

Collins Curve Improvement Project

Trinity County, California
District 2-TRI-299-PM 12.2/12.9
Project EA: 02-3E790
EFIS: 0200020151

Draft Initial Study & Proposed Mitigated Negative Declaration



Prepared by the
State of California Department of Transportation
March 2013

General Information About This Document

What's in this document:

This Draft Initial Study with proposed Mitigated Negative Declaration (IS/MND) examines the potential environmental effects of a proposed transportation project on State Route (Highway) 299, in Trinity County, from post mile 12.2 to 12.9. This Draft IS/MND was prepared to comply with the California Environmental Quality Act (CEQA). It describes the purpose and need for the project, the existing physical environment, and potential effects of the project on the physical environment. Final adoption of the Mitigated Negative Declaration will not be made until after consideration of public comments.

What you should do:

Please read this Draft Initial Study and proposed Mitigated Negative Declaration. Additional copies of this document as well as the technical studies are available for review at the Caltrans District 2 Office of Environmental Management, located at 1031 Butte Street, Redding CA 96001.

Copies of this document will also be available at the Trinity County Library, located at 351 N. Main Street, Weaverville, CA 96093.

This document can also be viewed online at:

<http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm>

We welcome your comments. If you have any information or concerns regarding the project, please send your written comments to Caltrans by the deadline below. Submit comments via U.S. mail to:

- California Department of Transportation
Attention: Amber Kelley, Environmental Branch Chief
North Region Office of Environmental Mgmt., MS-30
1031 Butte Street
Redding, CA 96001
- You may also submit comments via e-mail to Andre.Benoist@dot.ca.us
- Submit comments by the deadline: 5 pm, April 18, 2013.

What happens after this?

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

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Andre' Benoist, 1031 Butte Street, Redding, CA 96001; (530) 225-3302 Voice, or use the California Relay Service TTY number, 711.

Safety Improvement Project on State Route 299, in Trinity County, near Burnt Ranch, from 1.0 miles to 1.4 miles west of Mill Creek Road.

DRAFT INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Mar 20, 2013
Date of Approval


CINDY ANDERSON
Office Chief - North
North Region Environmental Services
California Department of Transportation



Proposed Mitigated Negative Declaration

Pursuant to: Division 13, California Public Resources Code

Project Description

Caltrans proposes a safety improvement project on Highway 299 in Trinity County. The project would add paved shoulders and improve five curves. Completion of the project will require vegetation removal, grading, concrete barrier and bridge construction, road reconstruction and widening, in addition to guardrail, and drainage improvements. Additional right-of-way is needed from the Shasta-Trinity National Forest Service for a portion of a fill slope. The overall project limits are from post mile 12.2 to 12.9, which includes contractor staging areas.

Determination

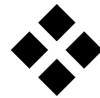
This proposed *Mitigated Negative Declaration* (MND) is included to give notice to interested agencies and the public, that it is Caltrans intent to adopt a MND for this project. This does not mean that the Department's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

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

- The proposed project would have *No Impact on: Agricultural Resources, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Geology and Soils, Hazards and Hazardous Material, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Traffic, or Utilities and Service Systems.*
- The proposed project would have *No Significant Impact on: Aesthetics*
- The proposed project would have a *Less Than Significant Impact with Mitigation on: Biological Resources.*

Cindy Anderson
Office Chief - North
North Region Environmental Services
California Department of Transportation

Date



Proposed Project

Project Title

Collins Curve Improvement Project

Lead Agency Name, Address, and Contact Person

Caltrans, District 2
1031 Butte Street, MS-30
Redding, CA 96001
Amber Kelley, Environmental Branch Chief
(530) 225-3510

Project Location

The proposed project is located in Trinity County, near Burnt Ranch, from 1.0 miles to 1.4 miles west of Mill Creek Road, from post mile markers 12.2 to 12.9, (see Figure 1, *Vicinity Map*, page 8).

Project Sponsor's Name and Address

Caltrans, District 2
1031 Butte Street
Redding, CA 96001

Introduction

This project would improve safety and traffic operations on Highway 299 in Trinity County, by reconstructing five curves and adding paved shoulders from Post Mile (PM) 12.2 to PM 12.9.

Purpose and Need

This segment of Highway 299 is a two-lane, conventional highway located in rural, mountainous terrain above the Trinity River (see Figure 2, *Topographic Map*, page 8).

The existing roadway consists of back-to-back curves, constricted by a large hillside along the eastbound lane and retaining walls and guardrails along the westbound lane. The roadway within the project limits has 12-foot lanes and 1-2 foot paved shoulders.

Additionally, the tight curves and narrow paved shoulders make it difficult for large trucks to stay within their lane when navigating this portion of the highway.

There were 11 reported collisions within a 5-year time period between September 1, 2004 and August 31, 2009. This is three times higher than the statewide average for similar highway facilities.

The purpose of this project is to reduce the number and severity of accidents, and improve traffic operations at this location. It is anticipated that accidents would be reduced by re-aligning the curves, and providing 4 foot-wide paved shoulders on both sides of the highway. These improvements would accommodate large vehicles too.

PROJECT DESCRIPTION

Proposed Build Alternative: Westbound Widening

This alternative proposes to widen and realign the roadway along the westbound lane. (See Figure 3, *Environmental Study Limits, sheets 1 and 2*, pages 9 and 10, for the proposed improvements).

A series of structures along the westbound lane would be built to gain the desired lane width and shoulders. There are two different types of structures proposed with this alternative. The first type of structure would be a Sidehill Viaduct (viaduct) bridge. The second type of structure would be a barrier slab. There are a total of 4 barrier slabs and 2 viaducts proposed for this project (see Figure 4, *Structure Cross Sections*, page 11).

A viaduct is the term applied to a bridge that does not cross over a waterbody, railroad or other roadway. Viaducts are typically used where the roadway parallels very steep or unstable terrain, and conventional road construction techniques are not feasible.

A barrier slab is a reinforced concrete road surface that supports a concrete guardrail. The barrier slabs proposed for this project would allow the highway to be shifted slightly toward the westbound lane.

The locations and types of structures proposed for Alternative B are depicted in Figure 3, *Environmental Study Limits Map, Sheets 1 and 2, pages 9 and 10*, and Figure 4, *Structure Cross-Section detail*, page 11.

This alternative requires less excavation along the eastbound lane, and includes a large fill area along the westbound lane. The fill area would require approximately 22,000 cubic yards of imported rock and dirt. A portion of the imported fill material would be obtained from the Burnt Ranch Transfer Station, which is situated adjacent to the project limits.

Construction of the fill would start at the bottom and would be built up with compacted layers until it is level with the existing roadway. The shape and slope of the fill would be in character with the surrounding area and would be replanted with trees.

The hillside above the road near post mile 12.8 would be cut back to create a rock catchment area. This is an area created to catch dirt and rock that slides down the hill, and keep it from entering the roadway. The excavation would produce approximately 14,000 cubic yards of material. The excavated material, along with the imported material from the transfer station, would be used to create the fill area at the west end of the project.

Completion of this project would also require bringing metal beam guardrail and drainage systems up to current standards.

Anticipated Construction Sequence

The project would most likely begin by placing construction area signs, and setting up a temporary traffic signal so that one lane of the highway can be used to move east and west bound traffic through the project area.

The contractor would shift traffic to the westbound lane, and begin excavating along the hillside adjacent to the eastbound lane. The excavated material would be taken to the new fill area at the west end of the project.

When the excavation along the eastbound lane is complete, the westbound lane would be closed, and traffic would be shifted to the eastbound lane. All of the structures would be built in the area of the westbound lane during this phase of the project.

Finally, the remaining sections of the new roadway would be built in line with the new structures. Final paving, striping and signing would be completed and both lanes of the new roadway would be open to traffic.

No-Build Alternative

A no-build alternative would propose that no physical changes are made to the existing section of the highway. The existing lane widths, shoulders, cross slope and curve shape would remain unchanged. Under this alternative, it can be anticipated that accidents would continue to take place at their current rate. This alternative does not meet the purpose and need of the project since it does not improve the existing condition.

Alternatives Considered but Eliminated From Further Discussion

Eastbound Widening:

This alternative proposed to widen and realign the roadway along the eastbound lane. This was the original design alternative. Extensive grading and excavation along the eastbound side of the highway would be required to provide the desired lane widths, and create a rock fall area outside of the roadway. This alternative would also include a 310 foot-long barrier slab to support the roadway. Additional project features included upgrading Metal Beam Guard Rail (MBGR) and drainage locations to current standards.

Based on Geotechnical investigations and analysis, the hillside cut proposed in this alternative was at a high risk for failure resulting in a high potential for a landslide onto the road. Also this alternative would produce 60,000 cubic yards of excess material that would have to be disposed of off-site. This alternative was dropped from further consideration due to the risks associated with the hillside stability, and the high costs associated with the material disposal.

Surrounding Land Uses and Setting

The project is located in steep, mountainous terrain in Trinity County, about a half-mile south east from the community of Burnt Ranch. The project limits are adjacent to the Burnt Ranch Transfer Station and the Trinity River. The project area is surrounded by public land managed by the US Forest Service.

Consistency with State, Regional, and Local Plans and Programs

The project is consistent with State and local transportation plans and programs, and has been identified by Trinity County as a programmed State Highway Operation and Protection Program (SHOPP) project in the 2010 Regional Transportation Plan.

Permits and Approvals

The following permits and approvals are needed prior to constructing the project.

Agency	Permit/Approval	Requirement
California Department of Fish & Wildlife, Region 1	Lake/Streambed Alteration Agreement [Section 1602 Fish and Game code]	Required for construction activities within stream and riparian corridors. Permit to be obtained by Caltrans.
California Department of Fish & Wildlife, Region 1	Incidental Take Permit [Section 2081, Fish and Game Code]	Required due to potential effects on the Trinity bristle snail. Permit to be obtained by Caltrans.
United States Army Corps of Engineers, Sacramento District	Department of the Army Permit [Section 404 of the Clean Water Act]	Required for construction activities within Waters of the US. Permit to be obtained by Caltrans.
Regional Water Quality Control Board, North Coast Region	Water Quality Certification [Section 401 of the Clean Water Act]	Required for construction activities within Waters of the State/US. Water Quality Certification to be obtained by Caltrans.

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Figure 2. Topographic Map with Project Location

Figure 3. Environmental Study Limits

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Figure 7. Possible Effect of Traffic Operation Strategies in Reducing On-Road CO₂ Emission¹

Figure 8. Conceptual Framework for Reducing Congestion

Appendix A. Mitigation Summary

Figure 1. Project Vicinity Map

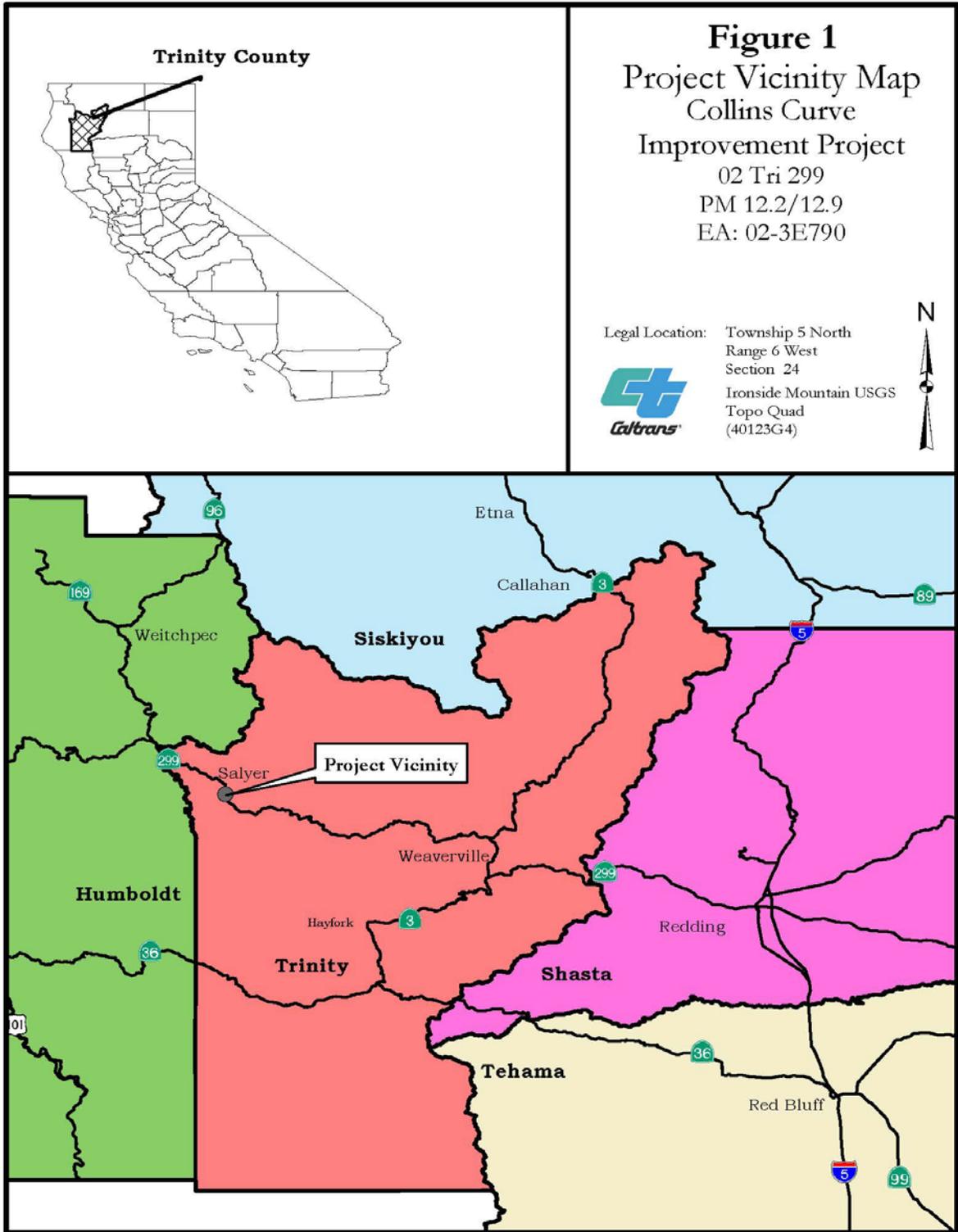


Figure 2. Topographic Map with Project Location

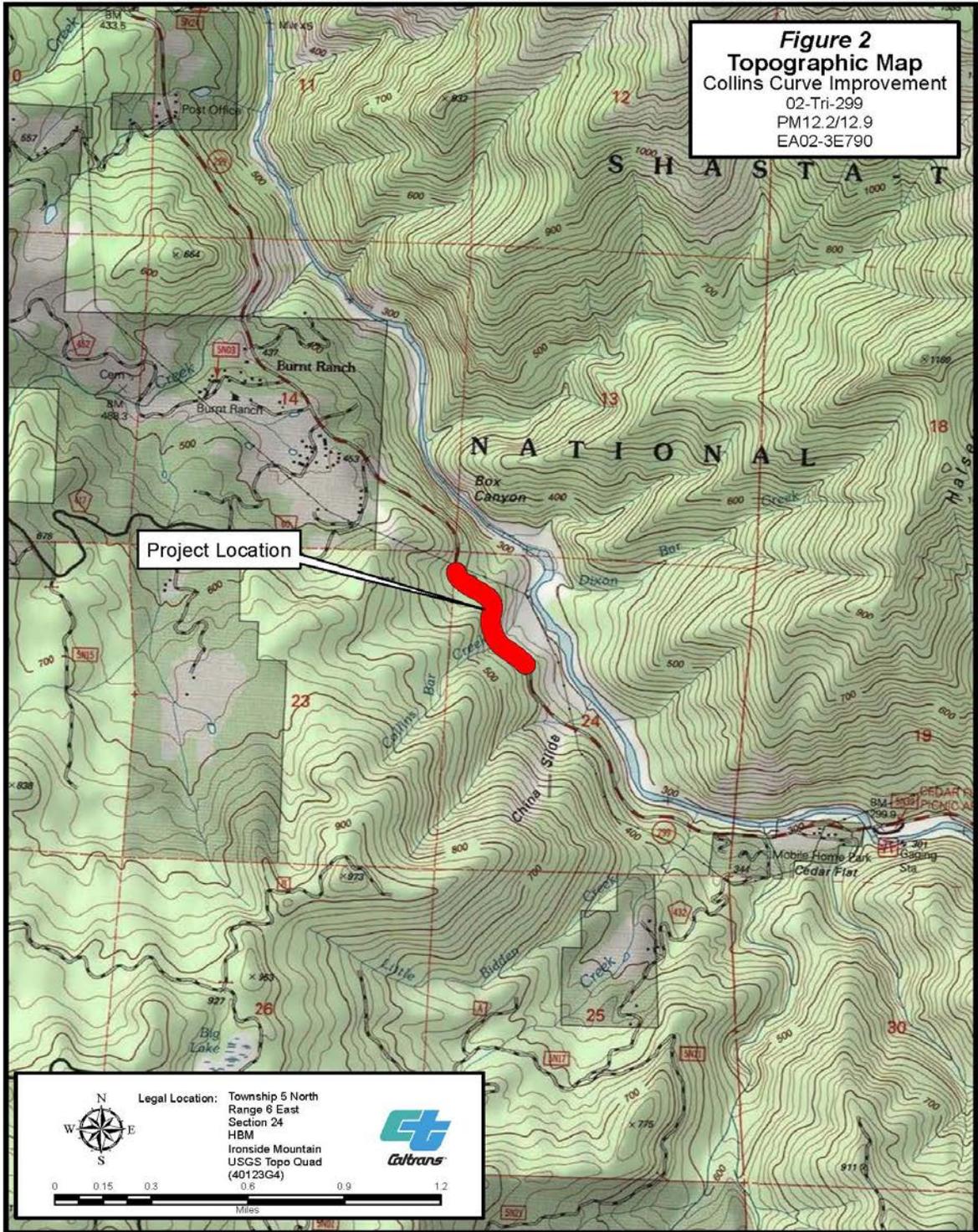


Figure 3. Environmental Study Limits, Sheet 1

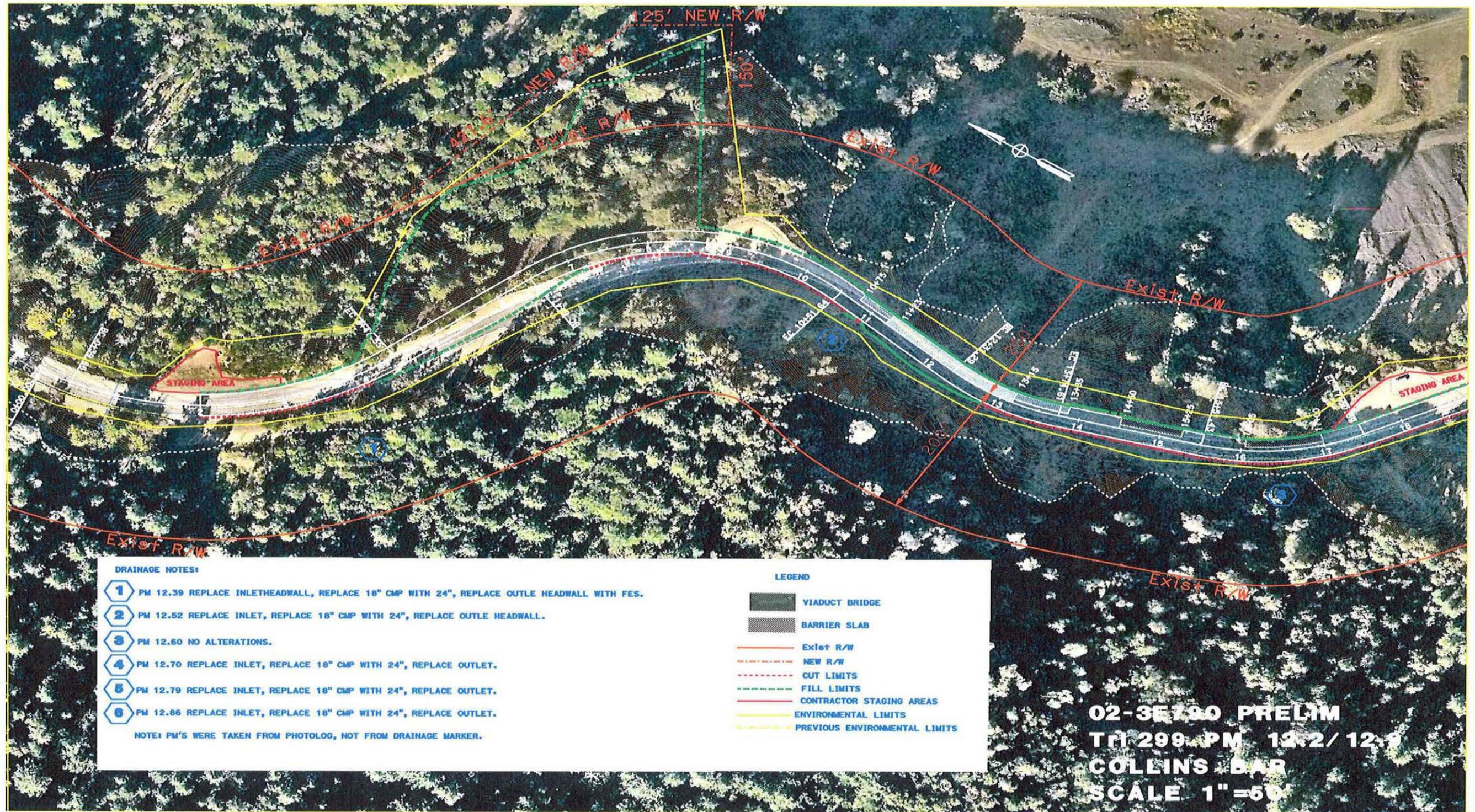
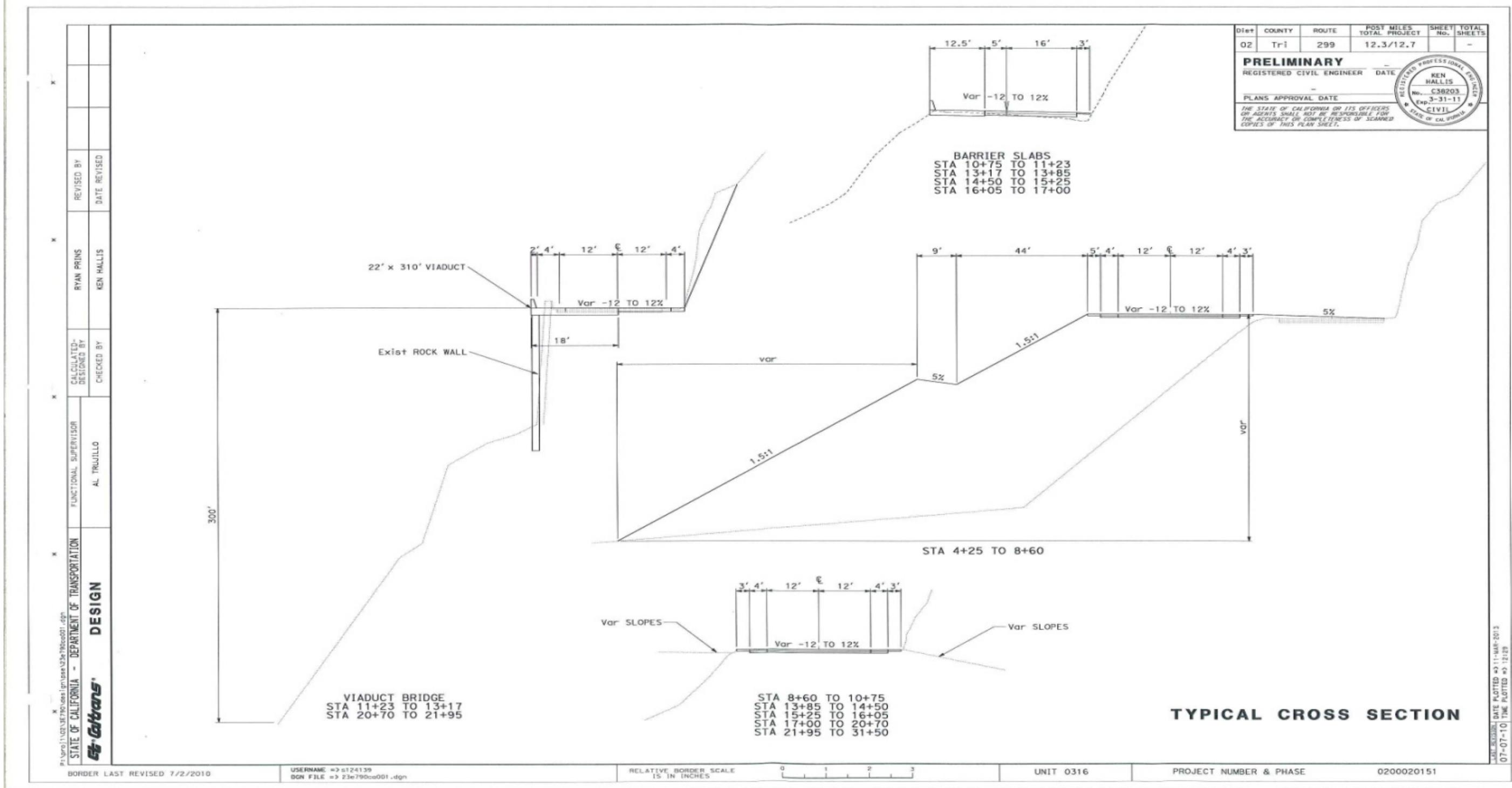


Figure 3. Environmental Study Limits, Sheet 2



Figure 4. Structure Cross Section Detail



CEQA Environmental Checklist

02/TRI/299

12.2/12.9

02-3E790

Dist.-Co.-Rte.

P.M/P.M.

E.A.

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IV. BIOLOGICAL RESOURCES: Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

V. CULTURAL RESOURCES: Would the project:

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

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VII. GREENHOUSE GAS EMISSIONS: Would the project:

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

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

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IX. HYDROLOGY AND WATER QUALITY: Would the project:

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

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

X. LAND USE AND PLANNING: Would the project:

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

XI. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XII. NOISE: Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XV. RECREATION:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XVI. TRANSPORTATION/TRAFFIC: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion of Environmental Impacts

Expanded discussion is included for checklist questions answered *Less than Significant Impact with Mitigation*. Clarifying discussion is not included for checklist questions answered *Less than Significant Impact or No Impact*.

BIOLOGICAL RESOURCES

The information in this section is based on the *Natural Environment Study* (NES), the *Incidental Take Permit* (ITP) and the *Mitigation and Monitoring Plan* (MMP) prepared for the project. Efforts completed for the biological studies included extensive field surveys, research, and coordination with regulatory and resource agencies.

Existing Setting

The project area is located in densely forested, steep, mountainous terrain. The soil is a mixture of bedrock, angular gravel, cobbles, boulders, and slide debris.

Adjacent to the eastbound lane, the land is mostly a steep uphill slope. The slope is bare in many areas as a result of the hillside cut when the highway was constructed and a series of small chutes prone to landslides and rockslides. Above the hillside cut, the ground is densely vegetated with trees and shrubs.

Adjacent to the westbound lane, the land is mostly a steep downhill slope. The slope is a mixture of vegetated areas, interrupted by bare rock chutes and slides. At the bottom of the slope, about 100 feet below the roadway, is the Burnt Ranch Transfer Station and the Trinity River.

Vegetation in the project area is dominated by Madrone and Conifer species. Typically, conifers form the upper canopy and broad-leaved trees comprise the lower canopy. A mixture of shrubs and annual species can be found in the understory.

THREATENED AND ENDANGERED SPECIES: *Trinity Bristle Snail*

Species Description and Taxonomy

The Trinity bristle snail (*Monadenia Infumata Setosa*) is a terrestrial snail that spends its life in forested, rocky terrain. Adult snail shells range from 1 to 1-1/2 inches across. Their color varies from gray to dark gray with an overall pattern of closely spaced brownish-red colored bristles (see Figure 5, below). The species is generally active at night.

Figure 5: Trinity bristle snail



The snail is listed for State protection and is classified as *Threatened* under the *California Endangered Species Act* (Fish and Game Code 2081[b]). A *Threatened* species is defined as: a native species or subspecies of a mammal, bird, reptile, amphibian, fish, or plant, that, although not presently threatened with extinction, is likely to become an endangered species in the near future in the absence of special protection and management efforts. The Trinity bristle snail is not a Federally-protected species.

Mollusk surveys that were conducted from 1999-2002 as part of the *Northwest Forest Plan* found several new Trinity bristle snail locations that significantly increased the known range of the species. It is believed that the snail is not as rare as originally thought when it was listed as a *Threatened* species in 1980.

The current population trend for the snail is unknown. There is ongoing research that suggests the snail may be interbreeding with other snail species and forming varieties of subspecies and hybrids.

Project Effects on the Trinity Bristle Snail

Snail surveys were conducted on several occasions in 2012, over a 6.75-acre study area. The survey area included the project limits and areas adjacent to the project limits. Surveys resulted in the discovery of live Trinity bristle snails and empty snail shells in multiple locations.

The quantity of snails that have been found in and around the project limits suggest that this population is healthy and stable. Project impacts on the snail and its habitat are expected to be minimal and temporary until the mitigation area and areas disturbed by construction have had time to naturalize.

In 1956, Caltrans realigned a section of highway in the project limits to its present location. At that time, a fill slope was created near post mile 12.44. This fill slope was layered with 7-10 inch angular rock, which over the last 20 years has become covered with moss and inundated with mixed conifer and hardwood trees. Over time, the fill area created by the 1956 highway realignment has developed into habitat for the snail.

The proposed project would enlarge the fill slope to assist in the curve realignment. Construction activities associated with the project would result in the direct loss or disturbance of 0.22 acres of potentially suitable habitat. At least 0.20 acres of suitable habitat within the project limits would not be disturbed by construction activities.

Excavating the hillside along the eastbound lane and depositing fill material along the westbound lane for the new curve alignment would remove some of the Trinity bristle snail habitat and has the potential to destroy some individual snails.

Since the Trinity bristle snail is a State-listed species, any impacts to the snail and its habitat require mitigation. Mitigation means that project related impacts to a species or its habitat must be off-set or compensated for to minimize the effects of the project on that species or habitat.

Coordination with the California Department of Fish and Wildlife (formerly known as the California Department of Fish and Game) regarding impacts to the snail indicated that snails and their habitat could be affected or temporarily affected as a result of the project. The Department of Fish and Wildlife requires a Section 2081 Incidental Take Permit in order to construct the project.

Proposed Mitigation Measures

To off-set the impacts to the snails and their habitat, the project would place large, angular rock and mulched organic material at the bottom and on the mid-slope bench of the new fill slope to create new and possibly better habitat for the snail. This area would

serve as the mitigation site for impacts to the snail. Key habitat features such as rotten logs, large rocks and boulders, and organic material such as leaves and mulch would be collected and stored in a temporary stockpile area within the project limits. After the project is constructed, the material would be re-deposited on the mitigation site to accelerate the creation of new snail habitat.

The mitigation proposed for this project involves a variety of measures that will help avoid, minimize, and fully mitigate for the direct and indirect effects of the project on the Trinity bristle snails, and their habitat. A full Mitigation and Monitoring Plan for Trinity bristle snail is on file with Caltrans. A summary of the proposed mitigation measures is included in Appendix A of this document. The final mitigation and monitoring plan will be developed with input from the California Department of Fish and Wildlife during the permit process for the 2081 permit.

WATERS OF THE STATE/ WATERS OF THE US

There are a total of 6 culvert drainage systems that cross through the project area. The drainage systems are listed 1-6 on the ESL map on page 9. Drainages 2, 4, 5 and 6 are small 18-inch culverts that convey stormwater runoff from the highway and are not considered Waters of the State or Waters of the US. Upgrading these drainages would not require permits from state and federal agencies.

Drainage 1 is a small 18-inch culvert, that conveys water only during rain events and is otherwise dry throughout the year. This drainage may be considered Waters of the State and/ or Waters of the US, and may require permits in order to replace the culvert. The project would have the potential to permanently affect approximately 2 feet x 100 feet (200 square feet) of open stream. When the fill area is constructed at the outlet of this drainage, the seasonal stream would be filled in. However, this area would be off set after the fill is constructed. The seasonal drainage would be re-established on the surface of the new fill area. This area would be protected with erosion control measures and would be replanted after the project is constructed.

Drainage 3 conveys Collins Bar Creek through two 24-inch culverts. No work on the creek or the culverts is proposed at this location.

GREENHOUSE GAS EMISSIONS

Climate Change (CEQA)

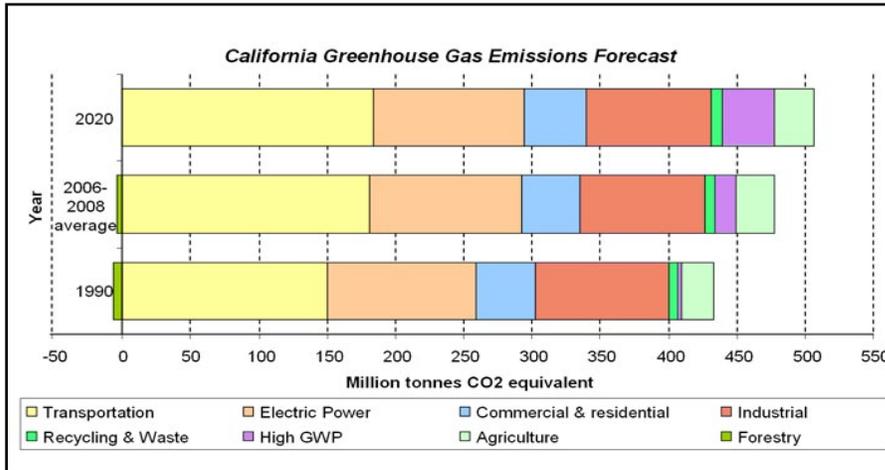
Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation (see Climate Action Program at Caltrans (December 2006), Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006. This document can be found at: <http://www.dot.ca.gov/docs/ClimateReport.pdf>

According to [Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents](#) (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG.² In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines Sections 15064(h)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Shown below is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

² This approach is supported by the AEP: Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), as well as the SCAQMD (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

Figure 5: California GHG Inventory Forecast

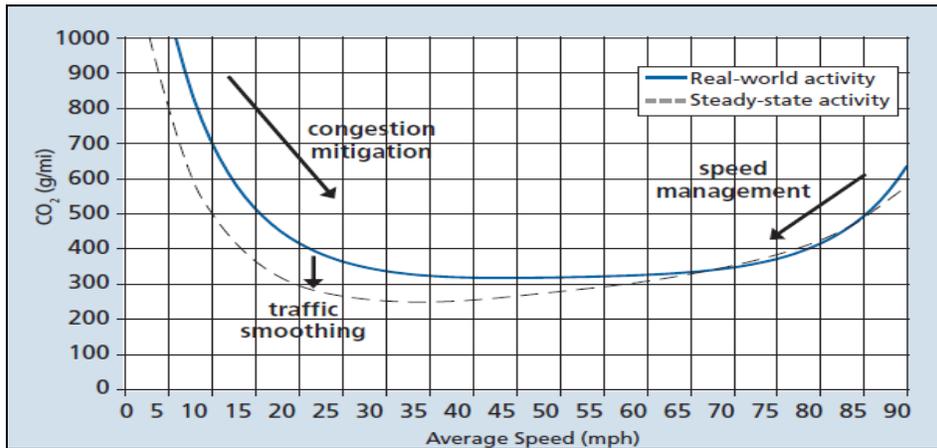


Source: California Department of Transportation Environmental Impact Report/Environmental Impact Statement Annotated Outline, July 2011.

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

One of the main strategies in Caltrans' Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of CO₂ from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 mph) and speeds over 55 mph; the most severe emissions occur from 0–25 mph (see Figure 6 below).

Figure 6: Possible Effect of Traffic Operation Strategies in Reducing On-Road CO₂ Emission³



Source: California Department of Transportation Environmental Impact Report/Environmental Impact Statement Annotated Outline, July 2011.

³ Traffic Congestion and Greenhouse Gases: Matthew Barth and Kanok Boriboonsomsin (TR News 268 May-June 2010) <<http://onlinepubs.trb.org/trnews/trnews268.pdf>>

Construction Emissions

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. Even though the project is not anticipated to increase operational GHG emissions, the proposed project would generate some GHG emissions during construction.

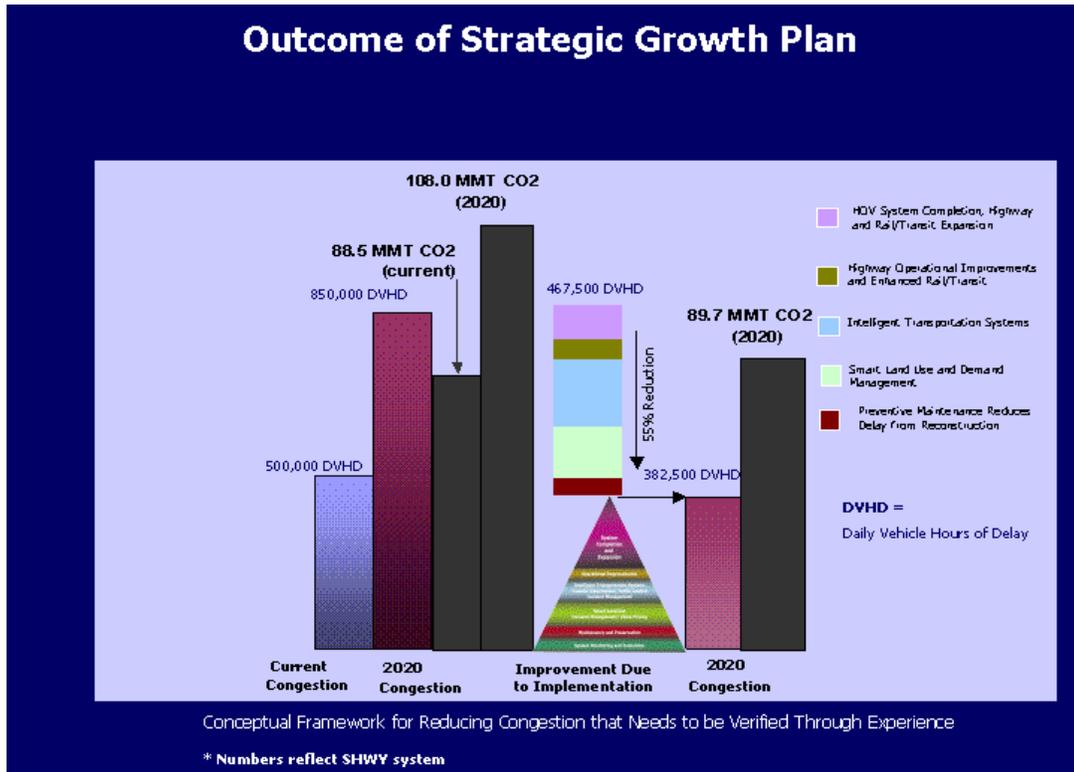
CEQA Conclusion

While construction activities would result in a slight temporary increase in GHG emissions during the construction phase, it is anticipated that the project would not result in any increase in operational GHG emissions. While it is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as CARB works to implement the Governor's Executive Orders and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade. As shown on the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The Strategic Growth Plan relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

Figure 7: Outcome of Strategic Growth Plan



As part of the Climate Action Program at Caltrans (December 2006, <http://www.dot.ca.gov/docs/ClimateReport.pdf>), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by EPA and CARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the UC Davis.

Adaptation Strategies:

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require

that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

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

Executive Order S-13-08 (signed by Former Governor Sshwarzenegger in November 2008) directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final *Sea Level Rise Assessment Report* (due to be released in December 2010 from the National Academy of Sciences), all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement.) This proposed project was programmed for construction funding in 2010, it is exempt at this time from the requirements to analyze the impacts of sea level rise as directed in Executive order S-13-08.

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

MANDATORY FINDINGS OF SIGNIFICANCE

- a) The proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.
- b) Based on the description of the proposed project and consideration of potential effects, there is no evidence to support a finding that the project has impacts that are individually limited, but cumulatively considerable.
- c) The proposed project does not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

Appendix A. Mitigation Summary

Mitigation proposed for this project involves a variety of measures that will help avoid, minimize, and fully mitigate for the direct and indirect effects on Trinity bristle snail and their habitat. For more information, see the Mitigation and Monitoring Plan on file with Caltrans.

Avoidance and Mitigation measures for the project include:

1. Construction shall take place during the dry season, typically May 15 to October 15, of any given year.
2. Prior to construction, organic material (leaves, moss, rotten logs and woody debris) will be stockpiled so it can be used to re-create habitat in the mitigation area.
3. Construction activities will be limited to the minimal area necessary to complete the project.
4. All material stockpiling and staging areas will be located in existing disturbed and developed areas adjacent to the project limits.
5. Vehicle and equipment refueling and maintenance will only be permitted in designated staging areas.
6. Large angular rock shall be placed at the base of the large fill slope, which is below the west bound lane at the west end of the project.
7. The project site shall be left clean without any construction debris.
8. After the project is complete, Caltrans will re-create snail habitat at the base of the large fill area at the west end of the project. The habitat re-creation will take place with oversight and direction from the California Department of Fish and Wildlife.

List of Preparers and Technical Studies

This Initial study was prepared by Caltrans, North Region Office of Environmental Management, with input from the following staff:

Amber Kelley, Environmental Branch Chief
Contribution: Document preparation oversight

Andre' Benoist, Environmental Planner
Contribution: Environmental Coordination and Document writer

Ken Hallis, Project Engineer
Contribution: Project design, Storm Water Data Report

Ryan Prins, Project Engineer Technician
Contribution: Project design

Tom Graves, Hazardous Waste Coordinator
Contribution: Initial Site Assessment for Hazardous Waste

Christian Lavric, Transportation Engineer
Contribution: Water Quality Assessment

Russell Adamson, Project Archaeologist
Contribution: Cultural resource surveys and compliance

Coady Reynolds, Project Biologist
Contribution: Natural Environment Study

Kelly Kawsuniak, Project Biologist
Contribution: Trinity Bristle Snail surveys, consultation and mapping. Incidental Take Permit. Mitigation and Monitoring Proposal.

Steve Thorne, District Hydraulic Engineer
Contribution: Floodplain Evaluation Report Summary

Bill Webster, Geotechnical Engineer
Contribution: Geotech Report