

Dani Creek Slide Permanent Restoration

In Monterey County, Big Sur Coast South Coast – Lucia Area

05-MON-1-PM 22.5/22.9

05-0002-0037

05-0T560

Initial Study with Proposed Mitigated Negative Declaration



Prepared by the
State of California Department of Transportation

April 2013



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the mitigation measures implemented in the construction of a soldier-pile tieback retaining wall located in Monterey County, California. The document describes the constructed project, the existing environment prior to the construction of the retaining wall, impacts from the project, and the avoidance, minimization, and/or mitigation measures that were implemented to offset these impacts.

What should you do?

- Please read this Initial Study. Additional copies of this document as well as the technical studies are available for review at the Caltrans district office at 50 Higuera Street, San Luis Obispo, California 93401. Additional copies will also be available at the Henry Miller Memorial Library, 48603 Highway 1, Big Sur.
- We welcome your comments. If you have any concerns regarding the project, send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

Matt Fowler, Senior Environmental Planner
Central Coast Environmental Analysis
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401

Submit comments via email to: [Matt_C_Fowler @dot.ca.gov](mailto:Matt_C_Fowler@dot.ca.gov).

- Submit comments by the deadline: June 6, 2013.

What happens next?

After comments are received from the public and reviewing agencies, Caltrans will address all comments in the Final Document and apply for a follow-up Coastal Development Permit from the County of Monterey.

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

For individuals with sensory disabilities, this document is available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please contact: Caltrans, Attn: Matt Fowler, Central Coast Environmental Management, 50 Higuera Street, San Luis Obispo, CA 93401; 805-542-4603 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans), under an Emergency Permanent Restoration Contract, has completed the construction of a soldier-pile tieback retaining wall on State Route 1 in Monterey County between post miles 22.5 and 22.9. The purpose of this Emergency Project was to stabilize the failing slope and restore the southbound lane, which was lost due to a large landslide on February 6, 2010. The completed project consists of an 825-foot long soldier-pile tieback wall and reconstruction of both the northbound and southbound lanes and shoulders.

Determination

This proposed Mitigated Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Mitigated Negative Declaration for this project. The mitigation measures contained in this Mitigated Negative Declaration are subject to change based on comments received by interested agencies and the public.

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

The proposed project had no effect on: agricultural resources, air quality, biological resources, cultural resources, geology, soils, hazards, hazardous materials, hydrology, water quality, land use and land use planning, mineral resources, noise, population, housing, public services, recreation, transportation, traffic, utilities or service systems.

In addition, the proposed project had no significantly adverse effect on aesthetics because the following mitigation measures reduced potential effects to insignificance:

- Aesthetic impacts have been mitigated by coloring and texturing exposed concrete elements associated with the retaining wall, etching the bicycle railing, contour grading construction access roads, and planting trees in front of the retaining wall.

Janet Newland
Office Chief,
Central Coast Environmental Management

Date

Section 1 Project Information

Project Title

Dani Creek Slide Permanent Restoration

Lead Agency Name and Address

California Department of Transportation
50 Higuera Street
San Luis Obispo, California 93401

Contact Person and Phone Number

Matt Fowler, Senior Environmental Planner
(805) 542-4603

Project Location

The proposed project is located on State Route 1 in Monterey County, California between post miles 22.5 and 22.9. Please refer to Project Vicinity Map (Figure 1).

Project Sponsor's Name and Address

California Department of Transportation (Caltrans)
50 Higuera Street
San Luis Obispo, California 93401

General Plan Description and Zoning

The project is zoned as a Monterey County watershed and scenic conservation area, as identified in the Monterey County Land Use Plan Big Sur Central Section land use map.

Description of Project

Caltrans has constructed an 825-foot long soldier-pile tieback retaining wall along the outside shoulder of the southbound lane using embedded steel piles with horizontal timber lagging. An aesthetically treated barrier and bicycle railing have been constructed on top of the wall. Both the northbound and southbound lanes have been restored and reconstructed to the standard 12-foot width with four foot shoulders.

Surrounding Land Uses and Setting

The Dani Creek retaining wall is situated on the ocean side of the steep, rugged coastline of Big Sur, in rural Monterey County. The project site is located between Harlan Creek on the north and Dani Creek on the south. Both creeks support native

riparian vegetation and flow from east to west bisecting State Route 1. The area between the creeks, where the wall is constructed, was stripped of vegetation by the landslide. The habitat along the inland side of State Route 1, within the vicinity of the project, consists of dense native coastal scrub. The unincorporated community of Lucia, consisting of a restaurant, a small convenience store, and a lodge is located approximately 1/8 of a mile to the north of the project site. Several private residences are nestled in the hills along the inland side of the highway.

Other Public Agencies Whose Approvals Are Required

The Dani Creek Slide Permanent Restoration project is within the Land Use Plan for the Big Sur Coast Segment of the Monterey County Local Coastal Program. The County of Monterey issued an Emergency Coastal Development Permit (#PLN100336) allowing the construction of this project. A condition of approval under the Emergency Coastal Development Permit requires that Caltrans submit an Application Request for a follow-up Coastal Development Permit which will be used by the County to evaluate potential adverse environmental effects resulting from the construction of this project.

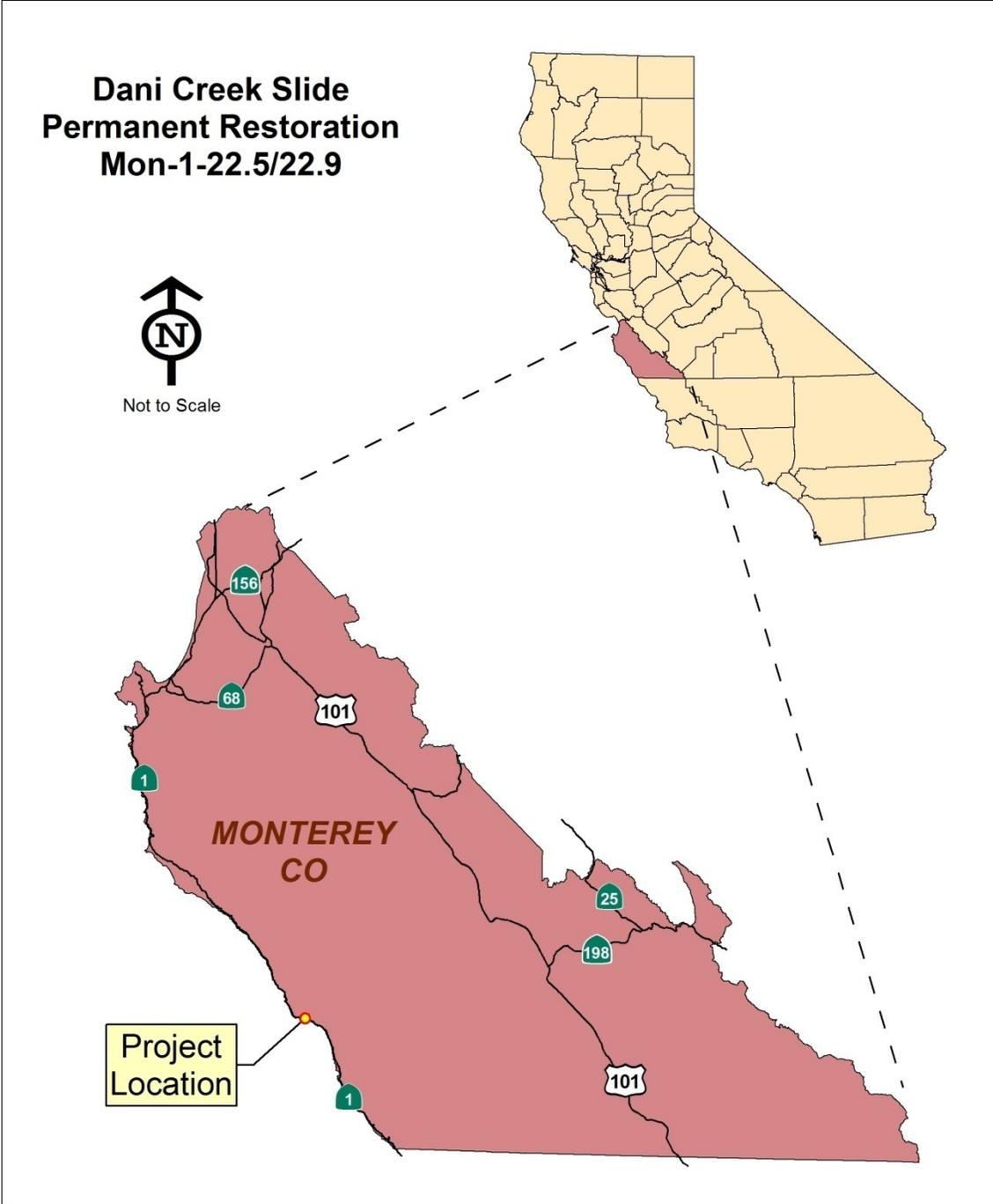


Figure 1 Project Vicinity Map



Figure 2 Project Location Map

Section 2 Environmental Factors Potentially Affected

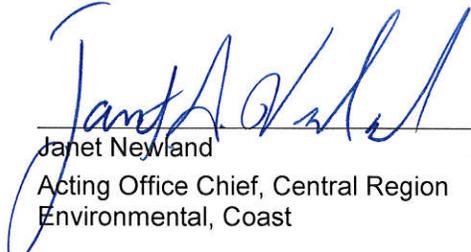
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance

Section 3 Determination

On the basis of this determination:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- 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.


Janet Newland
Acting Office Chief, Central Region
Environmental, Coast

4-29-2013
Date

Section 4 Impacts Checklist

The impacts checklist starting on the next page identifies physical, biological, social, and economic factors that might be affected by the proposed project. Direct and indirect impacts are addressed in checklist items I through XVII. Mandatory Findings of Significance are discussed in item XVIII. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

A brief explanation of each California Environmental Quality Act checklist determination follows each checklist item. Lengthy explanations, if needed, are provided after the checklist.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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I. AESTHETICS — Would the project:

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

Explanation: The Visual quality within the project limits is moderate, with limited ocean views and fairly ordinary landform and vegetation. (Scenic Resource Evaluation, June, 2010)

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

Explanation: There are no designated scenic resources as defined by CEQA statutes or guidelines, or by Caltrans Policy. (Scenic Resource Evaluation, June, 2010)

- c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Explanation: The project components are not visible from any critical viewpoints such as public beaches, parks, or trails. From the road, only the concrete bridge rail and tubular steel bicycle railing will be visible. Concrete surfaces were integrally colored and steel bicycle rail and metal beam guard rail were darkened to reduce impacts to less than significant. (Scenic Resource Evaluation, June, 2010)

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

Explanation: All concrete surfaces have a roughened finish and are integrally colored a medium brown to reduce the visual contrast with surrounding natural surfaces. All metal components have been chemically darkened to reduce shine and mimic aged metal. (Scenic Resource Evaluation, June, 2010)

II. AGRICULTURE 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. 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?

Explanation: No protected farmland lies within the project limits. (FMMP, 2010)

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

Explanation: No protected farmland lies within the project limits. (FMMP, 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland, to non-agricultural use?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: No protected farmland lies within the project limits. (FMMP, 2010)

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 checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The project is exempt from the Federal Highway Administration and Environmental Protection Agency final air quality conformity guidelines because it is in a category of projects that are unlikely to have any potential to degrade air quality. Safety improvements and damage repair that do not further degrade the air quality in the basin are consistent with the Monterey Bay Unified Air Pollution Control District (MBUAPCD). (Air Quality Technical Report, April 2010)

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"/>
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Explanation: The North Central Coast Air Basin is considered in attainment or unclassified for all national ambient air quality standards and non-attainment for state AAQS for ozone and airborne particulates less than ten microns in diameter (PM₁₀). The MBUAPCD contains in its emissions inventory, as part of the Air Quality Management Plan, emissions from construction projects. (Air Quality Technical Report, April 2010)

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 checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The total area of disturbance for the project is less than two acres, well within the MBUAPCD daily emissions thresholds for both ozone precursors and PM₁₀. (Air Quality Technical Report, April 2010)

d) Expose sensitive receptors to substantial pollutant concentrations?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: There were temporary and minimal increases in air emissions during the construction period. The few residences in the vicinity of the project were not subject to substantial pollutants. (Air Quality Technical Report, April 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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e) Create objectionable odors affecting a substantial number of people?

Explanation: There are very few residences within the vicinity of the project. Odors that emanated from the construction of the project were temporary. (Air Quality Technical Report, April 2010)

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?

Explanation: No special status plant or animal species were identified during field surveys. (Natural Environment Study, Minimal Impact, June 2010)

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

Explanation: No habitat for special status plant or animal species was present within the biological study area during field surveys. (Natural Environment Study, Minimal Impact, June 2010)

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?

Explanation: A single-parameter wetland lies on the eastern (inland) shoulder within the project limits. It does not satisfy the parameter definitions of a Clean Water Act wetland. Both Dani Creek and Harlan Creek are outside of the project limits. (Natural Environment Study, Minimal Impact, June 2010)

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?

Explanation: Within the project limits, the habitat value for wildlife typical of the Big Sur Coast is poor due to the disturbed condition of the existing slide and the steep topography. (Natural Environment Study, Minimal Impact, June 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: A single-parameter wetland (coastal zone wetland) lies on the eastern (inland) shoulder. A four-foot catchment basin for rock debris was constructed at this location at the bottom of the inland slope, creating a temporary impact to this wetland. The restored coastal wetland flows and functions in the same direction with the same quality as the previous on-site condition. (Natural Environment Study, Minimal Impact, June 2010)

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"/>
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Explanation: There are no such plans related to the project area. (Natural Environment Study, Minimal Impact, June 2010)

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"/>
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Explanation: No cultural resources requiring evaluation are present within the project Area of Potential Effect. (Historic Property Survey Report, May 2010; Equipment and Storage Areas for the Dani Creek Retaining Wall Project, May 2010)

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 type="checkbox"/>
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Archaeological resources are considered “historical resources” and are covered under question V(a).

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"/>
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Explanation: The formations present in the project study area are shown as having low potential for encountering sensitive paleontological resources. (Paleontological Study, April 2010)

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"/>
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Explanation: No indications of pre-historic human activities were found in the project study area. (Historic Property Survey Report, May 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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VI. GEOLOGY AND SOILS — Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

Explanation: The nearest known fault trace is the San Simeon Hosgri Fault Zone, approximately one mile from the project site. Fault rupture is unlikely within the project limits. (Geotechnical Report, May 2012)

ii) Strong seismic ground shaking?

Explanation: The project is located in a seismically active area. The structure is designed to withstand the effects of strong seismic ground shaking. The project does not expose people to increased risk of potential adverse effects due to seismic ground shaking. (Geotechnical Report, May 2012)

iii) Seismic-related ground failure, including liquefaction?

Explanation: Soils and rock at the site have low liquefaction potential. Soils susceptible to liquefaction are saturated sands, which are not present at the project site. (Geotechnical Report, May 2012)

iv) Landslides?

Explanation: The completed retaining wall stabilized an active portion of a landslide, reducing the exposure of persons to landslides. (Geotechnical Report, May 2012)

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

Explanation: The completed retaining wall stabilized an active portion of a landslide, reducing soil erosion. (Geotechnical Report, May 2012)

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Explanation: The retaining wall is located within an active landslide in an unstable geologic unit. It is designed to withstand landslide forces and maintain slope stability of the retained portion of the landslide. The project improves the stability of the unstable geologic unit and is not anticipated to cause onsite or offsite landslides, lateral spreading, subsidence, liquefaction, or collapse. (Geotechnical Report, May 2012)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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Explanation: Soils located at the site are not expansive. (Geotechnical Report, May 2012)

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The project does not generate wastewater.

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

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The roadway continues to be used in the same manner as it was prior to the project.

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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The roadway continues to be used in the same manner as it was prior to the project.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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Explanation: The nearest school is over 5 miles away from the project site. (Caltrans Google Earth)

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, 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"/>
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Explanation: According to Geotracker, a data base maintained by the Regional Water Quality Control Board, the above project location has not been identified as a site containing hazardous contaminants. (Hazardous Waste Coordinator Email, May, 2012)

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"/>
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Explanation: The nearest airport (to the project is located approximately 26 miles to the east near the City of Salinas. (Caltrans Google Earth, 2012)

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"/>
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Explanation: The nearest airport (to the project is located approximately 26 miles to the east near the City of Salinas. (Caltrans Google Earth, 2012)

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"/>
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Explanation: State Route 1 in Monterey County, is not considered a lifeline or priority transportation route. (Monterey County Catastrophic Earthquake Mass Transportation/Evacuation Plan, August 2010)

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 checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: The project is within an area subject to wildfires; however the roadway continues to function as it did prior to construction of the retaining wall.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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IX. HYDROLOGY AND WATER QUALITY —

Would the project:

- a) Violate any water quality standards or waste discharge requirements?

Explanation: Project construction included proper and accepted engineering controls and Best Management Practices. (Water Quality Assessment, April 2010)

- 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 that would not support existing land uses or planned uses for which permits have been granted)?

Explanation: The project used small amounts of water during construction to provide dust control and continues to use water for irrigation. Plant irrigation ended in September 2012.

- 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 that would result in substantial erosion or siltation on- or offsite?

Explanation: The completed retaining wall stabilized an active portion of a landslide, reducing soil erosion. (Geotechnical Report, May 2012) No waterways were affected by the project.

- 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 that would result in flooding on- or offsite?

Explanation: There were no changes to the existing drainage pattern of the project site or area.

- e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Explanation: The roadway continues to function as it did prior to construction of the retaining wall.

- f) Otherwise substantially degrade water quality?

Explanation: Project construction included proper and accepted engineering controls and Best Management Practices. (Water Quality Assessment, April 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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Explanation: The project does not include housing, neither is it in a floodplain nor floodway.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The project is not in a floodplain or floodway.

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"/>
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Explanation: The project is not within a floodplain nor is there a levee or dam above the project site.

j) Result in inundation by a seiche, tsunami, or mudflow?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The project is not within the tsunami inundation zone. (Caltrans Google Earth, 2012)

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"/>
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Explanation: The project replaced an existing highway on the same alignment.

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"/>
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Explanation: The project replaced an existing highway on the same alignment.

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"/>
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Explanation: No such plans have been identified in the project area. (Natural Environment Study, Minimal Impact, June 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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?

Explanation: The project replaced an existing highway on the same alignment.

- 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?

Explanation: The project replaced an existing highway on the same alignment.

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?

Explanation: Work occurred during normal working hours, Monday through Friday. (Resident Engineer email, April 2012)

- b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Explanation: Noise from stationary sources, such as construction equipment can be expected to attenuate at 6 decibels per distance doubled over a hard surface (smooth or paved), as found in most of the project site. This means that receptors up to 500 feet from the construction equipment experienced short-term, elevated noise levels during the construction period. (Noise Technical Study, April 2010)

- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Explanation: The project is used in the same manner as before construction of the project; a two-lane highway. Noise elevations have not increased since the project was constructed.

- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Explanation: Noise from stationary sources, such as construction equipment can be expected to attenuate at 6 decibels per distance doubled over a hard surface (smooth or paved), as found in most of the project site. This means that receptors up to 500 feet from the construction equipment experienced short-term, elevated noise levels during the construction period. (Noise Technical Study, April 2010)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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Explanation: The nearest airport (to the project is located approximately 27 miles to the east near the City of Salinas. (Caltrans Google Earth, 2012)

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"/>
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Explanation: The nearest airport (to the project is located approximately 27 miles to the east near the City of Salinas. (Caltrans Google Earth, 2012)

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"/>
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Explanation: The roadway continues to function as it did prior to construction of the retaining wall.

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"/>
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Explanation: No housing was affected by the project.

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"/>
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Explanation: No persons were displaced for this project.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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XIV. PUBLIC SERVICES —

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

Fire protection?	<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"/>

Explanation: The roadway continues to function as it did prior to construction of the retaining wall. Construction of the project restored emergency access through the area.

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"/>
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Explanation: The roadway continues to function as it did prior to construction of the retaining wall. No recreational facilities were affected.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: No, this is a roadway restoration project.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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XVI. TRANSPORTATION/TRAFFIC — Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The roadway continues to function as it did prior to construction of the retaining wall. Construction of the project restored vehicular access through the area.

b) Exceed, either individually or cumulatively, a level of service standard 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"/>
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Explanation: The roadway continues to function as it did prior to construction of the retaining wall. Traffic levels are expected to and have remained at levels similar to those prior to construction of the project.

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"/>
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Explanation: No, this is a roadway restoration project.

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"/>
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Explanation: The roadway continues to function as it did prior to construction of the retaining wall.

e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: The roadway continues to function as it did prior to construction of the retaining wall. Construction of the project restored vehicular access through the area.

f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: No, this is a roadway restoration project.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Explanation: Bicycle and pedestrian access was restored through the project area because of the project.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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XVII. UTILITY AND SERVICE SYSTEMS — Would the project:

- a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Explanation: No, this is a roadway restoration project.

- 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?

Explanation: No, this is a roadway restoration project.

- 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?

Explanation: Stormwater treatment facilities are not required for a project with less than one acre of disturbance. This project disturbed just under one acre, therefore, did not require stormwater treatment. (Resident Engineer email, April 2012)

- d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Explanation: Water supplies required for the construction of the project came from existing sources.

- e) Result in a determination by the wastewater treatment provider that 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?

Explanation: Wastewater was not generated during the construction of the project.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Explanation: The project required import of fill materials, no materials were hauled away. (Resident Engineer email, April 2012)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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Explanation: No materials were hauled away during construction of the project. (Resident Engineer email, April 2012)

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, 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 checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: No special status plant or animal species were identified during field surveys. No habitat for special status plant or animal species was present within the biological study area during field surveys. A single-parameter wetland lies on the eastern (inland) shoulder within the project limits. It does not satisfy the parameter definitions of a Clean Water Act wetland. Both Dani Creek and Harlan Creek are outside of the project limits. A four-foot catchment basin for rock debris was constructed at this location at the bottom of the inland slope, creating a temporary impact to this wetland. The restored coastal wetland flows and functions in the same direction with the same quality as the previous on-site condition. Within the project limits, the habitat value for wildlife typical of the Big Sur Coast is poor due to the disturbed condition of the existing slide and the steep topography. (Natural Environment Study, Minimal Impact, June 2010)

No cultural resources requiring evaluation are present within the project Area of Potential Effect. No indications of pre-historic human activities were found in the project study area. (Historic Property Survey Report, May 2010)

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 checked="" type="checkbox"/>	<input type="checkbox"/>
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Explanation: Although there have been incremental changes to the visual quality of the Big Sur coast over time, this project does not substantially contribute to the declining health of the overall visual resource. (Cumulative Visual Impact Assessment, December 2012)

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Explanation: Fault rupture is unlikely within the project limits. The project does not expose people to increased risk of potential adverse effects due to seismic ground shaking. Soils susceptible to liquefaction are not present at the project site. The completed retaining wall stabilized an active portion of a landslide, reducing soil erosion and landslide exposure. The project improves the stability of the unstable geologic unit and is not anticipated to cause onsite or offsite landslides, lateral spreading, subsidence, liquefaction, or collapse. (Geotechnical Report, May 2012)

The project location has not been identified as a site containing hazardous contaminants. (Hazardous Waste Coordinator email, May, 2012)

There were no changes to the existing drainage pattern of the project site or area. The project does not include housing, neither is it in a floodplain nor floodway, nor is there a levee or dam above the project site. The project is not within the tsunami inundation zone. (Caltrans Google Earth, 2012)

Work occurred during normal working hours, Monday through Friday. Noise elevations have not increased since the project was constructed. (Resident Engineer email, April 2012)

No persons were displaced for this project.

The roadway continues to function as it did prior to construction of the retaining wall. Construction of the project restored emergency and vehicular access through the area.

No recreational facilities were affected.

Water supplies required for the construction of the project came from existing sources. Wastewater was not generated during the construction of the project.

Additional Explanations for Questions in the Impacts Checklist

I. Aesthetics (questions c. and d.)

Affected Environment

Prior to construction of the project, the surrounding area was highly disturbed due to the landslide that occurred in February 2010. There was a single, unpaved, northbound lane. The southbound lane had been lost due to the landslide. A weekly addition of aggregate base material was required to preserve the one remaining, northbound lane so that the roadway would remain passable. Prior to the landslide in February 2010 this section of highway experienced frequent minor slipouts, some of which temporarily reduced the roadway to a single lane.

Although this stretch of the Big Sur Coast has some areas of memorable scenery with dramatic topography and beach/whitewater views, the visual quality within the project limits is only moderate, with limited ocean views and fairly ordinary landform and vegetation. The extremely disturbed slope and roadway, temporary k-rail on the shoulders, temporary signal system with large generator and electrical conduits laying on the ground surface, parked construction equipment, and a steel storage bin on the road shoulders all combined to create an unattractive visual condition for travelers.

Impacts

The soldier pile wall is visible from the highway, though from the traveler's perspective, the wall is shielded from view until vehicles are almost upon the structure. From the road, the guard rail, and tubular steel bicycle railing are visible.

Avoidance, Minimization, and/or Mitigation Measures

All concrete surfaces have a rough finish and are integrally colored a medium brown to reduce the visual contrast with surrounding natural surfaces. The steel bicycle rail has been chemically darkened to reduce shine and provide the look of apparent age. At both bridge approaches metal beam guard rail (MBGR) has been installed with an MBGR terminal section, avoiding the need for crash cushions. The guard rail and terminal section have been chemically darkened for the same reasons as the bicycle railing. To the greatest degree possible, excess soil has been placed at the base of the soldier pile wall to reduce the visible area of the wall face.

Except for areas where plants required removal, desirable existing vegetation within the construction zone has been cut off at ground level instead of being cleared and grubbed, so rootstocks are preserved for eventual resprouting. After construction, all disturbed areas were covered with a one-inch layer of compost and seeded with native

grasses and forbs. Invasive weeds within the project work areas were killed and removed.

In addition to erosion control seeding and weed control, native plants, including ceanothus and willow were planted wherever feasible in disturbed areas and irrigated with a temporary sprinkler system. A one-year plant establishment period was included as part of the contract to assure planting success. During this time, plants have been irrigated and weeds have been controlled within the entire construction area.

Appendix A Climate Change

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

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

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

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

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing

with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

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

AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan, (which includes market mechanisms) and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.”

Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger) further directs state agencies to begin implementing AB 32, including the recommendations made by the California's Climate Action Team.

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

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

Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate

change into Departmental decisions and activities. This policy contributes to the Department's stewardship goal to preserve and enhance California's resources and assets.

Federal

Although climate change and GHG reduction is a concern at the federal level, currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the U.S. Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - Federal Leadership in Environmental, Energy and Economic Performance.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or

contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009 . On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO₂) per mile, (the equivalent to 35.5 miles per gallon [MPG] if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

Project Analysis

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 contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

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

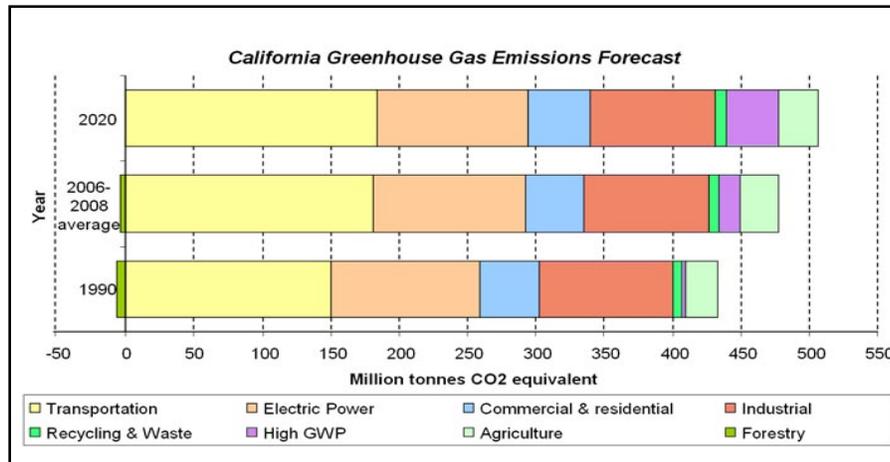


Figure 3 California Greenhouse Gas Forecast
 Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

The Department 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, the Department has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.

The purpose of this Emergency Project was to stabilize the failing slope and restore the southbound lane, which was lost due to a large landslide on February 6, 2010. The completed project consists of an 825-foot long soldier-pile tieback wall and reconstruction of both the northbound and southbound lanes and shoulders. The roadway has been restored to its original condition and has not added any additional capacity, and operational GHG emissions are not expected as a result of the project.

Prior to completion of the project, the roadway narrowed at this location to approximately 12 feet, requiring traffic control at each end of slide. Vehicles attempting to pass through this location were required to queue and idle for up to ten minutes while vehicles coming from the opposite direction were allowed to pass. Construction of the project has restored normal operating conditions and vehicles can now pass through the project site rather than idling in queues at either end of the project location

Construction Emissions

Greenhouse gas 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.

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

CEQA Conclusion

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

Greenhouse Gas Reduction Strategies

AB 32 Compliance

The Department continues to be actively involved on the Governor's Climate Action Team as ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the

targets set forth in AB 32. Many of the strategies the Department 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,



Figure 5: Mobility Pyramid

education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade. 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 are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 5: The Mobility Pyramid.

The Department 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. The Department works

closely with local jurisdictions on planning activities but does not have local land use planning authority. The Department assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; the Department is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB.

Table 1 summarizes the Departmental and statewide efforts that the Department is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 1 Climate Change/CO₂ Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix	1.2	4.2
				25% fly ash cement mix > 50% fly ash/slag mix	.36	3.6
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

The following measures were also included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. Landscaping reduces surface warming, and through photosynthesis, decreases CO₂. The project included planting native plants on adjacent slopes above and below the reconstructed roadway.
2. According to the Department's Standard Specifications, the contractor must comply with all of the local Air Pollution Control District's (APCD) rules, ordinances, and regulations regarding to air quality restrictions. At least once daily watering of all disturbed soil areas was conducted. Caltrans also requires Contractors to use California Air Resources Board approved low-sulfur diesel fuel in all diesel construction equipment.

Adaptation Strategies

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

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The [Progress Report of the Interagency Climate Change Adaptation Task Force](#) recommends that the federal government implement actions to expand and strengthen the nation’s capacity to better understand, prepare for, and respond to climate change.

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

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009)¹, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

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

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2012 to advise how California should plan for future sea level rise. The report is to include:

¹ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

² Pre-publication copies of the report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, were made available from the National Academies Press on June 22, 2012. For more information, please see http://www.nap.edu/catalog.php?record_id=13389.

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

Prior to the release of the final Sea Level Rise Assessment Report, 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. 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

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as the Department as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

The project is located along Highway 1 within the Land Use Plan for the Big Sur Coast Segment of the Monterey County Local Coastal Program. The project has an expected serviceable life span of about 50 years. According to values adopted in 2011 by the Ocean Protection Council, we can anticipate a maximum sea level rise at this location of 55 inches by 2100. Highway 1 at this location is approximately 375 feet above sea level; the foundation of the retaining wall structure reaches to approximately 325 feet above sea level. The separation between the highest anticipated sea level during the life of the project and the project itself is substantial, therefore the project is not expected to be affected by sea level rise inundation due to climate change and no adaptive measures would be required.

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

transportation system vulnerability to climate change, including the effect of sea level rise.

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 effects, 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.

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

Appendix B Project Area Prior to Landslide

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
5	MON	1	22.5 / 22.9		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	No.	Exp.
CIVIL		

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

Notes:
1) The area south of the culvert outlets is to remain undisturbed.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISOR BY

DATE REVISOR

Appendix C Project Area Prior to Construction



Appendix D Photos of Completed Project



The completed project as seen from the southbound lane



The completed project as seen from the northbound lane



The completed wall as seen from the north, below the roadway.