



Pasatiempo Shoulder Widening

Initial Study with Proposed Mitigated Negative Declaration



On State Route 17 between the southbound exit ramp to State Route 1 and the entrance ramp from Pasatiempo Drive



05-SCR-17-0.1/0.4
EA 05-1C670



General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Santa Cruz County in California. The document explains the reasons the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

Read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans district office at 50 Higuera Street, San Luis Obispo, California 93401. Additional copies are available at the Santa Cruz Central Library at 224 Church Street, Santa Cruz, CA 95060. An electronic copy is available on the Caltrans website www.dot.ca.gov/dist05/projects under "Santa Cruz County" and the City's website www.cityofsantacruz.com under "Latest News".

- Attend the public information meeting on Wednesday April 6, 2016 at the Brancifore Middle School in Santa Cruz from 5:30 p.m. to 7:30 p.m.
- Tell us what you think. If you have any comments about the proposed project, please attend the public information meeting and/or send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Scott Smith, Senior Environmental Planner, Environmental Division, California Department of Transportation, 855 M Street, Suite 200, Fresno CA 93721.
- Submit comments via email to: scott.smith@dot.ca.gov.
- Submit comments by the deadline: **April 15, 2016**.

What happens next:

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

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Scott Smith, Senior Environmental Planner, 855 M Street, Suite 200, Fresno, CA 93721; (559) 445-6172 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY/Voice), or 711.

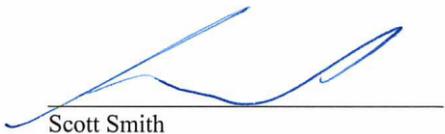
Construct a retaining wall and widen the outside shoulder of State Route 17
in Santa Cruz County between the southbound exit ramp to State Route 1
(post mile 0.1) to the entrance ramp from Pasatiempo Drive (post mile 0.4)

**INITIAL STUDY
with Proposed Mitigated Negative Declaration**

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

12/28/15
Date of Approval


Scott Smith
Senior Environmental Planner
California Department of Transportation

The following person(s) may be contacted for more information about this document:

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Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to improve the safety of southbound State Route 17 in Santa Cruz County from the southbound exit ramp to State Route 1 (post mile 0.1) to the entrance ramp from Pasatiempo Drive (post mile 0.4). Due to the higher-than-average collision rate, the project proposes to construct a retaining wall and widen the outside shoulder to 10 feet to improve drivers' stopping sight distance.

Determination

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

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

The project would have no effect on: agriculture/forest resources, air quality, floodplain, geology, soils, hazards, hazardous materials, hydrology, water quality, land use planning, mineral resources, noise, population, housing, public services, recreation, transportation, traffic, utilities or service systems.

The proposed project would have no significant effect on biological resources because mitigation measures listed for visual resources would reduce potential effects to insignificance.

In addition, the proposed project would have no significantly adverse effect on visual resources because the following mitigation measures would reduce potential effects to insignificance:

- The top of the retaining wall would generally follow the natural contours of the land and would not be stepped to achieve elevation changes.
- The retaining wall would be battered to reduce its perceived scale as seen from adjacent viewpoints.
- Aesthetic treatment would be applied to above-roadway retaining walls and to the safety shape barrier.
- The local communities would be involved in determining retaining wall aesthetics. Wall aesthetics would be discussed with both the County of Santa Cruz and the City of Santa Cruz.
- Any required construction access roads, staging areas, or other disturbed areas would be re-graded if necessary to match their pre-construction contours.
- The maximum number of trees horticulturally possible would be replanted in the disturbed area above the retaining wall and at a density suitable for the species. Coast live oaks should be replanted within the project limits at a minimum ratio of 2:1.
- Shrubs would be planted between the new trees.
- The revegetation planting would include a temporary irrigation system to promote vegetative establishment.
- The revegetation planting would include a minimum three-year plant establishment contract.
- Wire mesh drapery above the retaining wall would be colored to match the adjacent natural ground (Design Option 1).
- Native shrub seed would be applied to the wire mesh area above the retaining wall (Design Option 1).
- If additional shotcrete is required on the slope above the retaining wall, it would be sculpted and colored to match the adjacent natural ground (Design Option 1).
- Where the concrete drainage gutter behind the retaining wall is visible, it would be colored to match the adjacent natural ground (Design Option 2 and Design Option 3).
- All personnel safety rail would follow the gradual contour of the wall top and would not be stepped to achieve elevation changes (Design Option 2 and Design Option 3).
- All safety cable rail posts and cables would be darkened (Design Option 2 and Design Option 3).

Scott Smith
Senior Environmental Planner
California Department of Transportation

Date

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Chapter 1 Proposed Project

1.1 Introduction

The The California Department of Transportation (Caltrans) proposes to improve the safety of southbound State Route 17 in Santa Cruz County from the southbound exit ramp to State Route 1 (post mile 0.1) to the entrance ramp from Pasatiempo Drive (post mile 0.4). Due to the higher-than-average collision rate, the project proposes to construct a retaining wall and widen outside shoulder to 10 feet to improve stopping sight distance. Depending on the design option selected, the range of construction cost estimates for the "Build" alternative varies from \$5,024,000 to \$6,327,000 (December 2015). The right-of-way cost estimate is \$128,900 (December 2015). This project is proposed for funding in the 2014 State Highway Operation and Protection Program in the Safety Improvements Program (20.XX.201.010).

1.2 Purpose and Need

1.2.1 Purpose

This project is being proposed to improve the safety and operations of State Route 17 in Santa Cruz County from the southbound exit ramp to State Route 1 (post mile 0.1) to the entrance ramp from Pasatiempo Drive (post mile 0.4) by widening the outside shoulder to 10 feet to improve stopping sight distance. To accommodate this widened shoulder, the hill next to the southbound lanes would be excavated and a retaining wall would be constructed. The build options propose to move the cut slope out of drivers' sight line by constructing a retaining wall with a concrete barrier at the bottom.

1.2.2 Need

This location of State Route 17 has a higher-than-average number and severity of traffic collisions. Sight distance is limited because of the steep cut slope near the edge of the traveled way on the inside of the curve, and there is a higher-than-expected collision rate due in-part to poor stopping sight distance. There is a pattern of vehicles coming upon congestion too fast and, after evasive action, hitting the existing cut slope or median barrier, often on a wet surface. In addition, rear-end collisions have occurred.

Twenty-seven collisions were reported from November 1, 2008 to July 31, 2010, with 10 of those being injury collisions at this location of State Route 17. There were no fatal collisions. Twenty-two of the 27 collisions were roadway departure, 3 were rear-end, and 2 were broadside. Sixteen of the 27 collisions were on wet surface. Table 1.1 shows collision rates for the project location and compares that to the average collision rate of similar state facilities.

Table 1.1 Collision Rate Per Million Vehicle Miles

Location	Actual			Average		
	Fatal	F+I	Total	Fatal	F+I	Total
State Route 17	0	0.48	1.30	0.008	0.12	0.37

1.3 Project Description

Caltrans proposes to improve the safety of southbound State Route 17 in Santa Cruz County from the southbound exit ramp to State Route 1 (post mile 0.1) to the entrance ramp from Pasatiempo Drive (post mile 0.4). Because of a higher-than-average collision rate there, the project proposes to construct a retaining wall and widen the outside shoulder to 10 feet to improve drivers' stopping sight distance.

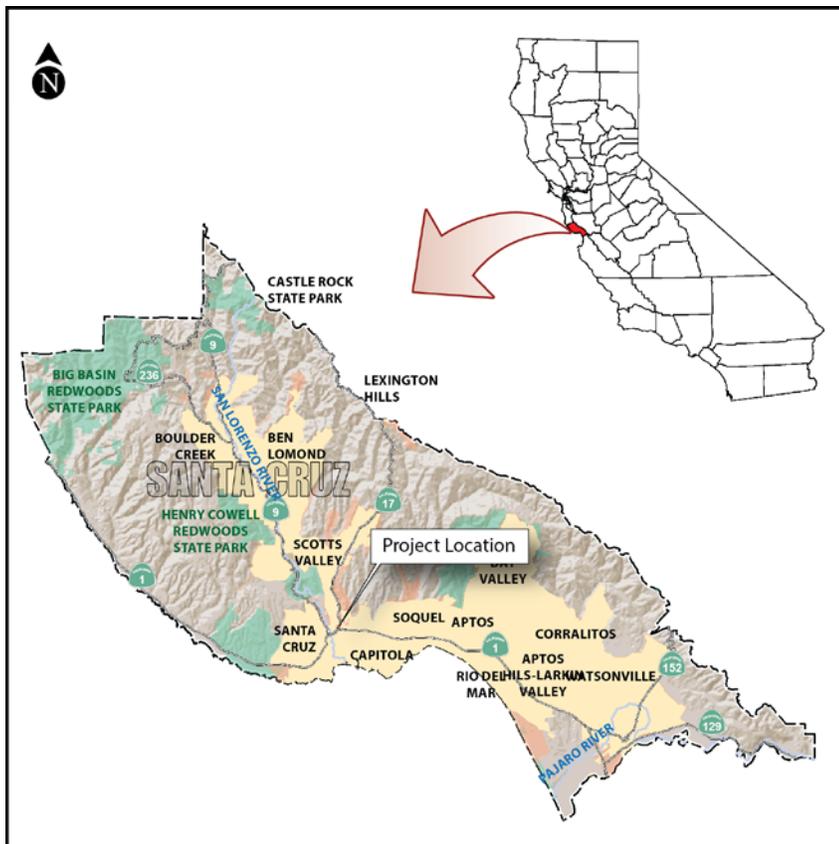


Figure 1-1 Project Vicinity Map

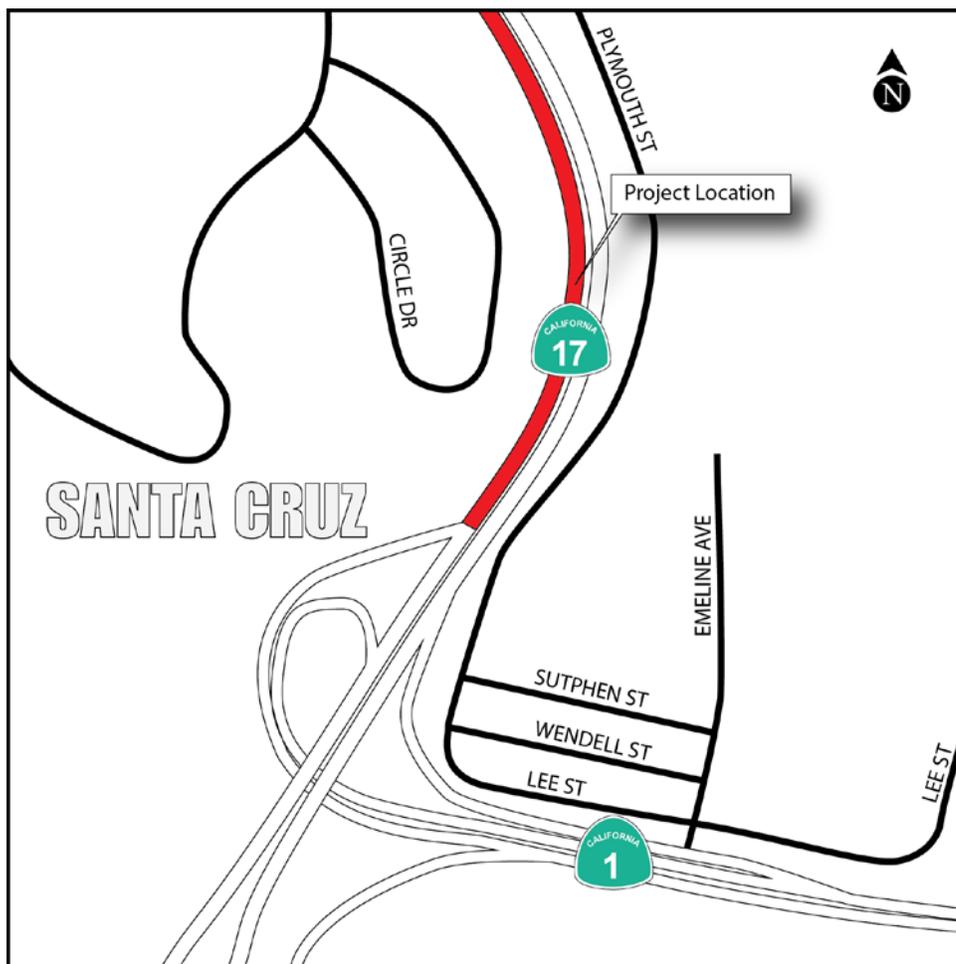


Figure 1-2 Project Location Map

1.4 Project Alternatives

1.4.1 Build Alternative

For this stretch of southbound State Route 17 in Santa Cruz County, Caltrans proposes to widen the outside shoulder to 10 feet to improve drivers' stopping sight distance. To accommodate this widened shoulder, the hill next to the southbound lanes would be excavated and a retaining wall would be constructed.

The build options propose to move the cut slope out of the sight line by constructing a retaining wall with a concrete barrier at the bottom. At the southern end of the project area, an existing gully would require an approximately 40-foot-long downslope

retaining wall with a concrete barrier. The area between the wall and the edge of the traveled way on the auxiliary lane would be paved, including a 10-foot shoulder. The paved area would be as wide as 25 feet.

Three retaining wall options are proposed. Each of the wall options would be approximately the same size, about 750 feet long and varying in height from about 5 to 20 feet. Aesthetic treatment such as texturing and/or coloring would be included with each of the wall options. The determination of wall type would be based in part on geotechnical information gathered during the design phase of the project. The retaining wall options are as follows:

Design Option 1—Soil Nail Wall

This design option proposes to construct a soil nail wall as the retaining wall for the cut slope area. Drainage work would include replacing existing drainage inlets and installing additional inlets in front of the wall connected to a concrete trunk line that drains into an existing inlet. Most of the work would be performed in the state right-of-way, but permanent easements would be required for the soil nails at certain locations.

Although both soil nail and soldier pile walls use top-down construction methods, soil nail wall construction does not require machinery/equipment on the top. Workers with some hand tools would be needed to grade or, as recommended, install an anchored wire mesh drapery above the wall to stabilize the shallow surface failures and slumps to prevent material from reaching the highway. The area of impact on the vegetation and trees from the face of the soil nail wall would be 5 feet to 7 feet. Drainage gutter and cable railing would not be required on top of the wall, but a shotcrete apron may be necessary. In front of the soil nail wall on the highway side, drainage inlets and a reinforced concrete pipe trunk line would be constructed to drain into an existing cross-drainage culvert.

Design Option 2—Soldier Pile Wall

This design option proposes to construct a soldier pile as a retaining wall for the cut slope area. Drainage work would include a gutter, risers and inlets at the back of the wall, plus replacing existing drainage inlets and installing additional inlets in front of the wall. Most of the work would be performed in the state right-of-way, but permanent easements would be required for the soil nails at certain locations.

Soldier pile walls require a top-down construction method. The area of impact on vegetation and trees beyond the face of the soldier pile wall is assumed to be 25 feet to 30 feet because there would be drilling machinery and other equipment required for construction on the top of the cut slope. This disturbed area would be available for revegetation after construction. On top of the soldier pile wall, a parapet with cable railing as well as a gutter would be required.

Design Option 3—Poured-in-Place Concrete (Type 1) Wall

This design option proposes to construct a poured-in-place concrete retaining wall for the cut slope area. Caltrans standards refer to this type wall as a “Type 1” wall. Drainage work would include a gutter, risers and inlets at the back of the wall, plus replacing existing drainage inlets and installing additional inlets in front of the wall.

This type of wall uses a bottom-up construction method. The area of impact on vegetation and trees would be at least 25 feet to 30 feet beyond the face of the wall because of the need for shoring up areas where excavation backslope would not be feasible. On top of the retaining wall, a parapet with cable railing as well as a gutter would be required. This design option will require right-of-way acquisitions.

1.4.2 No-Build (No-Action) Alternative

The No-Build Alternative would not make any improvements to the existing facility except for routine maintenance and would not address any elements of the project’s purpose and need.

1.5 Permits and Approvals Needed

A 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife would be required. The work would also require obtaining coverage from a Nationwide permit for compliance with Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers, and a related Section 401 Water Quality Certification from the Regional Water Quality Control Board.

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	1602 Streambed Alteration Agreement	Early coordination
U.S. Army Corps of Engineers	Nationwide 404 Permit	Early coordination
Regional Water Quality Control Board	401 Water Quality Certification	Early coordination

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

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

Human Environment

- Land Use – The proposed project is consistent with existing and future state, regional, and local land use plans and programs. This project is not within the coastal zone. No Wild and Scenic Rivers occur within the project limits. No public parks and/or recreational facilities would be affected by this project. (Draft Project Report – November 2015)
- Growth – This project would not promote growth.
- Farmlands/Timberlands – No agricultural or timberland resources would be affected by this project. (Draft Project Report – November 2015)
- Community Impacts – This project supports the existing community character and cohesion. Some minor property acquisitions will be required but would not result in any relocations. There are no environmental justice issues. (Draft Project Report – November 2015)
- Utilities/Emergency Services – Utilities and emergency services would not be disrupted by this project. (Draft Project Report – November 2015)
- Traffic and Transportation/Pedestrian and Bicycle Facilities – There are no pedestrian or bicycle facilities within the project limits. (Draft Project Report – November 2015)
- Cultural Resources – No historic properties or cultural resources would be affected by this project. (HPSR – October 2015, HRER – October 2015, Section 106 Close Out Memo – November 2015)

Physical Environment

- Hydrology and Floodplain – This project is not within the 100-year floodplain. (Draft Project Report – November 2015)
- Water Quality and Storm Water Runoff – Special provisions in the construction contract and under permits would be used to avoid adverse impacts to water quality and storm water runoff. (Draft Project Report – November 2015)

- Geology/Soils/Seismic/Topography – No known earthquake faults are in the project area. With no known faults or low-potential soil types in the project, liquefaction is not likely. (Geotechnical Report, 2015)
- Paleontology – No known paleontological resources or unique geologic features are within the vicinity of the project. (Paleontology Memo, 2015)
- Hazardous Waste/Materials – Any potentially hazardous materials would be handled and disposed of in accordance with all appropriate laws and regulations. (Initial Site Assessment Memorandum, April 2015)
- Air Quality – The project would not violate any air-quality standard because the work to install the culvert, headwall and outfall structures would have no long-term effects on local air quality. Also, work would not contribute to any existing or projected air quality violation. (Air Quality Report, October 2015)
- Noise – During construction, the project would generate minor short-term noise emissions and groundborne vibration. (Noise Technical Report, October 2015)

Biological Environment

- Natural Communities – The project would incur a temporary loss of existing oak habitat. Discussion of the replacement plantings of these trees is discussed in the Visual Section 2.1.1. Special provisions in the construction contract would be used to avoid impacts to roosting bats and nesting birds. (Natural Environment Study – August 2015)
- Wetlands and Other Waters – Special provisions in the construction contract and under permits would be used to avoid adverse impacts to a seasonal stream.
- Plant Species – The proposed project will have no effect on the following federally listed plant species identified in the Natural Environment Study – August 2015. Additionally, there will be no impacts to federally designated critical habitat for any of the federally listed plant species identified in the Natural Environment Study – August 2015.
- Animal Species – The proposed project will have no effect on the following federally listed plant species identified in the Natural Environment Study – August 2015. Also, there will be no impacts to federally designated critical habitat for any of the federally listed plant species identified in the Natural Environment Study – August 2015.
- Threatened and Endangered Species – This project would have no effect on threatened and endangered species. (Natural Environment Study – August 2015)
- Invasive Species – Special provisions in the construction contract would be used to avoid invasive species impacts. (Natural Environment Study – August 2015)

2.1 Human Environment

2.1.1 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). To further emphasize this point, the Federal Highway Administration in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

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

Affected Environment

State Route 17 is designated as Eligible in the State Scenic Highway system. State Route 17 in Santa Cruz County serves local and interregional traffic made up mostly of recreationists, commuters, and commercial users.

Through the project area, State Route 17 is a four-lane freeway with 12-foot-wide lanes. The highway facility in the project area includes concrete median barrier and metal beam guardrail at various locations along the northbound and southbound road shoulders (see Figure 2-1).



Figure 2-1 Existing Condition

The view of the existing slope is considered to be of moderately high baseline visual quality. The well-vegetated character of the slope is somewhat moderated by occasional pockets of eroded soil and glimpses of overhead utilities.

Overall, the project site contributes to the vegetated character of the State Route 17 corridor valued in local planning policy. The vividness or memorability rating is moderate because views of well-vegetated slopes such as this are relatively common along State Route 17 and throughout the region. The visual intactness is moderately high because few non-typical visual features are present, and no particularly contrasting or uncharacteristic elements are seen. The unity rating is slightly above average because, although many aspects of the view are harmonious, elements such as the roadway, high volume of vehicle traffic, signage, and overhead utilities detract somewhat from the scene.

Environmental Consequences

The project would remove all existing vegetation from the lower and mid-sections of the slope. Above the wall, all existing vegetation approximately 5 feet to 7 feet behind the face of the wall would be removed. A small portion of the slope above the wall would be covered with wire mesh and erosion control seeding. Existing trees and other vegetation between the wire mesh area and the adjacent neighborhood would be saved.

Design Option 1 proposes a soil nail type wall (see Figure 2-2), which would include the application of shotcrete on the wall face. Shotcrete does not use form liners typical of other concrete wall types. Instead, the application is sprayed on the wall face and hand-sculpted into the desired aesthetic appearance. This type of concrete application lends itself to a more organic-appearing surface treatment such as the faux-rock slope shown in Figure 2-2. Because this Design Option has no drainage gutter behind the wall, no safety cable railing would be required along the top of the wall.



Figure 2-2 Proposed Condition – Design Option 1 – Soil Nail Wall

The project would result in a noticeable visual change. The loss of mature vegetation and introduction of a large built wall structure would add to the urban character of the area. This change would be offset, however, by the aesthetic treatment of the wall face. The faux-rock treatment would minimize the built characteristics of the wall and maintain a more natural (though less vegetated) appearance for the site. The wider highway shoulders and wall placement would create a more open character and larger-scale highway facility through the project location.

In terms of the Visual Quality Evaluation rating, implementation of Design Option 1 would result in a slight decrease in the vividness, or memorability, rating. The proposed wall would be more visually dominant than the current vegetated slope, and its large scale would be somewhat inconsistent with the other walls along the corridor, as well as the generally vegetated character of the route. The visual intactness of this design option would be reduced slightly because of the large scale of the wall and its highly visible location.

Although retaining walls are part of the overall roadside environment along Highway 17, the project wall would be more noticeable and uncharacteristic than the others because of its larger size and location near a primary entrance to the city. This increased noticeability would also reduce the effectiveness of potential project features intended to visually blend the project with its surroundings. The visual unity of the project would also be reduced to some degree by introducing new geometric forms onto the previously vegetated hillside.



Figure 2-3 Proposed Condition – Design Options 2 and 3– Soldier Pile Wall and Cast-in-Place Wall

Design Options 2 and 3 would remove all of the existing vegetation from the lower and mid-sections of the slope. In addition, above the wall, all existing vegetation approximately 25 feet to 30 feet behind the face of the wall would be removed. See Figure 2-3. Existing trees and other vegetation within the adjacent neighborhood would be saved.

The aesthetic treatment for the wall face of Design Options 2 and 3 would be created by using a formliner, similar to a mold into which concrete is poured. This method of aesthetic application lends itself to more detailed, architectural designs such as placed-stone, brick patterns or other built-looking designs. Because these design options would include a drainage gutter behind the wall, safety cable railing would be required along the top of wall.

Design Options 2 and 3 would cause a noticeable change in visual character. Similar to Design Option 1, the loss of mature vegetation and introduction of a large built wall structure would add to the urban character of the area. This change would be offset by the aesthetic treatment of the wall face; the more formal look of these wall types would appear as intentionally constructed roadside elements, rather than naturally occurring cut slopes.

Tree removal for Design Options 2 and 3 would be more noticeable than with Design Option 1. Loss of vegetative screening would open up partial views from the highway to some of the residences in the adjacent neighborhood along West Circle Drive. Existing utility poles and overhead lines would become more visible from highway viewpoints. Wider highway shoulders and wall placement would create a more open, larger-scale highway facility through the project area.

Implementation of Design Option 2 or Design Option 3 would result in a minor reduction of the vividness rating. This is because although the proposed wall would be more memorable than the current vegetated slope, many viewers may not consider the change to be a positive one. The large scale of the wall and more formal aesthetic appearance would be distinct from the other walls along the corridor. Though retaining walls are part of the overall roadside environment along State Route 17, the visual intactness rating would be reduced because the project wall would be more noticeable than the others because of its larger size and location along a main entrance to the city. This increased noticeability would also reduce the effectiveness of potential project features intended to visually blend the project with its surroundings. The visual unity of the setting would also be reduced with the introduction of new geometric forms onto the hillside, removal of mature trees, and greater visibility of overhead utilities.

Cumulative Impacts

A number of highway projects have been constructed along State Route 17 in recent years. Curve corrections, shoulder widening, retaining walls, guardrail and other roadside safety projects have become visible along the corridor. In the project vicinity, two important highway projects are currently in the planning or design phase. A safety improvement project is proposed along the southbound off-ramp to Highway 1 just south of this project, which would realign the off-ramp and construct an approximately 200 to 400 foot long retaining wall. Approximately 0.3 mile north of the project, a highway sediment-control project is currently being designed to fix

drainage systems, repair erosion, and permanently remove most of the vegetation along about half a mile of highway roadside.

The shoulder widening project, when seen in the visual context of these other projects, would have a cumulative change on the vegetated character of the State Route 17 corridor approaching the City of Santa Cruz. The visual change would be noticeable, but not unexpected to viewers because the area is transitional, from the vegetated, less-developed inland areas to the urban land uses of Santa Cruz and the coastal communities. The avoidance and mitigation measures mentioned below would help reduce the cumulative urbanizing effect to the corridor.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would reduce the project's potential visual impact as seen from State Route 17 and the surrounding area:

The following are common measures to be applied to all design options:

1. The top of the retaining wall would generally follow the natural contours of the land and would not be stepped to achieve elevation changes.
2. The retaining wall would be battered to reduce its perceived scale as seen from adjacent viewpoints.
3. Aesthetic treatment would be applied to above-roadway retaining walls and to the safety shape barrier.
4. The local communities would be involved in determining retaining wall aesthetics. Wall aesthetics would be discussed with both the County of Santa Cruz and the City of Santa Cruz.
5. Any required construction access roads, staging areas, or other disturbed areas would be re-graded if necessary to match their pre-construction contours.
6. The maximum number of trees horticulturally possible, with emphasis on Coast live oaks, would be replanted in the disturbed area above the retaining wall and at a density suitable for the species.
7. Shrubs would be planted between the new trees.
8. The revegetation planting would include a temporary irrigation system to promote vegetation establishment.
9. The revegetation planting would include a minimum three-year plant establishment contract.

In addition to the common measures listed above, the following measures would apply to Design Option 1:

10. Wire mesh drapery above the retaining wall would be colored to match the adjacent natural ground.
11. Native shrub seed would be applied to the wire mesh area above the retaining wall.
12. If additional shotcrete is required on the slope above the retaining wall, it would be sculpted and colored to match the adjacent natural ground.

In addition to the common measures listed above, the following measures would apply to Design Option 2 and Design Option 3:

13. Where the concrete drainage gutter behind the retaining wall is visible, it would be colored to match the adjacent natural ground.
14. All personnel safety rail would follow the gradual contour of the wall top and would not be stepped to achieve elevation changes.
15. All safety cable rail posts and cables would be darkened.

2.2 Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of greenhouse gases generated by human activity, including carbon dioxide (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 United States, the main source of greenhouse gas 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 of greenhouse gas-emitting sources. The dominant greenhouse gas emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: "Greenhouse Gas Mitigation" and "Adaptation." "Greenhouse Gas Mitigation" is a term for reducing greenhouse gas emissions 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).¹

There are four main strategies for reducing greenhouse gas emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower greenhouse gas-

¹ http://climatechange.transportation.org/ghg_mitigation/

emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.²

Regulatory Setting

State

With passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by 2020, and 3) 80 percent below 1990 levels by 2050. In 2006, this goal was further reinforced with passage of Assembly Bill 32.

Assembly Bill 32 (AB 32), Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall greenhouse gas emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 18, 2006): This order established the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research to develop recommended amendments to the California Environmental Quality Act (CEQA) guidelines for addressing greenhouse gas emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill required the California Air Resources Board to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities

² http://www.fhwa.dot.gov/environment/climate_change/mitigation/

Strategy” that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State’s long-range transportation plan to meet California’s climate change goals under AB 32.

Federal

Although climate change and greenhouse gas reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing greenhouse gas emissions reductions and climate change at the project level. Neither the U.S. Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration has issued explicit guidance or methods to conduct project-level greenhouse gas analysis.³ The Federal Highway Administration supports the approach that 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 assist in 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 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 outlined by the Federal Highway Administration to lessen climate change impacts correlate with efforts that the State is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

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 Executive Order 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gas internally in federal agency missions, programs and operations, but also directs 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.

U.S. EPA’s authority to regulate greenhouse gas emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that greenhouse gases meet the definition of air pollutants under the existing Clean

³ To date, no national standards have been established regarding mobile source greenhouse gas, nor has U.S. EPA established any ambient standards, criteria or thresholds for greenhouse gases resulting from mobile sources.

Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six greenhouse gases constitute a threat to public health and welfare. It is the Supreme Court's interpretation of the existing act and U.S. EPA's assessment of the scientific evidence that form the basis for the U.S. EPA's regulatory actions. The U.S. EPA in conjunction with the National Highway Traffic Safety Administration issued the first of a series of greenhouse gas emission standards for new cars and light-duty vehicles in April 2010.⁴

The U.S. EPA and the National Highway Traffic Safety Administration are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced greenhouse gas emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever greenhouse gas regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle greenhouse gas regulations.

The final combined standards that made 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 implemented by this program are expected to reduce greenhouse gas 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 August 28, 2012, the U.S. EPA and National Highway Traffic Safety Administration issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of greenhouse gas emissions.

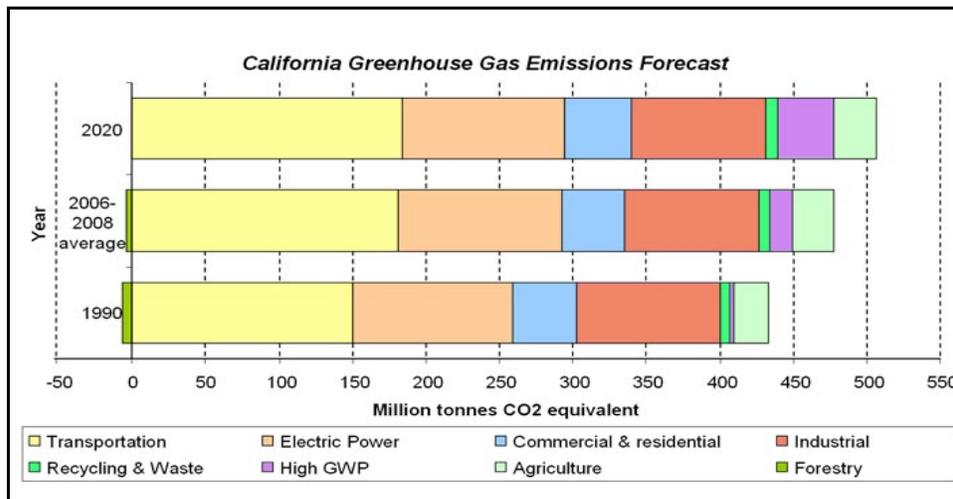
The complementary U.S. EPA and National Highway Traffic Safety Administration standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel-efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO₂ emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model-year 2014 to 2018 heavy-duty vehicles.

⁴ <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

Project Analysis

An individual project does not generate enough greenhouse gas 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 greenhouse gas.⁵ 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 to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce greenhouse gas emissions. As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board released the greenhouse gas inventory for California (forecast last updated: October 28, 2010). See Figure 2-4.



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

Figure 2-4 California Greenhouse Gas Forecast

⁵ 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 South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project-Level NEPA Analysis, July 13, 2009).

The forecast is an estimate of the emissions expected to occur in 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 greenhouse gas inventory for 2006, 2007 and 2008.

Caltrans and its parent agency, the State Transportation Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California’s greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.

One of the main strategies in Caltrans’ Climate Action Program to reduce greenhouse gas emissions is to make California’s transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0-25 miles per hour (see Figure 2-5). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors, greenhouse gas emissions, particularly CO₂, may be reduced.

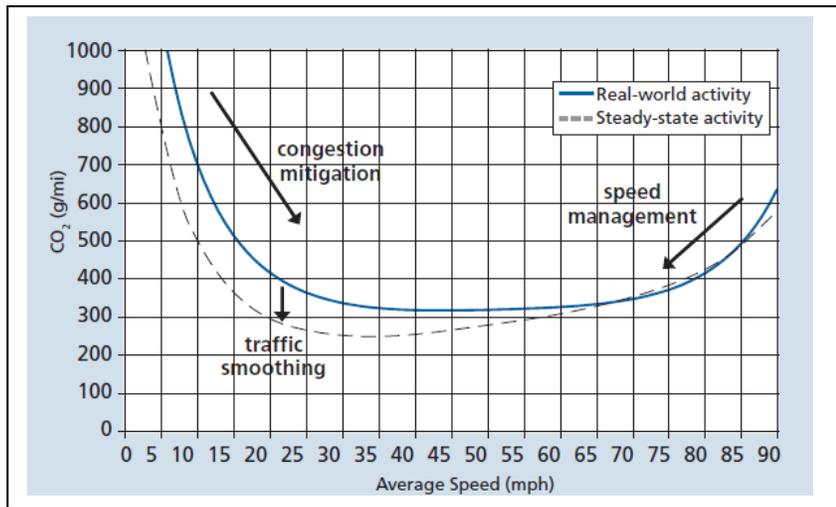


Figure 2-5 Possible Effect of Traffic Operation Strategies in Reducing On-Road CO₂ Emissions

The proposed project would have minimal or no increase in greenhouse gas emissions during operation. Construction emissions will be unavoidable, but there will likely be long-term greenhouse gas benefits by improved operation.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction greenhouse gas 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 greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

California Environmental Quality Act Conclusion

Despite these estimated reductions, there are also limitations with EMFAC and with assessing what a given CO₂ emissions increase means for climate change. Therefore, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Caltrans continues to be involved on the Governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger's Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in greenhouse gas emissions, while accommodating growth in population and the economy. The 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 shown in Figure 2-6: Mobility Pyramid.

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 works closely with local jurisdictions on planning activities, but does not have local land use planning authority. Caltrans assists 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 ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by

participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and California Air Resources Board.

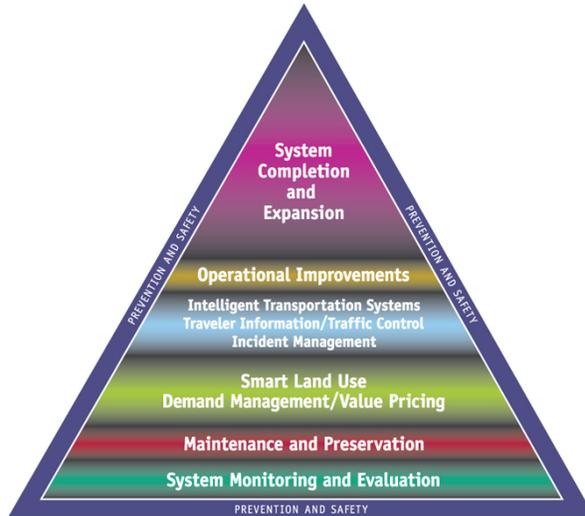


Figure 2-6 Mobility Pyramid

Caltrans is also working toward enhancing the State’s transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under SB 375 (Steinberg 2008), SB 391(Liu 2009) requires the State’s long-range transportation plan to meet California’s climate change goals under AB 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. The plan defines performance-based goals, policies, and strategies to achieve our collective vision for California’s future, statewide, integrated, multimodal transportation system.

The purpose of the California Transportation Plan is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the California Transportation Plan 2040 will identify the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the State’s transportation needs.

Table 2.1 summarizes Caltrans’ and statewide efforts that the Department is implementing to reduce greenhouse gas emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 2.1 Climate Change 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	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.007	2.17
Mainstream Energy & Greenhouse Gas 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, CARB, 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	0.0045	0.0065 0.45 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and construction industries		2.5% limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not estimated	Not estimated
Total					2.72	18.18

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Caltrans policy that will ensure coordinated efforts to incorporate climate change into Caltrans' decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)⁶ provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

The following measures will also be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from the project:

1. Lighting—Using energy-efficient lighting, such as LED traffic signals, reduces the electricity needed to adequately illuminate the project. The project may install lighting at intersections.
2. Restricting idling time—According to the Caltrans' Standard Specifications, the contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations for air quality restrictions. Limiting the amount of time trucks and equipment are allowed to idle reduces greenhouse gas emissions from construction projects.

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, 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 Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011⁷, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical

⁶ http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml

⁷ <http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation>

natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

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, then-Governor Arnold Schwarzenegger signed Executive Order S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This order set in motion several agencies and actions to address the concern of sea level rise.

In addition to addressing projected 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)⁸, 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 Executive Order 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 state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation, and Housing Agency (now called the State Transportation Agency); 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 is developed and collected, the State's adaptation strategy will be updated to reflect current findings.

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report⁹ to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

- 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.

⁸ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

⁹ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at: http://www.nap.edu/catalog.php?record_id=13389.

- Range of uncertainty in selected sea level rise projections.
- 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.
- Discussion of future research needs regarding sea level rise.

In 2010, interim guidance was released by the Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the State's infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academy's study.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 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 on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data.

All projects that have filed a Notice of Preparation as of the date of Executive Order S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency (now called the State Transportation 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. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans 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, Caltrans 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, Caltrans will be able review its current design standards to determine what changes, if any, may be needed 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 Executive Order S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea

Level Rise Assessment Report.

Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, and public outreach. This chapter summarizes the results of the Department's efforts to identify, address, and resolve project-related issues through early and continuing coordination.

The following individuals were contacted to assess the potential for historic properties affected by the proposed project.

Mary McPherson, President,
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Pasatiempo, CA 95060

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Annie Murphy

Susan Lehmann
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Santa Cruz Museum of Art and History
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Marla Novo

Daniel P. Gregory

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Department of Parks and Recreation
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Sacramento, CA 95816-7100

Historic Resources Commission
Santa Cruz County Planning Department
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Santa Cruz, CA 95060

Chapter 4 List of Preparers

This document was prepared by the following Caltrans Central Region staff:

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Robert Carr, Transportation Landscape Architect. California Licensed Landscape Architect #3473. B.S. Landscape Architecture, California Polytechnic State University San Luis Obispo; 27 years of experience in visual impact assessment preparation. Contribution: Visual Impact Assessment.

Rajeev Dwivedi, Engineering Geologist. Ph.D., Environmental Engineering, Oklahoma State University, Stillwater; more than 20 years of environmental technical studies experience. Contribution: Air quality and noise studies.

Damon Haydu, Associate Environmental Planner (Archaeology). M.A., Cultural Resources Management, California State University at Sonoma; B.A., Anthropology, University of California at Santa Cruz; 23 years of experience in California prehistoric archaeology and historic archeology. Contribution: Archaeological Survey Report; Historic Properties Survey Report.

Kirsten Helton, Senior Environmental Planner. B.A., Economics, California State University, Fresno; more than 20 years of environmental planning experience. Contribution: Document review.

Matthew Palmer, Associate Environmental Planner. M.A., Organizational Management, University of Phoenix, Fresno; B.S., Environmental Science, California State University, Fresno; 15 years of environmental technical experience. Contribution: Wrote draft environmental document.

Robert Tibstra, Associate Environmental Planner (Natural Sciences). M.S., Biology, B.S., Biology (Ecology), California State University, Fresno; 20 years of experience as a professional biologist, including extensive field surveys, document preparation, and permitting experience. Contribution: Biological impact analysis.

Roger Valverde, Graphic Designer III. Certificate of Multimedia, Mount San Jacinto and California State University, Fresno; more than 25 years of visual design and public participation experience. Contribution: Prepared document graphics.

Appendix A California Environmental Quality Act Checklist

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapters 2 and 3 of this Initial Study. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 2 and 3.

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>
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 type="checkbox"/>	<input checked="" 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"/>
iv) Landslides?	<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
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 body 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 the body of the environmental document.

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?
- 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"/>
<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
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"/>
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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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) Result in 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 checked="" type="checkbox"/>	<input 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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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"/>
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"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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"/>

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

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March 2013

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

A blue ink signature of Malcolm Dougherty.

MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"

Appendix C Minimization and/or Mitigation Summary

This appendix is a summary of minimization and/or mitigation measures required.

Visual/Biological Resources

The project would result in less than significant impacts with mitigation to visual resources under CEQA. The following are proposed minimization and mitigation measures for these impacts.

Common measures to be applied to all Design Options:

1. The top of the retaining wall would generally follow the natural contours of the land and would not be stepped to achieve elevation changes.
2. The retaining wall would be battered to reduce its perceived scale as seen from adjacent viewpoints.
3. Aesthetic treatment would be applied to above-roadway retaining walls and to the safety shape barrier.
4. The local communities would be involved in determining retaining wall aesthetics. Wall aesthetics would be discussed with both the County of Santa Cruz and the City of Santa Cruz.
5. Any required construction access roads, staging areas, or other disturbed areas would be re-graded if necessary to match their pre-construction contours.
6. The maximum number of trees horticulturally possible, with emphasis on Coast live oaks, would be replanted in the disturbed area above the retaining wall and at a density suitable for the species.
7. Shrubs would be planted between the new trees.
8. The revegetation planting would include a temporary irrigation system to promote vegetation establishment.
9. The revegetation planting would include a minimum three-year plant establishment contract.

In addition to the common measures listed above, the following measures would apply to Design Option 1:

10. Wire mesh drapery above the retaining wall would be colored to match the adjacent natural ground.
11. Native shrub seed would be applied to the wire mesh area above the retaining wall.
12. If additional shotcrete is required on the slope above the retaining wall, it would be sculpted and colored to match the adjacent natural ground.

In addition to the common measures listed above, the following measures would apply to Design Option 2 and Design Option 3:

13. Where the concrete drainage gutter behind the retaining wall is visible, it would be colored to match the adjacent natural ground.
14. All personnel safety rail would follow the gradual contour of the wall top and would not be stepped to achieve elevation changes.
15. All safety cable rail posts and cables would be darkened.

List of Technical Studies

Air Quality Report

Noise Study Report

Water Quality Report

Natural Environment Study

Historical Property Survey Report

- Historic Resource Evaluation Report
- Historic Architectural Survey Report
- Archaeological Survey Report

Hazardous Waste Reports

- Initial Site Assessment

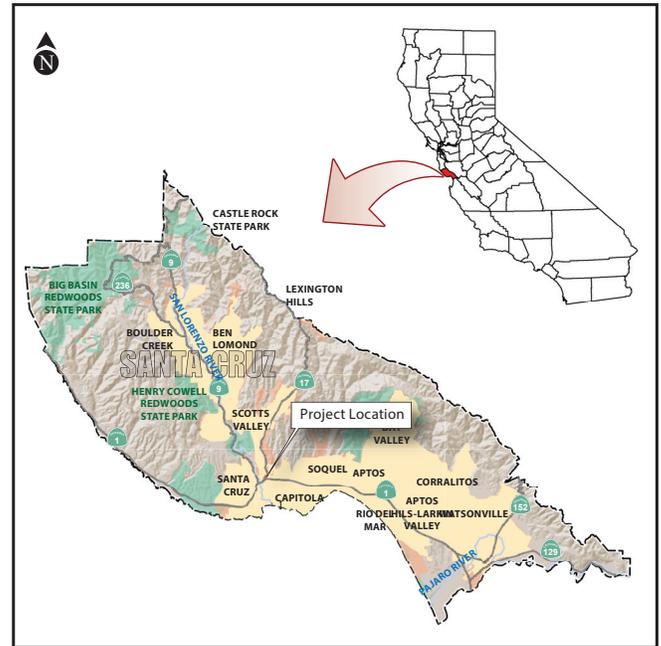
Scenic Resource Evaluation/Visual Assessment

Initial Paleontology Study



Pasatiempo Shoulder Widening

Initial Study with Proposed Mitigated Negative Declaration



For project updates and other project information, please go to <http://www.dot.ca.gov>

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