

State Route 84 Realignment and Widening



Initial Study/Environmental Assessment

State Route 84 (Vallecitos Road)

Pigeon Pass in Alameda County

04-ALA-KP 33.3/37.0

(PM 20.7/23.0)

04-172400

June 2004



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) have prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Alameda County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, the potential impacts from each of the alternatives, and the proposed avoidance, minimization and/or mitigation measures.

What should you do?

- Please read this Initial Study/Environmental Assessment.
- We welcome your comments. If you have any concerns regarding the proposed project, please attend the Public Information Meeting on June 16, 2004 and/or send your written comments to Caltrans by the deadline. Submit comments via postal mail to:

California Department of Transportation
Ron Kiaaina, Project Manager
P.O. Box 23660
Oakland, CA 94623-0660

- Submit comments via email to ron_kiaaina@dot.ca.gov.
- Submit comments by the deadline: July 7, 2004

What happens after this?

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

For individuals with sensory disabilities, this document could be made available in Braille, 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: Ron Kiaaina, Project Manager, P.O. Box 23660, Oakland, CA 95623-0660; (510) 286-4193 Voice, or use the California Relay Service TDD line at 1-800-735-2929.

SCH #
04-ALA-84-KP 33.3/37.0
(PM 20.7/23.0)
EA 04-172400

Realignment and widening of State Route 84 in Alameda County
Through the Vallecitos Hills / Pigeon Pass Area southwest of Livermore
KP 33.3/37.0 (PM 20.7/23.0)

INITIAL STUDY/ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (Federal) 42 USC 4332(2)(C)
(State) Division 13, Public Resources Code

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and

THE STATE OF CALIFORNIA
Department of Transportation

Date of Approval

John D. Webb
Chief, Office of Environmental Services
California Department of Transportation

Date of Approval

Division Administrator
Federal Highway Administration

Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to realign and widen a 3.7-kilometer (2.3-mile) portion of State Route (SR) 84 from kilometer post 33.3 to 37.0 (post mile 20.7 to 23.0) in the Vallecitos Hills/Pigeon Pass area of Alameda County.

The project will improve safety by upgrading the horizontal and vertical alignment of SR 84 to meet expressway design standards. The project proposes three alternatives having different horizontal and vertical alignments. Each alternative proposes to phase in climbing lanes over Pigeon Pass in both eastbound and westbound directions. Depending upon the alternative, the existing SR 84 would be eliminated or converted to a frontage road.

Determination

Caltrans has prepared an Initial Study, and determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would have no effect on air quality, land use, mineral resources, cultural resources, population and housing, floodplains, recreation, public services, transportation, traffic patterns, and utilities.
- The proposed project would have a less than significant effect on, farmlands, water quality, geology, soils, hydrology, and hazardous waste.
- Potential impacts to visual resources would be mitigated through the use of design features such as contour grading and slope-rounding, and by revegetation of disturbed areas.
- Potential impacts to water quality during construction would be mitigated through the use of Caltrans Best Management Practices.
- Potential impacts to riparian vegetation would be mitigated.

- Potential impacts to western burrowing owl, loggerhead shrike, red-tailed hawk, San Joaquin kit fox, vernal pool fairy shrimp, California linderiella fairy shrimp, California red-legged frog, California tiger salamander, and western pond turtle would be mitigated.
- Wetland impacts would be mitigated at an appropriate mitigation bank.

John D. Webb
Chief, Office of Environmental Services
California Department of Transportation

Date

Summary

This Initial Study (IS)/Environmental Assessment (EA) has been prepared to meet the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) for projects that could have adverse impacts on the environment. The following summary identifies major items of importance regarding the proposed project. Detailed project information is presented in the body of the document.

Proposed Action

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) are proposing a highway safety project on State Route (SR) 84 in Alameda County. The proposed project would realign and widen a 3.7-kilometer (km) (2.3-mile) section of SR 84 from kilometer post (KP) 33.3 to 37.0 (post mile [PM] 20.7 to 23.0) through the Vallecitos Hills, southwest of Livermore. State Route 84 within the project limits is currently a two-lane conventional highway with 3.6-meter (m) (12.0-foot [ft]) wide lanes and shoulders that are typically 0.3 m (1 ft) to 0.6 m (2 ft). The alignment of the existing roadway imposes driving restrictions such as limited sight distance and difficulties in negotiating sharp curves. The project under consideration would improve the existing horizontal and vertical alignment, which would result in improved safety and traffic operations. A second phase of this project would add a climbing lane over Pigeon Pass in both directions.

Project Alternatives

Three alternatives are proposed to meet the purpose and need of improving safety and traffic operations. All three alternatives improve the horizontal and vertical alignment to meet expressway design standards, provide 3.6-m (12.0-ft) wide lanes and 3.0-m (10.0-ft) wide shoulders and include climbing lanes over Pigeon Pass in both eastbound and westbound directions. All three alternatives provide a 3.6-m (12.0-ft) wide median. This median will accommodate left-turn pockets for vehicles accessing private properties along SR 84. All three alternatives require the relocation of a natural gas transmission pipeline located approximately 560 m (1837 ft) west of Pigeon Pass. A No Build Alternative, which would maintain existing conditions, is also included. All project alternatives are defined in detail in Chapter 2.

Impacts and Mitigation

This project would result in impacts to nine special status species including: western burrowing owl, loggerhead shrike, red-tailed hawk, San Joaquin kit fox, vernal pool fairy shrimp, California linderiella fairy shrimp, California red-legged frog, California tiger salamander, and western pond turtle. Impacts for each of the three alternatives are similar. Impacts to these species would be mitigated in consultation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service.

There would be impacts to 0.4 hectares (1.0 acres) of wetlands, which would be mitigated at a mitigation bank at a ratio determined prior to the permit process with input from the Army Corps of Engineers (ACOE). There would be 0.13 hectares (0.31 acres) of impacts to “other waters of the U.S.”. Most are temporary impacts from the addition of culverts. To minimize impacts from culvert installation Caltrans will restore banks to their original condition and revegetate with native species.

Ten parcels of property would be affected. Depending on the alternative, one residential relocation would be required. Fair market price would be paid for the property and relocation assistance provided.

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List of Technical Studies that are Bound Separately

- Air Quality and Noise Analysis
- Hazardous Waste Evaluation
- Historical Property Survey Report (HPSR)
 - Historic Resource Evaluation Report
 - Negative Archaeological Survey Report
- Natural Environment Study (NES)
- Biological Assessment (BA)
- Visual Impact Assessment (VIA)

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List of Abbreviated Terms

ac	acre
ACOE	United States Army Corps of Engineers
ADA	American Disabilities Act
APE	Area of Potential Effects
BMP	Best Management Practices
Caltrans	California Department of Transportation
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dbh	diameter at breast height
DOT	U.S. Department of Transportation
EPA	United States Environmental Protection Agency
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
ft	foot/feet
ha	hectare
in	inch
km	kilometer(s)
KP	kilometer post
m	meter(s)
mi	mile(s)
NEPA	National Environmental Policy Act
NEPA/404	National Environmental Policy Act/404
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
PM	post mile
RWQCB	Regional Water Quality Control Board
SCR	Senate Concurrent Resolution
SHPO	State Historic Preservation Office
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USFWS	United States Fish and Wildlife Service

Chapter 1 **Proposed Project**

1.1 Project Purpose and Need

The purpose of the project is to realign and widen a 3.7 km (2.3 mi) section of State Route (SR) 84 through the Vallecitos Hills/Pigeon Pass area in Alameda County. This project is being proposed because the segment of SR 84 that passes through the Vallecitos Hills/Pigeon Pass area has become functionally obsolete due to a combination of the existing features of the highway and increased volume of traffic. Shoulder widths do not meet current design standards. There are no opportunities to pass slower moving vehicles and no pull-outs exist within the project limits. This project would improve the existing horizontal and vertical alignment and bring this section of roadway up to current design standards.

Grades on SR 84 reach a maximum of 10.9% and at some locations stopping sight distance is limited by the curvature of the highway. This section of SR 84 is the most winding section in Alameda County. Southwest of the project area the road is fairly flat with large radius curves and a 90 km/h (55 mph) regulatory speed limit. Within the project area, the regulatory speed drops to 80 km/h (50 mph) with 25-, 30-, 35-, and 40-mph warning signs posted at numerous curves. At the northeast end of the project area SR 84 enters a more populated area, the regulatory speed remains 80 km/h (50 mph), and the road becomes flatter and less curving.

During peak hours, traffic is congested due to the winding alignment of the roadway through this area. This congestion has contributed to a collision rate that is higher than the statewide average. The average accident rate per million vehicle miles (acc/mvm) for a two-lane conventional highway is expected to be about 1.32 acc/mvm. The actual accident rate for SR 84 through the project area is 1.42 acc/mvm. Improving the alignment and widening the roadway is expected to lower the accident rate on this section of roadway.

1.2 Project Description

The project proposes to upgrade SR 84 to meet expressway design standards. Three design speed alternatives are considered: 80-, 90-, and 105-km/h (50-, 55-, and 65-mph). Each alternative has different horizontal and vertical alignments and depending

on funding will add climbing lanes over Pigeon Pass as a second phase of the project. The following project description is common to all three alternatives.

Climbing lanes: Each alternative will include climbing lanes over Pigeon Pass in both eastbound and westbound directions as a second phase of the project. The westbound climbing lane begins west of the signalized intersection at Ruby Hills Drive and SR 84 and merges back approximately 500 m (0.3 mi) west of Pigeon Pass. The eastbound climbing lane begins prior to the 6% uphill grade west of Pigeon Pass, continues over Pigeon Pass and either merges or continues to the intersection of Ruby Hills Drive, depending on the alternative. Adding climbing lanes for slower vehicles to be passed would increase traffic safety and improve operations.

Median and Lane Width: The two traveled lanes will each be 3.6 m (12.0 ft) wide. The first phase of the project will include a 1.8-m (6-ft) wide median buffer with 3.6-m (12-ft) wide turn-pockets where needed and 2.4-m (8-ft) wide shoulders. The second phase of the project will construct 3.0-m (10-ft) wide shoulders and a 3.6-m (12.0-ft) wide median, which will accommodate a left-turn pocket for vehicles accessing private properties along SR 84 and will also provide an acceleration lane for vehicles entering SR 84 from private properties.

Access: The project maintains access to existing driveways along the project's length. Access to a large parcel located south of SR 84 and west of Pigeon Pass will be provided via a proposed vehicular undercrossing. The proposed undercrossing structure is a structural steel plate arch culvert that is approximately 6.2 m (19.6 ft) wide by 5.4 m (18 ft) high and 40 m (131 ft) long. The undercrossing will also serve as a wildlife crossing. Another undercrossing for vehicles and wildlife will be located near the east end of the project.

Relocation of Utilities: The project would require the relocation of a 0.60-m (2.0-ft) diameter natural gas transmission pipeline and approximately 1900 m (6334 ft) of overhead electrical distribution lines.

Frontage Road: Depending upon the alternative, the existing SR 84 (Vallecitos Road) could be eliminated or ultimately be converted to a frontage road.

1.3 Project Background

Located southwest of the City of Livermore, a segment of SR 84 (also signed as Vallecitos Road) traverses the Vallecitos Hills on a winding alignment that generally

follows the natural topography (Figure 1.1). The crest of the roadway over the Vallecitos Hills is known locally as “Pigeon Pass”. This segment of SR 84 through the Vallecitos Hills was originally constructed in 1931 as a county road and later adopted by the State as a conventional highway. Today Vallecitos Road serves local traffic from Livermore and Pleasanton, and is heavily used by commuters heading to and from Silicon Valley. This section of SR 84 also serves as a bypass between I-580 and I-680.

The existing circuitous alignment has a regulatory speed of 80 km/h (50 mph) with 35-mph warning signs posted at numerous curves. State Route 84 has shoulders that vary in width from 0.3 m (1 ft) to 2.4 m (8 ft), but are typically less than 0.6 m (2 ft). The average daily traffic on SR 84 has increased from 12,800 vehicles per day in 1993 to 17,800 vehicles per day in 2002. Accident records show a higher than average accident rate for this segment of SR 84 through the Vallecitos Hills.

A project to improve safety and traffic operations on SR 84 through the Vallecitos Hills was initiated in 1998. A Project Study Report (PSR) was prepared and approved in 1999 for a 2.9 km (1.8 mi) long project to realign and widen SR 84 beginning at KP 34.2 (PM 21.3) and ending at KP 37.1 (PM 23.0). The proposed project would realign and widen SR 84 on either side of Pigeon Pass.

In January 2000, the Tri-Valley Transportation Council (TVTC) initiated agreements to begin work on a PSR for improving the SR 84 Corridor between Interstate (I)-580 and I-680. The TVTC is a joint powers agency made up of seven agencies: the Cities of Livermore, Dublin, San Ramon, Danville and Pleasanton, and Alameda and Contra Costa Counties. The TVTC has prepared a transportation plan for the Tri-Valley area, and each member agency has established a traffic impact fee to provide a portion of the funding for eleven projects of regional significance. One of the top priority projects is to improve SR 84 between I-580 and I-680.

In May 2000, the TVTC began work with Caltrans on a SR 84 Corridor PSR to identify and develop the ultimate geometric alignment for SR 84 between I-580 and I-680. The corridor generally conformed to the route adopted in November 1960 by the California Highway Commission, which moved a portion of SR 84 to the Isabel Avenue Corridor from its present alignment through the central part of the City of Livermore. A SR Transfer Report was prepared by the City of Livermore to officially transfer the existing SR through downtown Livermore (First Street) to the Isabel Avenue corridor by late 2003.

In addition to the alternatives prepared for the Isabel Avenue Corridor, the SR 84 Corridor PSR identified alternatives that would realign SR 84 through the Vallecitos Hills/Pigeon Pass area. Five possible alignments were studied from which two were recommended for further study in the SR 84 Corridor Project Report. The ultimate facility for SR 84 through the Vallecitos Hills/Pigeon Pass area is proposed as a 4-lane expressway having climbing lanes over Pigeon Pass. The typical cross section provides for a 6.6-m (22.0-ft) median with a concrete barrier, four 3.6-m (12.0-ft) wide lanes, 3.6-m (12.0-ft) wide climbing lanes (where needed) and two 3.0-m (10-ft) wide outside shoulders. The horizontal and vertical alignments would meet expressway standards for mountainous terrain.

The Project Development Team (PDT) developed three alternatives, for the current project under consideration based on varying design speeds for mountainous terrain. The design speed for an expressway in mountainous terrain can vary from 80 km/h (50 mph) to 130 km/h (81 mph) per the Highway Design Manual (HDM). Three viable alternatives are listed below:

- 80 km/h (50 mph) Design Speed Alternative
- 90 km/h (55 mph) Design Speed Alternative
- 105 km/h (65 mph) Design Speed Alternative

These alternatives meet the expressway standards for the ultimate SR 84 facility. Coordination efforts with the SR 84 Corridor Project Report are ongoing.

It is anticipated that improvements to upgrade SR 84 to expressway standards between I-580 and I-680 would occur sometime in the future, depending upon the availability of local funding. Therefore, it would be beneficial to have this project conform to the future ultimate alignment.

Separate from the discussion above, Caltrans has completed preparation of contract documents for a pavement rehabilitation project on SR 84 adjacent to the limits of the safety project. The project will widen existing shoulders and place pavement overlays on SR 84 between I-680 and the westerly limit of the safety project and from Ruby Hills Drive to Isabel Avenue on the easterly end of the safety project. This project will be constructed in 2004.

1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Table 1.4 Permits and Approvals Needed

Agency	Permit/Approval	Status
United States Fish and Wildlife Service (USFWS)	Consultation for Threatened and Endangered Species under Section 7 of the Federal Endangered Species Act.	Consultation with USFWS initiated on February 17, 2004.
United States Army Corps of Engineers (ACOE)	Section 404 Individual Permit for filling or dredging waters of the United States.	Application for Section 404 permit to be submitted during Plans, Specifications and Estimate (PS&E)
California Department of Fish and Game (CDFG)	1602 Agreement for Lake and Streambed Alteration	Application for 1602 permit to be submitted during PS&E
California Department of Fish and Game (CDFG)	Section 2080.1 Agreement for Threatened and Endangered Species	Application for 2080.1 Agreement to be submitted during PS&E
San Francisco Bay Regional Water Quality Control Board	Section 401 Water Quality Certification	Application for Section 401 permit to be submitted during PS&E
County of Alameda	Cooperative Agreement	A cooperative agreement will be entered into with the County of Alameda after the Project Approval and Environmental Document (PA&ED) phase for the relinquishment of existing SR 84 from station 52+20 to station 79+80 and its corresponding right-of-way

Figure 1.1 Project Location Map

Chapter 2 **Project Alternatives**

2.1 Alternative Development Process

The Project Development Team (PDT) considered the project background, the ultimate facility and environmental constraints when developing the alternatives presented below. The overall goal was to develop a project that would be compatible with the future SR 84 facility while minimizing the need for interim work.

2.2 Project Alternatives

Features common to Phase I of the three build alternatives are described below, with further details of each alternative following.

- Improved horizontal and vertical alignments, which meet expressway design standards, and are compatible with the future alignment of SR 84 through the Vallecitos Hills/Pigeon Pass area.
- One 3.6-m (12-ft) wide lane and 2.4-m (8-ft) wide shoulder in each direction.
- A 1.8-m (6-ft) wide median buffer with 3.6-m (12-ft) wide turn-pockets where needed.
- A 29.0-m (95-ft) wide grading plane (hinge to hinge) to accommodate a future median barrier and a median width that meets minimum expressway standards in mountainous terrain.
- Continued access to existing driveways and two vehicular undercrossings at Vargas Road and 500 m (1640 ft) west of the Ruby Hills Drive intersection. The undercrossings will also serve as wildlife crossings.
- The relocation of a 0.60-m (2-ft) diameter natural gas transmission pipeline located approximately 560 m (1840 ft) west of Pigeon Pass, and the relocation of wooden pole electrical distribution lines along existing SR 84.

Additional features common to Phase II of the three build alternatives are described below. Phase II will be constructed at a later time, dependent on funding.

- 3.6-m (12-ft) wide climbing lanes over Pigeon Pass in both eastbound and westbound directions.

- A 3.0-m (10-ft) wide shoulder in each direction.
- A 3.6-m (12-ft) median which will accommodate left-turn pockets for vehicles accessing private properties along SR 84 and will also provide an acceleration lane for vehicles entering SR 84 from private properties.

2.2.1 Build Alternatives

80 km/h (50 mph) Design Speed Alternative

Additional features of this alternative are:

- Due to the proximity of the proposed realignment to the existing alignment the majority of the existing roadway would be removed or covered with earth fill.
- Approximately 300,000 cubic meters of excess material would be generated requiring designation of a disposal site.
- Approximately 16.4 hectares (ha) (40.5 acres [ac]) of new right-of-way would be required.
- A Type 1 retaining wall is proposed along the north side of SR 84 near the top of cut slope from station 80+00 to station 81+00. A retaining wall is necessary to protect private properties in the Ruby Hills Subdivision.
- A Type 1 retaining wall is proposed along the south side of SR 84 from station 79+00 to station 80+80. A retaining wall is necessary to reduce impacts to a residence located south of SR 84.

90 km/h (55 mph) Design Speed Alternative

Additional features of this alternative are described below:

- Existing SR 84 (Vallecitos Road) would be relinquished to Alameda County for use as a frontage road. This frontage road will provide access to private properties north of SR 84 for the majority of the project's length, and serve as a bicycle route. It will also provide a corridor for utilities in the future when SR 84 becomes an expressway.
- Earthwork for this alternative is balanced. Therefore, a disposal site is not necessary.

- Approximately 27.1 ha (67.1 ac) of new right-of-way including one residence is required. Relocation assistance would be provided.

105 km/h (65 mph) Design Speed Alternative

Additional features of this alternative are described below:

- Portions of existing SR 84 are to be relinquished to Alameda County for use as a partial frontage road system. The existing SR 84 alignment would provide access to private properties north of SR 84. This alternative does not provide for a continuous frontage road.
- Earthwork for this alternative is balanced. Therefore, a disposal site is not necessary.
- Approximately 32.0 ha (79.2 ac) of new right-of-way is required including one residence. Relocation assistance would be provided.

Refer to Appendix D for plans and further details.

2.2.2 No Build Alternative

The “no build” alternative would maintain the existing conditions. This alternative would have no environmental impacts and no mitigation would be required. The “no build” alternative would not improve safety or traffic operations.

2.2.3 Comparison of Alternatives

All three of the build alternatives have similar impacts to special status species and sensitive resources. See Table 2.1 for a comparison of the alternatives’ costs, impacts, and features. See Figures 2.1, 2.2, and 2.3 for maps of the three design speed alternatives

Table 2.1 Comparison of Alternatives

	80 km/h Alternative	90 km/h Alternative	105 km/h Alternative	No Build Alternative
Wetlands*	>1.5	1.5	1.5	None
Riparian Areas*	>4.5	4.5	>4.5	None
Oak Woodland*	<1.9	1.9	1.9	None
Kit Fox habitat*	>79.2	79.2	>79.2	None
Fairy Shrimp habitat*	0.6	0.6	0.6	None
California Tiger Salamander habitat*	>87.2	87.2	<87.2	None
Red-legged Frog habitat*	>4.4	4.4	>4.4	None
Environmental Mitigation Costs**	\$3.2	\$2.2	\$2.5	None
Current SR 84 turned into frontage road	No	Yes	No	No change
Retaining wall needed	Yes	No	Yes	No
Disposal site needed for excess soil	Yes	No	No	No
Acres of new right-of-way required	40.4	67.0	79.2	None
Residential Relocations	None	One	One	None
Utility Relocation Costs**	\$3.2	\$1.0	\$1.0	None

Total Project Costs** (Phase I and II)	\$27.3	\$26.7	\$31.5	None
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* Numbers shown in acres. Amount includes current Caltrans right-of-way.

**Costs shown in millions

Figure 2.1 80 km/h Design Speed Alternative

Figure 2.2 90 km/h Design Speed Alternative

Figure 2.3 105 km/h Design Speed Alternative

Chapter 3 **Affected Environment, Environmental Consequences, & Mitigation Measures**

3.1 Water Quality and Storm Water Runoff

The federal Clean Water Act (CWA) of 1972 addresses water pollution control and water quality protection. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States for their beneficial uses. Federal environmental regulations based on the CWA have evolved to require the control of pollutants from municipal separate storm systems (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, and storm drains) and construction activities (clearing, grading, and excavation). Discharges from such sources were brought under the National Pollution Discharge Elimination System (NPDES) permit process by amendments to the CWA in 1987 and the subsequent 1990 promulgation of storm water regulations by the EPA. In California, the U.S. Environmental Protection Agency (EPA) has delegated administration of the federal NPDES program to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). Caltrans was issued NPDES permit no. 99-06-DWQ on July 15, 1999, to cover all municipal and construction storm water activities. Caltrans is responsible for the development of a Storm Water Pollution Prevention Plan (SWPPP) for all projects that disturb more than 0.4 ha (1.0 ac) of total land area.

3.1.1 Affected Environment

The proposed project is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board. The project is located in the Livermore Valley watershed, which is surrounded by the hills of the Diablo Range. The creeks within the project limits are small seasonal drainages. The creeks on the west side of Pigeon Pass drain into Vallecitos Creek, which drains to Arroyo de la Laguna and the San Antonio Reservoir. The creeks on the east side of Pigeon Pass drain into Arroyo del Valle. Arroyo de la Laguna and Arroyo del Valle are included in the EPA's 303(d) listing for the pollutant Diazinon (pesticide). Diazinon is not used for roadside maintenance, therefore highway runoff is not a likely contributor to this pollution.

The receiving water bodies are not considered High Risk Areas used for municipal or domestic water supply.

3.1.2 Impacts

Approximately 16 to 32 ha, (40 to 79 ac) of new right-of-way would be required, depending on the alternative selected. Cut and fill slopes will vary from 1:2 with multiple benches to 1:4 or flatter.

The proposed project would require excavation, grading, roadway construction, and loss of vegetation, all of which result in soil and ground disturbances. These disturbances would create loose and/or unprotected soil that, if not properly managed and contained on the project site, could be carried by surface runoff, or wind, to watercourses. Such increases in sediment and turbidity could adversely affect receiving water quality.

Construction activities may introduce chemicals, oils, and greases that could be carried by surface runoff to surface water, if not properly managed. These impacts have the potential to occur for the duration of construction. Highway runoff and other long-term maintenance activities may also introduce these pollutants to surface water.

3.1.3 Mitigation Measures

The contractor would be required to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to protect receiving waters from pollution. A site-specific SWPPP would be developed and implemented as required by the Caltrans Statewide NPDES permit.

To reduce impacts due to erosion, sedimentation, and introduced pollutants, both temporary and permanent erosion control measures would be implemented. These measures include, but are not limited to, the following:

- All “in-water” work would comply with standards set by the San Francisco Bay Regional Water Quality Control Board. The contractor’s work would comply with the water pollution protection provisions of Section 7-1.01G of Caltrans Standard Specifications and SWPPP, as well as with all conditions contained in regulatory permits.

- Prior to excavation, temporary erosion control fencing would be placed down slope of areas where disturbance of native soil is anticipated. The temporary fence would be maintained in a functional condition until soil disturbance activities are complete and permanent erosion control is applied. Loose soil built up behind the fencing would be incorporated into the slope or taken offsite.
- Best Management Practices (BMPs) such as infiltration basins, detention basins, bio-strips and swales would be implemented, in addition to any other measures described in the Caltrans Construction Site BMP Manual.
- Hydraulic design techniques such as flared end sections on culverts, rock slope protection (RSP), paved water conveyances and energy dissipater pads would be used.
- The contract specification for permanent erosion control would require the use of California native forb and grass species, from the same elevation and geographic area as the project site.
- Soils would be amended with compost containing long-term soil nutrients and slow-release organic fertilizers to provide nutrients over the first year. Mulches used on the project would be from source materials that would not introduce exotic species. No wheat or barley straw would be used on the project because of the potential to introduce weeds. Rice straw would be used in non-wetland areas. Native grass straw would be used in wetland areas.
- Collected runoff would be discharged to the same drainages as pre-project conditions wherever possible, to prevent localized increases in runoff.

3.2 Hydrology and Floodplains

Executive Order 11988 for Floodplain Management directs federal agencies to refrain from conducting, supporting, or allowing an action in a floodplain unless it is the only practicable alternative. The FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A. An encroachment into a floodplain is defined as “an action within the limits of the 100-year floodplain,” with the 100-year floodplain being defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” The National Flood Insurance Program produces maps that identify 100-year flood areas based on local hydrology, topology,

precipitation, flood protection measures, and other scientific data. The Federal Emergency Management Agency (FEMA) administers this program.

3.2.1 Affected Environment

The project area lies within the Livermore Valley watershed. The creeks within the project limits are small seasonal drainages. The creeks on the west side of Pigeon Pass drain into Vallecitos Creek, which drains to Arroyo de la Laguna and the San Antonio Reservoir. The creeks on the east side of Pigeon Pass drain into Arroyo del Valle. The average annual rainfall is 51 to 61 cm (20 to 24 in).

FEMA Flood Insurance Rate Maps were used to determine flood zones in the project area. The project corridor is located within Zone C, an “Area of Minimal Flooding.”

3.2.2 Impacts

The proposed project would not have an impact on a floodplain. The proposed construction would not adversely affect the drainage or flood potential within the project limits. The increase in impermeable surfaces from construction of this project would have a negligible effect on drainage. No mitigation is required.

3.3 Geology and Soils

3.3.1 Affected Environment

Geologically the project lies within the Coast Range Geomorphic Province of Central California, primarily in the Vallecitos Hills. Terrain in the project area consists of steep rolling hills and open grasslands. Soils in the project area are classified as Positas gravelly loam and Diablo clay according to soil conservation service studies. Slope stability of the underlying soils is a concern for project construction. Positas gravelly loam is considered susceptible to slight to severe erosion. Diablo clay is classified as susceptible to moderate to severe erosion. There has been a history of landslides in the area east of Pigeon Pass.

3.3.2 Impacts

Approximately 16 to 32 ha, (40 to 79 ac) of new right-of-way would be required, depending on the alternative selected. The proposed project would require excavation, grading, roadway construction, and loss of vegetation, all of which result in soil and ground disturbances.

3.3.3 Mitigation Measures

Special design features such as an enhanced erosion control technique (Type B) that utilizes rock bolting with pivoting head anchors attached to threaded steel shafts, steel plates, rope restraints and rock netting will be used in areas that are prone to landslides. Hydro-seeding will be applied following installation to vegetate the stabilized area. Additionally, slopes will be 1:2 with multiple benches or flatter.

3.4 Hazardous Waste/Materials

3.4.1 Affected Environment

Aerially Deposited Lead

Aerially Deposited Lead (ADL) contamination of the soil along the roadway was identified as a possible hazardous waste issue. Historically, lead additives were placed in gasoline. Combustion of gasoline with lead additives resulted in lead particulates, ADL, which over time, accumulated along the State highway system. A site investigation of the project area was conducted by Shaw Environmental, Inc. to evaluate the presence and concentration of ADL. A total of 490 soil samples were collected during this investigation.

Nuclear Research Center

General Electric Vallecitos Nuclear Research Center is located approximately 1380 m (4528 ft) from the start of the project area. The center is an active facility that currently conducts small scale research and development activities on several irradiated fuel sources. Additionally, the facility prepares radioactive material for medical diagnosis, treatment, and research. The facility is licensed and actively regulated by several State and Federal agencies including California Department of Health Services and the Federal Nuclear Regulatory Commission. Soil, water, and air are monitored at various intervals across the entire facility including, at the boundary

of the facility and Caltrans' right-of-way. As a good business practice, annual vegetation samples are taken at the boundary of the facility and Caltrans' right-of-way.

3.4.2 Impacts

Aerially Deposited Lead

After testing, it was determined that soil for the proposed project, treated as a whole, would not be considered a California Hazardous Waste

Nuclear Research Center

There are no identified radioactive waste issues associated with constructing the proposed project immediately adjacent to the General Electric-Vallecitos Nuclear Research Center property lines. The facility is, and has been in compliance with all regulatory requirements and is considered a "good player" by the Department of Health Services. This is consistent with the sampling and analysis conducted in 1997 and 1998 by the Center and the Department of Health Services.

3.4.3 Mitigation Measures

Aerially Deposited Lead

No mitigation is necessary; however, worker health and safety requirements are required. This includes the preparation and implementation of a Lead Compliance Plan, as required by California Code of Regulations, Title 8, Section 1532.1 "Lead". These requirements are outlined in Caltrans Standard Special Provisions. If excess soil is generated by construction of the proposed project, it is recommended that soils 0.3 m (1.0 ft) below existing grade or deeper are selected for off-site reuse or export.

Nuclear Research Center

No mitigation is necessary.

3.5 Air Quality

3.5.1 Affected Environment

The project is located in Alameda County, which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD encompasses the nine San Francisco Bay Counties including, San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Napa, Marin, Southern Sonoma and Southwest Solano

County. The total land area covered is 5600 square miles, with 6.5 million people and 4.5 million cars and light trucks. The San Francisco Bay Area is a large shallow basin surrounded by hills that taper into a series of valleys. The topography gives the Bay Area air basin great potential for trapping and accumulating air pollutants. The attainment status of the BAAQMD is listed in Table 3.1.

Table 3.1 Attainment Status of Bay Area Air Quality Management District

Pollutant		State Attainment Status	Federal Attainment Status
Ozone (O₃)	1 Hour Standard	Non-Attainment	Non-Attainment
	8 Hour Standard	Not Applicable	Unclassified
Particulate Matter (PM₁₀)		Non-Attainment	Attainment
Nitrogen Dioxide (NO₂)		Attainment	Attainment
Sulfur Dioxide (SO₂)		Attainment	Attainment
Carbon Monoxide (CO)		Attainment	Attainment
Sulfates		Attainment	Attainment

3.5.2 Impacts

This project is located in Alameda County, which is under the jurisdiction of BAAQMD. BAAQMD is in a federal non-attainment area for ozone. Therefore in order for the project to meet the conformity determination, it must be included in a Federal approved Regional Transportation Plan. The project is in the 2001 Regional Transportation Plan (Ref # 94034), therefore the contributions of emissions are included in the emission budget, and it meets the conformity requirements.

A local carbon monoxide analysis is required for projects that are likely to worsen air quality. To determine if a project is likely to worsen air quality, the criteria in the “Transportation Project-Level Carbon Monoxide Protocol” needs to be examined. If the project passes the criteria, then the project will not worsen air quality and no further analysis is necessary. In summary, this project passes the criteria and will not worsen air quality, therefore it will not have an air quality impact and a carbon monoxide (CO) analysis is not necessary.

3.5.3 Mitigation Measures

Construction of the project will result in the generation of suspended particulate matter. Although the amount of dust generated will result in an impact, the impacts will be temporary, local, and limited to the areas of construction. To minimize the amount of construction dust generated, and because the project is in a state PM₁₀ (particulate matter) non-attainment area, dust control practices must be incorporated into the project to mitigate this potential impact. The dust control practices must comply with the current Caltrans' Standard Specifications and the Bay Area Air Quality Management District Regulation 6 – Particulate Matter and Visible Emissions.

3.6 Noise

Federal guidelines for assessing traffic noise are contained in Title 23 of the Code of Federal Regulations, Part 772 (23 CFR 772), "Procedures for Abatement of Highway Traffic Noise and Construction Noise".

Caltrans and the Federal Highway Administration (FHWA) have agreed to the criteria that are outlined in the "Traffic Noise Analysis Protocol, For New Highway Construction and Highway Reconstruction Projects - October 1998". Transportation projects affected by this Protocol are Type I projects. A Type I project is defined in 23 CFR 772 as follows: A proposed Federal or Federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes.

Traffic noise impacts are identified when one of the following occur:

- A substantial noise increase. "Substantial increase" is defined in 23 CFR 772 as follows: "A noise increase is substantial when the predicted noise levels exceed existing noise levels by 12 dBA Leq (h)."
- Noise levels approach or exceed the Noise Abatement Criteria (NAC). "Approach or exceed the Noise Abatement Criteria" is defined in 23 CFR 772 as follows: "A traffic noise impact will also occur when the predicted noise level(s) approach (within 1 dBA) or exceed the Noise Abatement Criteria. (See Table 3.2). The Noise Abatement Criteria for residences is 67 dBA, Leq (h)."

Under FHWA regulations (23 CFR 772), noise abatement must be considered for Type I projects when the project results in a substantial noise increase, or when the predicted noise levels approach or exceed the Noise Abatement Criteria (NAC) (Table 3.2). Noise abatement measures which are reasonable and feasible and that are likely to be incorporated in the project, as well as noise impacts for which no apparent solution is available, must be identified and incorporated into the project’s plans and specifications (23 CFR 772.11(e)(1) and (2)).

Table 3.2 Activity Categories and Noise Abatement Criteria (NAC)

Activity Category	NAC Hourly A-Weighted Noise Level, dBA Leq(h)	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 Exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 Exterior	Developed lands, properties or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

3.6.1 Affected Environment

The area surrounding the proposed project is primarily rural with a few residences. Short-term noise levels were measured at one location in the project area at the south side of the Ruby Hills Development (see Table 3.3). Noise measurements were made with a Bruel & Kjaer Precision Integrating Sound Level Meter, Type 2236 and a Bruel & Kjaer Sound Level Calibrator, Type 4230 meeting American National Standards Institute requirements for Type 1 sound level meters. The noise level measurements were taken 1.5 m (5 ft) above the ground. Noise levels were taken for

15 minutes and represent a one-hour time period (Leq (h)). The sound level meter was calibrated before and after the measurement, and fitted with a windscreen.

The noise measurement locations were selected to represent the noise environment without the interference of the backyard fences at the noise-sensitive receptors within the project limits. The area surrounding SR 84 is rolling hills and the topography and the earthen berms located at the fence lines of the Ruby Hills Development help shield the noise from the residents.

3.6.2 Impacts

Future Noise Impacts

There are three alternatives being proposed, slightly changing the alignment of SR 84. The area surrounding the Ruby Hills Development is rolling hills. The houses are located on a hillside above SR 84, and the topography of the area provides a natural earthen berm between the houses and the roadway. This earthen berm reduces the line of sight to the roadway and naturally shields the noise.

Traffic noise impacts were identified by using traffic levels predicted for the year 2025 and determining if those noise levels would approach or exceed the noise abatement criteria (NAC) or would be 12 decibels (dBA) or more over existing conditions. Table 3.3 summarizes the traffic noise impacts for the design year conditions for the build and no build scenarios. The only change in the noise environment would be the addition of a climbing lane, and the location of the lanes. Only one of the three alternatives brings the roadway closer to the Ruby Hills Development. It is not a significant change in the alignment. Based on this analysis, the noise level has a potential net increase of 7 dBA, and is well below the NAC of 67 dBA. Therefore this project will not result in adverse noise impacts.

Additionally, one of the project components is to include rubberized asphalt concrete (Type O) in the pavement mixture of the completed roadway. Although not an approved noise mitigation measure, recent studies indicate that rubberized asphalt concrete can reduce traffic noise.

Construction Impacts

Various construction activities for this project will occur over a period of time. During the construction phase of the project, noise from construction activities would

dominate the noise environment in the immediate area. Activities involved in construction would generate noise levels, as indicated in Table 3.4, ranging from 70 to 100 dBA at a distance of 15 m (50 ft). Construction activities would be temporary in nature, typically occurring during normal working hours. Construction noise impacts could be adverse, as nighttime operations or use of unusually noisy equipment could result in annoyance or sleep disruption for nearby residences.

3.6.3 Abatement Measures

Construction noise is regulated by Caltrans Standard Specifications Section 7-1.01I, “Sound Control Requirements”. These requirements state that noise levels generated during construction shall comply with applicable local, state and federal regulations, and that all equipment shall be fitted with adequate mufflers according to the manufacturers’ specifications.

Adverse construction noise effects can be minimized through the following measures:

- Minimize nighttime, holiday, and weekend work.
- Stationary construction equipment, such as compressors and generators, should be shielded and located as far away as feasible from receptors.
- Construction operations should be placed in locations where noise disturbances would be minimized.
- Hold community meetings to inform area residents of construction work, schedule, and control measures to be taken to reduce impacts.

Table 3.3 List of Measured and Modeled Noise Levels (Sound 2000)

Location	Measured Existing dba Leq(h)	Modeled Existing dBa Leq (h)	2025 No Build Existing dBA Leq(h)	2025 Build Future dBA 80 km/hr Design Leq(h)	2025 Build Future dBA 90 km/hr Design Leq(h)	2025 Build Future dBA 105 km/hr Design Leq(h)	NAC	Greater than NAC or Significant Increase in Noise Level
Receiver 1	53.0	54	56	60	60	61	67	No
Receiver 2	**	62	65	62	63	64	67	No

** A noise reading was not measured at this receiver, just modeled.

Table 3.4 Construction Equipment Noise Ranges

Type of equipment	Average noise level dBA
Pile Driver	100 @ 15 meters
Scrapers	88 @15 meters
Concrete Truck	82 @15 meters
Dump Truck	80 @15 meters
Front Loaders	80 @15 meters
Backhoes	79 @15 meters
Excavator	76 @15 meters
Bulldozers	71 @15 meters
Compressors	74 @15 meters
Cranes	70 @15 meters
Pumps	70 @15 meters

3.7 Wetlands and Other Waters of the United States

The ACOE and the EPA jointly define wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. The term “other waters of the United States” includes seasonal or perennial waters (creeks, lakes, or ponds) and other types of habitats that lack one or more of the three technical criteria for wetlands (soil, hydrology, or vegetation). The ACOE has authority under Section 404 of the Clean Water Act to regulate activities that could discharge fill or dredge material into, or otherwise adversely modify these resources.

Executive Order 11990 establishes a national policy to avoid adverse impacts on wetlands whenever there is a practicable alternative. The U. S. Department of Transportation (DOT) promulgated DOT Order 5660.1A in 1978 to comply with this direction. On federally funded projects, impacts to wetlands must be identified in the environmental document. Alternatives that avoid wetlands must be considered. If wetland impacts cannot be avoided, then all practicable measures to minimize harm must be included. This must be documented in a specific Wetlands Only Practicable Alternative Finding in the final environmental document.

For the proposed project, “waters of the U. S.” are divided into jurisdictional wetlands and “other waters of the U. S.” The methodology set forth in the ACOE 1987 Wetland Delineation Manual was used to delineate wetlands within the project limits. Additional information is contained in the Natural Environment Study prepared for this project and is available at the Caltrans, District 3 Office of Environmental Management, 703 B Street, Marysville, CA and at the District 4 Office of Environmental Management, 111 Grand Avenue, Oakland, CA.

3.7.1 Affected Environment

All areas within the project limits that were suspected of having wetland characteristics were delineated in accordance with the Army Corps of Engineers 1987 Wetland Delineation Manual. There are four small seasonal wetlands within the project area.

3.7.2 Impacts

Jurisdictional Wetlands: The proposed project will impact 0.4 hectares (1.0 acres) of jurisdictional wetlands.

Waters of the United States: There will be 0.13 hectares (0.31 acres) of impacts to other waters. Most are temporary impacts from the addition of culverts. A stockpond will also be permanently filled. The addition of culverts will not change the hydrology of the area. To minimize impacts from culvert installation Caltrans will restore banks to their original condition and revegetate with native species.

Impacts are similar for all three of the build alternatives.

3.7.3 Mitigation Measures

To mitigate the impacts to wetlands Caltrans proposes to mitigate at an appropriate mitigation bank. The mitigation ratio will be determined prior to the permit process with the input of the ACOE.

In addition, Caltrans proposes to recreate the wetland that acts as a breeding pool for California tiger salamander. This site will be partially filled as a result of the new alignment. The existing wetland is located east of a private driveway, south of SR 84, and will be recreated in the general vicinity.

3.8 Vegetation

Oak Woodlands - Oak woodlands are protected under Senate Concurrent Resolution No. 17 (SCR 17). SCR 17 states that “all state agencies, including, but not limited to, those specified in this measure, having land use planning duties and responsibilities shall, in the performance of those duties and responsibilities and in a manner consistent with their respective duties and responsibilities, undertake to assess and determine the effects of their land use decisions or actions within any oak woodlands containing Blue, Engelmann, Valley, or Coast Live Oak, that may be affected by the decisions or actions.” Under SCR 17, an oak woodland is defined as a five-acre circular area containing five or more oak trees per acre. The California Department of Fish and Game (CDFG) also considers oak woodlands to be a valuable sensitive resource, and requires mitigation for oak tree removal.

Invasive Species/Noxious Weeds - Executive Order 13112 directs federal agencies to prevent and control the spread of invasive species. FHWA requires an analysis of the risk for any federal funded action to cause or promote the introduction or spread of invasive species.

3.8.1 Affected Environment

Nonnative grassland is the dominant vegetation community in the area. Most of this grassland is completely open, but there are some scattered oaks in places. The dominant species within the grassland include slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), perennial ryegrass (*Lolium multiflorum*), and Medusa-head (*Taeniatherum caput-medusae*). Native and nonnative herbaceous species are also present, as well as patches of creeping wildrye (*Leymus triticoides*) and purple needlegrass (*Nassella pulchra*).

Several seasonally wet areas are located within the project area. These areas sometimes support vegetation which are frequently only found under anaerobic conditions characteristic of wetlands. Vegetation found in the various wet areas include tall flatsedge (*Cyperus eragrostis*), spikerush (*Eleocharis macrostachya*), fringed willow herb (*Epilobium ciliatum* ssp *ciliatum*), spreading rush (*Juncus paten*), rabbit foot grass (*Polypogon monspeliensis*), red willow (*Salix laevigata*), low club rush (*Scirpus cernuus*), and mule fat (*Baccharis salicifolia*). A complete list of all vegetation identified during botanical surveys can be found in the Natural Environment Study, which is available at Caltrans' District 3 office, 703 B Street, Marysville, and at Caltrans' District 4 office, 111 Grand Avenue, Oakland, CA.

Oak Woodlands - Valley oak woodlands, which correspond with the California Native Plant Society's (CNPS) valley oak series, can be found along some of the ephemeral creeks and scattered in the upland nonnative grassland. It is dominated by valley oak (*Quercus lobata*) and includes coast live oak (*Quercus agrifolia*) and California buckeye (*Aesculus californica*). The woodlands interspersed in the upland are of a lower density than the riparian and are typical of oak woodlands that have a nonnative grassland understory.

Invasive Species/Noxious Weeds - Some exotic (nonnative) species are considered aggressive and invasive. The California Exotic Pest Plant Council (CalEPPC) maintains a list that categorizes the severity of the invasive species. List A, with its two subcategories A-1 and A-2, contains plants which are considered the most

invasive wildland pest plants. They are considered aggressive invaders that displace natives and disrupt natural habitats. Plants in subcategory A-1 are widespread, plants in A-2 are less widespread (regional pests). List B plants are less invasive than List A plants, spread less rapidly, and cause less disruption. Red List plants are localized but have the potential to spread explosively. The following nonnative plants in the study area are on CalEPPC's A or B Lists: yellow star-thistle (*Centaurea solstitialis*) (A-1), fennel (*Foeniculum vulgare*) (A-1), Medusa head (*Taeniatherum caput-medusae*) (A-1), red brome (*Bromus madritensis ssp. rubens*) (A-2), fig (*Ficus carica*) (A-2), pennyroyal (*Mentha pulegium*) (A-2), Mediterranean linseed (*Bellardia trixago*) (B), black mustard (*Brassica nigra*) (B), Italian thistle (*Carduus pycnocephalus*) (B), bull thistle (*Cirsium vulgare*) (B), poison hemlock (*Conium maculatum*) (B), olive (*Olea europaea*) (B), and Harding grass (*Phalaris aquatica*) (B). None of the plants in the project area are on CalEPPC's red list. A few species in the project area are on CalEPPC's list for which current information does not adequately describe the nature of its distribution, invasiveness, or threat to wildlands: short pod mustard (*Hirschfeldia incana*), cherry plum (*Prunus cerasifera*), and purple-top vervain (*Verbena bonariensis*). The following nonnative grasses located in the study area are on CalEPPC's preliminary list of annual grasses that are abundant and widespread in California and pose significant threats to wildlands: slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), and Italian ryegrass (*Lolium multiflorum*).

3.8.2 Impacts

Oak Woodlands - The proposed project will impact approximately 1.8 ha (4.4 ac) of riparian oak woodland and 0.8 ha (1.9 ac) of upland oak woodland.

Invasive Species/Noxious Weeds - The proposed project has the potential to introduce or spread invasive plant species and noxious weeds with the clearing, grading, and soil-moving operations associated with roadway construction.

3.8.3 Mitigation Measures

Where possible, efforts should be made to avoid the removal of native trees within the project limits. All trees to be avoided would be protected throughout the construction period by special fencing. These trees would be marked on project plans and in the field.

Oak Woodlands – Mitigation for loss of oaks is consistent with SCR 17, as well as CDFG’s consideration of oak woodlands as a sensitive resource. Oak woodlands will be replaced, in kind, on site where room will allow. The remaining acreage will be replaced offsite at a mitigation bank or other suitable location in the vicinity. Avoidable oak woodlands will be fenced off and designated as environmentally sensitive areas (ESAs).

Invasive Species/Noxious Weeds - The following revegetation measures for all disturbed soils would reduce the potential to introduce or spread invasive plant species and noxious weeds from or into the project area:

- The contract specifications for permanent erosion control would require the use of California native forb and grass species, from the same elevation and geographic area as the project site.
- All areas disturbed by construction would be treated with a seed mix comprised of local native grasses and forbs.
- Soils would be amended with compost containing long-term soil nutrients and slow-release organic fertilizers to provide nutrients over the first year.
- Mulches used on the project would be from source materials that would not introduce exotic species. No wheat or barley straw would be used on the project because of the potential to introduce weeds. Rice straw would be used in non-wetland areas. In wetland areas, only native grass straw would be used.

3.9 Special Status Species

Special status species are plants, animals, and fish that are considered rare, threatened, or endangered by local, state, or federal resource conservation agencies. These agencies include the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), California Department of Fish and Game (CDFG), and the California Native Plant Society (CNPS). These agencies protect and manage special status species and potential special status species under the federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, and the California Native Plant Protection Act.

3.9.1 Affected Environment

The determination of the Biological Study Area (BSA) was a joint effort by the PDT to ensure that all areas impacted by construction activities would be included during technical studies. It is expected that the presence of equipment and noise may cause a disturbance to species occupying areas beyond the actual construction footprint. For this reason, the BSA extends beyond the limits of ground disturbance. Care was taken to include areas that could be potentially impacted indirectly but without incorporating an unreasonably large study area. General field surveys of the BSA were conducted by Caltrans biologists to assess existing natural resources and identify habitat types, potential wetlands, factors indicating the potential presence of sensitive species (threatened, endangered and species of concern), and the need for in-depth studies.

Several literature references were consulted to determine the potential presence of federal and state listed endangered and threatened species, species of concern, and other sensitive biological resources within the BSA. These references included 1) the California Natural Diversity Database (CNDDB) 7.5 minute quadrangles for Livermore, La Costa Valley, Milpitas, Dublin, Mendenhall Springs, Niles, Altamont, and Diablo (CDFG); 2) the Federal Threatened and Endangered Species lists for La Costa Valley and Livermore quadrangles (USFWS); and 3) other published and nonpublished literature.

3.9.1.1 Birds

Western burrowing owl (*Athene cunicularia hypugaea*): Federal species of concern and state species of concern. The burrowing owl is a small, ground-dwelling owl that inhabits open spaces. Burrowing owl habitat is present within the BSA, and assumed to be occupied. One owl pellet containing insect and small mammal remains was found at the entrance of a ground squirrel burrow.

Loggerhead shrike (*Lanius ludovicianus*): Federal species of concern and state species of concern. The loggerhead shrike is a songbird that feeds more like a bird of prey. Due to its unique behavior of impaling its captured prey on thorns, twigs, and barbed wire, it is able to consume larger prey than is typical for a songbird of its size. Their diet consists of small mammals, birds, lizards, snakes, frogs and insects. These birds breed and winter in California. Sometimes they build nests in edge habitats along roadways.

A loggerhead shrike was observed during a field study on June 27, 2002 at the intersection of SR 84 and the Mullenax driveway. Also, signs of their presence in the form of impaled insects were found on the right-of-way barbed wire fence at the west end of the project area.

Red-tailed hawk (*Buteo jamaicensis*): Protected under the Migratory Bird Treaty Act. There is a red-tailed hawk nest located just outside the project area, within 46 m (150 ft) of the proposed alignment. Field observations in 2002 proved it to be active. It is not known if it was active in 2003.

3.9.1.2 Mammals

San Joaquin kit fox (*Vulpes macrotis mutica*): Federal endangered and state endangered. The San Joaquin kit fox is one of eight recognized subspecies of kit fox. San Joaquin kit foxes are nocturnal. They use dens that have been excavated in loose soil, often using existing ground squirrel dens that they enlarge. Dens are normally 20 to 25 cm (8 to 10 in) in diameter and are taller than they are wide. They will also take advantage of man-made structures such as culverts when natural dens are in short supply.

Surveys showed that suitable kit fox habitat appears to be abundant within the BSA, and is contiguous within a 10-mile radius of the project. There is an abundance of ground squirrels, which provide dens, and a prey base. Several squirrel dens appear to have been enlarged by another animal, possibly a kit fox. Although the closest kit fox sighting is approximately 8 km (5 mi) from the project, there are no obvious natural barriers that would prohibit kit fox movement within the radius. Therefore, it is assumed that kit fox are present in the project area.

3.9.1.3 Vernal Pool Crustaceans

Vernal pool fairy shrimp (*Branchinecta lynchi*): Federal threatened. The vernal pool fairy shrimp occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. During reproduction, the female either drops her eggs to the bottom or carries her eggs in the brood sac until she dies and sinks to the bottom. These eggs (cysts) dry up with the vernal pool and stay in a resting state until certain stimuli, rain for instance, induce hatching. The soil in the bottom of an occupied pool may contain viable cysts that are many years old.

Caltrans hired URS, a private consulting firm, to conduct back-to-back dry and wet season surveys in 2002/2003 in accordance with the USFWS fairy shrimp protocol. A

total of five sites were sampled. Dry sample surveys revealed two cysts at one site which had large polygon morphology characteristic of *B. lynchi*, *B. coloradensis*, *B. conservatio*, *B. longiantenna*, *B. sandiegonensis*, *B. mesovallensis*, *B. lindahli*, and the undescribed *Branchinecta* known as “mountain fairy shrimp”. Wet sample surveys in 2002/2003 did not discover any adult *Branchinecta* species at any of the sampling locations. According to URS, habitat associations and geographic ranges indicate that the cysts most likely came from *B. lynchi*. Therefore, vernal pool fairy shrimp are present within the study area.

California linderiella fairy shrimp (*Linderiella occidentalis*): Federal species of concern. California linderiella are freshwater crustaceans, which inhabit clear to tea-colored water in seasonal ponds. Their life cycle revolves around fluctuations in their habitat such as the presence or absence of water, temperatures and levels of dissolved oxygen. During reproduction, cysts settle to the bottom of the pond and remain in the mud after the water body dries. Once the water returns to the pond and conditions are favorable, the cysts hatch. Fairy shrimp are a source of food for the California tiger salamander. California linderiella fairy shrimp were discovered at one site during dry and wet season surveys.

3.9.1.4 Amphibians and Reptiles

California red-legged frog (*Rana aurora draytonii*): Federal threatened, state species of concern. A 24-ha (60-ac) mitigation site for red-legged frog (RLF) and California tiger salamander is adjacent to the east end of the project area, north of SR 84. The site was established by Signature Homes to mitigate impacts caused by the construction of the Ruby Hills and Vineyard Estates subdivisions. The site consists of a series of created ponds connected by drainages, and the surrounding upland habitat. Two of these ponds lie within the BSA but well outside the project footprint. The pond nearest SR 84 dries completely during late summer, the other pond maintains some water all year. According to Janice Gann, of the Department of Fish and Game, RLF are present within these ponds. The URS consultant also detected RLF egg masses in one of the ponds outside the project footprint while conducting fairy shrimp surveys. An unnamed ephemeral creek runs parallel to the south side of SR 84, from the middle to the east end of the project. The creek’s substrate is a mud/cobble mix with abundant detritus, potholes and shallow pools. With the exception of a few small open areas, the creek is heavily wooded. Although the creek does not flow during the summer months, there are active springs that keep large portions of the creek moist, and in some areas provide shallow pools. The heavy shade also contributes to the moist environment. The hydrology of this creek does

not support breeding frogs, but may provide suitable summer habitat. It is possible that some of the frogs inhabiting the mitigation pond which dries up may move, via crossing the highway or through existing culverts, to the moist areas in the creek for summer refuge.

California tiger salamander (*Ambystoma californiense*): Federal proposed threatened and state species of concern. The distribution of the California tiger salamander (CTS) is restricted to the Central Valley of California and lower elevations to the west. A 24-ha (60-ac) mitigation site for RLF and CTS is near the east end of the project, north of SR 84. The site, consisting of a series of ponds connected by drainages, was established by Signature Homes to mitigate impacts caused by the construction of the Ruby Hills and Vineyard Estates subdivision. Two of these ponds lie within the BSA but well outside the project footprint. A URS consultant observed larval salamanders at this site, as well as at a seasonal pool located south of the SR 84 toe of slope. Potential habitat appears to exist in a seasonal stockpond located south of SR 84 on private property, although no larvae were observed. According to CDFG's California Natural Diversity Database there are documented occurrences of CTS nearly the entire length of the project area, therefore, all upland, riparian, and bodies of water within the project area are considered CTS habitat.

Western pond turtle (*Clemmys marmorata*): Federal species of concern. The northwestern (*Clemmys marmorata marmorata*) and southwestern pond turtle (*Clemmys marmorata pallida*) are subspecies of the western pond turtle. Although the stock ponds adjacent to and within the BSA, appear to be suitable habitat, no western pond turtles (WPTs) were found during numerous field surveys of aquatic and upland areas by either the Caltrans biologist or the consultant. Knowing the nearest documented sighting is only approximately 3.2 km (2 mi) away, it is possible that WPTs are present despite the lack of visual observations during field visits.

3.9.2 Impacts

3.9.2.1 Birds

Western burrowing owl: The proposed action will have temporary and permanent direct effects to western burrowing owls. Ground disturbance including grading, filling, and excavating will occur over the entire length of the project. This type of ground disturbance has the potential to cause mortality to individuals occupying the area. Burrowing owls could be crushed or buried alive by heavy equipment and earth moving. Other direct effects caused by construction activities include possible

temporary disruption of foraging, disruption or complete loss of reproduction, harassment from increased human activity, and permanent and temporary loss of habitat.

Loggerhead shrike: The proposed action will have temporary and permanent direct effects to the loggerhead shrike. Direct effects to loggerhead shrikes include disruption of breeding, destruction of nests, and mortality to nestlings. The temporary increase in noise and presence of human activity could interfere with foraging and harass individuals. Because these birds sometimes build nests in edge habitats near roadways, they are at greater risk of being disturbed during construction. Individuals may be forced to search for nesting habitat in areas that are already occupied, where they will have to compete even harder for fixed resources. Heavy use of barbed wire fence for foraging was evident within the BSA, and a temporary loss of the fence could make foraging more difficult. Approximately 6.9 ha (17 ac) of foraging habitat would be permanently lost due to the new alignment.

Red-tailed hawk: No impacts with mitigation and avoidance measures.

3.9.2.2 Mammals

San Joaquin kit fox: The proposed action will have permanent and temporary direct, and indirect effects to the San Joaquin kit fox. Approximately 7 ha (17.3 ac) will be permanently lost to the new alignment. Another 25 ha (61.9 ac) will be temporarily disturbed as a result of construction related activity. Ground disturbance including grading, filling, and excavating will occur over the entire length of the project. This type of ground disturbance has the potential to cause mortality to individuals occupying the area. Kit fox could be crushed or buried alive by heavy equipment and earth moving. Other direct effects caused by construction activities include possible disruption of foraging, disruption or complete loss of reproduction, harassment from increased human activity, and permanent and temporary loss of shelter. Since kit fox are nocturnal, if construction is performed at night associated lighting could increase all of the above effects, and possibly increase predation. Indirect effects may include an increase in mortality as the foxes will have to cross a wider highway, in turn increasing their chances of being hit by traffic. Portions of the original road will remain intact after completion of the proposed action. This will mean the fox must, in some areas, cross two roads to reach adjacent habitat. Although this may seem to pose an additional threat, the old road will serve only as an access road to a local rancher's livestock pasture. It is likely to receive virtually no traffic during the night, and therefore would not pose a barrier to crossing.

3.9.2.3 Vernal Pool Crustaceans

Vernal pool fairy shrimp: The proposed action will have direct effects to vernal pool fairy shrimp. Approximately 84% (0.21 ha [0.52 ac] of a 0.25-ha [0.61-ac]) pool occupied by vernal pool fairy shrimp is slated to be filled for the construction of the new alignment. This action will result in mortality to all individuals living in the portion of the pool that is slated for fill, and a loss of habitat for the species as a whole. By partially filling the pool, the crucial components of the remaining portion, such as size, temperature, and hydrology, may be altered such that the remaining undisturbed portion of the pool no longer functions as fairy shrimp habitat. Reducing the pool's size and concentrating the population into such a small area could potentially increase predation to a point which the species could not sustain itself. The USFWS considers an entire pool to be directly impacted if any part of it is destroyed. Therefore, 0.25 ha (0.61 ac) of fairy shrimp habitat will be lost.

California linderiella fairy shrimp: The population of California linderiella fairy shrimp will suffer the same impacts, including cumulative, that were outlined for the cohabiting vernal pool fairy shrimp.

3.9.2.4 Amphibians and Reptiles

California red-legged frog: The proposed action will have permanent and temporary direct, and permanent indirect effects to the red-legged frog (RLF). Approximately 1.8 ha (4.4 ac) of RLF riparian summer habitat will be removed during construction. Areas of RLF habitat that are avoidable will be fenced and protected as an Environmentally Sensitive Area (ESA). No breeding habitat will be affected. Individual frogs occupying the affected habitat run the risk of being crushed or buried by earth moving activities. Those that do survive will suffer permanent and temporary (during construction activity) loss of habitat, possible temporary disruption of foraging, and harassment from increased human activity. Since frogs migrate to breeding ponds and breed outside of the construction season, and no breeding habitat will be impacted, disruption or loss of reproduction among surviving frogs is not expected. However, at certain times during construction it is possible that frogs leaving the breeding ponds north of SR 84 to seek summer habitat south of SR 84 may be impeded due to construction activities. Frogs would be able to use summer habitat north of SR 84 in the mitigation preserve. Summer habitat, including riparian corridors, ponds, mud cracks, and mammal burrows in the preserve are abundant and completely protected from construction activities.

Permanent indirect effects come from increased impervious surfaces caused by the additional pavement. The addition of impermeable surfaces increases roadway run-off contaminated with chemicals associated with vehicles (i.e., gasoline and oil), and silt, which may lead to water quality degradation. Also, having to cross a wider highway will increase their chances of being hit by traffic.

California tiger salamander: The proposed project will have permanent and temporary direct effects and permanent indirect effects to the California tiger salamander (CTS). Approximately 7.7 ha (19.1 ac) of CTS habitat, including 0.25 ha (0.61 ac) used for breeding, will be permanently lost to the new and wider alignment. Construction related activities will temporarily disturb 27.5 ha (68 ac), including 0.02 ha (0.05 ac) used for breeding. The impacted habitat consists of riparian and upland aestivating habitat, and breeding habitat. Individual salamanders occupying the affected habitat run the risk of being crushed or buried by earth moving activities. Those that do survive will suffer permanent and temporary loss of habitat (related to temporary construction activity), possible temporary disruption of foraging, and harassment from increased human activity. Permanent indirect effects come from increased impervious surfaces caused by the additional pavement. The addition of impermeable surfaces increases roadway run-off contaminated with chemicals associated with vehicles (i.e., gasoline, oil), and silt, which may lead to water quality degradation. Caltrans will work with the CDFG in an effort to find and relocate CTS one year prior to construction

Western pond turtle: The proposed action will have permanent and temporary direct, and permanent indirect effects to the WPT. Potential direct effects to WPTs include injury and mortality to individuals in the direct path of ground disturbance activities taking place within the upland areas. Large equipment and earth moving activities can crush or bury WPTs alive. This mortality includes the destruction of occupied nests. Those that do survive will suffer permanent and temporary (during construction activities) impacts, loss of upland habitat, possible disruption of foraging, and harassment from increased human activity. Permanent indirect effects come from increased impervious surfaces caused by the additional pavement. The addition of impermeable surfaces increases roadway run-off contaminated with chemicals associated with vehicles (i.e., gasoline, oil), and silt, which may lead to water quality degradation. Another indirect effect may include a possible increase in mortality as the turtles will have to cross a wider highway, in turn increasing their chances of being hit by traffic. Portions of the original road will remain intact after completion of the proposed action. This will mean the WPTs must, in some areas, now cross two

roads to reach adjacent habitat. However the old road will serve only as an access road to a local rancher's livestock pasture and receives very little traffic, it is not expected to pose a significant barrier to WPTs trying to cross.

3.9.3 Mitigation Measures

Caltrans and FHWA have entered into formal consultation with the USFWS for federally listed species, pursuant to Section 7 of the Federal Endangered Species Act. Mitigation measures for these species are subject to the review and approval of the USFWS.

3.9.3.1 Birds

Western burrowing owl: Caltrans will work with the CDFG to implement a plan that will minimize direct effects to burrowing owls. This plan may include, but is not limited to, pre-construction surveys, monitoring, relocation, nest salvage, or exclusion of owls from burrows. Burrowing owls use the same habitat as kit fox, and the upland constituent of RLF and CTS habitat. Any land set aside for these species, within the range of the burrowing owl, would also benefit the future survival of the owls, and help minimize the negative effects caused by the proposed action.

Loggerhead shrike: Avoiding construction during the breeding season (spring through summer) is not feasible. The typical construction season runs from mid March to mid October, and the proposed project is too large to restrict work to only a couple of months during that season. Such a restriction would add years to construction, or render the project unbuildable. One method of minimizing mortality and reproduction loss would be to establish a work window for clearing and tree removal to occur outside the nesting period. To require this during the fall and winter months would expose threatened and endangered species addressed in this document to greater risk during their breeding seasons. Instead, preconstruction surveys will be conducted to ensure active nests are not destroyed. Barbed wire fence will be replaced at the completion of construction. Caltrans is planning to revegetate a portion of the BSA with an oak woodland. When mature, this woodland will increase edge habitat and create nesting sites for the shrike.

Red-tailed hawk: In order to avoid disturbance to an active nest the following provisions shall be implemented:

- Any work necessary within 152 m (500 ft) of the known nest site shall begin between March 1st and March 15th. Once work commences there shall be no cease in work greater than 24 hours for as long as the work is necessary, or until May 15th whichever comes first.
- If hawks nest at the site any time prior to or during the construction season a biological monitor, approved by Caltrans, shall be retained by the contractor to monitor the nest during the time(s) that construction activities are taking place within 400 m (0.25 mi) of the nest. The frequency and duration of the monitor will be determined at that time by the Caltrans project biologist.
- No jack hammering, pile driving, blasting, or other activity which is suspected to cause noise levels in excess of typical earth moving activities (clearing, grubbing, excavating, etc.) shall be performed within 400 m (0.25 mi) of the active nest site. If it is found that activities are causing stress and/or the potential of nest abandonment, it may be necessary to cease activity until a plan can be developed between the parties involved that would avoid causing abandonment, or until the young fledged, depending on the circumstances.

3.9.3.2 Mammals

San Joaquin kit fox: In order to compensate for permanent direct effects to kit fox, Caltrans proposes to purchase 21 ha (51.9 ac) of habitat from an approved mitigation bank. This quantity represents a mitigation ratio of 3:1 recommended by a USFWS biologist. Twelve culverts will be installed throughout the project. These structures, although not specifically designed for the kit fox, will provide a safe method of crossing the new highway.

In addition, there are two structures being added that will provide safe undercrossings for foxes year round. The proposed highway will cross over two driveways that provide access for a local rancher to his livestock pastures. In order to maintain this access, two large culvert structures will be installed. Each structure will be located adjacent to a creek, so will be more apt to be found by kit foxes based on their tendency to use drainages for corridors. Their location, large size, and year round access should provide a safe, useable area for crossing.

3.9.3.3 Vernal Pool Crustaceans

Vernal pool fairy shrimp: In order to reduce the direct effects, Caltrans proposes to purchase 0.7 ha (1.8 ac) of vernal pool fairy shrimp habitat at an approved mitigation bank. This quantity represents a ratio of 3:1 (2 parts preservation, 1 part creation). If

a local bank is not available at the time of purchase, Caltrans will contribute equally to the USFWS fairy shrimp conservation fund. To avoid direct mortality to adults using this pool construction at the pool will be restricted to a period after the pool has completely dried (normally by mid July). In addition to purchasing credits or contributing to the in lieu fee, Caltrans will attempt to salvage the soil and recreate a similar pool, on private property, near the original location using this material.

California linderiella fairy shrimp: The proposed mitigation for the vernal pool fairy shrimp will also minimize the effects to California linderiella fairy shrimp.

3.9.3.4 Amphibians and Reptiles

Red-legged frog: To compensate for permanent direct effects to RLF caused by the proposed action, Caltrans proposes to purchase 5 ha (12.5 ac) of RLF habitat at a USFWS approved mitigation bank. This acreage amount was based on a 3:1 mitigation ratio recommended by a USFWS biologist. Also, where possible Caltrans will revegetate riparian areas post-construction in an attempt to recreate RLF habitat on site. Twelve drainage culverts, and two driveway culvert undercrossings will be installed throughout the project. These structures, although not specifically designed for RLF, will provide a safe method of crossing the new highway. These culverts will minimize the possible increased mortality associated with crossing a wider highway. To minimize disturbance during the breeding migration and reduce the risk of mortality there shall be no ground disturbing activities between October 31 and March 1, outside the limits of the established road bed. Adverse effects to water quality will be avoided by implementing temporary and permanent Best Management Practices outlined in section 7-7.01G of Caltrans' Standard Specifications.

California tiger salamander: To avoid direct mortality to breeding adults and juveniles using the affected breeding pool, construction will be restricted to a period after the pool has completely dried (normally by mid July). Also, to minimize disturbance during the breeding migration and reduce the risk of mortality there shall be no ground disturbing activities between October 31 and March 1 outside the limits of the established road bed. Since CTS migrate to breeding ponds and breed outside of the construction season, disruption of the process is not expected. Dispersal of juveniles occurs by May or June, so any construction taking place during that time may limit and complicate juvenile dispersal to the uplands. Those juveniles using the ponds on the mitigation site north of SR 84 who may want to disperse into the upland south of SR 84 may be impeded due to construction activities. They may be forced to find summer habitat north of SR 84 in the mitigation preserve established by Signature

Homes. Summer habitat, including mammal burrows in the preserve are abundant and completely protected from construction activities.

In the event that CTS become listed as threatened or endangered prior to completion of this action, Caltrans is prepared to compensate effects to CTS caused by the proposed action, by purchasing 23.2 ha (57.3 ac) of CTS habitat at a USFWS approved mitigation bank. This acreage amount was based on a 3:1 mitigation ratio recommended by a USFWS biologist. At this time, USFWS has no official mitigation standard in place. Regardless of the future listing outcome, Caltrans proposes to recreate the breeding pool that will be filled in during construction.

Twelve culverts, and two driveway culvert undercrossings will be installed throughout the project. These structures, although not specifically designed for the CTS, will provide a safe method of crossing the new highway. These culverts could minimize the possible increased mortality associated with crossing a wider highway. Since there are drainage culverts proposed at both vegetated riparian corridors, and also in the upland areas, this will likely increase the chances that CTS will find them during any point-to-point movements. Modifications to culverts, (fencing, culvert substrate, etc.) that would encourage use by amphibians is currently being investigated. Intentions are that the culverts will be used by multiple species so care must be taken to ensure that a modification for one species is not detrimental to another. Adverse effects to water quality will be avoided by implementing temporary and permanent Best Management Practices outlined in section 7-7.01G of Caltrans' Standard Specifications.

Western pond turtle: Because CTS, RLF, and WPT have such similar habitats, any land set aside for those species, within the range of the WPT, would benefit the future survival of the species, and help compensate for the negative effects caused by the proposed project. Twelve culverts and two driveway culvert undercrossings will be installed throughout the project. These structures, although not specifically designed for the WPT, will provide a safe method of crossing the new highway. Spacing between the proposed culverts ranges from 26 m (85 ft) to 450 m (1,480 ft). These culverts will minimize the possible increased mortality associated with crossing a wider highway. Effects caused by poor water quality will be avoided by implementing temporary and permanent Best Management Practices outlined in section 7-7.01G of Caltrans' Standard Specifications.

3.10 Parks, Recreational Areas, and Wildlife/Waterfowl Refuges

There are no parks or refuges immediately adjacent to the project area. The Sunol Regional Wilderness is the closest park, approximately 6.4 km (4 mi) south of the project area. Since there would be no impacts to parks, recreational areas, or wildlife refuges, no mitigation is required.

3.11 Land Use, Planning, and Growth

3.11.1 Affected Environment

The existing corridor travels through land use areas that are designated Large Parcel Agriculture, Resource Management, and Lands within City Limits (Urban Growth Area). “Large Parcel Agriculture” areas permit agricultural processing facilities and limited agricultural services. “Resource Management” areas require a minimum parcel size of 100 acres. The eastern portion of the existing roadway borders the Ruby Hills Development, an upscale residential community. This section of SR 84 is considered to be part of the “Lands within City Limits” (Urban Growth Area), according to the East County Area Plan.

3.11.2 Impacts

The project would require the acquisition of 16 to 32 ha (40 to 79 ac), depending on the alternative, of land adjacent to the existing alignment. The land acquired would primarily be grazing land. The proposed project is consistent with the policies contained in the Alameda County General Plan. Since the project would not increase highway capacity, it is not expected to support population growth. No mitigation is required.

3.12 Community Impacts (Social, Economic) and Environmental Justice

3.12.1 Affected Environment

This section of SR 84 carries primarily commuter traffic, and acts as a connector for motorists traveling from Interstate 580 to Interstate 680. At the east end of the project

area is the City of Livermore, with a population of 74,000. North of the project is the City of Pleasanton, with 64,000 people. The majority of the population (80%) is in Management/Professional or Sales and Office occupations.

Residential – Residences in the project area include the Ruby Hills gated community at the east end of the project area, and one residence close to the road south of SR 84. (See Figure 3.1 for proximity to SR 84)

Business - Businesses near the project area include Kalthoff Vineyards and Crystal Image Farms, an equestrian facility. No businesses will be impacted by this project.

Demographics – Based on the U.S. Census Bureau 2000 census, the racial and ethnic composition within the cities of Pleasanton and Livermore has a lower percentage of minorities than Alameda County as a whole. The median household income for the city of Livermore is well above the average for both Alameda County and California as a whole. (See Tables 3.5 and 3.6)

Table 3.5 Racial and Ethnic Composition

Population Groups (by percentage)	Alameda County	Livermore	Pleasanton
White	48.8	81.9	80.4
African American	14.9	1.6	1.4
American Indian	0.6	0.6	0.3
Asian	20.4	5.8	11.7
Hispanic	19.0	14.4	7.9
Total Population	1,443,741	73,345	63,654

Source: U.S. Census Bureau, Census 2000.

Table 3.6 Income Levels

Income in 1999	Alameda County	Project Area Livermore	Project Area Pleasanton	California
Median Household Income	\$55,946	\$75,322	\$90,859	\$47,493
Per Capita Income	\$26,680	\$31,062	\$41,623	\$22,712
Persons below poverty, percent, 1999	11%	Not Available for City	Not Available for City	14%

Source: U.S. Census Bureau, Census 2000.

3.12.2 Impacts

Right-of-Way – Right-of-way acquisition would be required for construction of the project and consists mostly of unimproved agricultural land. Two of the affected parcels are improved with vineyards. One full take of an agricultural property with a residence would be required. Property owners would be compensated the fair market value for any land or improvements acquired by Caltrans. (See table 3.7 for impacts)

Table 3.7 Right-of-Way Impacts

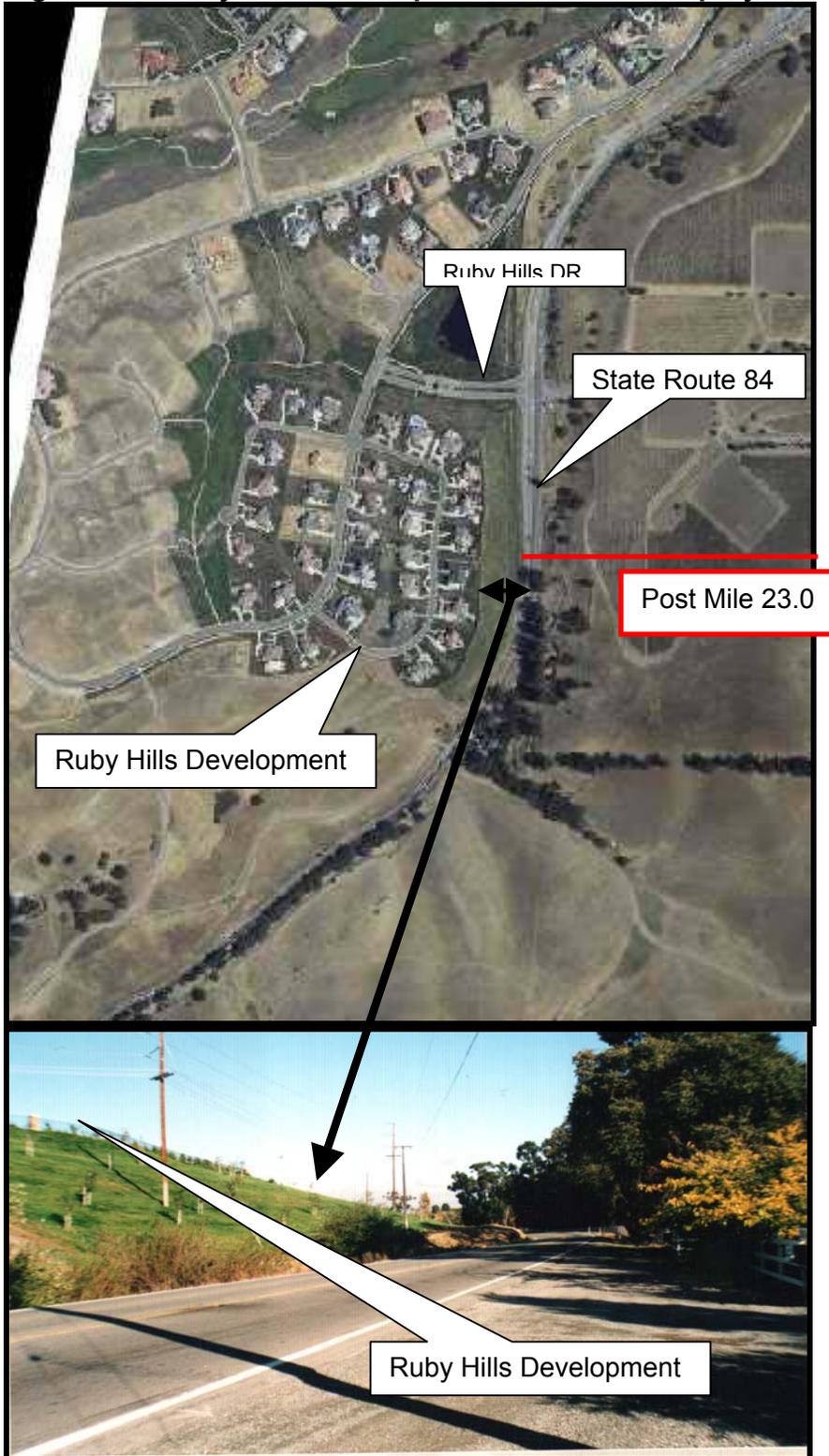
Impact	Design Speed Alternative		
	80-km/h	90-km/h	105-km/h
Parcels impacted	9	10	10
Relocations required	0	1	1
Hectares of new right-of-way	16.36	27.13	32.06
Acres of new right-of-way	40.43	67.04	79.22

Environmental Justice – The demographic analysis for the area surrounding the project indicates that it is in a higher income area than average. The proposed project would not result in disproportionately high health or environmental effects on minority or low-income populations. The project is considered to be consistent with the objectives of Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority and Low Income Populations).

3.12.3 Compensation

Property owners would be compensated the fair market value for any land or improvements acquired by Caltrans. Relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Refer to Appendix C for further information.

Figure 3.1 Ruby Hills Development in relation to project



3.13 Utilities/Emergency Services

The project will require the relocation of gas, electric and telephone facilities. There are no water distribution facilities located in the project limits. The project requires relocation of approximately 300 m (984 ft) of 600-mm (24-in) diameter natural gas transmission pipeline. The project also requires the relocation of approximately 1100 meters (3610 ft) of overhead electrical distribution lines. Caltrans will closely coordinate with utility companies to ensure minimum disruption of service to customers in the project area.

No emergency services would be adversely impacted by construction of the project. During construction, Caltrans will coordinate with appropriate emergency response agencies to ensure adequate response times. After completion, the proposed project would result in improved conditions for fire protection, law enforcement, and other emergency response services along SR 84.

3.14 Bicycle Facilities

State Route 84 between I-680 and I-580 is a conventional highway. All conventional highways and expressways are open to bicycle travel, except where prohibited. Therefore, SR 84 in the project area is open to bicycle travel.

Bicycle travel is expected to improve with the construction of wider shoulders and curve corrections. Additionally, with the 90-km/h (55-mph) Alternative the current roadway would be relinquished as a frontage road, which could provide an improved route for bicyclists.

3.15 Visual/Aesthetics

Caltrans Office of Landscape Architecture conducted studies of the proposed project area to identify possible scenic resources and potential visual quality impacts, as per Caltrans standards. The methods used to assess the visual impacts of the proposed project are those set forth in the report, "Visual Impact Assessment for Highway Projects" published by the U.S. Department of Transportation Federal Highway Administration. Landscape character and levels of visual quality were then determined for both pre-and post-project conditions. The analysis considered views of the road from surrounding areas as well as views from the road experienced by motorists who would be traveling on State Route 84.

3.15.1 Affected Environment

Traveling east on SR 84 starting at the beginning of the project, KP 33.3 (PM 20.7) the terrain is pastoral with rolling hills. The land use along this stretch consists of grazing land, small farms, sparsely scattered residences and a few private and public equestrian facilities (Crystal Image Farms). Most of this development sits back from the highway and is not highly visible. The highway facility in this section lies between distant rolling hills in a valley terrain. As the roadway ascends out of the valley it becomes rather steep in areas. Segments of the road abut up against cut slopes of rolling hills on the north side and have steep drop offs on the south side. These drop off segments open up the highway to an extensive view-shed. Other portions of the highway are depressed where the road travels between cut slopes. The corridor past Pigeon Pass descends along a dense riparian habitat that borders the southern edge of the corridor. Continuing east, the terrain changes from rural to a more urban environment. The more urban part of SR 84 has the Ruby Hills Development on the north side and the Kalthoff Vineyards and a single residence on the south side.

Traveling west from approximately KP 37.0 (PM 23.0), the corridor begins to ascend through oak woodlands with riparian vegetation and a creek paralleling the south side of the existing SR 84. The north side of the corridor is rolling hills covered with native grasslands. This section of the corridor is narrow, winding, and steep. At the crest of the corridor, known as Pigeon Pass, expansive views of rolling hills, grazing/agricultural land, glimpses of the San Antonio Reservoir, the foothills of the Sunol Regional Wilderness, and the Apperson and Wauhab Ridge can be seen.

3.15.2 Impacts

Within the immediate project area, the landscape exhibits a high degree of vividness, intactness, and unity. Additionally, the scenic resources of the area provide a uniqueness and quality due to their view-sheds, the natural landscape of the surrounding rolling hills, and the riparian vegetation and creek that parallel portions of the existing roadway.

After giving consideration to the existing roadway and environment, the alternatives were considered to help determine future impacts to the scenic resources and visual quality of the project's area. Because the alternatives only vary slightly in location

Figure 3.2 Existing view of SR 84 looking east towards Ruby Hills



Figure 3.3 Visual simulation of future roadway alignment (90 and 105-km/h design speed alternatives). Shown with proposed climbing lane.



Figure 3.4 Existing view of SR 84 looking east - near postmile 21.0



**Figure 3.5 Visual simulation of proposed highway alignment (80 or 90-km/h design speed alternatives).
Shown with proposed climbing lane.**



from one another, impacts are similar for all three alternatives. All alternatives (except for the no build) disrupt and alter the natural landscape and riparian vegetation that currently exists. Areas that are cleared and disturbed to temporarily expose the earth, especially the large cut slopes, would contrast with the undisturbed surrounding areas and would have the potential to attract the attention of viewers. These apparent scars would constitute a temporary visual impact.

Removal of any existing native trees and vegetation along the roadside to accommodate construction will impact the current visual character and interest of SR 84. The existing roadside slopes and hillsides will be impacted by construction of the project. No scenic vistas or view sheds will be impacted by the project.

3.15.3 Mitigation Measures

To minimize the degree of change and reduce visual impacts, mitigation techniques such as contour grading, slope rounding, re-vegetating and screen planting should be employed. The following specific design features are recommended.

- Cut and fill slopes would be contour graded and rounded so as to reflect the contours of adjacent, undisturbed topography to the extent feasible. Grading operations should not result in angular landforms.
- Design for gradual grade transitions (contour grading and slope rounding) at hinge and catch points of earthwork slopes, so as to reduce soil erosion and create a more natural appearing topography.
- Wood debris and green material generated from clearing and grubbing of the construction site shall be chipped into a mulch material and later spread over the disturbed slope area to aid in erosion control and re-vegetation.
- All exposed ground surfaces would be seeded with species such as perennial native grass and chaparral shrub seeds as early as possible for erosion control purposes and to preserve the natural landscape character. Plant species native to the area shall be used when re-vegetation is being performed.
- Oak trees that must be removed for construction of the project would be replaced at a ratio consistent with the biological assessment report.

- For any roadway structural elements, the Project Engineer and Landscape Architect shall coordinate for aesthetic treatments. For any existing roadway paving or elements that are to be abandoned, they shall be cleared and removed. The remaining topography and soils shall be reclaimed to match adjacent landform and vegetation cover.
- To help stabilize creek side slopes, fast-growing native willow trees will be planted in riparian areas.
- The existing grade around the base of remaining trees would be preserved to prevent the roots from being impacted by cut or fill earthwork.
- Once a roadway design plan has been selected, it is required that landscape re-vegetation and erosion control plans be prepared for the project prior to construction.
- Where rock slope protection and rock creek protection is specified, rock that is local and indigenous to the region would be used. If such rock is unavailable, and rock that has the potential for producing a glare to the environment is used, that rock would be stained with a coloring material.

3.16 Historic and Archaeological Resources

Federal regulation for cultural resources is governed primarily by Section 106 of the National Historic Preservation Act of 1966 (as amended). Section 106 requires federal agencies to take into account the effects of their actions on historic properties, and provides the Advisory Council on Historic Preservation the opportunity to comment on such actions. For compliance with NEPA, the FHWA follows the Council's implementing procedures contained in 36 CFR Part 800. Historic and archaeological resource studies performed pursuant to these statutes are documented in a Historic Property Survey Report prepared by Caltrans. For compliance with the California Environmental Quality Act (CEQA), the State Historic Preservation Office (SHPO) must provide concurrence with FHWA's findings regarding project impacts.

3.16.1 Affected Environment

The Area of Potential Effects (APE) encompasses direct or indirect effects associated with the alternatives that could cause alterations in the character or use of any historic

property. The architectural APE encompasses all parcels containing built resources from which Caltrans will acquire new right-of-way or easements. In addition, the architectural APE includes any property that might be affected by visual or other indirect effects caused by the highway realignment and widening. An archaeological APE encompasses all areas of potential ground disturbance associated with the proposed project, and this disturbance could extend from 10.00 to 280.00 m (32.81 to 918.64 ft) from the existing centerline along both sides of SR 84.

Nine parcels contain built resources that post-date 1957 and were treated in accordance with the “Caltrans Interim Policy for the Treatment of Buildings Constructing in 1957 or Later,” which became effective on June 1, 2001. Caltrans staff reviewed the project’s APE and confirmed that no buildings predate 1957 or appear to require further study. One archaeological site, CA-ALA-605H, was identified within the APE, but was determined to be ineligible for inclusion on the National Register. In a letter dated June 3, 2003, SHPO concurred with FHWA’s determination that CA-ALA-605H is not eligible for inclusion in the National Register and concurred with the finding of No Historic Properties Affected, pursuant to 36 CFR 800.4 (d)(1).

3.16.2 Mitigation Measures

Although unlikely, it is possible that unidentified subsurface archaeological remains exist within the project limits and could be encountered during ground-disturbing activities. If buried cultural materials are encountered during construction, it is Caltrans policy to halt work in the immediate vicinity of the find until a qualified archaeologist can evaluate the nature and significance of the find. Additional surveys will be required if the project changes to include areas that have not been surveyed.

3.17 Unavoidable Adverse Impacts

The proposed project would not result in unavoidable adverse impacts. The project would not degrade the quality of the environment, or cause substantial adverse effects to human beings, either directly or indirectly. None of the impacts of this project are expected to contribute to a cumulatively considerable impact.

Chapter 4 Cumulative Impacts

Table 4.1 Projects Considered in Cumulative Effects Evaluation

Responsible Agency	Project Name	Type of Project	Location	Status
Caltrans	SR 84 Realignment and Widening (EA 17240)	Safety project - realignment and widening	Vallecitos Hills/Pigeon Pass area, southwest of Livermore	Proposed project; Programmed for 04/05 fiscal year
Caltrans	SR 84 Resurfacing, Restoration and Rehabilitation (RRR)	Pavement overlay and shoulder widening	Between I-680 and west end of 17240, and from Ruby Hills Drive to Isabel Avenue on the east end of 17240	In construction
City of Livermore	Transfer of SR 84 from First Street to Isabel Ave	Route transfer	Downtown Livermore	Transferred December 17, 2003
Caltrans	The Ultimate Alignment	Road widening and realignment for a 4-lane expressway with climbing lanes over Pigeon Pass	SR 84 between I-580 and I-680	In early planning stage

4.1 Potential Cumulative Effects

For the purpose of this document, cumulative impacts will be addressed for the region including the city limits of Livermore, and the SR 84 corridor from Livermore west to the I-680 interchange. According to the Livermore General Plan Update, much of the open space left within the city limits is designated as open space in the form of resource management areas, parks, hillside conservation or agriculture. It is reasonable to consider that those areas will remain protected for the foreseeable future. The SR 84 corridor is a rural area with large parcels of privately owned property. Most of the property is used for ranching.

In addition to the Pigeon Pass project, another project in the SR 84 corridor is in the early planning stages. That project, sometimes referred to as the “ultimate alignment”, proposes to widen Isabel Avenue and Vallecitos Road (SR 84) from Airway Boulevard to the I-680 interchange. The widening project will have similar impacts to sensitive species as the Pigeon Pass project. However, these cumulative impacts have been minimized to the extent possible by designing the Pigeon Pass realignment to mimic the future design of the widened ultimate alignment. This is

intended to reduce the amount of new ground disturbance, and additional habitat loss when the larger project is built. It is important to clarify that the Pigeon Pass safety project is a stand-alone project and does not depend upon the ultimate alignment. It is possible that once the ultimate alignment of SR 84 is complete, the privately owned open space surrounding it will be sold to developers and lost to residential and commercial uses. This additional loss could have cumulative impacts to sensitive species. The ultimate widening of SR 84 is several years away.

4.1.1 Special Status Species

When listed species are affected, consultation with USFWS under the Federal Endangered Species Act and CDFG under the California State Endangered Species Act would be completed for future projects that may occur in the area. Cumulatively, the viability of some sensitive species throughout the region could be impacted. Each project would mitigate for specific impacts through avoidance, creation, and preservation. Often, through mitigation requirements, the resource agencies are able to obtain large parcels of suitable habitat, creating a continuity that facilitates viability among individual species. This project is not expected to have an adverse cumulative effect to threatened and endangered wildlife and plant species.

4.1.2 Wetlands and Waters of the U.S.

Federal regulations require that there be no net loss of wetlands. All projects are required to incorporate water quality measures to prevent water pollution within and beyond project areas. With a no net loss of wetlands and mandatory water quality measures, it is expected that any impacts to wetlands and waters of the U. S. would be temporary in nature, and that mitigation of natural habitats would facilitate sustainability throughout the region.

4.1.3 Other Resources

The proposed project is not expected to contribute to cumulative effects to water quality, farmland, air quality, noise, floodplains, visual resources, hazardous waste, and cultural resources

Chapter 5 **Comments and Coordination**

Agency consultation and public participation for the project have been accomplished through a variety of formal and informal methods, including project development team meetings and interagency coordination meetings. This chapter summarizes the results of the Department's efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

Public Involvement

Caltrans met with a private landowner on July 9, 2002 to discuss conducting environmental field studies on his property. This landowner owns a significant portion of the property adjacent to the proposed project. At this meeting, he explained that he needs to cross SR 84 for his cattle ranching activities, including hauling cattle with a semi-tractor trailer. To solve these issues, Caltrans proposed a vehicular undercrossing of adequate size to haul cattle from one side of SR 84 to the other. The landowner agreed and provisions for a grade-separated crossing have been included in the design of each of the three alternatives.

This Draft Environmental Assessment/Initial Study will be available for public review and comment for a minimum of 30 days. During the public review, a notice of availability and opportunity for a public workshop will be advertised. Comments received during the review period will be included and addressed in the Final Environmental Assessment/Initial Study.

Agency Coordination

U.S. Fish & Wildlife Service Consultation for Endangered Species Act

- A meeting was conducted on September 19, 2002 for Caltrans and USFWS to discuss San Joaquin kit fox and the potential presence of Alameda whipsnake
- Concurrence on "Early Evaluation for the San Joaquin Kit Fox", personal communication with Valerie Bloom, December 2002

- Consultation Pursuant to Section 7 of the Endangered Species Act, via FHWA was initiated in September 2003

U.S. Army Corps of Engineers Wetland Delineation

- Request for Verification of Wetland Delineation, pending

State Historic Preservation Office (SHPO) Letters

- Request for Concurrence of Historic Property Survey Report, From FHWA to SHPO, March 5, 2003.
- Concurrence of Findings from SHPO, June 3, 2003

Chapter 6 **List of Preparers**

This Initial Study/ Environmental Assessment was prepared by the North Region of the California Department of Transportation (Caltrans). The following Caltrans staff prepared this Initial Study/ Environmental Assessment:

Baker, Gwyn, Associate Environmental Planner. Four years experience in environmental planning and document preparation. **Contribution: Document Preparation.**

Baker, Jean L., Senior Environmental Planner. Twenty years experience in preparing and supervising the preparation of environmental documents. **Contribution: Environmental Branch Chief.**

Ferreira, Alan, P.E., Transportation Engineer. Seven years experience in design and project development. **Contribution: Project Engineer, PS&E Phase**

Grady, Kathleen, Landscape Associate. Twenty years experience performing visual impact assessments. **Contribution: Visual Impact Assessment.**

Haney, Jeff, Associate Environmental Planner (Archaeology). Twenty years experience, including ten years in California archaeology. **Contribution: Historic Property Survey Report**

Hoole, John, P.E. Transportation Engineer. Twelve years experience in design and project development. **Contribution: Project Engineer, PA&ED Phase**

Hui, Cyrus, P.E., Senior Transportation Engineer. Twenty-three years experience in design and project development, eleven years as Senior Transportation Engineer. **Contribution: Design Branch Chief.**

Kiaaina, Ron, Project Manager. Two and half years experience in project development and delivery. **Contribution: Project Manager.**

Melani, Mark, Environmental Engineer. Fifteen years experience in hazardous waste studies. **Contribution: Updated Hazardous Waste Initial Site Assessment.**

Penders, Sean, P.E., Water Quality Engineer. Nine years experience in storm water and water quality analysis. **Contribution: Water Quality Report.**

Speckert, Lynn, Associate Environmental Planner (Air/Noise). Ten years experience performing air and noise studies. **Contribution: Air and Noise Reports.**

Tate, Darla, Associate Environmental Planner. Six years experience working with CEQA, two years experience environmental document preparation with Caltrans. **Contribution: Former Environmental Coordinator.**

Tordoff, Judy, Associate Environmental Planner (Archaeology). Thirty-five years experience, including twenty years in California archaeology. **Contribution: Historical Resource Evaluation Report.**

Wilson, Steve, P.E., Transportation Engineer. Seventeen years in design and project development. **Contribution: Project Engineer.**

Zahner, Shanna, Associate Environmental Planner (Natural Sciences). Five years experience in biological studies. **Contribution: Natural Environment Study report and Biological Assessment.**

Appendix A California Environmental Quality Act Evaluation

CEQA Environmental Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The CEQA impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. Please refer to the following for detailed discussions regarding impacts:

CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulations, Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resource Code, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)

CEQA requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate that there will be no impacts. A “no impact” reflects this determination. Any needed discussion is included in the section following the checklist.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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 building within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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d) Expose sensitive receptors to substantial pollutant concentration?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Create objectionable odors affecting a substantial number of people?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

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

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

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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 checked="" type="checkbox"/>	<input type="checkbox"/>
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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 checked="" type="checkbox"/>	<input type="checkbox"/>
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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

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

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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COMMUNITY RESOURCES - Would the project:

a) Cause disruption of orderly planned development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Be inconsistent with a Coastal Zone Management Plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Affect life-styles, or neighborhood character or stability?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Physically divide an established community?

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

e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?

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

f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?

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

g) Affect property values or the local tax base?

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

h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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i) Result in alterations to waterborne, rail, or air traffic?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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j) Support large commercial or residential development?

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

k) Affect wild or scenic rivers or natural landmarks?

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

l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?

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

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/> |

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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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"/> |

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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HAZARDS AND HAZARDOUS MATERIALS -

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

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

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

HYDROLOGY AND WATER QUALITY - Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 run-off 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 run-off water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted run-off?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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LAND USE AND PLANNING - Would the project:

a) 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"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

b) Conflict with any applicable habitat conservation plan or natural community conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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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"/>
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NOISE - Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

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

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"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/> |

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:

- | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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"/> |

RECREATION -

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

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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TRANSPORTATION/TRAFFIC - Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exceed, either individually or cumulatively, in a level of service standard established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 incomplete 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) Result in inadequate parking capacity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

UTILITY 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"/> |
| 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"/> |

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

e) Result in 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"/>
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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"/>
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g) Comply with federal, state, and local statutes and regulations related to solid waste?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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"/>
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Appendix B Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5267
FAX (916) 654-6608



July 26, 2000

TITLE VI POLICY STATEMENT

The California State 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, sex and national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

A handwritten signature in cursive script that reads "Jeff Morales".

JEFF MORALES
Director

Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

RELOCATION ASSISTANCE ADVISORY SERVICES

The California Department of Transportation (the Department) will provide relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of the Department's acquisition of real property for public use. The Department will assist residential displacees in obtaining comparable decent, safe and sanitary replacement housing by providing current and continuing information on sales price and rental rates of available housing. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees will be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include supplying information concerning federal and state assisted housing programs, and any other known services being offered by public and private agencies in the area.

RESIDENTIAL RELOCATION PAYMENTS PROGRAM

The Relocation Payment program will assist eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for, or incidental to, purchasing or renting a replacement dwelling, and actual reasonable expenses incurred in moving to a new location within 80 kilometers (50 miles) of the displacee's property. Any actual moving costs in excess of 80 kilometers (50 miles) are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

Moving Costs

Any displaced person who was "lawfully" in occupancy of the acquired property regardless of the length of occupancy in the property acquired will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 80 kilometers (50 miles), a moving service authorization, or a fixed payment based on a fixed moving cost schedule which is determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expenses payments, fully eligible homeowners may be entitled to payments for increased costs of purchasing replacement housing.

Homeowners who have owned and occupied their property for 180 days prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment equal to the difference between the Department's offer to purchase their property and the price of a comparable replacement dwelling, and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. Also the interest differential must be based upon the "lesser of" either the loan on the displacement property or the loan on the replacement property. The maximum combination of these three supplemental payments that the owner-occupants can receive is \$22,500. If the calculated total entitlement (without the moving payments) is in excess of \$22,500, the displacee may qualify for the Last Resort Housing described below.

Rental Supplement

Tenants who have occupied the property to be acquired by the Department for 90 days or more and owner-occupants who have occupied the property 90 to 180 days prior to the date of the first written offer to purchase may qualify to receive a rental differential payment. This payment is made when the Department determines that the cost to rent a comparable and "decent, safe and sanitary" replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the eligible occupant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitation noted below under the "Down Payment" section (see below). The maximum amount of payment to any tenant of 90 days or more and any owner-occupant of 90 to 179 days, in addition to moving expenses, will be \$5,250. If the calculated total entitlement for rental supplement exceeds \$5,250, the displacee may qualify for the Last Resort Housing Program described below.

The rental supplement of \$7,500 or less will be paid in a lump sum, unless the displacee requests that it be paid in installments. The displaced person must rent and occupy a "decent, safe and sanitary" replacement dwelling within one year from the date the Department takes legal possession of the property, or from the date the displacee vacates the Department-acquired property, whichever is later.

Down Payment

Displacees eligible to receive a rental differential payment may elect to apply it to a down payment for the purchase of a comparable replacement dwelling. The

down payment and incidental expenses cannot exceed the maximum payment of \$5,250, unless the Last Resort Housing Program is indicated. The one-year eligibility period in which to purchase and occupy a "decent, safe and sanitary" replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24.404) contain the policy and procedure for implementing the Last Resort Housing Program on federal aid projects. In order to maintain uniformity in the program, the Department has also adopted these federal guidelines on non-federal-aid projects. Except for the amounts of payments and the methods in making them, last resort housing benefits are the same as those benefits for standard relocation as explained above. Last resort housing has been designed primarily to cover situations where available comparable replacement housing, or when their anticipated replacement housing payments, exceed the \$2,520 and \$22,500 limits of the standard relocation procedures. In certain exceptional situations, last resort housing may also be used for tenants of less than 90 days.

After the first written offer to acquire the property has been made, the Department will, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation.
- Number of people to be displaced and the distribution of adults and children according to age and sex.
- Location of school and employment.
- Special arrangements to accommodate any handicapped member of the family.
- Financial ability to relocate into comparable replacement dwelling, which will house all members of the family decently.

The above explanation is general in nature and is not intended to be a complete explanation of relocation regulations. Any questions concerning relocation should be addressed to the Department. Any persons to be displaced will be assigned a relocation advisor who will work closely with each displacee in order to see that all payments and benefits are fully utilized, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments.

THE BUSINESS AND FARM RELOCATION ASSISTANCE PROGRAM

The Business and Farm Relocation Assistance Program provides aid in locating suitable replacement property for the displacee's farm or business, including, when requested, a current list of properties offered for sale or rent. In addition, certain types of payments are available to businesses, farms, and non-profit organizations. These payments may be summarized as follows:

- Reimbursement for the actual direct loss of tangible personal property incurred as a result of moving or discontinuing the business in an amount not greater than the reasonable cost of relocating the property.
- Reimbursement up to \$1,000 of actual reasonable expenses in searching for a new business site.
- Reimbursement up to \$10,000 of actual reasonable expenses related to the reestablishment of the business at the new location.
- Reimbursement of the actual reasonable cost of moving inventory, machinery, office equipment and similar business-related personal property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting personal property.

Payment "in lieu" of moving expense is available to businesses which are expected to suffer a substantial loss of existing patronage as a result of the displacement, or if certain other requirements such as inability to find a suitable relocation site are met. This payment is an amount equal to the average annual net earnings for the last two taxable years prior to relocation. Such payment may not be less than \$1,000 and not more than \$20,000.

ADDITIONAL INFORMATION

No relocation payment received will be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance).

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable "decent, safe and sanitary" replacement residence, open to all persons regardless of race, color, religion, sex or national origin, is available or has been made available to them by the state.

Any person, business, farm or non-profit organization, which has been refused a relocation payment by the Department, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or the Department's Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal council at his/her expense. Information about the appeal procedure is available from the Department's Relocation Advisors.

The information above is not intended to be a complete statement of all of the Department's laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted immediately

after the first written offer to purchase, and also given a more detailed explanation of the Department's relocation programs.

IMPORTANT NOTICE

To avoid loss of possible benefits, no individual, family, business, farm or non-profit organization should commit to purchase or rent a replacement property without first contacting a Department of Transportation relocation advisor at:

State of California
Department of Transportation, District 4
111 Grand Ave
Oakland, CA 94612

Appendix D Plan Sheets
