

Highway 49 Widening at La Barr Meadows

State Route 49 in Nevada County
03-NEV-49-KP 15.5/18.0 (PM 9.7/11.2)
EA 2A6900

Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment



Prepared by the
U.S. Department of Transportation
Federal Highway Administration
and the
State of California Department of Transportation
June 2007



General Information About This Document

What's in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of the proposed project located in Nevada County, California. The document describes why the project is being proposed, the existing environment that could be affected by the project, and potential impacts from construction of the project.

What should you do?

- Please read this Initial Study/Environmental Assessment.
- We welcome your comments. If you have any concerns regarding the proposed project, send your written comments to Caltrans by the deadline. Submit comments via regular mail to Caltrans, Attn: Susan D. Bauer, Environmental Management M-1, P.O. Box 911, Marysville, CA 95901; submit comments via email to *sue.bauer@dot.ca.gov*
- Submit comments by the deadline: _____.

What happens next?

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

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Susan D. Bauer, Environmental M-1 Branch, P.O. Box 911, Marysville, CA 95901; (530) 741-7113 Voice, or use the California Relay Service TTY number, 1-800-735-2929

SCH Number:
03-NEV-49-15.5/18.0
(PM 9.7/11.2)

Upgrade State Route (SR) 49 in Nevada County by widening, relocating, and
signalizing the intersection at La Barr Meadows Road and SR 49 from Ponderosa
Way KP 15.5 (PM 9.7) to just north of Lode Line Way KP 18.0 (PM 11.2)

Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C)

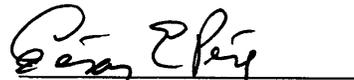
U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

THE STATE OF CALIFORNIA
Department of Transportation

30 May 2007
Date of Approval


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

6/6/07
Date of Approval


Federal Highway Administration

Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose to upgrade a portion of the interregional transportation facility (State Route 49) in Nevada County from Ponderosa Way to north of Lode Line Way near Grass Valley to accomplish the following objectives: 1) Improve safety by restricting access to State Route (SR) 49 through the elimination of driveways, 2) Correct roadway deficiencies within the project limits by bringing SR 49 up to current design standards, and 3) Accommodate existing and projected future traffic volumes at a level of service (LOS) D or better through the year 2025. Construction activities will consist of widening the existing roadway from two lanes to four lanes with a continuous median/left turn lane, realign the horizontal alignment, removal of at-grade intersections, construction of a frontage road system to funnel traffic from existing at-grade intersections and private driveways to new signalized intersection (La Barr Meadows & SR 49), and concrete barriers between the SR 49 and the new frontage road system.

Determination

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

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

- The proposed project will have **no effect** on floodplains, geology or soils, wetlands, public services, farmland, or planned land use;
- The proposed project will not increase seismic hazards or induce growth;
- The proposed project will have **no significant effect** on air quality, cultural resources, biological resources, water quality, utilities, social, recreational or educational facilities, or neighborhood integrity.
- Visual/aesthetic impacts will be mitigated through a combination of either plantings that provide a visual screen and/or construction of screening fences or walls.
- Impacts to Waters of the U.S. will be mitigated through creation of waters on or off-site, purchasing credits at an approved mitigation bank, contributing to an in-lieu fee program, or by using a combination of these measures.

John Webb, Chief
North Region Environmental Services
California Department of Transportation

Date

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List of Abbreviated Terms

ac	Acre
AC	Asphalt concrete
AADT	Annual Average Daily Traffic
APE	Area of Potential Effects (cultural resources)
BMP	Best management practices (water quality)
Caltrans	California Department of Transportation
CDFG	California Department of Fish & Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon monoxide (air quality)
dBA	Decibels (noise level measurement)
DI	Drainage Inlet
ESA	Environmentally Sensitive Area
FG	Finished grade
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
ft	foot/feet
HDM	Highway design manual
HPSR	Historic property survey report
IS	Initial Study
km	kilometer(s)
KP	kilometer post
Leq	Equivalent noise level
LOS	Level of service
m	meter(s)
MBTA	Migratory Bird Treaty Act
mi	mile(s)
NAC	Noise abatement criteria
NEPA	National Environmental Policy Act
NES	Natural Environment Study (biological resources)
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
PG&E	Pacific Gas & Electric
PM	post mile
ppm	Parts per million
PRC	Public Resources Code
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SR	State Route
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish & Wildlife Service

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) and Federal Highway Administration (FHWA) propose to upgrade a 3.5-kilometer (1.5-mile) segment of State Route (SR) 49 from Ponderosa Way (KP 15.5/PM 9.7) to just north of Lode Line Way (KP 18.0/PM 11.2) near Grass Valley in Nevada County. The goal of this project is to improve the operations and safety of SR 49 by widening the existing roadway from two lanes to four lanes with a continuous median/left turn lane, and to construct a signalized intersection near La Barr Meadows Road. The project also proposes the construction of frontage roads and the removal of existing at-grade intersections in order to direct traffic, which normally accesses SR 49 from private driveways, to the new signalized intersection.

The proposed project would accomplish the following objectives:

- Improve safety by restricting access to SR 49 through the elimination of at-grade intersections.
- Correct roadway deficiencies within the project limits by bringing SR 49 up to current design standards.
- Accommodate existing and projected future traffic volumes at a level of service (LOS) D or better through the year 2030.

The following improvements are included in the proposed project:

- Construction of a signalized intersection near La Barr Meadows Road.
- Construction of two additional 3.6-m (12-ft) lanes with a continuous two-way left turn lane and 2.4-m (8-ft) shoulders.
- Rehabilitation of the existing SR 49 roadway.
- Construction of a frontage road system to funnel existing at-grade intersections and private driveways to a signalized intersection.
- Install concrete barrier between SR49 and the new frontage road system.

- Elimination of driveway access points.
- Provide improved emergency vehicle access via signalized intersection.

The estimated total cost for the project is \$27 million. Construction capital cost is estimated at \$17.7 million. Cost related to the acquisition of the right-of-way is estimated at \$9.3 million. Construction of the project would begin in the year 2009, subject to California Transportation Commission (CTC) approval of construction funding.

This project is programmed in the 2006 adopted State Transportation Improvement Program (STIP). Program funding includes \$10.96 million from the Interregional Improvement Program (IIP), and \$10.96 million from Nevada County's Regional improvements Program (RIP) share. Additionally, the proposed project was chosen to receive \$18.56 million from the Corridor Mobility Improvement Account (CMIA) program. The proposed project is also included in the Regional Transportation Plan.

Currently, the larger corridor project (KP 3.38- 21.89/PM 2.1 – 13.6) and the proposed project are in the 20- year Nevada County Transportation Commission's (NCTC) Regional Transportation Plan. The proposed project (Highway 49 Widening at La Barr Meadows) is included in the 2007 Federal Statewide Transportation Improvement Program (FSTIP), which was approved October 2, 2006.

1.2 Purpose and Need

1.2.1 Purpose

The California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose to upgrade a portion of the interregional transportation facility (State Route 49) in Nevada County from Ponderosa Way to just north of Lode Line Way near Grass Valley to accomplish the following objectives:

- Improve safety by restricting access to State Route (SR) 49 through the elimination of driveways.
- Correct roadway deficiencies within the project limits by bringing SR 49 up to current design standards.
- Accommodate existing and projected future traffic volumes at a level of service (LOS) D or better through the year 2025.

- Improving pedestrian and bicyclist mobility through the project limits

1.2.2 Project Vicinity

State Route 49 serves the “Mother Lode” county of the Sierra Nevada foothills, extending 295 miles from post mile 0.0 in Madera County near Oakhurst through seven counties which include Mariposa, Amador, El Dorado, to name a few and ends at the State Route 89/70 junction (PM 7.0) near the Sierra/Plumas County line (Figure 1.1).

Classified as a Federal Aid Primary (FAP) Route, SR 49 is a minor arterial route with extensions into the urban areas of Placerville (at Highway 50), Auburn (at I-80), and Grass Valley/Nevada City (Highway 20). Senate Bill 300 (Kopp, 1989) established an Interregional Road System (IRRS) of State highways outside urbanized areas that serve primarily interregional travel and commerce, and SR 49 is part of this Interregional Road System.

Originally built as a stagecoach route, and later widened, paved and used as the primary north/south route connecting the towns in the Sierra foothills, today SR 49 acts as a lifeline route to several communities in Nevada, Placer and Sierra Counties. The highway carries significant volumes of commuter, trucking and recreational traffic and in many areas the demand far exceeds the capacity of the facility

1.2.3 Need

The segment of SR 49 that includes the proposed project serves the Grass Valley/Nevada City area, which has expanded in size over time. As a result, the volume of local traffic has increased, and the State highway facility has become an integral part of the local circulation system in addition to serving interregional and interstate traffic.

Nevada County has experienced rapid growth and trucks, commuters, and recreational traffic increasingly use this portion of SR 49. Growth forecasts for the corridor indicate that traffic congestion and delays will only increase if SR 49 in Nevada County is not improved. It is estimated that 30% of the County work force is currently using this route as a primary commute route to major employment centers, resulting in over-capacity traffic demand during peak commute and recreation periods.

1.2.3.1 Route Concept

The Interregional Transportation Strategic Plan (ITSP) identifies the portion of SR 49 between Interstate 80 in Auburn in Placer County and SR 20 in Nevada County as a High-Emphasis “Focus Route,” making it one of Caltrans’ highest priority routes for project planning and programming (Caltrans 2000). Caltrans, in partnership with the Nevada County Transportation Commission (NCTC), Placer County Transportation Planning Agency (PCTPA), and local communities along the corridor, proposes to eventually expand this entire portion of SR 49 to a five-lane facility. The ultimate facility concept as defined in the Transportation Concept Report (TCR) is a five-lane conventional highway (Caltrans 2000).

1.2.3.2 Existing Facility

The facility within the project limits is a two-lane, undivided highway with periodic turn lanes and passing/acceleration lanes. The project location is a highly developed area of SR 49 consisting of numerous unrestricted access points. These access points include local road connections, a fire station, and residential and commercial driveways. A typical roadway cross-section shows one northbound and one southbound travel way, each 3.6 meters (12 feet) in width. The typical outside shoulder width varies from 0 to 2.44 meters (0 to 8 feet) (Figure 1-2a,b,c,d).

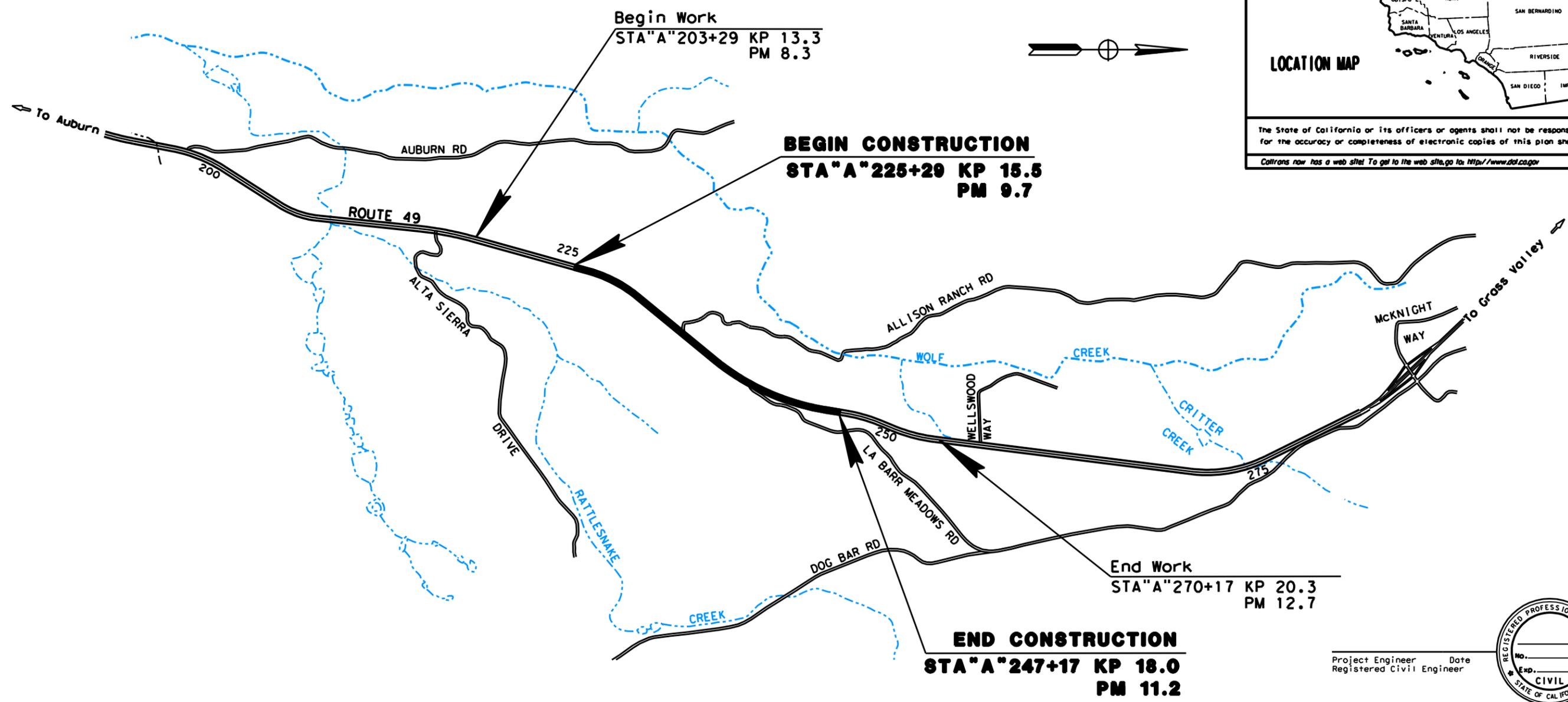
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**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY**
 IN NEVADA COUNTY
 ON ROUTE 49
 NEAR THE CITY OF GRASS VALLEY
 FROM 1.1 km NORTH OF ALTA SIERRA ROAD
 TO 0.9 km SOUTH OF WELLSWOOD WAY



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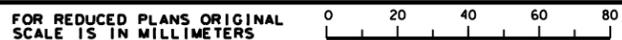
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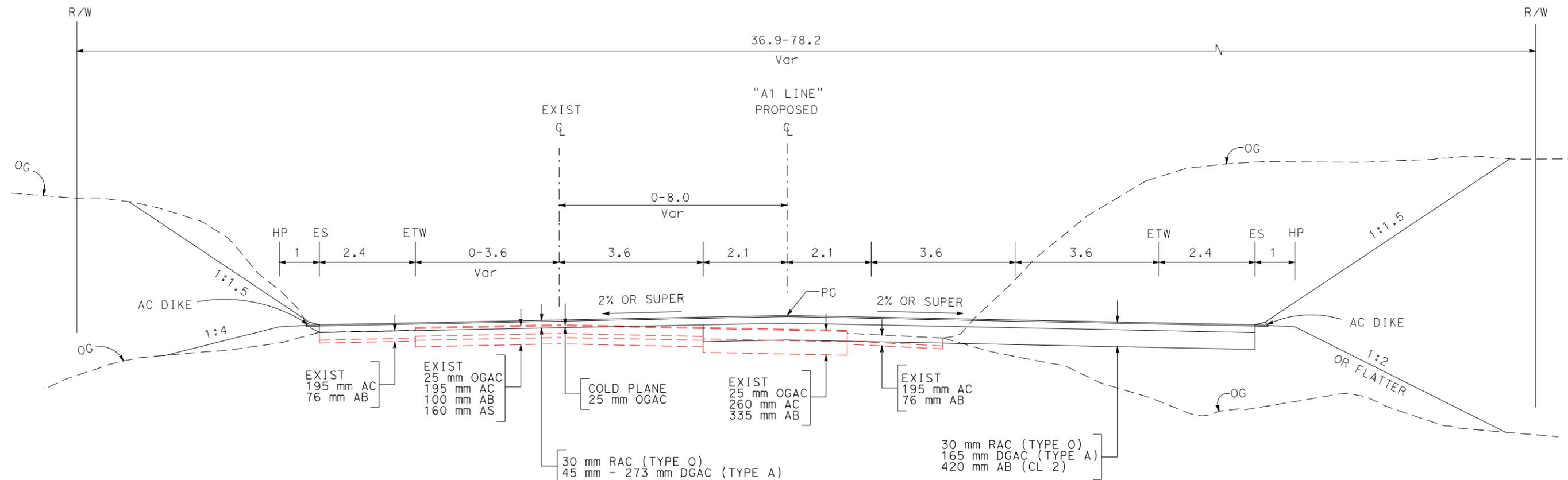
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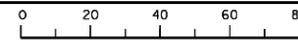
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FIGURE 1.2 A

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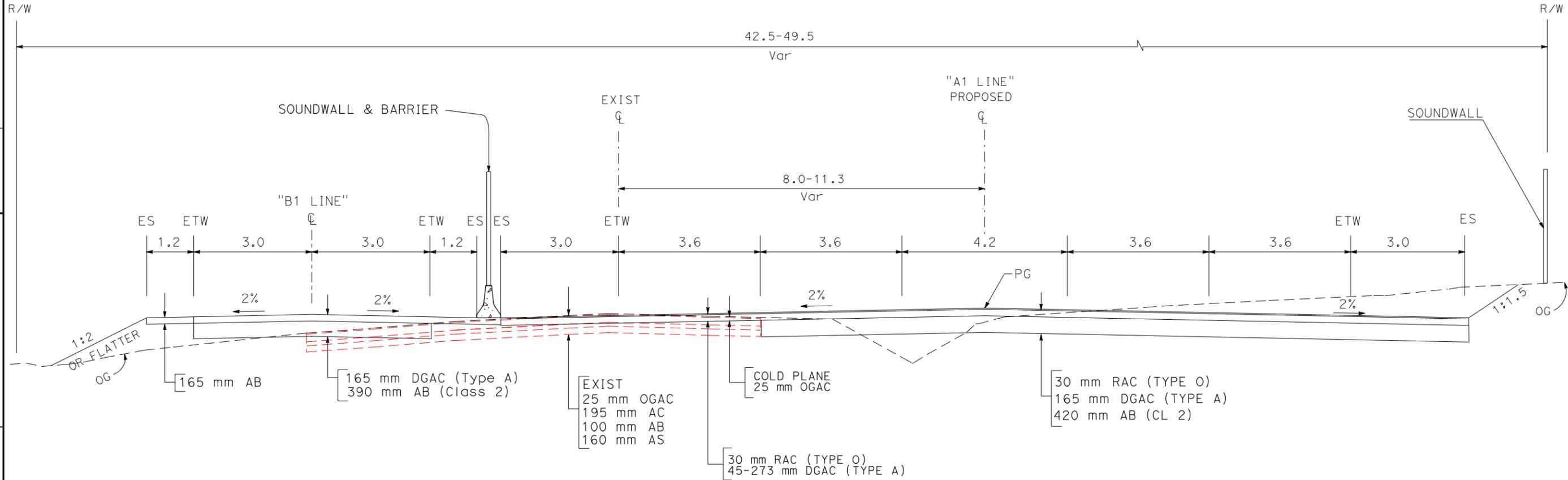
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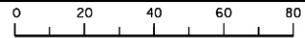


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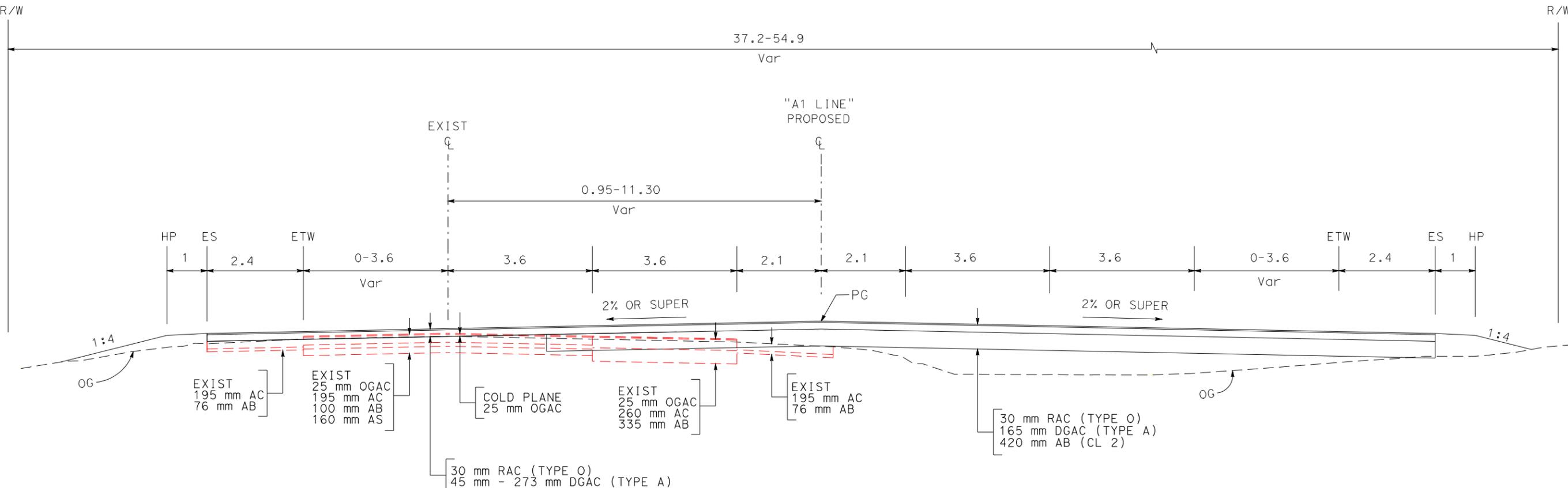
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FIGURE 1.2 C



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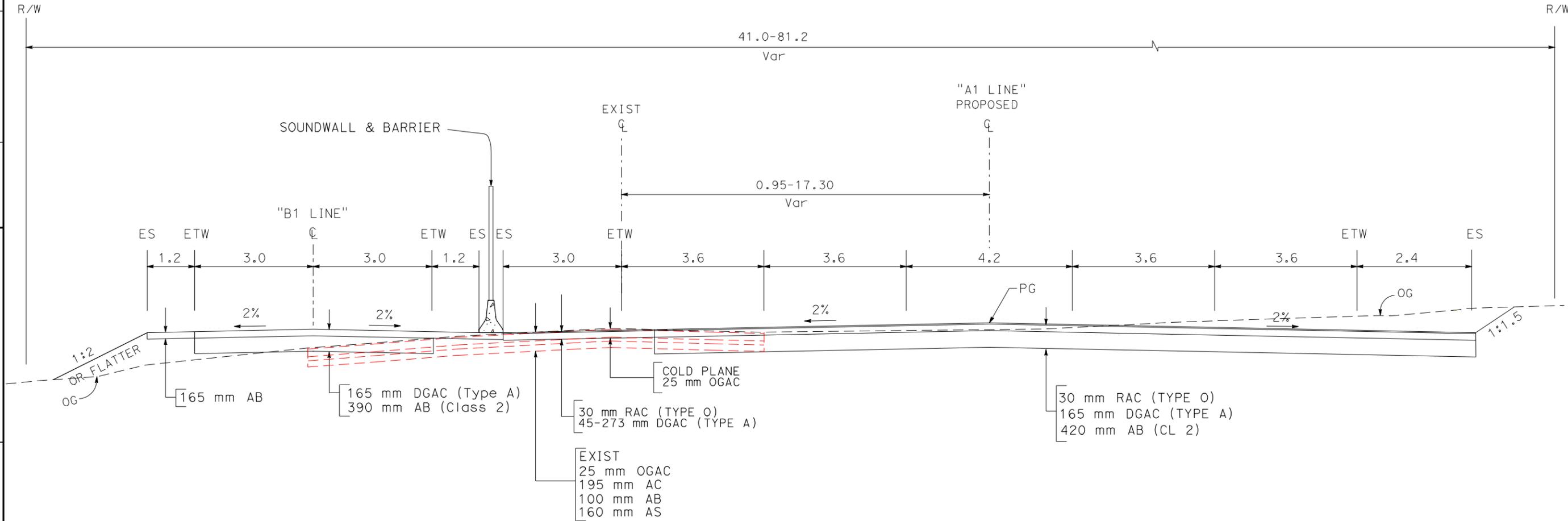
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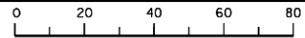
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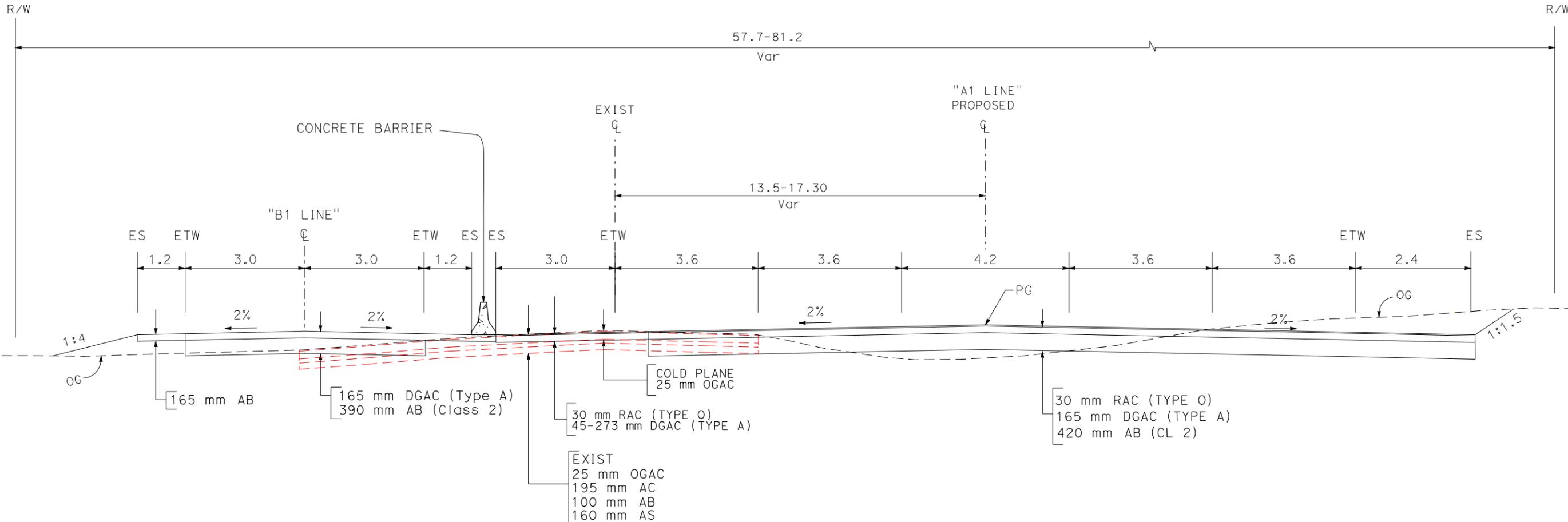
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FIGURE 1.2 E



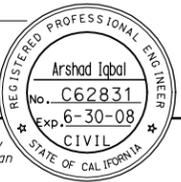
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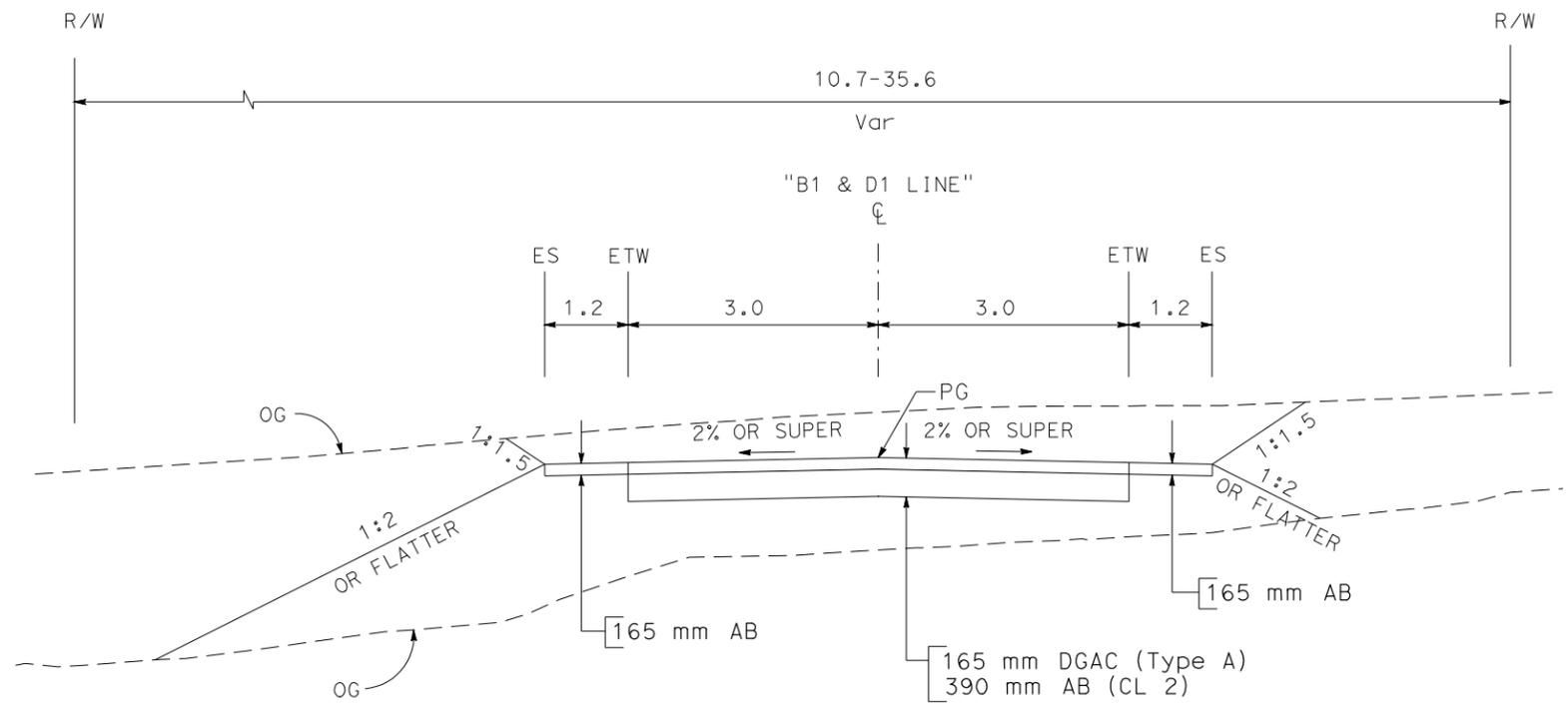
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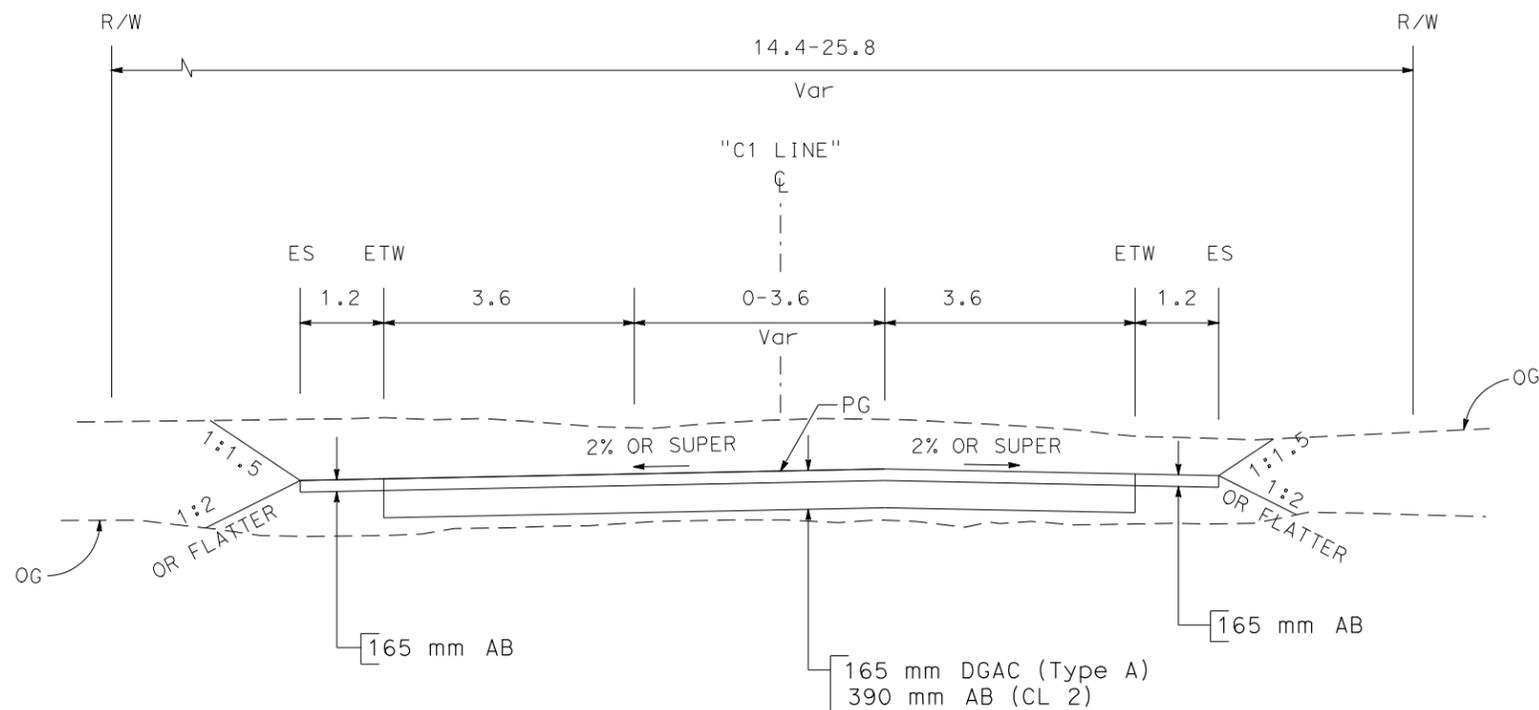
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FIGURE 1.2 G

1.2.3.3 Safety Issues

The traffic accident fatality rates for the highway segment under study are considerably higher than the statewide average for similar facilities. This is primarily due to the presence of at-grade intersections and private driveways. Slow moving vehicles entering or exiting the two-lane, high-speed highway create conflicting movements with through traffic and increase the potential for accidents. Failure to yield is the primary contributing factor in the at-grade intersection accidents.

Table 1-1 shows accident history data from the Traffic Accident and Surveillance and Analysis System (TASAS) for the segment studied, from KP 15.3/18.5 (PM 9.7/11.2), for the three-year period from July 1, 2002 to June 30, 2005.

Table 1.1 Accident Rates

Traffic Collision Data										
Location	Number of Collisions				Collision Rate (per million vehicle miles)					
					Actual			Average		
	Total	Fatal	Injury	F+I*	Fatal	F+I*	Total	Fatal	F+I*	Total
Study segment: KP 15.3/18.5 (PM 9.7/11.2)	39	4	13	17	0.090	0.38	0.88	0.033	0.56	1.18
Intersection SR 49 La Barr Meadows Road	9	3	2	5	0.124	0.21	0.37	0.008	0.16	0.33

*Fatal + Injury

Several fatal collisions have occurred at the SR-49/La Barr Meadows Road intersection. In addition to the collisions, a number of “near misses” have been reported. Although the number of accidents has not necessitated a safety improvement project, traffic in the project area is currently near capacity. With Annual Average Daily Traffic (AADT) projected to increase 62% by 2029, the Safety Index, a threshold number above which a safety project is warranted, will likely be triggered in the future.

AADT is the total traffic volume on a segment of roadway divided by 365 days and adjusted for seasonal influence, weekly variations and other variables. AADT is used for evaluating traffic trends, computing accident rates and planning and designing highway projects.

Additionally, Fire Station 88 of the Nevada County Consolidated Fire District is within the limits of this highway segment. Even with a flashing amber signal, fire station personnel have stated that it is often difficult for emergency vehicles to access the highway due to the heavy concentration of through traffic. This in turn raises the possibility of delayed response time of emergency crews.

1.2.3.4 Roadway Capacity

According to the updated Transportation Concept Report for SR 49, yearly traffic growth for the segment of SR 49 that includes this project is estimated at 1%. The Caltrans Office of Travel Forecasting and Modeling projects that the AADT through the SR 49/La Barr Meadows Road intersection will increase from 28,500 vehicles in the year 2004 to 47,000 vehicles in the year 2030. The Peak-Hour Volume (PHV) is estimated to increase from 3,190 vehicles to 5,260 vehicles during the same period. Trucks constitute 2% of the total traffic within the study segment.

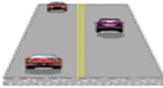
The AADT is projected to increase 37% by 2019 and 68% by 2030. The traffic volume forecasts for the analysis years of 2009, 2019, 2029, and 2030, (as shown in Table 1-2) with the base analysis year of 2004 were provided by the District 3, Office of Travel Forecasting and Modeling. The current and forecasted design year values for AADT, peak hour, 20-Year Directional Percentage, 20-Year Truck Percentage, 10-Year and 20-Year Traffic Indexes (TI) are as follows:

Table 1.2 Current and Forecasted Traffic

<u>03-Nev-49 KP 15.2/18.0 (PM 9.7/11.2)</u>		
	Annual ADT	Peak Hour
Base Year 2004 =	28,500	3,190
Year 2009 =	32,100	3,600
Year 2019 =	39,200	4,390
Year 2029 =	46,300	5,190
Year 2030=	47,000	5,260
20-Year Directional % =	55%	
20-Year Truck % =	4.5%	
10-Year TI =	9.5	
20-Year TI =	10.5	

The existing two-lane conventional highway will not accommodate predicted traffic increases at the accepted route concept Level Of Service (LOS), which is LOS D (see Table 1.3 for explanation of LOS). The LOS on this route is LOS F during peak hours.

Table 1.3 Traffic Level of Service (LOS)

LEVELS OF SERVICE for Two-Lane Highways			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		55+	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. No delays
B		50	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. No delays
C		45	Stable traffic flow, but less freedom to select speed, change lanes or pass. Minimal delays
D		40	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. Minimal delays
E		35	Unstable traffic flow. Speeds change quickly and maneuverability is low. Significant delays
F			Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. Considerable delays

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

1.3 Alternatives

1.3.1 Build Alternative

The build alternative proposes to widen the existing roadway by adding one 3.6 meter (11.8 feet) lane in each direction of travel and a continuous 4.2 meter (13.7 feet) median/left turn lane, construct 2.4 meter (7.8 feet) paved outside shoulders, right turn pockets, improve the vertical alignment and shift the center line to the east in order to improve sight distance. In addition to the roadway widening, this alternative

proposes to repair failed pavement sections, cold plane existing Open Grade Asphalt Concrete, and place Dense Grade Asphalt Concrete and Rubberized Asphalt Concrete overlay on the entire roadway.

The 2.4 meter (7.8 feet) outside shoulders along the entire route would also provide adequate width to safely accommodate bicyclists and pedestrians (Figure 1.3).

The build alternative proposes to construct a signalized intersection at KP 17.0 (PM 10.6) between the Foothill Church and the Nevada County Consolidated Fire District Station 88, remove existing at-grade intersections, and construct frontage roads that direct traffic to the new signalized intersection. The frontage roads will be comprised of 3.0 meter (10 –foot) lanes and 1.2 meter (4 ft) gravel/aggregate base shoulders. Existing private driveways would be repaved to provide smoother connection to the frontage roads. Pedestrian crosswalks, which are compliant with the Americans with Disabilities Act, are also incorporated into the design of the signalized intersection.

The Forest Springs Canal runs along the eastern side of SR 49. The Nevada Irrigation District (NID) maintains this canal to provide irrigation water for approximately 75 customers. The canal is primarily an earthen ditch with portions encased in pipes. Due to the close proximity to the proposed frontage roads, the canal would be replaced with pipes and relocated underground to improve travelers' safety.

This alternative would require advisory design exceptions for the non-standard slopes steeper than 1:4 and the frontage roads 3.0 meter (10 ft.) and 1.2 meter (4 ft.) gravel/aggregate base shoulders. The exceptions would minimize construction cost and avoid excessive right-of-way costs.

The highway widening and construction of frontage roads would require acquisition of properties along both sides of the SR 49.

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

PROJECT ENGINEER
ARSHAD IOBAL

CALCULATED/
DESIGNED BY
CHECKED BY

DATE
REVISED BY
DATE REVISED



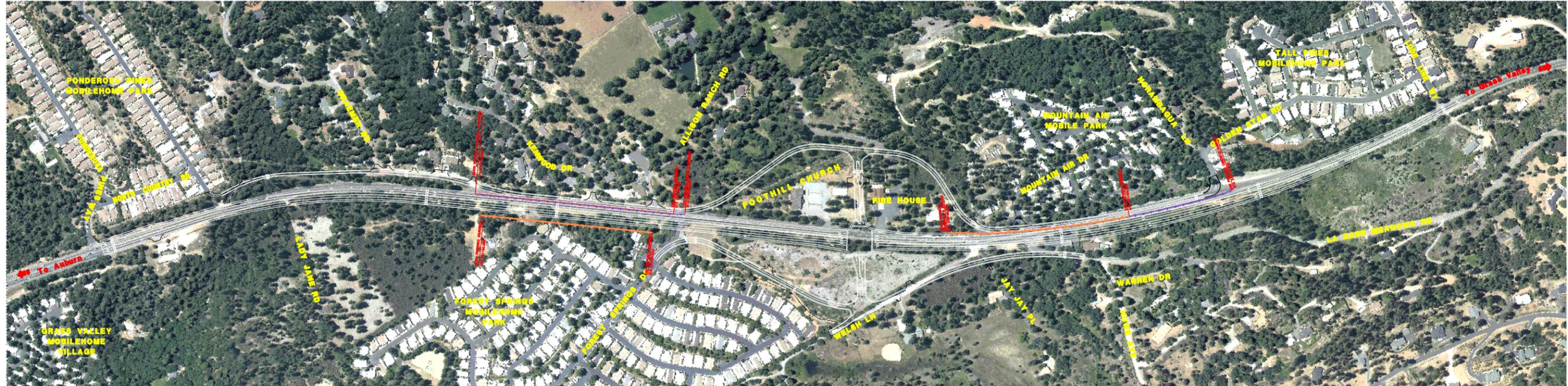
DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NEV	49	15.5/18.0		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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To get to the Caltrans web site, go to: <http://www.dot.ca.gov>



NO SCALE

BUILD ALTERNATIVE FIGURE 1.3



USERNAME => s131817
DGN FILE => Build_Alternative.dgn

CU 03266

EA 2A6900

LAST REVISION
00-00-00
DATE PLOTTED => 21-MAY-2007
TIME PLOTTED => 3:15:19

A No-Build Alternative is included to provide a baseline for comparison of the impacts of a proposed project. With a No Build Alternative, the facility would not be widened and the other associated improvements would not be constructed. It is expected that the collision rate within the project limits would continue to increase as traffic increases. This alternative would not meet the purpose of the project, which is to improve the safety and operation of the highway.

1.3.2 Alternatives Considered and Withdrawn

1.3.2.1 Alternative 2

This alternative is similar to the build alternative; however, the frontage road geometrics would necessitate a wider curve, flatter slopes, and wider frontage roads, which would result in excessive additional right-of-way acquisition and increased construction cost. Four residential structures on Assessor's Parcel Number (APN) 023-280-001 would need to be relocated in order to connect the frontage road to the local street. This alternative was rejected due to its increased right-of-way requirement, increased construction cost and additional impact to the local community (Figure 1.4).

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



PROJECT ENGINEER

CALCULATED/
DESIGNED BY

DATE

REVISED BY

DATE

DATE REVISION

DATE REVISION



NO SCALE

WITHDRAWN ALTERNATIVE FIGURE 1.4



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Nev	49	15.5/18.0		

REGISTERED CIVIL ENGINEER

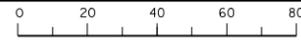
PLANS APPROVAL DATE

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RELATIVE BORDER SCALE IS IN MILLIMETERS



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DGN FILE => Withdrawn_Alternative.dgn

CU 03266

EA 2A6900

DATE PLOTTED => 21-MAY-2007
TIME PLOTTED => 3:15:25

1.4 Permits and Approvals Needed

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

Agency	Permit/Approval	Status
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States.	Application for Section 404 permit anticipated after final environmental document distribution.
California Department of Fish and Game	1602 Agreement for Streambed Alteration	Application for 1601 permit will be submitted after Project approval.
California Water Resources Board	Water Discharge Permit (Section 401)	Section 401 permit application will occur concurrently with the Section 404 permit application.
Nevada County	Maintenance Agreement	Maintenance agreement will be prepared during the design phase.

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

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project, potential impacts, and proposed avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

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

- **Land Use, Planning and Consistency**—The project is consistent with the goals, policies, and objectives of the Nevada County General Plan.
- **Growth**—The proposed project would not be growth inducing, since unplanned development would be restricted by the absence of a sewage service.
- **Farmlands**— There is no farmland within the project area (Nevada 49 CIA, Caltrans 2005).
- **Cultural Resources**— Caltrans prepared a Historic Property Survey Report, Historic Resources Evaluation Report, and an Archaeological Survey Report (Caltrans 2005: HPSR, HRER, and ASR). These documents found that there are five properties within the Area of Potential Effects (APE) that were old enough to require formal evaluation under Section 106 of the National Historic Preservation Act. The reports conclude that these properties are not eligible for inclusion in the National Register; and that there are no historic properties affected by the proposed project. In addition, there are no archaeological sites identified within the APE.
- **Hydrology and Floodplain**— The project is not located within the 100-year floodplain and would not alter surface or groundwater hydrology (Floodplain Hydraulic Study Caltrans 2004).

- **Geology/Soils/Seismic/Topography**— A preliminary Geotechnical report was prepared by Caltrans in April, 2006. No adverse effects would occur because of the proposed project.
- **Paleontology**— The project would not impact paleontological resources.
- **Natural Plant Communities**— No natural plant communities of concern known from the region occur within or near the study area. The ponderosa pines series habitat is common in the Sierra Nevada foothill region (NES 2006).
- **Wetlands** — There are no wetlands within or adjacent to the project area (NES 2006).
- **Threatened and Endangered Species**— No threatened or endangered species are present within the project area. No impacts will occur (NES 2006).

2.1 Human Environment

2.1.1 Community Impacts

A Community Impact Assessment (CIA) was completed in December 2005.

2.1.1.1 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. The Federal Highway Administration (FHWA) in its implementation of the NEPA [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Affected Environment

Major Land Uses

The proposed project is located on State Route (SR) 49 about 1.5 miles south of Grass Valley in Nevada County. The project area is predominantly residential, with five mobile home parks located in a 1.3-mile stretch of the State highway. Other uses include a church, fire station, day care center, a Moose Lodge, and a motel.

Most of the project area is zoned for residential uses, specifically Residential Agricultural (RA) with 1.5- or 3-acre minimum lots, and Medium Density Residential (R2), which is how the mobile home parks in the area are zoned. There are several small Highway Commercial Districts (CH-D) in the area, near Forest Springs Mobile Home Park, Mountain Air Village, and south of the project limits.

From south to north within the project limits, the mobile home parks are:

- Grass Valley Mobile Home Village, 104 mobile home lots
- Ponderosa Pines Mobile Home Park, 135 mobile home lots
- Forest Springs Mobile Home Park, 310 mobile home lots
- Mountain Air Mobile Park, 84 mobile home lots with additional spaces for recreational vehicles (RV); additional RV storage in the rear of the park
- Tall Pines Mobile Home Park, 96 mobile home lots

Tall Pines is the only “family” mobile home park in the area; it accepts residents of all ages. The other parks are exclusively for senior citizens.

Demographic Characteristics

Based on the Year 2000 U.S. Census, the project area is made up of Block Groups 1, 2, and 3 in Census Tract 1.04, and is home to 3,300 residents. This area includes the northern edge of the Alta Sierra community, all of the mobile home parks in the area, and many homes north and south of the project area that would be only minimally affected by the project (Figure 2.1).

Age

The median age of project area residents, and residents of Alta Sierra, in 2000 was 48 years old, compared to 38 in Grass Valley and 43 in Nevada County. The median age statewide was 33 in the year 2000.

The Census data on residents' ages reflects the presence of mobile home parks for senior citizens. Nearly a quarter of project area residents were 70 years old or older at the time of the 2000 Census. Grass Valley, Alta Sierra, and Nevada County all have relatively high proportions of residents in this age group. Statewide, eight percent of the population is 70 or older.

Race / Ethnicity

Nevada County and the project area are less diverse than the rest of California (see Table 2.1). In the project area (and in Alta Sierra) four percent of the population is nonwhite. Eight percent of Grass Valley residents and six percent of Nevada County residents are nonwhite. Statewide, 41 percent of the population is nonwhite.

People who identify themselves as being of Hispanic ethnicity on the Census forms can be of any race. Hispanics make up one percent of the project area, four percent of Alta Sierra and six percent of Grass Valley and Nevada County.

There are no known minority communities in the project area. No project residents identify themselves as being linguistically isolated.

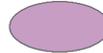
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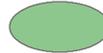
 Proposed Project (Draft)

 SR49

 Communities

Project Area Block Groups

 Tract 104, BG1

 Tract 104, BG2

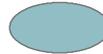
 Tract 104, BG3



FIGURE 2.1 - PROJECT AREA BLOCK GROUPS

03-NEV-49
KP 15.8/18.1 (PM 9.82/11.27)
Nevada 49

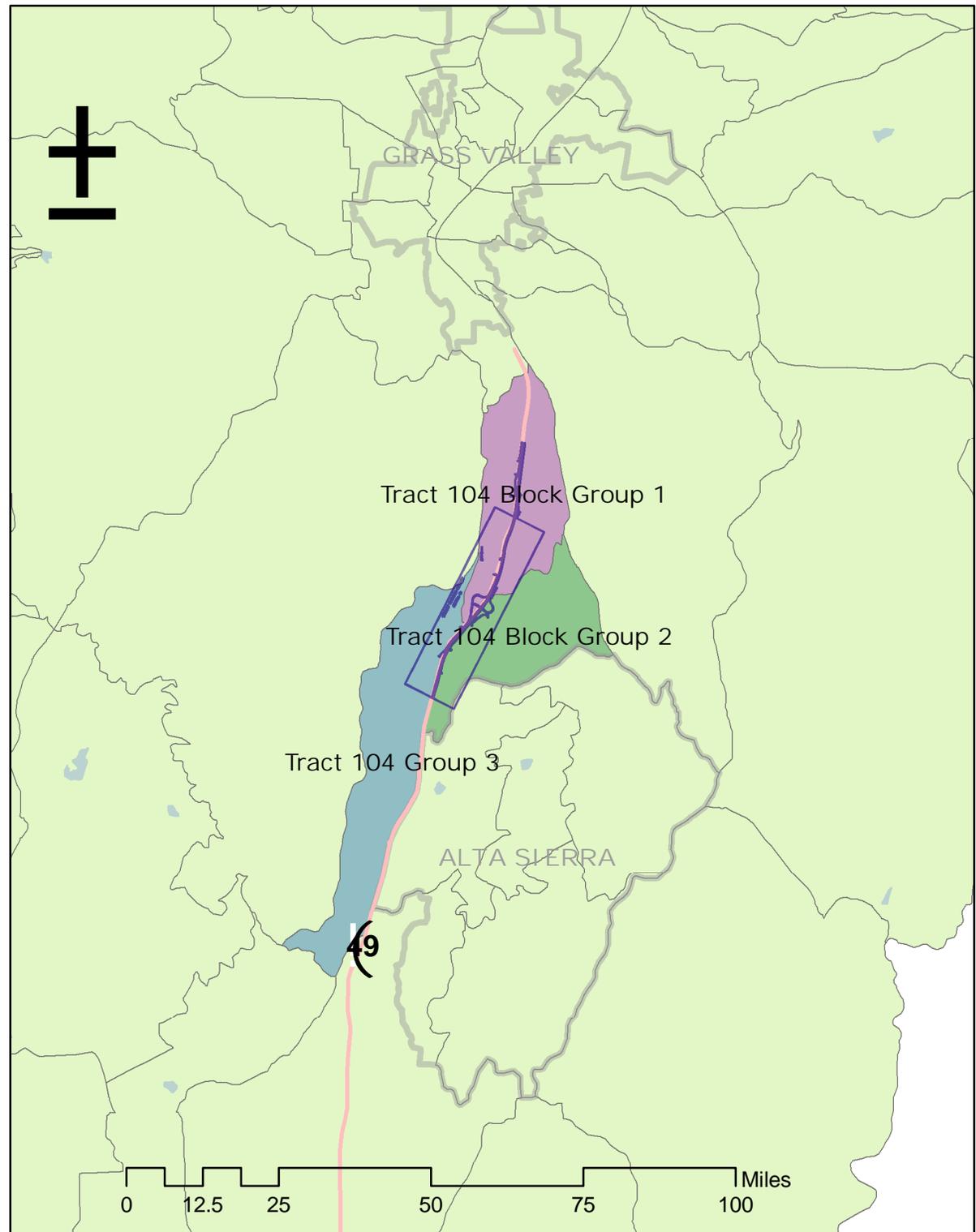


Table 2.1 Race and Ethnicity by Place of Residence

Race / Ethnicity	Project Area		Grass Valley		Alta Sierra		County		CA
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Percent
White	3,176	96%	10,256	92%	6,279	96%	85,473	93%	59%
Black / African American	49	1%	19	0%	11	0%	197	0%	7%
AIAN *	20	1%	116	1%	19	0%	621	1%	1%
Asian	12	0%	54	0%	11	0%	593	1%	11%
NH/OPI**	0	0%	6	0%	23	0%	118	0%	0%
Some other race	11	0%	148	1%	63	1%	1,904	2%	17%
Two or more races	39	1%	562	5%	123	2%	1,904	2%	5%
Hispanic Ethnicity	49	1%	648	6%	258	4%	5,177	6%	32%

Source: 2000 US Census

*AIAN – American Indian / Alaska Native

**NH/OPI – Native Hawaiian / Other Pacific Islander

Community Cohesion

Residents in mobile home parks often live in a ‘community within a community.’ Managers of the mobile home parks in the area report high levels of cohesiveness, with organized activities such as a weekly coffee hour, potlucks, a variety of clubs, Bingo and other games, low-impact aerobics, and a monthly newsletter.

Impacts

No Build Alternative

Under the No Build Alternative, no improvements would be made to SR 49; therefore, no effect on existing housing, businesses or residents would occur.

Build Alternative

The proposed project would require the relocation of three residential units. Two of these would be in single-family homes adjacent to SR 49, and one would be in Mountain Air Mobile Home Park. The relatively small number of relocations required by the project should not pose a problem in finding adequate replacement housing.

Community Cohesion

Other than household relocation, the project would have minimal impacts on community cohesion.

Barriers to Interaction

The project would not disrupt traffic on the local streets and roads in this area. The addition of frontage roads, connecting the residents along SR 49, may provide a benefit to community cohesion.

Avoidance, Minimization, and/or Mitigation Measures

Community Cohesion, Relocation Impacts and Environmental Justice

- Offsetting the impact of household relocations is the fact that, given the abundance of mobile homes in this area, replacement housing in a nearby mobile home park may be available. The displacements required by the project represent only 0.14 percent of the total supply of mobile homes in the immediate area. Mobile home owners in parks may also receive relocation benefits as both renters (renting a space in a mobile home park) and as homeowners.

2.1.1.2 Relocations

Regulatory Setting

Caltrans' Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations, Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix D for a summary of the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 United States Code 2000d, et seq.). Please see Appendix C for a copy of Caltrans' Title VI Policy Statement.

Affected Environment

Residential Housing

As discussed previously in the Community Character and Cohesion section Sec. 2.1.1.1, the project area is predominately comprised of several mobile home parks and single-family residences.

There are 1,500 housing units in the area and half of these units are mobile homes. Mobile homes represent the most abundant source of affordable housing in the project area and the surrounding community. The median home value in Nevada County is over \$300,000, while mobile home prices in the project area range between \$30,000 and \$200,000.

Area Businesses

There are only a few businesses within the project's limits: residential uses are much more prevalent. Businesses with frontage on SR49 include Allyson's Playcare, a small daycare center with a long history in the area, and Sierra Foothill Mortgage, a real estate office.

Several smaller businesses operate on parcels adjacent to SR49 in the area, including Heritage Log Homes, operating on Norambagua Lane at the northern end of the project. This business has an advertisement on SR49 adjacent to its' business.

Impacts

No Build Alternative

Under the No Build Alternative, no improvements would be made to SR 49; therefore, no effect on existing housing, businesses or residents would occur.

Build Alternative

Household Relocations

Caltrans Environmental Handbook states the following about the relocation of elderly residents:

Senior citizens and physically disabled residents are typically more seriously affected by relocation than other groups. Some older people move to be closer to family and some move to a better climate, but most want to stay put. According to a telephone survey conducted by

the American Association of Retired Persons, 78% of those polled indicated they do not want to leave their own homes. This makes sense. Older Americans often rely on others for emotional support, and are frequently dependent on community services and local access to stores.

In the case of the project area's residents, there are two considerations: residents are elderly and reside in the "community within a community" of mobile home parks geared toward senior citizens.

The displacement of residents has a negative effect on neighborhoods, but relocation options locally are available. Relocation assistance would be provided to help residents explore local housing options.

The proposed project would require the relocation of three residential units. Two of these would be in single-family homes adjacent to SR 49, and one would be in Mountain Air Mobile Home Park. The relatively small number of relocations required by the project should not pose a problem in finding adequate replacement housing (Caltrans DRIR 2007).

Business Displacement

One business, the real estate office at SR 49 and La Barr Meadows Road, would be displaced by the project. This business has a number of relocation options in the area. It employs between 5 and 10 people.

The project would require moving the office at Mountain Air Mobile Home Park to another location on the property, and would require relocating one mobile home unit. The owner of the Park would be provided with nonresidential relocation assistance to help relocate the Park's office. The owner of the mobile home would receive assistance in finding replacement dwellings, or replacement locations for their home.

Avoidance, Minimization, and/or Mitigation Measures

- Relocation assistance payments and counseling will be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as Amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees will be entitled to moving expenses. All benefits and services will be provided equitably

to all residential and business relocatees without regard to race, color, religion, age, national origins and disability as specified under Title VI of the Civil Rights Act of 1964 (See Appendix C).

Business Displacement and Relocation Impacts

- All real property transactions will comply with the property acquisition and relocation standards of the State of California, the Caltrans Relocation Assistance Program and the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

2.1.1.3 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2007, this is \$20,650 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix C of this document.

Affected Environment

This project has been developed in accordance with the Civil Rights Act of 1964, as amended, and Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The Executive Order requires each Federal agency (or its designee) to take the appropriate and necessary steps to identify and address 'disproportionately high and adverse' effects of federal

projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

Income and Poverty

In rural areas similar to the project area, mobile homes are typically the most readily available form of affordable housing. In the case of the project area, however, the mobile home communities are a form of senior citizen housing first, and a form of affordable housing second (see Tables 2.2 and 2.3, below).

According to the 2000 Census, the project area is not home to an unusually large proportion of residents living below poverty. Poverty rates in the project area vary from a high of 13 percent to a low of 4 percent, compared to 15 percent in Grass Valley, 8 percent countywide and 14 percent statewide. Median household income in the project area ranges from a low of \$35,000 to a high of \$57,000, compared to \$28,000 in Grass Valley, \$45,800 in Nevada County, and \$47,500 statewide.

Table 2.2 Poverty Status by Age

	PROJECT AREA				Grass Valley	Alta Sierra	Nevada County	CA
	Total	BG* 1, Tract 1.04	BG* 2, Tract 1.04	BG* 3, Tract 1.04				
Under 5 years	0%	0%	1%	0%	2%	0%	0%	1%
5 years	0%	0%	0%	0%	0%	0%	0%	0%
6 to 11 years	1%	1%	1%	0%	2%	0%	1%	2%
12 to 17 years	2%	1%	4%	0%	1%	1%	1%	2%
18 to 64 years	4%	4%	5%	1%	9%	3%	5%	8%
65 to 74 years	2%	2%	1%	3%	0%	0%	0%	0%
75 years and over	1%	2%	1%	0%	1%	0%	0%	0%
TOTAL	9.6%	10.3%	12.9%	3.8%	14.9%	4.3%	8.1%	14.2%

* BG - Block Group

Table 2.3 .Project Area Income Levels

	PROJECT AREA			Grass Valley	Alta Sierra	Nevada County	CA
	BG* 1, Tract 1.04	BG* 2, Tract 1.04	BG* 3, Tract 1.04				
Median Household Income	\$36,944	\$35,144	\$57,222	\$28,182	\$56,868	\$45,864	\$47,493
Per Capita Income	\$17,363	\$20,753	\$22,810	\$16,877	\$28,876	\$24,007	\$22,711

*BG – Block Group

Housing

There is a high concentration of mobile homes in the project area. There are over 1,500 housing units in the project area, and mobile homes make up half of them. Statewide, less than five percent of all housing units are mobile homes.

Mobile homes represent the most abundant source of affordable housing in the project area. The median value of mobile homes in the area was \$43,000 at the time of the 2000 Census. Online property listings for the project area indicate that mobile home prices range from \$30,000 to \$200,000. The current median home value in Nevada County is over \$300,000.

Impacts

No Build Alternative

Under the No Build Alternative, no improvements would be made to SR 49; therefore, no effect on existing housing, businesses or residents would occur.

Build Alternative

The project’s impacts to residents would include construction noise and dust, increased out-of-direction travel, and residential and commercial relocations. Two single-family homes and one mobile home would be displaced. Out-of-direction travel would increase for both single-family homeowners and mobile home park residents.

The project’s benefits, which include long-term safety and improved accessibility, would also be experienced primarily by residents of the area. The project’s benefits would accrue both to residents of single-family homes and mobile home parks.

Residents of both the single-family homes and mobile home parks in the area have stated their support for this project (CIA, 2005).

This analysis concludes that the proposed project would not cause disproportionately high and adverse effects on any minority or low-income populations as defined in Executive Order 12898 regarding environmental justice.

Avoidance, Minimization, and/or Mitigation Measures

- Offsetting the impact of household relocations is the fact that, given the abundance of mobile homes in this area, replacement housing in a nearby mobile home park may be available. The displacements required by the project represent only 0.4 percent of the total supply of mobile homes in the immediate area. Mobile home owners in parks may also receive relocation benefits as both renters (renting a space in a mobile home park) and as homeowners.
- Relocation assistance payments and counseling will be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as Amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees will be entitled to moving expenses. All benefits and services will be provided equitably to all residential and business relocatees without regard to race, color, religion, age, national origins and disability as specified under Title VI of the Civil Rights Act of 1964.

2.1.2 Utilities/Emergency Services

Affected Environment

Caltrans completed a Community Impact Assessment, which addresses impacts to Utilities and Emergency Services, on December 2005.

The Nevada County Sheriff's Office, the Grass Valley Police Department, and the California Highway Patrol provide police protection in this area. The nearest police offices are in Grass Valley. There is a Sheriff's Service Center on Combie Road, about eight miles south of the project area.

Fire protection is provided by the Nevada County Fire District, whose Station #8 is located within the project limits, near the proposed signalized intersection.

Water service is provided by the Nevada Irrigation District (NID), which operates the Forest Springs irrigation canal that crosses SR 49 in the project area. This canal provides irrigation water for approximately 75 customers. The canal is primarily an earthen structure.

Impacts

No Build Alternative

The No Build Alternative would result in no improvements being made to SR 49 in the project area. Safety concerns and deterioration of the level of service would not be addressed, which could result in delays for emergency vehicles responding to calls.

Build Alternative

No adverse effects are identified with respect to emergency access, emergency planning or increase risk during project operations. Emergency response times would not increase significantly because of this project. The proposed project will improve traffic operations and safety for SR 49 and side roads in the project boundaries. With wider shoulders and four lanes, cars would be able to get out of the way of emergency vehicles on SR 49 much more easily.

Left turn lanes, the addition of two lanes, construction of frontage roads, removal of at grade intersections, and the construction of a new signalized intersection will improve safety and facilitate emergency access within the project area and nearby areas.

Additionally, the mobile home parks farthest from the new intersection (Ponderosa Pines to the south, and Tall Pines, to the north) would continue to have direct access from the highway for emergency vehicles. Southbound ambulances, coming from Grass Valley, would be able to utilize the right-turn into Ponderosa Pines from the highway. Tall Pines Mobile Home Park has an emergency access gate on the north side of the park that the park manager can open in case of emergencies.

Fire service is provided by a Nevada County Consolidated Fire District Station 88 located within the project area on the western side of SR 49. The project would improve the station's ability to respond to calls.

Traffic congestion and delays can occur during construction and can result in substantially adverse impacts; however, these adverse effects can be avoided through

adequate construction period traffic management planning that includes timely notification of any road closures and detours to police and fire departments, the California Highway Patrol, other emergency service providers and public transit providers.

The project would include replacing the portion of the Forest Springs Canal adjacent to the proposed frontage roads with pipes and relocating it underground. The project would have minimal impacts to this facility.

Avoidance, Minimization, and/or Mitigation Measures

- Prior to start of construction, Caltrans will coordinate with the Highway Patrol, the Nevada County Sheriff's Office, Grass Valley Police Department and the Nevada County Consolidated Fire District to prepare a Construction Period Emergency Access Plan.
- Prior to start of construction, Caltrans will coordinate with affected school districts to provide for alternative bus routes and safe routes to schools for students.
- Prior to start of construction, Caltrans will coordinate with public transit providers to relocate transit stops affected by construction and to provide advance notice to transit users.
- Caltrans would coordinate relocation work with the various utility companies to ensure minimum disruption of service to customers in the area during project construction.

2.1.3 Traffic and Transportation/Pedestrian and Bicycle Facilities *Regulatory Setting*

The Federal Highway Administration (FHWA) directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans and the FHWA are committed to carrying out the 1990 Americans with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

Affected Environment

The facility within the project limits is a two-lane, two-way undivided conventional highway consisting of 3.6 meters (12 feet) lane width with typical outside shoulder width varying from 0 to 2.4 meters (0 to 8 feet). Numerous unrestricted access points exist throughout the corridor with no access control. These access points consist of local road connections, a fire station, and residential and commercial driveways.

The existing two-lane highway will not accommodate predicted traffic increases at the accepted route concept level-of-service (LOS), which is LOS D. This segment of SR 49 currently operates at LOS F during peak hours. The Caltrans Office of Travel Forecasting and Modeling forecasts that the average daily traffic (ADT) through the SR-49/La Barr Meadows Road intersection will increase from 28,500 vehicles in the year 2004 to 47,000 vehicles in the year 2030. The peak-hour volume (PHV) is estimated to increase from 3,190 vehicles to 5,260 vehicles during the same period. Trucks constitute 2% of the total traffic within the study segment.

Pedestrian and Bicycle Facilities

Bicycle and pedestrian use of SR 49 is infrequent. There are intermittent trails along the sides of the road, separated by an embankment in one case, or by vegetation in several others. Residents of the mobile home parks tend to walk within the parks, and residents of the residential subdivision in the area (the homes along Braemar Way and Kenwood Drive) have local streets available to walk on. The shoulders on SR 49 do not provide a comfortable area for either walking or biking.

There are no sidewalks on SR 49 in the project area, but there are informal trails along parts of the highway. Examples include:

- Along the east side of SR 49 between Lady Jayne Road and the homes adjacent to Forest Springs Mobile Home Park, a well maintained 0.2 mile trail runs along the hill on the roadway shoulder.
- A well-used 0.13 pedestrian trail provides a connection along the west side of SR 49 Between Foothill Church and Allison Ranch Road.

Trails also connect Kenwood and Braemar Roads to Ponderosa Pines Mobile Home Park.

Nevada County's Non-Motorized Transportation Master Plan indicates that SR 49 within the project limits as "accessible" to bicycles, but is not a designated bicycle route.

Impacts

No Build Alternative

Under this option, no changes to the project area would occur. The traffic conditions in the area would continue at the same levels of service and would worsen. The travel demand forecast for the year 2030 found the Level of Service within the project limits to be near or at LOS F.

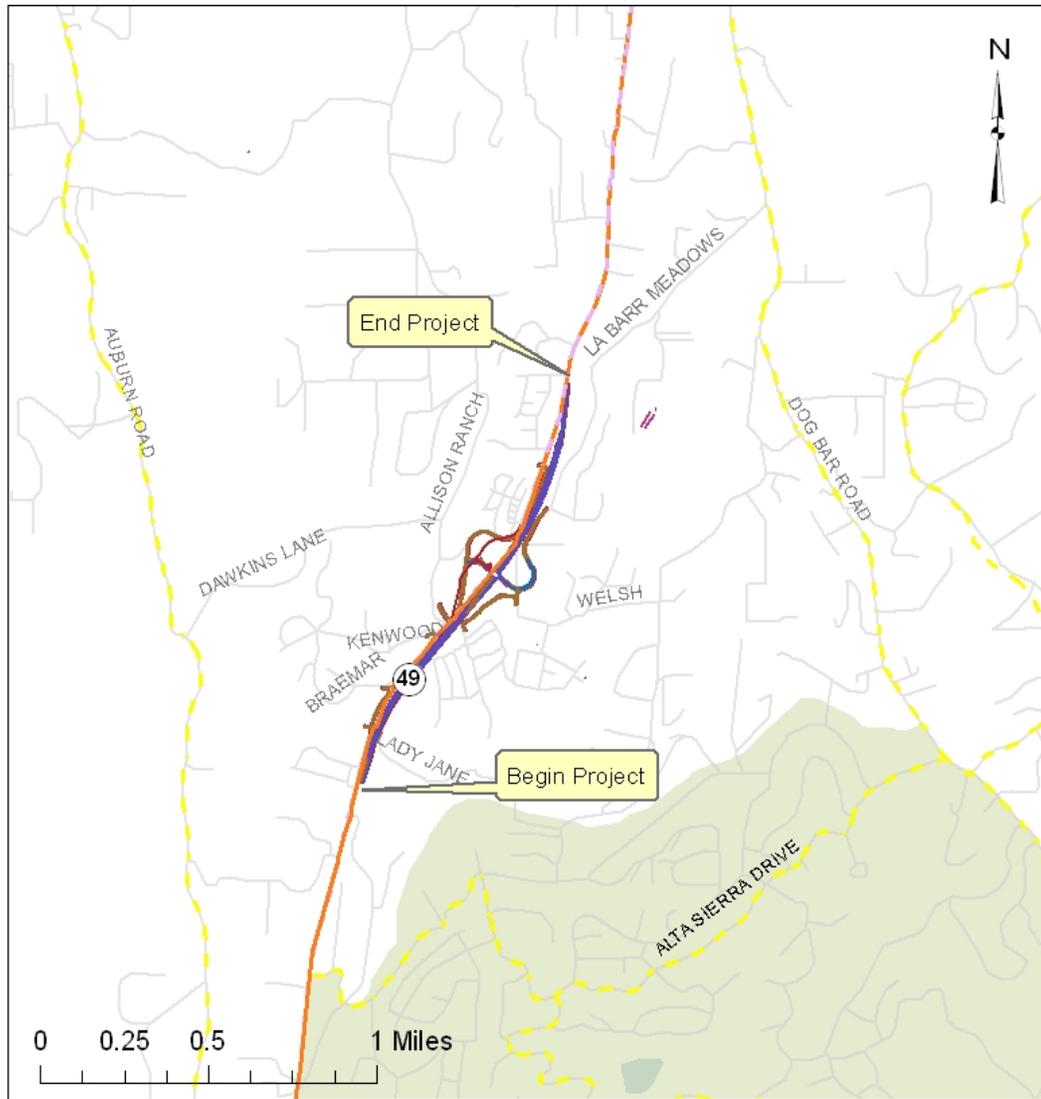
Build Alternative

The build alternative would improve safety by installing a signal at the SR 49/La Barr Meadows Road intersection and constructing frontage roads. Several local road and driveway connections to SR 49 would be eliminated; most accidents in the project area have occurred at these connection points. The proposed project would increase capacity and improve the Level of Service with the project area. This would provide a benefit to local and regional traffic and would improve the movement of goods and services in the area.

The proposed project would improve access for pedestrians and bicycles. Crosswalks are proposed for the signalized intersection. A crosswalk width of 1.2 meters (4 feet) would be provided to comply with standards mandated in the Americans with Disabilities Act. Many of the informal trails running along the highway would be removed. However, the added frontage roads would provide improved access for cyclists and pedestrians. Additionally, the provision of 2.4 meter (8.0 foot) outside shoulders along the entire route would provide adequate width to safely accommodate bicyclists and pedestrians.

In addition to the widened shoulders and frontage roads, the new signalized intersection at La Barr Meadows would facilitate access to designated planned bike routes in the area (eg. Dog Bar Road, Figure 2.2)

Figure 2.2 Project Area Bicycle Routes



D3 Bike Routes

- PLANNED CLASS I
- PLANNED CLASS II
- PLANNED CLASS III
- EXISTING CLASS I
- EXISTING CLASS II
- EXISTING CLASS III
- ALTERNATE BIKE ROUTE
- BIKES ACCESSIBLE ON SR
- BIKES PROHIBITED ON SR

Project Area Bicycle Routes
03-NEV-49
KP 15.8/18.1 (PM 9.82/11.27)
Nevada 49
EA 2A6900

Avoidance, Minimization, and/or Mitigation Measures

- A Transportation Management Plan has been developed for this project and would be updated during the final project design. This plan identifies that traffic delays are likely during construction; however, at least one lane would remain open at all times. One-way traffic control would be in effect during working hours and two lanes would be available for traffic during non-working hours, including nights, weekends and holidays. In addition, adequate shoulder width would be maintained for bicycle and pedestrian traffic.
- All impacted emergency response agencies would be notified in advance of any planned traffic control operations. The Contractor would prepare an emergency response action plan prior to the beginning of construction. This plan would address the facilitation of emergency vehicle access through the construction zone.

2.1.4 Visual/Aesthetics

Regulatory Setting

National Environmental Policy Act

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

California Environmental Quality Act

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

Affected Environment

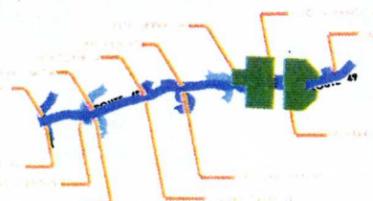
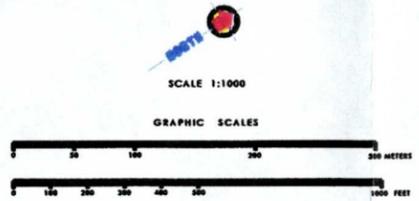
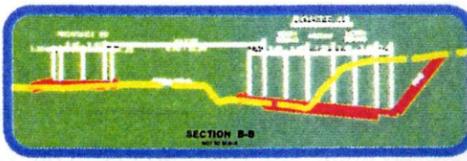
The project is located on the western slope of the Sierra Nevada at an elevation of approximately 2,600 feet above sea level just south of the community of Grass Valley, CA. The area is characterized by scattered development containing residential, mobile home parks, vacant lots, and a few businesses. A Visual Impact Assessment was completed September 2005 and revised in April 2007.

The method of evaluation follows the FHWA guidelines by identifying the overall regional visual resource within the project area. Visual features (resources) of the landscape are assessed and the character and quality of the visual resources are highlighted.

FHWA has established guidelines (Publication Number FHWA-HI-88-054) for the preparation of visual impact assessments. In accordance with these guidelines, the project area was divided into several landscape units to facilitate the visual impact analysis. Each landscape unit is an area comprised of landscape units and major viewsheds (Figure 2.3).

ROUTE 49 WIDENING PROJECT - LA BARR MEADOWS SIGNALIZED INTERSECTION

ROUTE 49 - NEVADA COUNTY POST MILE 9.82 TO 11.27



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SOUTHERN LAU

CENTRAL LAU

NORTHERN LAU

Figure 2.3
Landscape Assessment Units
(LAU)

LANDSCAPE ASSESSMENT UNIT (LAU) MAP

Landscape Assessment Units (LAU)

The project area has been divided into three Landscape Assessment Units (LAU). These are the Northern LAU, the Central LAU and the Southern LAU. Each LAU consists of land uses and physical features with similar characteristics. Furthermore, this division facilitates easier description of each area.

The Northern LAU

This LAU is comprised of the Tall Pines Mobile Home Park (MHP), Mountain Air Mobile Village and single family uses to the south and east of the Tall Pines MHP. The physical boundary starts at the most northern project limits, near Lode Line Way and ends at Forest Road.

Central LAU

This LAU begins at Forest Road and terminates at Allison Ranch Road. Land uses in this area are the Forest Springs MHP, Foothill Church, a Fire Station and several single-family homes.

Southern LAU

This LAU consists of Ponderosa Pines MHP and several single-family homes. The physical location starts at Ponderosa Pines Way and ends at Allison Ranch Road.

Impacts

No Build Alternative

Under the No Build Alternative, no change would occur to the existing viewpoints. This alternative would have no effect on visual/aesthetic resources.

Build Alternative

The Northern LAU

The Tall Pines Mobile Home Park is on a lower elevation from the highway. A natural buffer of tall pines, which creates a visual buffer, will mostly be removed to create a fill slope. Revegetation of this area would restore some of the visual buffer.

The visual impact to the Mountain Air Mobile Village and its office building would be as a result of tree removal and fill placement near the new frontage road. This negative visual impact is unavoidable, as there is no space to revegetate the area.

Two single family residences north of Forest Road will be placed closer to the new frontage road and lose several mature trees, which have served as a visual buffer.

The majority of the single-family homes on the east side of the highway are shielded by a forest and are to the east of the La Barr Meadows Road. The cut needed for the highway would remove a large number of trees, but many remain beyond the cut slope and provide a visual buffer for the residences.

Due to close proximity of the La Barr Meadows frontage road to SR 49, headlight glare may become a problem for the area immediately north of Jay Jay Place.

The increase in pavement width, the cut slopes to the east and tree removal will reduce the visual quality of this LAU. On the other hand, the remaining pine forest will substantially preserve the visual character.

Visual Quality Rating Of The Northern LAU

In accordance with the FHWA Guidelines, the visual quality formula is:
Visual Quality (VQ)=Vividness (V)+ Intactness (I)+ Unity (U), Divided by three.

The score range is from 1 to 7 as follows:

- 1=Very Low
- 2=Low
- 3=Low/Medium
- 4=Medium
- 5=Medium/High
- 6=High
- 7=Very High

VQ For The Northern LAU

VQ=V+I+U divided by 3
VQ Before= 5+3+5=13:3=4.33
VQ After=3+2+2=7:3=2.33
VQ Reduction=4.33-2.33=2

The Central LAU

The roadway widening on the east side of SR 49 requires approximately a 30-foot wide area of tree removal. This is a substantial amount of tree removal. However, more trees remain beyond the highway and for the most part, the existing visual character will remain intact. The visual impact of this tree removal will be the greatest for the two parcels located on the southeast and northeast quadrants of the new intersection. These parcels are currently vacant and may be developed in commercial type uses in the future. At that time, the owners will provide planting buffers in accordance with the local ordinances.

The visual impact of the project will be minimal for the Forest Springs Mobile Home Park (MHP) dwelling units. A tree buffer will remain between the park and the highway. Two buildings between the park and the highway will be removed. The Forest Springs MHP office building will also be removed.

There will be very little visual impact for the single-family homes located on the hills to the east of the highway. There is no visual impact to the single-family homes on the west side of the intersection, as a natural pine forest separates them from the highway.

A single-family house near Forest Road and on the north side of the Fire Station will remain. The new frontage road at Forest Road will remove some of the trees, which now benefit this residence. Additionally, this residence will be exposed to 6 or more feet of roadway paving on the east side of the structure.

Again, there may be a headlight glare issue within this LAU, due to the close proximity of Forest Springs Drive and SR 49.

Visual Quality Rating Of The Central LAU

$$VQ=V+I+U$$

$$VQ \text{ Before}=3+4+4=3.66$$

$$VQ \text{ After}=2.5+3.5+3.5=3.16$$

$$VQ \text{ Reduction}=3.33-3.16=0.17$$

The Southern LAU

A private soundwall separates the Ponderosa Pines MHP from the highway. This mobile home park is located on a higher elevation from the highway. The placement of a cut at the highway edge will remove a portion of the existing trees that currently

provide a visual buffer to the park. A few of the trees on the embankment will remain and continue to provide a visual buffer for the park.

A cluster of single-family homes on Braemar Road will not be impacted. The new frontage road will be in the same location as the existing frontage road. A native stand of existing trees will remain between Braemar Road and the mainline and will continue to provide a visual buffer. Some trees would have to be removed in the vicinity of Kenwood Drive. This is a non-avoidable visual impact, as there will be no place left to plant after highway construction.

There are fewer single-family homes on the east side of the highway. Highway widening will take trees out, but a thick forest will remain between the highway and the structures to the east.

Visual Quality Rating Of The Southern LAU

$VQ = V + I + U$

VQ Before = $4 + 5 + 6$ divided by $3 = 5$

VQ After = $3 + 4 + 5$ divided by $3 = 4$

VQ Reduction = $5 - 4 = 1$

Sound walls

The Noise Study report identified a need for noise barriers in two locations. One location is at the vicinity of Kenwood Drive and a second location is near Mari Lane and Norambagua Way.

Sound walls are recommended for both east and west sides of SR 49 in the vicinity of Kenwood Drive. A sound wall on the west side of SR 49 would also minimize some of the visual impacts of tree removal for the homes located in the vicinity of Kenwood Drive.

The second location of sound walls recommended for the project is located between SR 49 and the new frontage road in the vicinity of Mari Lane to Norambagua Way. On the west side of SR 49, a sound wall would also minimize some of the visual impacts of tree removal. The visual benefit would be mostly for the home located on the north side of the Fire Station, although it would benefit other structures in the vicinity as well.

Caltrans will determine during final design if noise abatement measures are still reasonable and feasible, and if the sound walls will be incorporated in the plans, estimates and specifications.

Overall, roadway improvements would have some impact on all viewpoints in the study area. The visual impact however, will be different to each side. Even though trees will be taken out on the east side of the highway, the visual character of the area for the most part, remains the same. There are many more of the same type of pine forests, which will remain and continue to provide a visual buffer for homes in the area.

The visual impact of the widening on the west side of the highway varies. The project will result in removal of the existing trees for several homes and businesses, which now provide a buffer from the highway. This is a reduction of visual quality for residents of this area.

Providing a new tree buffer for the west side of the roadway is not feasible due to lack of the needed right of way and topographic constraints. However, minimization measures would provide planting screens on new slopes in those areas, where trees or shrubs could safely be placed.

Where planting screens cannot be placed, the project results in a negative visual impact, as residents are placed closer to the roadway edge of pavement. In these cases, minimization measures have been proposed to provide a fence or wall for visual buffer. The project will pose very little visual impact to drivers, as they continue to see similar views of the existing highway and surrounding areas.

Implementation of this project would result in negative effects on the visual quality, for the west side of the roadway. In short term, due to constraints of right of way and topography, some, but not all of these negative effects can be lessened. In the long term, after tree plantings mature and/or visual screens are provided, the impacts from the project would be reduced.

Avoidance, Minimization, and/or Mitigation Measures

- Cut and fill slopes should 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.

- During clearing and grubbing, stockpile existing surface soils and duff from the construction site as part of the excavation work. Resurface all new cut/fill slopes with stockpiled material to enhance re-vegetation efforts.
- Plant species native to the area shall be used when re-vegetation is being performed. Often, native grasses and shrubs are the first to re-colonize after a disturbance event such as a disease or fire. The Caltrans Office of Landscape Architecture with consultation with the Biologist will provide appropriate native species for the project.
- Provide Erosion Control ‘Type D’ to all disturbed areas.
- Where space permits, on the west side of SR 49, provide a planting screen for the single family home located on the north side of the Fire Station and the single family home located on the south side of Allison Ranch Road and at the vicinity of Kenwood Drive.
- Provide full plantings of native trees and shrubs for the new intersection near the Foothill Church and the Fire Station and any other location at the intersection where space permits.
- A number of pine trees and black oak must be removed for the widening project. To preserve the visual character, where space permits, provide the same species of native pine and black oak trees in the project planting plans.
- Provide fence or wall for the single-family home just north of the Fire Station on the west side of the highway.
- Provide a fence or wall as a visual buffer for two single family homes near Mountain Air drive and a single family home north of the Fire Station; all are located on the west side of the highway.
- Provide headlight glare screening on proposed barriers (Barrier 1: PM 10.07-10.28; Barrier 2: PM 10.56 – 10.70).
- Should no sound walls be used for the project, provide aesthetic enhancements of texture and color appropriate for the area to all concrete barriers.

- At the end of construction all areas used for staging, access or other construction activities shall be contour graded in such a way as to visually integrate them into the surrounding topography.

Noise Barrier Visual Minimization Measures

- Design of sound walls (if included in the project) must use materials similar to those placed along other portions of the corridor and must also be compatible with native materials. Similar material, pattern, color and style are recommended to provide continuity and visual interest to the corridor landscape.
- A landscape plan must be prepared to provide appropriate landscape screening of sound walls (if included in the project) to minimize the potential for graffiti and other nuisances. Appropriate landscape materials will be determined based on the placement of the wall and available setbacks. Generally, trees require a 30-foot setback, shrubs need approximately 20 feet and vines can be planted and trained to grow up the wall. A combination of these plantings may be appropriate for this area. The Caltrans Office of Landscape Architecture can provide a planting design for the project as a part of the sound wall design effort, if included in the project.

2.2 Physical Environment

2.2.1 Water Quality and Storm Water Runoff

Regulatory Setting

Section 401 of the Clean Water Act, the primary federal law regulating water quality, requires water quality certification from the state board or regional board when a project: 1) requires a federal license or permit (a Section 404 permit is the most common federal permit for Caltrans projects), and 2) would result in a discharge to waters of the United States.

Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. To ensure compliance with Section 402 of the Clean Water Act, the State Water Resources Control Board has issued a

National Pollutant Discharge Elimination System (NPDES), Statewide Storm Water Permit to regulate storm water discharges from all of Caltrans' right-of-way, properties, and facilities. The permit regulates both storm water and non-storm water discharges during and after construction.

In addition, the State Water Resources Control Board issues the Statewide Permit for all of Caltrans' construction activities of 1 acre or greater. This permit also applies to a number of smaller projects that are part of a common plan of development exceeding 1 acre or projects that have the potential to significantly impair water quality. Caltrans projects subject to the Statewide Storm Water Permit require a Storm Water Pollution Prevention Plan (SWPPP), while all other projects, smaller than 1 acre, require a Water Pollution Control Program (WPCP).

The California Environmental Protection Agency has delegated administration of the federal NPDES program to the State Water Resources Control Board and nine regional boards. This project is located within the jurisdiction of the State Water Resources Control Board and the Central Valley Regional Water Quality Control Board.

Subject to Caltrans' review and approval, the contractor prepares both the SWPPP and the WPCP. These identify construction activities that may cause pollutants in storm water and measures to control these pollutants. Since neither the WPCP nor the SWPPP have been prepared at this time, the following discussion focuses on anticipated pollution sources or activities that may cause pollutants in the storm water discharges.

Additional laws regulating water quality include the Porter-Cologne Water Quality Act, Safe Drinking Water Act, and Pollution Prevention Act. State water quality laws are codified in the California Water Code, Health and Safety Code, and Fish and Game Code, Section 5650-5656.

Affected Environment

The proposed project is located along the foothills of the Western Sierra Nevada Range. All of the project length is located in the Bear River watershed. All of the contributing creeks flow from east to west of the project site, except for the Forest Springs Lateral (Nevada Irrigation District water conveyance ditch).

Storm water and other flows in the project site may flow into Forest Springs Lateral, which eventually discharges into Wolf Creek. Flow continues downstream to the

Bear River and Sacramento River. The Upper Bear River watershed is approximately 1,048 km² (404.7 square miles).

Impacts

No Build Alternative

No improvements to the roadway would be made under the No Build Alternative. Therefore, there would be no impact to storm water runoff.

Build Alternative

The primary potential for water quality impacts from the project is soil erosion or suspended solids being introduced into the waterways. Minimization measures that comply with Caltrans permits and storm water program for construction and long-term impacts will focus on the control of sediment and suspended solids from entering the waterways. The construction activities necessary for the build alternative may have an impact on the water quality of the waterways. Commonly used construction activity Best Management Practices (BMPs) will be required to minimize potential impacts.

The waterway within the corridor project limits is the Forest Springs Lateral. Proper crossing facilities will be designed for each of the waterways, as well as all drainage crossings. The objective of the drainage design is to limit the water surface elevations and velocities to no greater than the existing conditions, or what can be handled by the existing conditions, at the boundary of the project.

During construction there could be temporary adverse impacts due to increased erosion that could eventually be transported into nearby creeks and storm drains with storm runoff. There is also a potential for spills and leaks of lubricants and other fluids associated with vehicles and equipment during construction.

Avoidance, Minimization, and/or Mitigation Measures

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS#000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board.
- The Caltrans NPDES permit requires that Caltrans consider the installation of permanent water quality treatment systems for any major construction project. Best Management Practices (BMPs) for sediment control and treatment were considered

in accordance with Caltrans State Wide Storm Water Management Plan (SWMP). The additional lanes and associated impervious surface qualifies as a major construction project. Additional runoff from highways has the potential to increase contaminants in the surrounding water bodies. Use of vegetated strips, which will allow additional areas for infiltration and filtration of highway runoff, is recommended. The project limits contain many areas that currently act as bio-swales, which help improve storm water runoff through infiltration, sedimentation, and natural biological actions. Those areas that naturally treat storm water should be avoided to the maximum extent practicable. New bio-swales and strips are recommended to help treat the additional runoff. These measures should provide treatment through infiltration, filtration, sedimentation, and biological processes, thereby minimizing the potential water quality impacts.

- Construction projects with a disturbed soil area of more than one acre (0.4ha) or by request of a Regional Water Quality Control Board require a Caltrans approved (SWPPP) containing project specific effective erosion and sediment control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management and material pollution controls.
- As directed by Caltrans' Storm Water Management Plan (SWMP) and the Project Planning and Design Guide (PPDG) an evaluation of the project using the most recent approved evaluation guide is essential in determining if the incorporation of permanent storm water runoff treatment measures shall be considered for this project.
- If the project is required to have a SWPPP as determined by the Central Valley RWQCB then a Notification of Construction (NOC) shall be submitted to the Central Valley RWQCB at least 30 days prior to the start of construction.

2.2.2 Hazardous Waste Materials

Regulatory Setting

Many state and federal laws regulate hazardous materials and hazardous wastes. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include the following:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

Affected Environment

A Preliminary Site Investigation (PSI) was completed to assess the potential presence of Aerially Deposited Lead (ADL) from motor vehicle exhaust in the surface and near surface soils, Naturally Occurring Asbestos (NOA) related to serpentine and ultramafic rock, and Total Petroleum Hydrocarbons (TPH) impacts from a former service station facility.

The investigation was comprised of geologic assessment and 13 soil samples collected for NOA analysis, 198 soil samples (68 locations) collected to determine ADL presence and concentration, and six soil samples collected from the possible service station location for TPH content and concentration.

Potential Lead Soil Impacts

Ongoing testing by Caltrans has indicated that ADL exists along major freeway routes due to emissions from vehicles powered by leaded gasoline. Caltrans reports that total lead concentrations in soil adjacent to the freeways have typically ranged between 50 and 700 milligrams per kilogram (mg/kg). At sites where soil has not been disturbed, the aerially deposited lead is generally limited to the upper 2.0 feet (ft) (0.61 meters [m]) of soil within unpaved shoulder and median areas.

Naturally Occurring Asbestos

The California Air Resources Board (CARB) has minimization/mitigation practices for construction, grading, quarrying, and surface mining operations that may disturb natural occurrences of asbestos outlined in Title 17 California Code of Regulations (CCR), Section 93105. NOA potentially poses a health hazard when it becomes an airborne particulate.

Total Petroleum Hydrocarbons

A previously unidentified fuel island and potential automobile maintenance/refueling facility may have been present within the site boundaries. Contaminants commonly associated with automobile maintenance/refueling facilities include gasoline (TPHg), diesel (TPHd), ethylene glycol from antifreeze, aromatic/halogenated volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs).

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. No land uses or soils would be disturbed due to construction.

Build Alternative

ADL was detected at concentrations exceeding the laboratory method detection limits in 137 of the 198 soil samples analyzed, at concentrations ranging from 5.0 to 460 mg/kg. Forty-seven of the 198 soil samples had reported total lead concentrations greater than 50 mg/kg (ten times the Soluble Threshold Limit Concentration (STLC) value for lead of 5.0 mg/l).

Thirteen soil samples were analyzed by EMSL Inc for asbestos by CARB 435. None of the soil samples were reported to contain asbestos at or above the polarized light microscopy (PLM) laboratory method detection limit of 0.25%.

The six TPH samples were not reported to contain Total Petroleum Hydrocarbon as gasoline (TPHg), benzene, toluene, ethylbenzene and total xylenes (BTEX), fuel oxygenate compounds (FOCs), or Volatile oxygenate compounds (VOCs) above the respective method detection limits. The one sample analyzed for SVOCs and ethylene glycol was not reported to contain that compound above the respective method detection limits. Total Petroleum Hydrocarbon as diesel (TPHd) was reported in each of the samples at concentrations ranging from 1.9 to 41 mg/kg

Avoidance, Minimization, and/or Mitigation Measures

Minimization and/or mitigation measures are required in order to provide health and safety precautions to both workers and residents during construction.

- Per Caltrans requirements, the contractor(s) shall comply with Title 8, Section 1532.1 “lead” which includes preparation of a project-specific Lead Compliance Plan to prevent or minimize worker exposure to lead impacted soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other appropriate health and safety protocols and procedures for the handling of lead-impacted soil.

- Low-level TPHd contamination was found in the vicinity of the reported former service station at approximately postmile 10.2. These low level TPHd concentrations of less than 100 parts per million do not represent a substantial environmental or public health concern at the site of the former service station. However, the Nevada County Department of Environmental Health (NCDEH) has a zero tolerance view of TPH-contaminated soils that have been disturbed during construction. If the soils in the region of the potential service station are going to be disturbed for construction purposes, Caltrans will coordinate construction activities with the NCDEH and/or Regional Water Quality Control Board.

2.2.3 Air Quality

Regulatory Setting

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the concentration of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards. Standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for carbon monoxide, nitrogen dioxide, ozone, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Nevada County Transportation Commission and the

appropriate federal agencies, such as the Federal Highway Administration, make the determination that the Regional Transportation Plan is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to meet regional conformity requirements for purposes of the project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is in “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as non-attainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as carbon monoxide or particulate matter analysis performed for National Environmental Policy Act and California Environmental Quality Act purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the carbon monoxide standard to be violated, and in “nonattainment” areas, the project must not cause any increase in the number and severity of violations. If a known carbon monoxide or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

Affected Environment

Air Quality Standards

Under the Clean Air Act, the U.S. EPA established the National Ambient Air Quality Standards (NAAQS) for seven potential air pollutants:

- 1) Carbon Monoxide (CO)
- 2) Ozone (O₃)
- 3) Nitrogen Dioxide (NO₂)
- 4) Suspended Particulate Matter 10 micron or less in diameter (PM₁₀)
- 5) Fine Particulate Matter (PM_{2.5})
- 6) Sulfur Dioxide (SO₂)
- 7) Lead (Pb)

The State of California has adopted the California Ambient Air Quality Standards (CAAQS) in addition to the Federal standards.

Direct emissions from automobiles contain mainly hydrocarbons, nitrogen dioxide and carbon monoxide. Indirect emissions include ozone and PM10. Lead emissions from automobiles have considerably declined in recent years through the increase use of unleaded gasoline. Due to their formation and/or dispersion patterns, hydrocarbons, nitrogen dioxide, ozone, and PM10 can only be reasonably analyzed from a regional perspective. On the other hand, CO is a relatively stable and site-specific pollutant with major concentrations generally found immediately adjacent to roadways. It is, therefore, the only pollutant analyzed to determine air quality at the project specific microscale level.

As shown in the following table, both NAAQS and CAAQS for CO are established for the average exposure time of 1-hour and 8-hour. The NAAQS are not to be exceeded more than once per year while the CAAQS are standards not to be exceeded at any time.

Ambient Air Quality CO Standards	1-Hour	8-Hour
National (NAAQS)	35 ppm	9.0 ppm
California (CAAQS)	20 ppm	9.0 ppm

Under NAAQS, Nevada County is currently designated as in “attainment/unclassified” for all transportation related criteria pollutants (CO, Ozone, PM10). However, Western Nevada County is an Isolated Rural Non-attainment Area under the Federal 8 hour Ozone standard.

Under the CAAQS, Nevada County is currently designated “attainment/unclassified” for CO and “non-attainment” for both ozone and PM₁₀.

Regional Air Quality Conformity

Western Nevada County is an Isolated Rural Non-attainment Area under the Federal 8 hour Ozone standard. Signalization projects are exempt from Regional Emissions Analysis under 40 CFR 93.127. Western Nevada County is Attainment/Unclassified for the Federal Carbon Monoxide and Particulate Matter standards, so hot spot analysis is not required for conformity purposes. Therefore, the project is exempt from project-level conformity requirements.

In addition to the criteria pollutants discussed above, the U. S. Environmental Protection Agency also regulates air toxics, including particulate matter contained in diesel exhaust. Diesel engine exhaust contains a complex mixture of gases and particulates that have raised concerns about their potential for adverse health effects. Human exposure to diesel engine exhaust comes from both highway and non-highway sources. Studies of the risks are inconclusive, however, and Environmental Protection Agency has yet to establish air quality standards or guidelines for assessing the project level effects of mobile air toxics. Such limitations make the study of mobile air toxic concentrations, exposures, and health impacts difficult and uncertain, especially on a quantitative basis.

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements.

Build Alternative

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust or PM10, would be the primary short-term construction impact, which may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature.

Avoidance, Minimization, and/or Mitigation Measures

- Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 7-1/OF “Air Pollution Control” and Section 10 “Dust Control” require the contractor to comply with the Nevada County Air Pollution Control District’s rules, ordinances, and regulations.
- With respect to diesel emissions during construction, Caltrans will take all minimization measures that are listed in Caltrans Standard Specifications to reduce particulate emissions.

2.2.4 Noise

Regulatory Setting

The National Environmental Policy Act of 1969 and the California Environmental Quality Act provide the broad basis for analyzing and abating the effects of highway traffic noise. The intent of these laws is to promote the general welfare and to foster a healthy environment.

For highway transportation projects with Federal Highway Administration involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain Noise Abatement Criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the criterion for residences (67 decibels, or “dBA”) is lower than the criterion for commercial areas (72 dBA). The following table lists the noise abatement criteria.

Table 2.4 Activity Categories and Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, A-weighted Noise Level, Average Decibels (dBA) Over One Hour	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

Source: Caltrans Traffic Noise Analysis Manual, 1998

A-weighted decibels are adjusted to approximate the way humans perceive sound

In accordance with the Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, October 1998*, a noise impact occurs when the future noise level with the project results in a substantial increase in noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design can be incorporated into the project plans and specifications. This document discusses noise abatement measures that may be incorporated in the project.

Caltrans *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978 and the cost per benefited residence.

Table 2.5 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Affected Environment

Land uses potentially subject to traffic noise impacts include single-family residences, mobile home parks, a church, and a fire station. Frequent human use is considered to occur at exterior locations in which people are exposed to highway noise for 1 hour or more on a regular basis. Impacts are typically assessed at

residential locations with defined outdoor activity areas (e.g., backyards and patios) and parks with defined activity areas (e.g., playgrounds and picnic tables) that are not currently protected by existing Caltrans noise barriers. Land uses in the project area have been grouped into a series of numbered areas, which are shown in Figure 2.3a-b. All noise references, tables, and illustrations are referenced to SR 49 Improvement Project Final Noise Study Report (June 2006) unless noted otherwise.

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. The noise levels would remain the same and increase through time as indicated by the SR 49 Improvement Project Final Noise Study Report (June 2006).

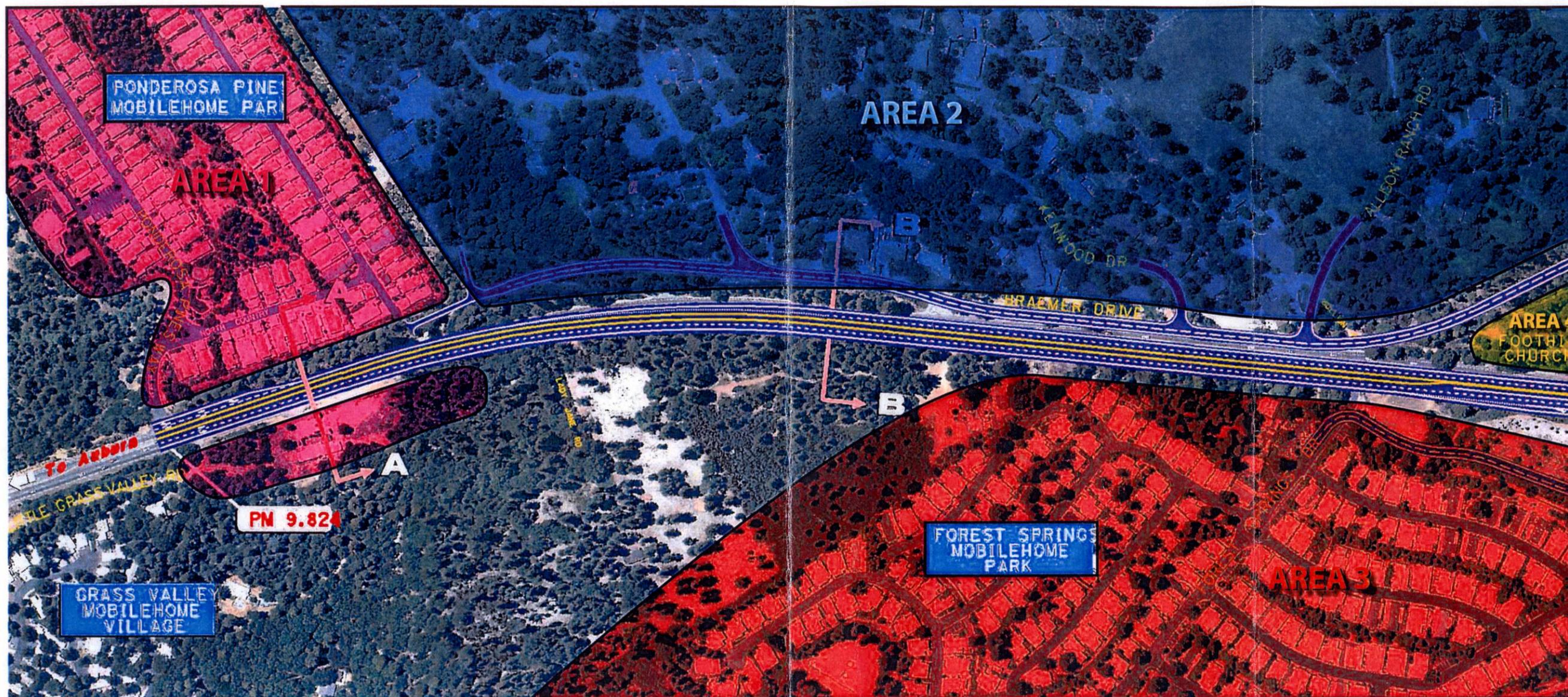
Build Alternative

A field noise investigation was conducted to quantify existing noise conditions while noise-modeling software (TNM2.5) was used to evaluate traffic-noise for design-year (2031) conditions. Table 2.5 summarizes the traffic noise modeling results respectively. As indicated in the tables, traffic noise impacts using Caltrans/Federal Highway Administration (FHWA) criteria are predicted. Noise increases of up to 8 dBA are projected and 25 of 76 modeled receptor sites have been identified as being noise impacted.

Table 2.6 Traffic Noise Levels

Area	Receptors	Existing Traffic Noise Level (dBA)*	Design Year (2031) No-Build Traffic Noise Level (dBA)*	Design Year (2031) Build Alternative Traffic Noise Level (dBA)*
1	6	52-61	55-63	57-65
2	14	57-71	60-73	62-71
3	22	56-67	58-69	61-75
4	4	61-67	64-69	64-69
5	1	61	63	65
6	23	61-69	62-71	61-70
7	5	59-63	61-66	59-64

*dBA range



Match Line (See Figure 2b)



GRAPHIC SCALES

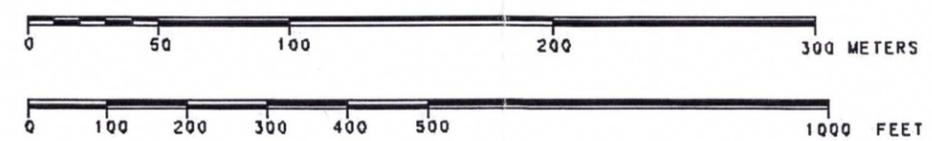
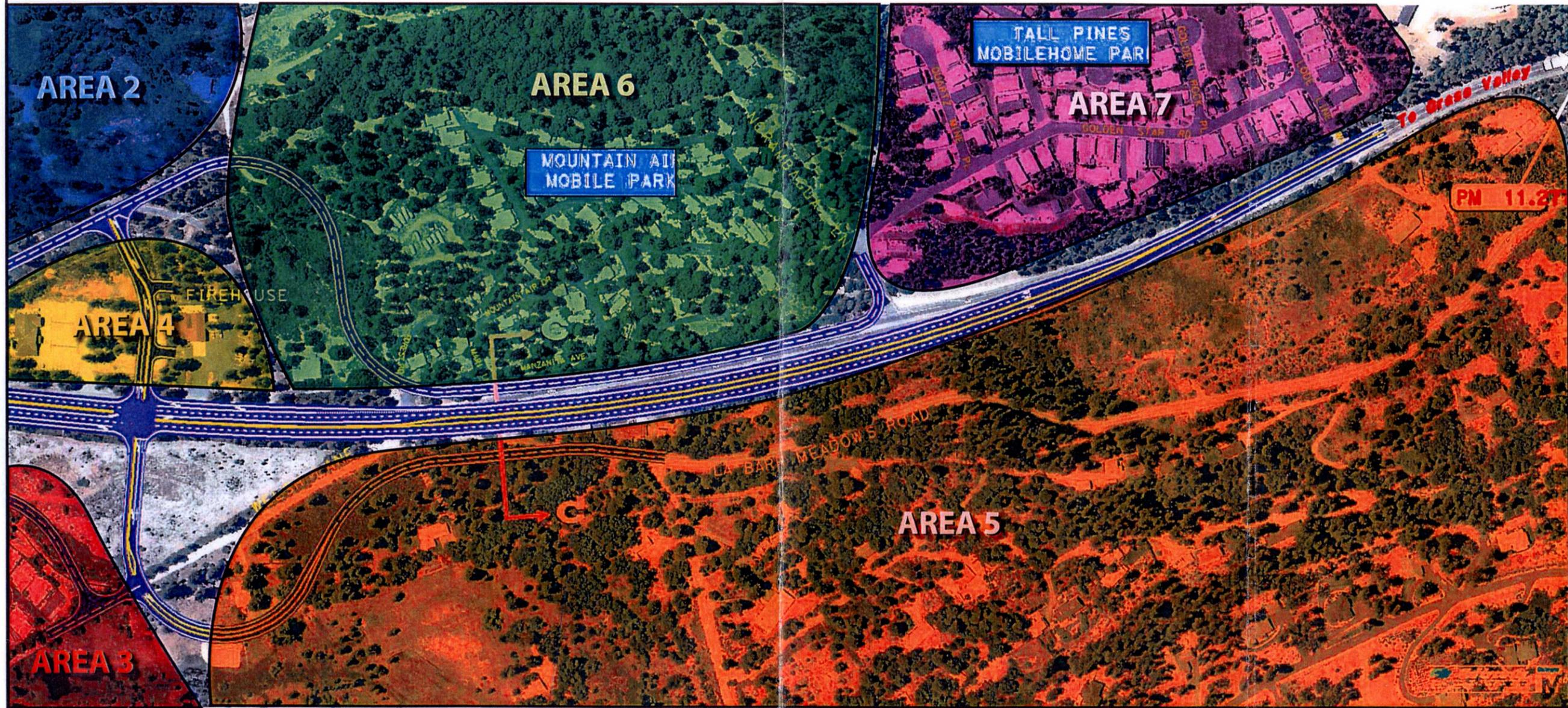


Figure 2.4a
Noise Study Analysis Area

04541.04 Noise Study Report (10-05)

Match Line (See Figure 2a)



GRAPHIC SCALES

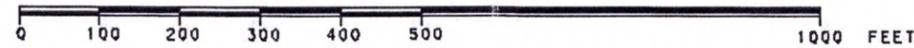


Figure 2.4b
Noise Study Analysis Area

Since noise impacts are predicted to be incurred by the proposed project within three areas, a detailed impact and abatement assessment was conducted in three primary areas in the project vicinity:

- **Area 2:** single family residences in the vicinity of Braemer Dr, Kenwood Dr, and Allison Ranch Rd
- **Area 3:** Forest Springs Mobile Home Park
- **Area 6:** Mountain Air Mobile Home Park

Construction Impacts

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 2.6 summarizes noise levels produced by construction equipment commonly used on roadway-construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 15m (50ft). Noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA per doubling of distance. Therefore a scraper that registers a noise level of 89 dBA at 15m (50ft) would only generate 83 dBA of noise at 30m (100ft).

Table 2.7 Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 15 meters [50 feet])
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 1995.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans' standard specifications and would be short-term, intermittent, and dominated by local traffic noise.

Avoidance, Minimization, and/or Noise Abatement

Construction Minimization Measure

- Noise generated during construction would be minimized because the contractor would be required to conform to the provisions of Caltrans Standard Specifications, Section 7-1.01 I, “Sound Control Requirements”. This section requires the contractor to comply with all local sound control and noise level rules, regulations and ordinances, which apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler or a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without a muffler.

Noise Abatement

The feasibility and reasonableness of evaluated noise barriers have been considered utilizing the preliminary noise abatement design that is included in the Noise Study Report (Table 2.8). Based on the studies completed to date, Caltrans and the Federal Highway Administration intend to incorporate noise abatement in the form of barrier(s) (Figure 2.4a-d):

- NB1-2 is a feasible barrier and is reasonable, from a cost perspective
- NB-2 is feasible and reasonable from a cost perspective
- NB-3-1, NB-3-1 modified, and NB 3-2 are feasible and reasonable from a cost perspective.

Based on the studies thus far completed, the project could incorporate noise abatement measures in the form of barriers as follows:

- NB1-2: Sta 231+40 to 234+50, 4.3m (14ft) Height
- NB-2: Sta 231+50 to 234+20, 4.3m (14ft) Height
- NB-3-2: Sta 239+40 to 241+60, 4.3 m (14ft) Height

Calculations based on preliminary design data indicate that the barriers will reduce noise levels by 5 to 12 dBA. If during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision of the noise

abatement would be made upon completion of the project design and the public involvement processes.

Table 2.8 Reasonable Allowance Comparison

<i>Barrier</i>	<i>Length(m)</i>	<i>Height (m/ft)</i>	<i>Reasonable Allowance</i>	<i>Engrs Estimate</i>
NB-1	323	1.8/6	\$176,000	\$116,280
		2.4/8	\$230,000	\$155,050
		3/10	\$276,000	\$193,600
		3.7/12	\$384,000	\$239,020
		4.3/14	\$480,000	\$277,780
		4.9/16	\$528,000	\$316,540
NB-2	271	1.8/6	\$240,000	\$97,560
		2.4/8	\$250,000	\$130,080
		3/10	\$416,000	\$162,600
		3.7/12	\$832,000	\$200,540
		4.3/14	\$884,000	\$233,060
		4.9/16	\$884,000	\$265,000
NB-3-1M	740	1.8/6	\$126,000	\$81,000
		2.4/8	\$252,000	\$108,000
		3/10	\$572,000	\$135,000
		3.7/12	\$660,000	\$166,000
		4.3/14	\$782,000	\$193,500
		4.9/16	\$782,000	\$220,000

Multiple Reflections Between Parallel Barriers

A technical advisory has been noted in the noise studies report for multiple reflections between parallel barriers. Caltrans’ Technical Noise Supplement (1998b) suggests that where noise barriers face each other across a roadway project, the effect of multiple reflections may be noticeable when the ratio of barrier height to perpendicular distance between barriers is less than 10:1.

Because multiple reflections are predicted to substantially reduce the benefits of Barriers NB1-2 and NB-2 it is recommended that these barriers, if proposed, be constructed with absorptive surfaces with a Noise Reduction Coefficient (NRC) of 0.85 or greater.

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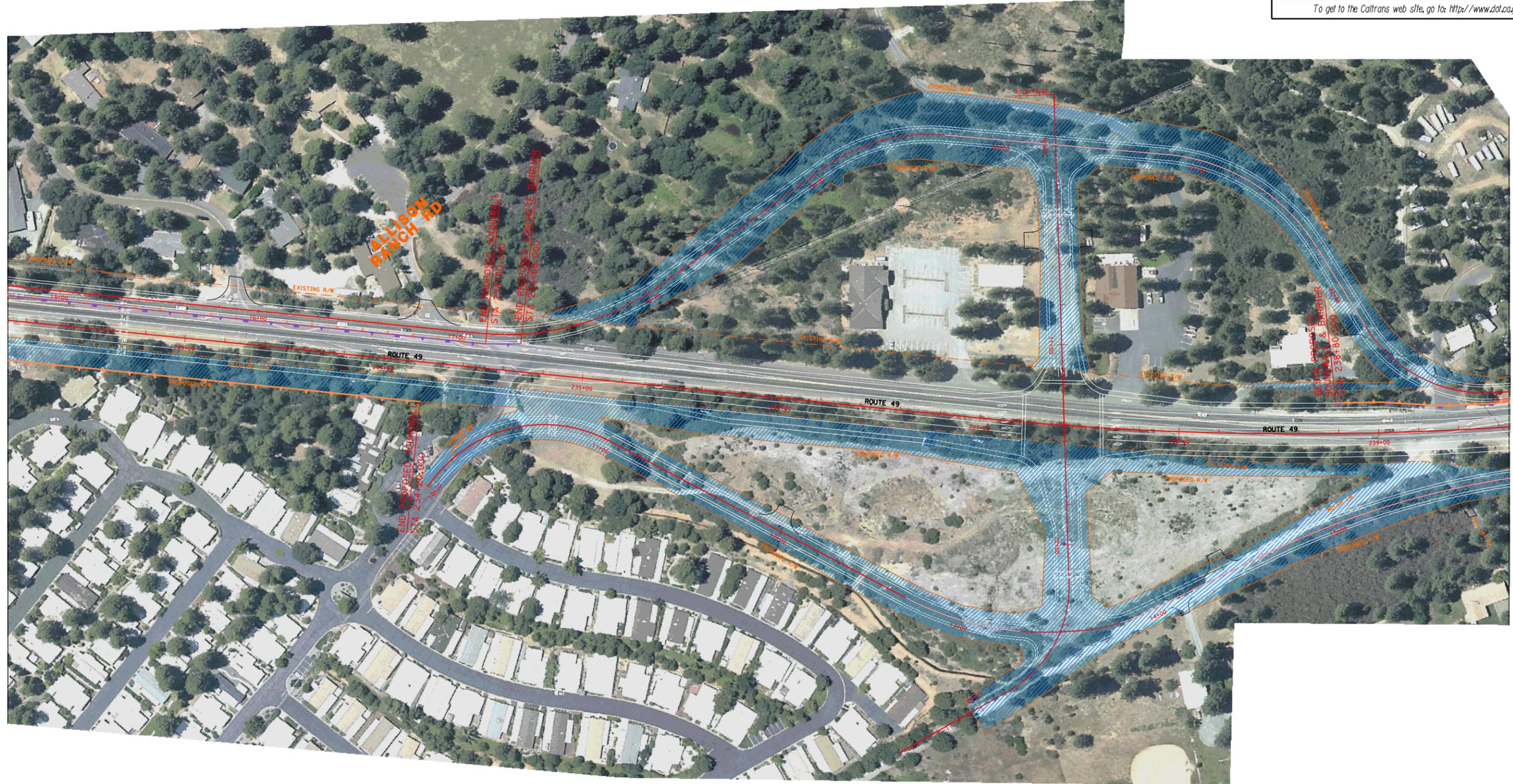


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MATCH LINE (SEE FIGURE 2.5 A)



MATCH LINE (SEE FIGURE 2.5 C)



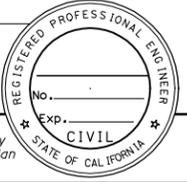
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03	NEV	49	15.5/18.0		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

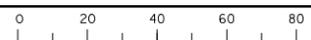
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NO SCALE

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FIGURE 2.5 B

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MATCH LINE (SEE FIGURE 2.5 B)



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	NEV	49	15.5/18.0		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

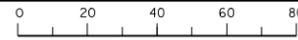
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FIGURE 2.5 C

2.3 Biological Environment

2.3.1 Natural Communities

Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Affected Environment

A Natural Environment Study (NES) was prepared by Caltrans (2007). Further details regarding natural communities of concern can be found in the Natural Environment Study (NES).

Habitat

The project is located at 2,400 feet in elevation. This is the typical rolling hill country of the transitional foothill zone of the western Sierra Nevada. The dominant feature of this community is Ponderosa Pine (*Pinus ponderosa*) and Black Oak (*Quercus kelloggii*). The aspect is subtle but slightly southwesterly. The overstory is dense in most locations with a dense middle story in the low points. The ground layer is predominantly annual grasses and forbs with some mountain misery (*Chamaebatia foliolosa*) and Himalayan blackberry (*Rubus discolor*) mixed in. Where there is no residential development, the overstory and the shrub layer is quite dense.

Common Animal Species

Common animal species seen within the project area include black-tailed deer (*Odocoileus hemionus*), raccoons (*Procyon lotor*), western gray squirrel (*Sciurus aberti*), turkeys (*meleagris gallopavo*), Steller's jay (*Cyanocitta stelleri*), Western fence lizard (*Sceloporus occidentalis*) and Northwestern pond turtle (*Clemmys marmorata marmorata*).

Migration Corridors

There is evidence of diurnal movement of some of the common species throughout the project area. Because of the residential (developed) interface there is a lot of movement of species like raccoons, opossum, fox, turkeys and deer. These species are adapted to the existence of residences and utilize the man-made features like gardens and ponds for their livelihood but likely move back into the more undeveloped areas for shelter. While most of these species have been noted as being killed on the roadway it is difficult to determine the impact on the local population. The evidence is that they are moving across the roadway.

There is data to support that deer are moving across the highway, in the project area, as a seasonal movement between their winter and summer range habitat. There is also suggestion that there is a resident herd that may have daily movements across the highway on a regular basis as opposed to just seasonal movement. An analysis of this highway section compared to other highway sections (using TASAS/Accident data and the deer mortality database) showed that the current condition of the highway is having an adverse effect on deer.

The project area and surrounding habitat is rural residential. There are a few pockets of dense residential areas, which include mobile home parks and houses on less than one acre. The rest of the project area and the habitat within five miles of the project area is open, undeveloped space and homes on larger parcels.

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. The corridor will continue to experience a high volume of deer/wildlife mortality within the project area.

Build Alternative

Habitat

The project area and surrounding habitat for over 20 miles provides good to excellent habitat for deer and other common species. The proposed project would not impact the quantity, quality, and/or type of habitat. Habitat value within the area will remain

consistent, even though development will continue occurring within the project area (NES 2007).

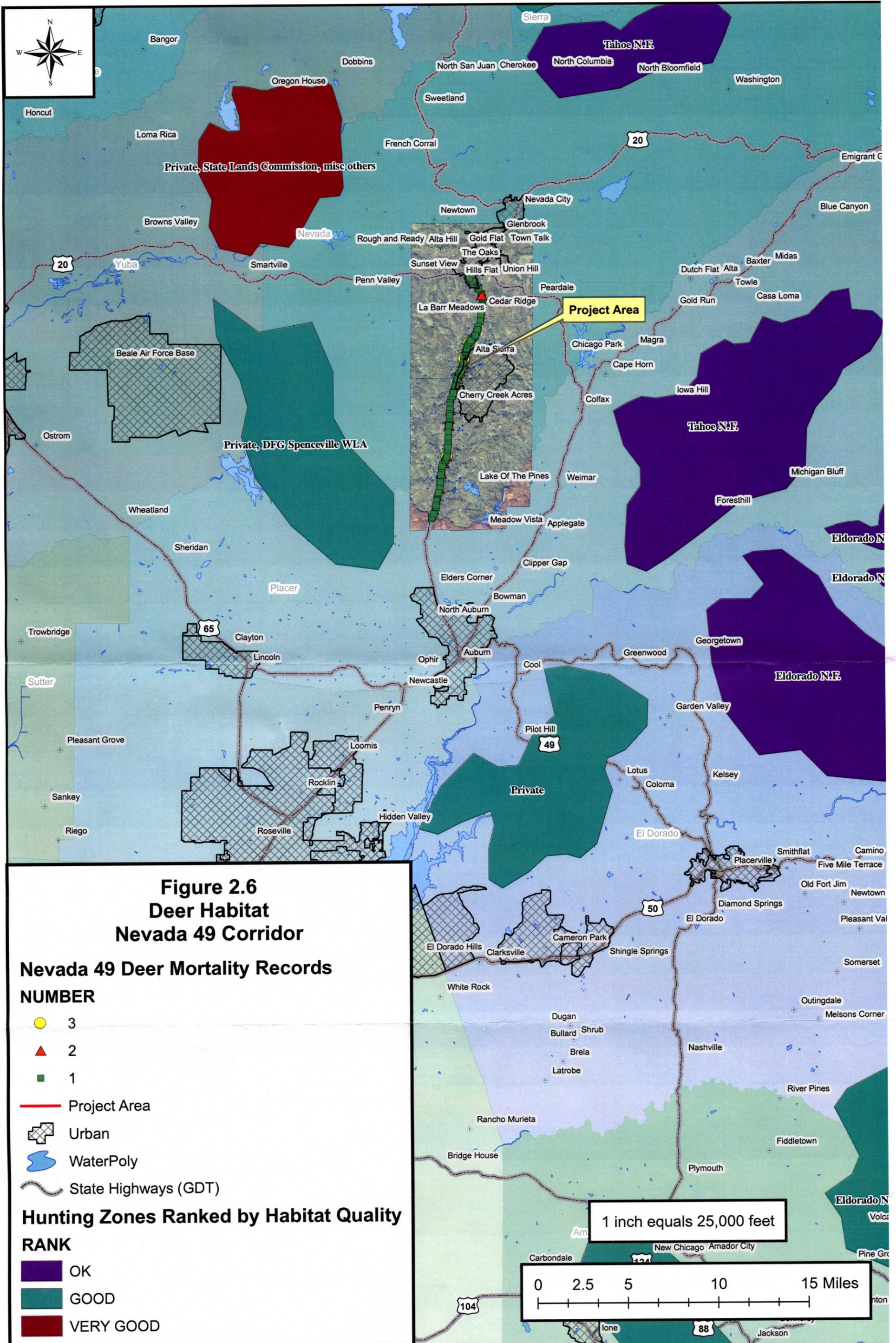
Migration Corridors

The project area is bordered on the east and the west by high value habitat in the form of wildlife areas managed by the California Department of Fish and Game (CDFG) for game species and large undeveloped parcels which facilitates the movement of wildlife across the highway.

Although, the project area is one of the more densely populated areas within the corridor. Deer mortality records show that development does not deter these particular deer herds from using the corridor.

Determining migration patterns for species that are not listed on the endangered species list can be a challenge due to the lack of tracking and agency management. Fortunately, Caltrans maintains deer mortality records and accident data (which identify when deer are involved). The CDFG also maintains deer herd management information (including mortality information). All these resources have helped identify migration patterns within the project boundaries.

There are two different types of deer being affected within the project limits, the resident herds and the migratory herds. The resident herds are those deer that live within the project vicinity year round and their movement across the highway may occur on a daily basis. The migratory herds move through the project area during the fall and spring on their way between the higher elevations and the Spenceville Wildlife Area to the west of the project area (Figure 2.6).



**Figure 2.6
Deer Habitat
Nevada 49 Corridor**

**Nevada 49 Deer Mortality Records
NUMBER**

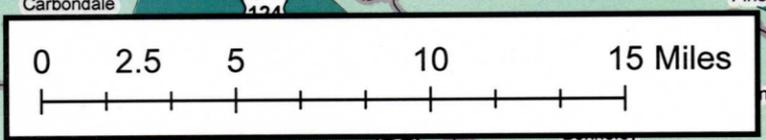
- 3
- ▲ 2
- 1

- Project Area
- Urban
- WaterPoly
- State Highways (GDT)

**Hunting Zones Ranked by Habitat Quality
RANK**

- OK
- GOOD
- VERY GOOD

1 inch equals 25,000 feet



Caltrans Deer Mortality Records

The Caltrans deer mortality records consist of records collected by the Maintenance crews. Crew members, who remove road killed deer from the highway, document the date, type (doe, buck, fawn) and location (nearest post mile). The limitations of this data are that not all removed deer are recorded and, mortality records that are recorded to the nearest post mile may not provide accurate locations.

The records were mapped for the entire corridor from the McKnight Way off ramp to the Wolf/Combie Intersection. The results of the data analysis showed that deer kill has been consistently increasing. The data also showed areas that could be loosely termed “hot spots” or areas where there were several deer kills recorded. The project area contains one of these hot spots. Within the project area there were 56 deer kills reported for a ten-year period. The project area represents approximately ten percent of the corridor and accounts for ten percent of the corridor deer kill (Figure 2.7).

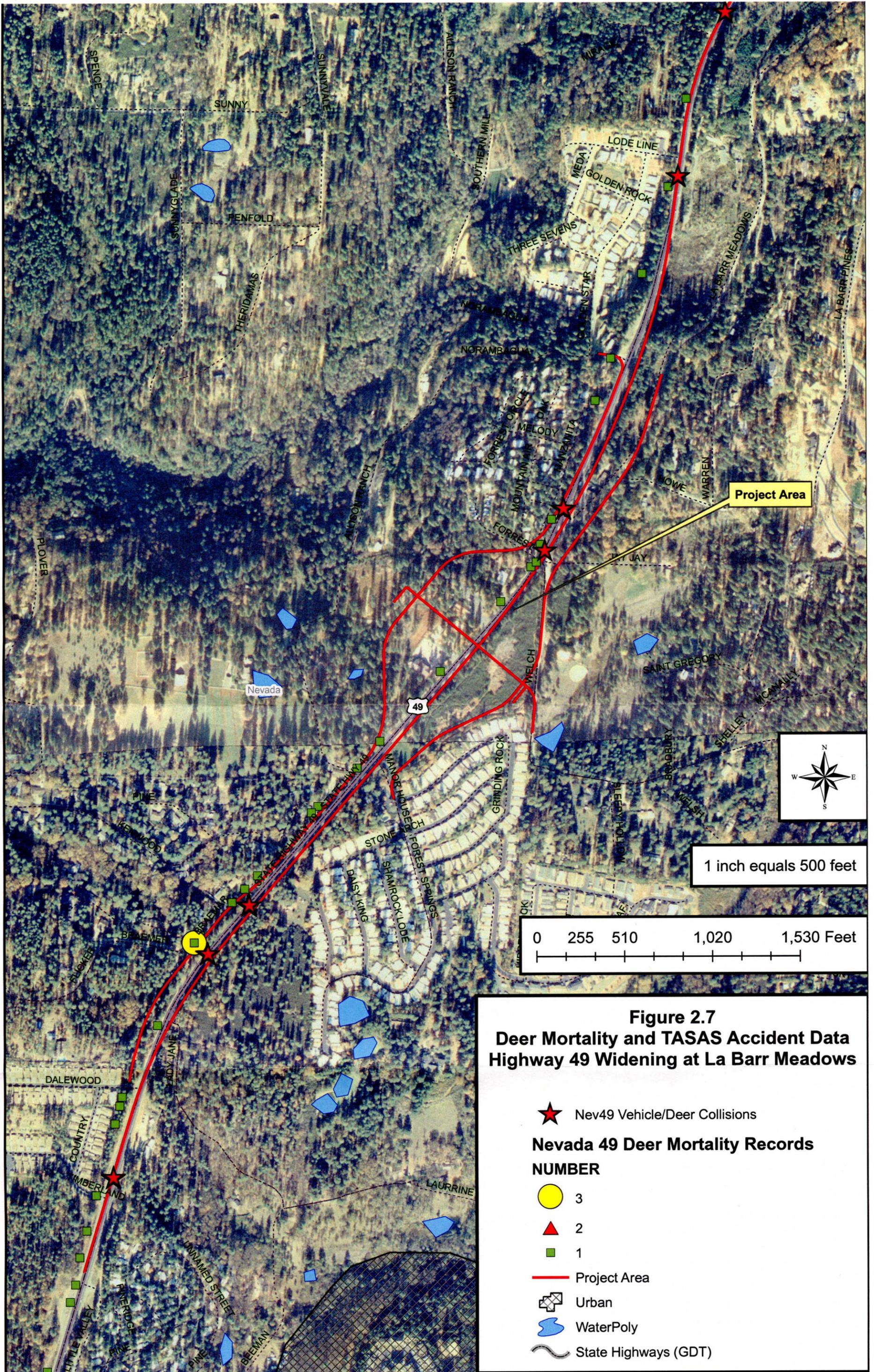
Due to the nature of the proposed project, which would incorporate widening of the roadway to accommodate adding lanes and frontage roads, projected increase in traffic volumes and speed it is expected that impacts to the migration/wildlife corridor would be substantial.

Safety Barriers/Possible Sound walls

Concrete barriers are proposed between the SR 49 and frontage roads at PM 10.07 to 10.28 and 10.56 to 10.70. These barriers, Right of Way fencing and the possibility of sound walls located at the same locations will have compounding negative effect on the existing wildlife migration/movement corridor.

Possible impacts that may occur:

- The barriers may cause the animals to walk adjacent to the barrier until it ends and then jump or move out into traffic without the drivers having any warning.
- May serve as a barrier to small mammals.
- Adults may be able to “clear” the barrier and/or fencing but are separated from their young.
- Increase in predation if wildlife are trapped against barrier/fence.



Avoidance, Minimization, and/or Mitigation Measures

It is Caltrans policy that the District Project Development Team (PDT) makes a determination as to whether a project impact would be substantially adverse (or significant under CEQA). The PDT for the proposed project and Caltrans District 3 Management have determined that the impacts to the wildlife migration/movement corridor would not be substantially adverse and no minimization/mitigation measures such as a wildlife crossing (large culvert under the roadway) are currently proposed.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable

alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the California Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the California Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The California Department of Fish and Game's jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Boards also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

Affected Environment

No wetlands are present within the project limits. A single Nevada Irrigation District (NID) ditch is present within the project limits. This ditch was excavated in dry land and conveys water for irrigation and other agricultural uses. The NES prepared for this project contains additional information regarding studies completed for potential wetlands and other waters of the U.S.

Nevada Irrigation Ditch

The Nevada Irrigation Ditch, referred to as the Forest Springs Lateral, is a man-made feature that was excavated in dry land. Water for the feature is siphoned from Rattlesnake Ditch, which is siphoned from the Chicago Park Ditch. Unlike some other NID ditches in the district, this water does not originate within any reasonable

distance from a natural hydrologic feature. The purpose of the ditch is to provide irrigation water to the area of Forest Springs just west of the highway.

The ditch is located in the middle of the project area at the top of a knoll. This is a substantially maintained feature devoid of vegetation and has heavy pedestrian use along its banks. Because this is a man-made feature conveying water for agricultural purposes it may be exempt as Waters of the U.S. Because there is no vegetation within the channel this feature is not considered a wetland and there is no riparian vegetation associated with the ditch.

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. Therefore, no impacts would occur to the NID ditch within the project limits.

Build Alternative

The project will permanently impact .027 ha (.06 ac) of other waters. Due to the close proximity of the new frontage road placement, the NID ditch will be permanently replaced with pipes, which would then be relocated and extended underground to improve travelers' safety. The modification of the NID ditch will not change the hydrology of the area.

Avoidance, Minimization, and/or Mitigation Measures

Permanent impacts to the Waters of the U.S. will be mitigated through creation of waters on or off-site, purchasing credits at an approved mitigation bank, contributing to an in-lieu fee program, or by using a combination of these measures.

2.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Game share regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species

that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. Please see the Threatened and Endangered Species, Section 2.3.5, in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including California Department of Fish and Game fully protected species and species of special concern, U.S. Fish and Wildlife Service candidate species, and non-listed California Native Plant Society rare and endangered plants.

The regulatory requirements for the Federal Endangered Species Act can be found at United States Code 16, Section 1531, et. seq. See also 50 Code of Federal Regulations Part 402. The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et. seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

Affected Environment

A Natural Environment Study was completed by Caltrans in May 2007. This report discusses impacts to plant species.

The project is located in the Sierra Nevada Mid-elevation Pine Forest. The dominant tree species are ponderosa pine, incense cedar (*calocedrus decurrens*) and black oak. There are also tan oaks (*Lithocarpus densiflorus*) and madrone (*Arbutus menziesii*) scattered throughout the area. The shrub layer consists of manzanita (*Archtostryphos* sp.); scotch broom (*Cytisus scoparius*), poison oak (*Toxicodendron toxicodendron*) and ceanothus. The ground layer is predominantly annual grasses and forbs with some mountain misery (*Chamaebatia foliolosa*) and Himalayan blackberry (*Rubus discolor*) mixed in. Where residential development is absent, the overstory and the shrub layer are quite dense.

Regional Plant Species of Concern

Plant species of concern that have the potential to occur within the project limits are listed below:

Table 2.9 Regional Plant Species of Concern

Scientific Name	Common Name	Status	Distribution	Habitat Requirement	Habitat Present in Project Area
<i>Calystegia stebbinsii</i>	Stebbin's Morning Glory	FE/SE//1B	El Dorado and Nevada Counties	Chaparral, cismontane woodland on serpentine soils	Yes
<i>Fremontedendron decumbens</i>	Pine Hill Flannelbush	FSC///1B	El Dorado and Nevada Counties	Chaparral, cismontane woodland on serpentine soils	Yes
<i>Fritillaria eastwoodiae</i>	Butte County Fritillary	FSC///1B	Butte, Nevada, Placer, Shasta Tehama and Yuba counties	Chaparral, cismontane woodland, lower montane coniferous forest	Yes
<i>Lewisia longpetala</i>	Long-petaled lewisia	FSC///1B	El Dorado, Fresno, Nevada Placer counties	Alpine boulder and rock field, subalpine coniferous forest	Yes
<i>Lewisia serrata</i>	Saw-toothed lewisia	FSC///1B	El Dorado, Placer, Nevada counties	Broadleaved upland forest, lower montane coniferous forest, riparian scrub.	Yes
<i>Plagiobothrys glyptocarpus var. modestus</i>	Cedar Crest popcorn flower	FSC//List3	Nevada county	Cismontane woodland	Yes
<i>Monardella follettii</i>	Follett's monardella	1B/ SLC	Nevada and Plumas counties	Lower montane coniferous forests, rocky serpentine	Yes

FEDERAL ENDANGERED SPECIES ACT

FE: Federally listed Endangered
 FT: Federally listed Threatened
 FSC: Federal Species of Concern
 FPT: Federally proposed Threatened

CALIFORNIA ENDANGERED SPECIES ACT

SE: State-listed as Endangered
 ST: State-listed as Threatened
 CSC: California Special Concern species (This is a CDFG term)

California Native Plant Society (CNPS)

CALIFORNIA DEPARTMENT OF FISH AND GAME

Fully Protected and Protected: Cannot be taken without a permit from the Fish and Game Commission

FISH AND WILDLIFE SERVICE

MNBMC: Migratory Non-game Birds of Management Concern

WESTERN BAT WORKING GROUP

WBG- High Priority: imperiled or at risk for imperiled

Stebbin's Morning Glory (Calystegia stebbinsii)

This is a perennial herb that blooms April through July. The nearest recorded sighting is five miles away. The known locations have very different habitat than what is present in the project area. The known locations are gabro or serpentine soils with an overstory of manzanita and grey pine. They are very open sites with little mid-story vegetation. The project area has a very dense overstory of black oak and ponderosa pine. The soils are red-clay but not of gabro or serpentine parent material. There is a dense mid-story component of vegetation including scotch broom and ceanothus. There is a fair amount of manzanita but it occurs as a mid-story plant in the project area and not an overstory plant like the known sites.

Survey Results

Surveys by Caltrans biologists on April, May, June, July, and September resulted in no sightings of the Stebbin's Morning Glory (*Calystegia stebbinsii*). Surveys for this species were conducted during the appropriate time of year. Furthermore, it is unlikely that the species occurs within the project area because serpentine soils are very limited.

Pine Hill Flannelbush (Fremontedendron decumbens)

This evergreen shrub is only known from one location in Nevada County approximately five miles from the project area. It blooms from April to July. Like Stebbin's morning-glory, this plant is typically found on soils with gabro or serpentine parent material. The known location, in Nevada County, is much more open and dry as compared to the project area. The known locations have a thin overstory of grey pine and manzanita. While manzanita occurs within the project area, it is a dense and a mid-story element.

Survey Results

Surveys by Caltrans biologists on April, May, June, July, and September, resulted in no sightings of the Pine Hill Flannelbush (*Fremontedendron decumbens*). Surveys for this species were conducted during the appropriate time of year.

Butte County Fritillary (*Fritillaria eastwoodiae*)

This perennial herb is found in the openings of chaparral and cismontane woodland it blooms between March and May.

Survey Results

Surveys by Caltrans biologists on April, May, June, July, and September resulted in no sightings of the Butte County Fritillary (*Fritillaria eastwoodiae*).

Saw-toothed lewisia (*Lewisia serrata*)

This perennial herb species is found within riparian scrub habitat. Within the project limits suitable habitat is limited to the NID ditch, which is devoid of vegetation. The plant blooms from May through June and was surveyed for during those times but was not found.

Survey Results

Surveys by Caltrans biologists on April, May, June, July, and September resulted in no sightings of the Saw-toothed Lewisia (*Lewisia serrata*).

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. The natural environment would remain the same. No impacts would occur to the plant species within the area.

Build Alternative

Although the literature research, including the USFWS list of potential species and the CNDDDB, identified the potential for these species to occur within the project limits, none of the plant species discussed in this section were found. Consequently, the build alternative would not impact the species discussed in this section.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or Mitigation Measures are needed for these species.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanographic and Atmospheric Fisheries, and the California Department of Fish and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the state or federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5. All other special-status animal species are discussed here, including California Department of Fish and Game fully protected species and species of special concern, and the U.S. Fish and Wildlife Service or National Oceanographic and Atmospheric Fisheries candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

Affected Environment

Caltrans completed a Natural Environment Study in May 2007.

The following species of concern have the potential to occur with in the project area:

Table 2.9 Regional Wildlife of Concern

Scientific Name	Common Name	Status	Distribution	Habitat Requirement	Habitat Present in Project Area
<i>Myotis volans</i>	Long-legged myotis bat	FSC/WBW G: High priority/-	Mountains throughout California	Most common in woodlands and forests above 1,220m.	Yes
<i>Carduelis lawrenceii</i>	Lawrence's goldfinch	FSC///	Scattered along the edge of the central valley and the coast range.	Valley and foothill woodlands, prefers to nest in oaks. Breeds in open oak woodland.	Yes
<i>Clemmys marmorata marmorata</i>	Western Pond Turtle	FSC/CSC/Protected/-	Oregon border south along the coast to San Francisco Bay, inland through the Sacramento Valley, and the western slope of Sierra Nevada.	Woodlands, grasslands, and open forests; occupies ponds, marshes, rivers, with muddy or rocky bottoms and with cattails, or other aquatic vegetation.	Yes
<i>Phrynosoma coronatum frontale</i>	California horned lizard	FSC//CSC	Throughout the foothills and woodland areas of California.	Sandy washes, scattered low bushes, loose soil for burial and insects for foraging are required for suitable habitat.	Yes

FEDERAL ENDANGERED SPECIES ACT

FE: Federally listed Endangered
 FT: Federally listed Threatened
 FSC: Federal Species of Concern
 FPT: Federally proposed Threatened

CALIFORNIA ENDANGERED SPECIES ACT

SE: State-listed as Endangered
 ST: State-listed as Threatened
 CSC: California Special Concern species (This is a DFG term)

CALIFORNIA DEPARTMENT OF FISH AND GAME

Fully Protected and Protected: Cannot be taken without a permit from the Fish and Game Commission

FISH AND WILDLIFE SERVICE

MNBMC: Migratory Non-game Birds of Management Concern

WESTERN BAT WORKING GROUP

WBG- High Priority: imperiled or at risk for imperiled

Although these species were identified by various sources (USFWS list, CNDDDB) to have potential to occur within the project limits, none were found during surveys of the project area. These species include:

Lawrence's Goldfinch (Corduelis lawrencei)

Lawrence's Goldfinch is uncommon in the foothills surrounding the Central Valley. This small seed eater prefers to nest in oaks where there is dense vegetation. They are often found in flocks with other seed eaters.

Survey Results

This species was not seen during field surveys, nor were any associated seed eaters seen. While there is habitat within the project area, it is a very disturbed and developed area. It is not conclusive as to whether or not black oaks constitute favorable oak habitat, sightings tend towards blue oak woodland habitat of which there is none within the project area.

Long-Legged Myotis Bat (Myotis volans)

The long-legged myotis bat is found throughout California. It has been found from coast to high elevation in Sierra Nevada and White Mountains in California. Habitat includes pinyon juniper, Joshua tree woodland, montane coniferous forest habitats, and in forested habitats along the coast. It is relatively rare in the Sierra Nevada. Day roosts are primarily in hollow trees, particularly large diameter snags or live trees with lightning scars. The project area was surveyed for potential roost sites, but none were found.

Survey Results

This species was not found during surveys; however, roosts for this species can be difficult to detect as they occur under bark or in hollow trees.

California Horned Lizard (Phrynosoma coronatum frontale)

The California horned lizard is found throughout the foothills and woodland areas of California.

Survey Results

This species was not found during field surveys. Habitat within the project area is marginal with limited open space and sandy ground.

Northwestern Pond Turtle (Clemmys marmorata marmorata)

The northwestern pond turtle is an aquatic turtle typically found in slack or slow-moving water with prevalent aerial and aquatic basking sites.

Survey Results

One pond turtle was seen in the NID ditch and one was seen crossing the road approximately where the NID ditch goes into a culvert and under the road. In another project in western Nevada County, numerous pond turtles were seen during construction on the NID ditches.

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. The natural environment would remain the same. No impacts would occur to the animal species within the area.

Build Alternative

The literature research, which includes the USFWS list of potential species and the CNDDDB, identified the potential for these species to occur within the project limits. Only the western pond turtle was found during biological surveys. Although, only one special status species was found within the project limits, the potential to impact special status species listed above still exists. Listed are the potential impacts, which may occur by species.

Long-legged Myotis Bat

Maternal colony may be located within one of the large trees slated for removal as part of this project.

Northwestern Pond Turtle

Construction activities may temporarily displace individuals particularly during the dewatering activities. If the turtles are nesting within the project area, those nests may be damaged during earthwork. If it is common for the species to cross the road within the project area then successful crossing may be less likely to occur following

the widening of the roadway. It is possible that the project could fragment the localized population.

An analysis of the proposed frontage roads and barriers/sound walls shows that there will be more roadways within the vicinity of the NID ditch. The barriers/sound walls and new right of way fencing may change the current movement patterns of turtles. The new frontage roads, barriers/sound walls and fencing may cause an increase in turtle mortality or may cause more habitat fragmentation.

Avoidance, Minimization, and/or Mitigation Measures

- The Federal Migratory Bird Treaty Act (MBTA) protects most native North American birds, their active nests and eggs from disturbance or destruction. To ensure compliance with the MBTA, a pre-construction survey would be conducted to confirm there are no active nests in the project area that might be disturbed by construction. If an active nest were observed, Caltrans would coordinate with CDFG and/or USFWS on how to proceed. Work would not proceed until any issues were resolved to the satisfaction of all parties.
- To comply with the MBTA, the Contractor would be informed that migratory birds and their (active) nests, eggs and young, are protected and measures must be implemented to avoid the harassment or take of any birds. Tree and shrub removal would occur from September 1 to March 1 to avoid taking nesting birds. If vegetation removal cannot be completed within this window, then surveys by the Caltrans biologist would be required prior to the removal of any trees. If nesting birds were present, tree and shrub removal would not be permitted until a Caltrans biologist has given authorization to proceed.
- A Caltrans biologist will be available during dewatering and/or relocation of the NID ditch. Western pond turtles will be moved downstream or perhaps to suitable offsite habitat (i.e. there are several ponds adjacent to the project area).
- Pre-construction surveys of large trees by a qualified biologist should be conducted to identify the presence of maternal colonies. Tree removal should be slated before June/July to avoid impacting the Long-legged Myotis bats.

2.3.5 Invasive Species

Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

A Natural Environment Study (NES) was completed in May, 2007 which addressed invasive species.

In accordance with Executive Order 13122 regarding invasive species, Federal Highway Projects must make efforts to avoid the introduction and spread of noxious weeds. There is only one plant species within and adjacent to the project area that may be considered noxious on a state and local level but not on a federal level and that is Scotch broom (*Cytisus scoparius*). On the State level, Scotch broom is ranked with a pest rating of “C”. This level means that the while acknowledged as a weed, eradication is limited to the spread of the seed and plant from nurseries or when found in cropseeds. Localized populations are controlled at the discretion of the commissioner or on a local level. This means that there are no state or federal requirements for managing this species.

Impacts

No Build Alternative

Under the no build alternative, construction would not occur and SR 49 would remain a two lane conventional highway with no intersection improvements. The natural environment would remain the same. Invasive species such as scotch broom would continue to be found throughout the project site.

Build Alternative

Due to the presence of Scotch broom throughout Caltrans right of way and the surrounding area, the proposed project would incorporate appropriate avoidance and minimization measures, resulting in minimal impact in regards to the spread of invasive species.

Avoidance, Minimization, and/or Mitigation Measures

- None of the species on the California list of noxious weeds will be used for revegetation purposes.
- In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. Caltrans should make efforts to prevent the spread of this species to non-infested areas. Some of the methods that will be included will be to wash all equipment before it leaves the site and if excess materials leave the site, to be sure they are being disposed of in a manner that does not spread scotch broom.

2.4 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the

project, such as changes in community character, traffic patterns, housing availability, and employment.

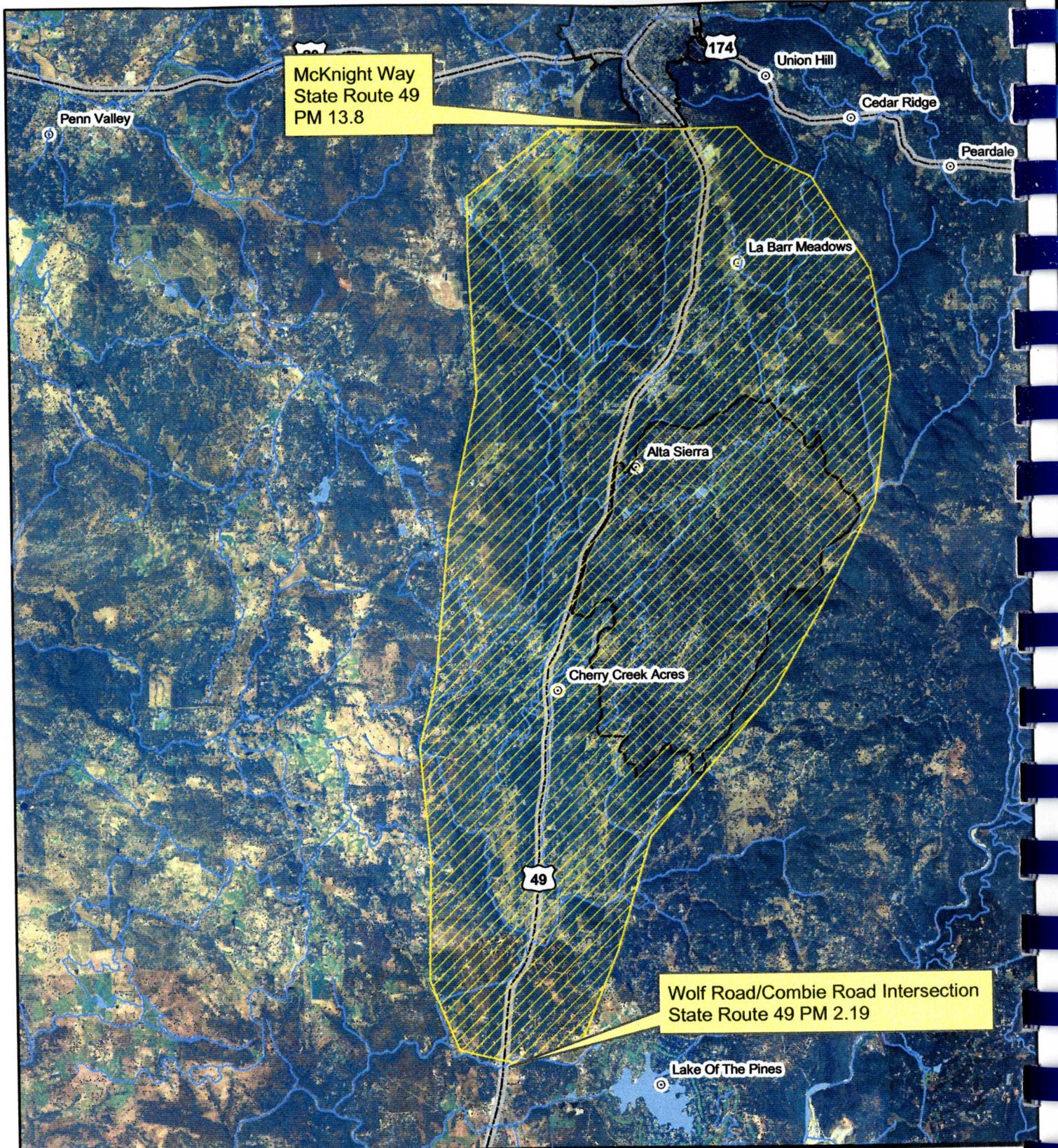
Section 15130 of the California Environmental Quality Act Guidelines describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under the CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under the NEPA, can be found in 40 Code of Federal Regulations, Section 1508.7 of the Council on Environmental Quality regulations.

The resources that the Highway 49 Widening at La Barr Meadows project may adversely impact will be discussed in the cumulative analysis include the following:

- Water Quality
- Wildlife Migration/Movement Corridors

2.4.1 Cumulative Effects Areas

The cumulative effects areas, which will be used to conduct the cumulative impact analysis, will be Wolf /Combie Road (PM 2.19) to McKnight Way (PM 13.8) on State Route 49 (Figure 2.8).



McKnight Way
State Route 49
PM 13.8

Wolf Road/Combie Road Intersection
State Route 49 PM 2.19

The cumulative effects analysis area includes Highway 49 from the Wolf/Combie Roads intersection north to McKnight Way in Grass Valley. The Western border is the outer reaches of the Wolf Creek watershed. The Eastern border is the outer reaches of South Wolf Creek.



Figure 2.8
Highway 49 Widening at
La Barr Meadows Road
03-2A6900
Nevada County

2.4.2 Projects Considered in the Cumulative Effects Evaluation

A total of 11 projects in the general vicinity of the proposed project were reviewed for the cumulative effects evaluation. Table 2- 9 summarizes proposed development in the resource assessment areas, which may contribute to cumulative impacts for the Highway 49 Widening at La Barr Meadows project. The table includes recently projects and reasonably foreseeable future projects that would potentially affect the same resources as the Highway 49 Widening at La Barr Meadows project. This was compiled from sources from sources including Nevada County Planning and Public Works Departments and Caltrans District 3 Intergovernmental Review Branch.

Table 2.10 Projects Evaluated as part of the Cumulative Impacts Analysis

Development/Project	Location	Resources (s) potentially impacted*
PAST		
SR 49 Widening	SR 49/Lime Kiln Rd.	Wildlife Movement/Migration Corridor, Water Quality
PROPOSED		
SR49 Shoulder Widening	SR 49 PM 7.3 – 8.0	Wildlife Movement/Migration Corridor, Water Quality
Higgins Market	Wolf-Combie/SR 49	Wildlife Movement/Migration Corridor, Water Quality
Crestview Interchange	SR 49	Wildlife Movement/Migration Corridor, Water Quality
Mangini Development	SR 49	Wildlife Movement/Migration Corridor, Water Quality
Kenitzer Development	SR 49	Wildlife Movement/Migration Corridor, Water Quality
Forest Spring MHP Expansion	SR 49	Wildlife Movement/Migration Corridor, Water Quality
Bear River Plaza	SR49/Combie Road	Water Quality
Quail Lake Estates	SR 49/Lime Kiln Rd	Wildlife Movement/Migration Corridor, Water Quality
Wolf Creek Ranch Estates	SR 49 Lime Kiln Rd.	Wildlife Movement/Migration Corridor, Water Quality
Highway 49 widening at La Barr Meadows	SR 49/La Barr Meadows Rd.	Wildlife Movement/Migration Corridor, Water Quality

*A resource “potentially impacted” does not imply this resource indeed exists or would be impacted.

2.4.3 Cumulative Effect Discussion

2.4.3.1 Water Quality

The Highway 49 corridor between Wolf /Combie Road (PM 2.19) and McKnight Way (PM 13.8) was used as the study area for the water quality analysis (Figure 2-8).

The water quality impact analysis concluded that the proposed project would not substantially affect water quality. All projects list in table 2-10 have the potential to impact water quality both on a temporary basis during construction and on a permanent basis. Sedimentation is arguably the greatest water quality concern for any of the proposed projects. The addition of impervious surfaces, which would occur from a majority of those projects, would increase the amount of storm water runoff as well as introduce new sources of pollutants that, if transported to surface bodies of water, could degrade water quality. The conversion of grassland or oak woodlands to other uses could impact water quality if best management practices are not implemented. Implementing Best Management Practices (BMPs) to control and clean storm water runoff would minimize all of these impacts. Water quality could be impacted by the location of new construction if vegetated buffer zones to filter pollutants around creeks and tributaries are not included in the planning of these projects.

Future projects that disturb more than 0.4 ha (1.0 ac) of soil or that require coverage under the General Construction Permit are subject to compliance with the Porter-Cologne Act, Federal Clean Water Act, and possibly CEQA review and compliance. These projects would be reviewed by the Regional Water Quality Control Board (RWQCB) and would be required to implement BMPs to minimize impacts to water quality. If BMPs were not implemented, cumulative impacts to water quality would result. Projects proposed within Caltrans right of way must comply with the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) permit. The conditions of the NPDES permit require Caltrans to implement BMPs to protect water quality to the maximum extent practicable. Because BMP technology to protect water quality is improving every year, future projects would likely improve the quality of water discharged from the project area as compared to the quality prior to the construction of the project.

Impacts to water quality could result during the construction of any of the projects listed in Table 2.9. However, these impacts would be temporary and would not result in a substantial cumulative impact to water quality. Construction related water

quality impacts could be minimized by the implementation of BMPs. If these projects were subject to permits or review by the RWQCB, the likelihood that these projects would implement BMPs would increase. However, projects not subject to these reviews and/or required to implement BMPs to protect water quality could result in a substantial impact to water quality alone or cumulatively. (Cumulative impacts to water quality are occurring as a result of non-regulated operations and because of the incremental impacts of projects proposing the expansion of impervious surfaces.) Since the State Route 49 Widening at La Barr Meadows Road project must comply with Caltrans' NPDES permit which requires the inclusion of BMPs, this project would not result in a cumulative impact to water quality.

2.4.3.2 Wildlife Migration Corridors

The Highway 49 corridor between Wolf /Combie Road (PM 2.19) and McKnight Way (PM 13.8) was used as the study area for the wildlife migration corridor analysis (Figure 2-8). Many of the smaller projects listed in Table 2.9, had no specific quantification of impacts to wildlife migration corridors.

The proposed project would have minimal contribution to the continued loss of natural undisturbed habitat in the region, which fosters migration corridors, though the nature of the project would impede the ability of migratory species to move through the area.

The larger projects listed in Table 2.9 such as Wolf Creek Estates all have qualitative information regarding impacts to open space and wildlife movement corridors. These projects identify loss of habitat as a substantial biological impact and they all have proposed mitigation. The Wolf Creek Estates project has proposed to mitigate impacts to wildlife movement corridors by designating areas within the project limits open space with conservation easements, perimeter fencing that allow for unobstructed animal movement, and passive recreation uses associated with trail system project feature. Other larger projects have habitat mitigation measures, which will help offset the increased residential density. The State Route 49 Widening at La Barr Meadows Road project would not result in a substantial loss of open space. However, the results of widening the roadway would continue to impact individual wildlife that cross the roadway. At a certain point, it is expected that the AADT of vehicles will reach a level that precludes any safe crossing for any individual species and may result in a barrier to movement of wildlife.

While the proposed Highway 49 Widening at La Barr Meadows project may impact wildlife movement in the area to some degree, the impacts are not considered at this time to be substantial. The incremental effects of the proposed project would not be cumulatively considerable.

Chapter 3 Comments and Coordination

Agency consultation and public participation for this project have been accomplished through a variety of methods, including project development team meetings, interagency coordination meetings, a public workshop, and written correspondence. This chapter summarizes the results of Caltrans' efforts to fully identify, address and resolve project-related issues through early and continuing coordination. Copies of pertinent correspondence are included at the end of this chapter.

Public Outreach

Caltrans has conducted extensive outreach in the project area, related to the project and to safety in general. This includes:

- In March 2004, Caltrans held workshops at Mountain Air and Forest Springs Mobile Home Parks to discuss ideas for improving SR 49 and to talk about motorist safety. A California Highway Patrol (CHP) representative was present to talk to residents about defensive driving.
- Caltrans met with the Fire Chief from Nevada County Consolidated Fire District Station 88, located within the project's limits, and the pastor of Foothill Church, located adjacent to the fire station.
- A public meeting was held on April 19, 2005, at Higgins Oaks Lions Club. Approximately 20 residents attended this public meeting.
- A public meeting was held on April 27, 2005, at Foothill Church. Approximately 60 area residents attended.

Historic and Tribal Coordination

Consultation letters were sent to the following Native American groups on the dates shown:

- T'Si-akim Maidu (7/20/2005)
- Jill Harvey (7/20/2005)
- Todd Valley Miwok-Maidu Cultural Foundation (7/20/2005)
- United Auburn Indian Community (7/20/2005)

All the native groups listed above were also called by phone on 08/20/2005.

Request for information letters were sent to following local historical societies/historic preservation groups on the date shown:

- Nevada County Historical Society Museum (07/20/2005)
- Grass Valley Museum (07/20/2005)
- Nevada County Historical Society (07/20/2005)

The California Native American Heritage Commission (CalNAHC) was contacted to request a search of the sacred land files for the project area. Although the search failed to yield information on Native American cultural resources located within or adjacent to the project area, the CalNAHC provided an updated list of individuals and organizations in the Native American community.

Resource Agency Coordination

During the preparation of the Natural Environment Study Report, record search was conducted through the California Natural Diversity Database (CNDDDB) and information was obtained from the California Native Plant Society. In addition, United States Fish and Wildlife Services (USFWS) and California Department of Fish and Game (CDFG) were contacted about biological resources in the area.

Caltrans contacted the USFWS (10/10/2004) to ask which federally listed or proposed threatened and endangered species potentially occur in the project. An initial USFWS species list was received in October of 2004 and an updated list was acquired in January 26, 2006.

Caltrans contacted CDFG in April of 2005 to inform them of the project, and to inquire about concerns this agency might have regarding endangered species and other sensitive biological resources in the project area. Field surveys and literature review conducted for this project indicate that no species listed as threatened, endangered, or candidate by the CDFG are present within the project area.

Draft Initial Study/Environmental Assessment Review

The draft IS/EA will be available for public and agency review for 30 days, and during that time a public workshop will be held in the vicinity of the project. Comments received during the review period will be considered prior to making a decision on the project.

Chapter 4 List of Preparers

The following Caltrans North Region staff contributed to the preparation of this Initial Study:

Sukhwinder Bajwa, Senior Transportation Engineer. B.S. Civil Engineering, California State University, Sacramento. Eleven years of experience in civil engineering. Contribution: Project Manager.

Sandra Rosas, Associate Environmental Planner. M.A., Anthropology (Ethnobotany), Northern Arizona University; B.S./B.A. Biology/Anthropology, California State University, Chico. Fourteen years of experience in environmental studies. Contribution: Environmental coordinator and document writer.

Susan Bauer, Senior Environmental Planner. B.S. Biological Studies and B.S. Science Education, Oregon State University, Corvallis, Oregon. Nine years of experience in environmental studies and preparation of environmental documents. Contribution: Environmental Branch Chief.

Marsha Freese, Associate Landscape Architect, BS Landscape Architecture, Iowa State University, Masters Business Administration, University of Phoenix, Eight years experience in preparation of visual impact assessments.

Aaron McKeon, Associate Environmental Planner, Masters in Regional Planning, Cornell University, Ithaca, New York. Six years of experience evaluating socioeconomic impacts of transportation projects. Contribution: Community Impact Assessment.

Suzanne Melim, Associate Environmental Planner, B.S. Natural Resource Management; California Polytechnic State University, San Luis Obispo. Nine years of experience in biology and environmental planning. Contribution: Biological Study Maps.

Daryl Noble, Associate Environmental Planner - Archaeology, PQS PI-Prehistoric Archaeology, M.A. in Anthropology; 29 years experience in California archaeology. Contribution: Historic Property Survey Report (HPSR).

Sean Penders, Professional Civil Engineer, M.S. Civil Engineering, Sacramento State University, B.S. Environmental Engineering, California Polytechnic State University, San Luis Obispo. 11 Years experience in Civil and Environmental Engineering. Contribution: Water Quality Oversight.

Mark Melani, Associate Environmental Planner, B.S. Soil Science; California Polytechnic State University, San Luis Obispo. Eighteen years of experience in hazardous waste/material evaluation. Contribution: Hazardous Waste Oversight.

Mike DeWall, Transportation Engineer, P.E. (Civil); B.S. Civil Engineer, California State University, Chico; M.S. Engineering Management, Air Force Institute of Technology; 23 years of engineering experience in construction management, design, public works, and facility operations and maintenance. Contribution: Hydraulics Study.

Abdel-Kader Taha, Transportation Engineer P.E., B.S. Civil Engineering, California State University, Sacramento. 15 years experience in Transportation Engineering. Contribution: Past Project Engineer.

Gail St. John, Associate Environmental Planner, B.A. Art History, University of California at Davis; Master of Historic Preservation, University of Georgia. Ten years of experience in historic architectural studies and Section 106 compliance documentation. Contribution: Historical Resources Evaluation Report.

Benjamin Tam, Transportation Engineer, B.S. Civil Engineering; San Jose State University, San Jose, California. Nine years of experience in noise studies, 16 years; Caltrans experience. Contribution: Technical Noise Studies.

Sharon Tang, Air/Noise Specialist, A.A. Sacramento City College, Sacramento CA; Six years experience in Air/Noise studies. Contribution: Air Quality Reports.

Khanh Vu, Transportation Engineer, B.S. Civil Engineer, California State University, Sacramento. Seven months experience in transportation engineering. Contribution: Assistant Project Engineer

Narayan P Selwal, EIT, Transportation Engineer, B.S. Civil Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh. M.Sc. Construction Management, Pokhara University. 10 years of

professional experience in civil engineering. Contribution: Assistant Project Engineer

Arshad Iqbal, P.E. Transportation Engineer, M.S. Civil Engineering, CSU, Fullerton; 19 years experience in civil engineering. Contribution: Project Engineer.

Mastri M. Alvandi, Transportation Engineer, B.S. Civil Engineer, California State University, Sacramento. Twenty years experience in transportation engineering. Contribution: Design Senior

Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

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

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 checked="" type="checkbox"/> | <input 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 checked="" type="checkbox"/>	<input 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 that exceed quantitative thresholds for ozone precursors)?

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

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

e) Create objectionable odors affecting a substantial number of people?

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

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

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

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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"/>
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c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Disturb any human remains, including those interred outside of formal cemeteries?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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GEOLOGY AND SOILS - Would the project:

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

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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ii) Strong seismic ground shaking?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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iii) Seismic-related ground failure, including liquefaction?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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iv) Landslides?

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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 offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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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"/>
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HYDROLOGY AND WATER QUALITY - Would the project:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or offsite?

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

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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f) Otherwise substantially degrade water quality?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

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

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

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

LAND USE AND PLANNING - Would the project:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

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

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?

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?

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?

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

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

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

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

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

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

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

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>
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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"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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Other public facilities?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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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 that might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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TRANSPORTATION/TRAFFIC - Would the project:

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

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

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

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

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

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

e) Result in inadequate emergency access?

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

f) 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"/>
--------------------------	--------------------------	--------------------------	-------------------------------------

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

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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

MANDATORY FINDINGS OF SIGNIFICANCE -

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

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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SACRAMENTO, CA 94273-0001
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TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

January 14, 2005

TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, 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 black ink that reads "Will Kempton".

WILL KEMPTON
Director

"Caltrans improves mobility across California"

Appendix C Summary of Relocation Benefits

California Dept. of Transportation Relocation Assistance Program

Relocation Assistance Advisory Services

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

Residential replacement dwellings would 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 would 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 would 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 links below are to the Relocation Assistance for Residential Relocation Brochure.

http://www.dot.ca.gov/hq/row/pubs/residential_english.pdf

http://www.dot.ca.gov/hq/row/pubs/residential_spanish.pdf

http://www.dot.ca.gov/hq/row/pubs/mobile_eng.pdf

http://www.dot.ca.gov/hq/row/pubs/mobile_sp.pdf

The Business and Farm Relocation Assistance Program

http://www.dot.ca.gov/hq/row/pubs/business_farm.pdf

http://www.dot.ca.gov/hq/row/pubs/business_sp.pdf

Additional Information

No relocation payment received would 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 would 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 would 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 Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or the Caltrans' 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 Caltrans' Relocation Advisors.

The information above is not intended to be a complete statement of all of Caltrans' 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 Caltrans' 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 #3
703 B Street
Marysville, CA 95901

Appendix D Minimization and/or Mitigation Summary

Avoidance and Minimization Measures

Cultural Resources

- It is Caltrans' policy to avoid cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in the area until a qualified archaeological can evaluate the nature and significance of the find. Additional surveys would be required if project limits are extended beyond the present study limits.
- Although no indications of human remains were identified on the surface, subsurface human remains may become evident during construction activities. Applicable procedures should be followed upon the unanticipated discovery of human remains, in accordance with provisions of State Health and Safety Code, Sections 7052 and 7050.5 and the State Public Resources Code Sections 5097.9 and 5097.99. Sections 7052 and 7050.5 of the State Health and Safety Code define the disturbance of Indian Cemeteries as a felony. The code further requires that construction or excavation is stopped in the vicinity of discovered human remains and the Sheriff and Coroner notified immediately. The Coroner must determine whether the remains are those of a Native American, the Coroner shall contact the California Native American Heritage Commission within 24 hours. Subsequent procedures shall be followed, according to State Public Resources Code Sections 5097.9 and 5097.9, regarding the role of Native American participation.

Biological Resources

- A California Department of Fish and Game 1602 Streambed Alteration Agreement would be required.
- The project would require a U.S. Army Corps of Engineers (USACE) Nationwide Permit for activities in waters of the U.S. required for modification or improvement of linear transportation projects. An associated State Water Resource Control Board's (SWRCB) water quality (401) certification would also be required.
- Any exposed soil resulting from project related disturbance would be re-planted with local native species to avoid dispersal or introduction of noxious weeds as well as for erosion control. Since this area is well shaded by overstory trees, shade-tolerant species should be planted. Suggested species include snowberry (*Symphocarpus sp.*). Mulch would be pine needles or wood chips.

- Per the federal Migratory Bird Treaty Act, the Contractor would be instructed that migratory birds and their (active) nests, eggs and young, are protected and measures must be implemented to avoid the harassment or take of any birds. Tree and shrub removal should occur between September 1 to March 1 avoid taking nesting birds. If vegetation removal cannot work within this window, then surveys by the Caltrans biologist would be required prior to the removal of any trees. If nesting birds were present, tree and shrub removal would not be permitted until a Caltrans biologist has given authorization to proceed.

Invasive Species

- None of the species on the California list of noxious weeds will be used for revegetation purposes.
- In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed as noxious weeds. Caltrans should make efforts to prevent the spread of this species to non-infested areas. Some of the methods that will be included will be to wash all equipment before it leaves the site and if excess materials leave the site, to be sure they are being disposed of in a manner that does not spread scotch broom.

Utilities/Emergency Services

- Prior to start of construction, Caltrans will coordinate with the Highway Patrol, the Nevada County Sheriff's Office, Grass Valley Police Department and the Nevada County Consolidated Fire District to prepare a Construction Period Emergency Access Plan.
- Prior to start of construction, Caltrans will coordinate with affected school districts to provide for alternative bus routes and safe routes to schools for students.
- Prior to start of construction, Caltrans will coordinate with public transit providers to relocate transit stops affected by construction and to provide advance notice to transit users.
- Caltrans would coordinate relocation work with the various utility companies to ensure minimum disruption of service to customers in the area during project construction.

Traffic/Transportation

- A Transportation Management Plan has been developed for this project and would be updated during the final project design. This plan identifies that traffic delays are likely during construction; however, at least one lane would remain open at all times. One-way traffic control would be in effect during working hours and two lanes would be available for traffic during non-working hours, including nights, weekends and holidays. In addition, adequate shoulder width would be maintained for bicycle and pedestrian traffic.
- All impacted emergency response agencies would be notified in advance of any planned traffic control operations. The Contractor would prepare an emergency response action plan prior to the beginning of construction. This plan would address the facilitation of emergency vehicle access through the construction zone.

Hydrology/Floodplain

- The project shall adhere to the conditions of the Caltrans Statewide NPDES Permit CAS#000003, (Order # 99-06-DWQ), issued by the State Water Resources Control Board.
- The Caltrans NPDES permit requires that Caltrans consider the installation of permanent water quality treatment systems for any major construction project. Best Management Practices (BMPs) for sediment control and treatment were considered in accordance with Caltrans State Wide Storm Water Management Plan (SWMP). The additional lanes and associated impervious surface qualifies as a major construction project. Additional runoff from highways has the potential to increase contaminants in the surrounding water bodies. Inclusion of vegetated strips, which will allow additional areas for infiltration and filtration of highway runoff, is recommended. The project limits contain many areas that currently act as bio-swales, which help improve storm water runoff through infiltration, sedimentation, and natural biological actions. Those areas that naturally treat storm water should be avoided to the maximum extent practicable. New bio-swales and strips are recommended to help treat the additional runoff. These measures should provide treatment through infiltration, filtration, sedimentation, and biological processes, thereby minimizing the water quality impacts.
- Construction projects with a disturbed soil area of more than one acre (0.4ha) or by request of a Regional Water Quality Control Board require a Caltrans approved Storm Water Pollution Prevention Plan (SWPPP) containing project specific effective erosion and sediment control measures. These measures must address soil stabilization practices, sediment control practices, tracking control practices, and

wind erosion control practices. In addition, the project plan must include non-storm water controls, waste management and material pollution controls.

- As directed by Caltrans' Storm Water Management Plan (SWMP) and the Project Planning and Design Guide (PPDG) an evaluation of the project using the most recent approved evaluation guide is essential in determining if the incorporation of permanent storm water runoff treatment measures shall be considered for this project.
- If the project is requiring a SWPPP as determined by the Central Valley RWQCB then a Notification of Construction (NOC) shall be submitted to the Central Valley RWQCB at least 30 days prior to the start of construction.

Air Quality

- Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 7-1/OF "Air Pollution Control" and Section 10 "Dust Control" require the contractor to comply with the Nevada County Air Pollution Control District's rules, ordinances, and regulations.
- With respect to diesel emissions during construction, Caltrans will include all necessary minimization measures that are listed in Caltrans Standard Specifications to reduce particulate emissions.

Hazardous Waste

- Per Caltrans requirements, the contractor(s) shall comply with Title 8, Section 1532.1 "lead" which includes preparation of a project-specific Lead Compliance Plan to prevent or minimize worker exposure to lead impacted soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other appropriate health and safety protocols and procedures for the handling of lead-impacted soil.
- Low-level TPHd contamination was found in the vicinity of the reported former service station at approximately PM 10.2. These low level TPHd concentrations of less than 100 parts per million do not represent a substantial environmental or public health concern at the site of the former service station. However, the Nevada County Department of Environmental Health (NCDEH) has a zero tolerance view of TPH-contaminated soils that have been disturbed during construction. If the soils in the region of the potential service station are going to be disturbed for construction

purposes, Caltrans will coordinate construction activities with the NCDEH and/or Regional Water Quality Control Board.

Noise and Vibration

Construction Minimization Measure

- Noise generated during construction would be minimized because the contractor would be required to conform to the provisions of Caltrans Standard Specifications, Section 7-1.01 I, “Sound Control Requirements”. This section requires the contractor to comply with all local sound control and noise level rules, regulations and ordinances, which apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler or a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without a muffler.

Noise Abatement

The feasibility and reasonableness of evaluated noise barriers have been considered utilizing the preliminary noise abatement design that is included in the Noise Study Report. Based on the studies completed to date, Caltrans and the Federal Highway Administration are considering incorporating noise abatement in the form of barrier(s).

Based on the studies thus far completed, the project could incorporate noise abatement measures in the form of barriers as follows:

- NB1-2: Sta 231+40 to 234+50, 4.3m (14ft) Height
- NB-2: Sta 231+50 to 234+20, 4.3m (14ft) Height
- NB-3-2: Sta 239+40 to 241+60, 4.3 m (14ft) Height

Calculations based on preliminary design data indicate that the barriers will reduce noise levels by 5 to 12 dBA. If during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision of the noise abatement would be made upon completion of the project design and the public involvement processes.

Multiple Reflections Between Parallel Barriers

A technical advisory has been noted in the noise studies report for multiple reflections between parallel barriers. Caltrans' Technical Noise Supplement (1998b) suggests that where noise barriers face each other across a roadway project, the effect of multiple reflections may be noticeable when the ratio of barrier height to perpendicular distance between barriers is less than 10:1.

Because multiple reflections are predicted to substantially reduce the benefits of Barriers NB1-2 and NB-2 it is recommended that these barriers, if proposed, be constructed with absorptive surfaces with a Noise Reduction Coefficient (NRC) of 0.85 or greater.

Aesthetics

To minimize visual impacts from the proposed project, the following measures are proposed:

- Cut and fill slopes should 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.
- During clearing and grubbing, stockpile existing surface soils and duff from the construction site as part of the excavation work. Resurface all new cut/fill slopes with stockpiled material to enhance re-vegetation efforts.
- Plant species native to the area shall be used when re-vegetation is being performed. Often, native grasses and shrubs are the first to re-colonize after a disturbance event such as a disease or fire. The Caltrans Office of Landscape Architecture with consultation with the Biologist will provide appropriate native species for the project.
- Provide Erosion Control 'Type D' to all disturbed areas.
- Where space permits, on the west side of SR 49, provide a planting screen for the single family home located on the north side of the Fire Station and the single family home located on the south side of Allison Ranch Road and at the vicinity of Kenwood Drive.
- Provide full plantings of native trees and shrubs for the new intersection near the Foothill Church and the Fire Station and any other location at the intersection where space permits.
- A number of pine trees and black oak must be removed for the widening project. To preserve the visual character, where space permits, provide the same species of native pine and black oak trees in the project planting plans.

- Provide headlight glare screening on proposed barriers (Barrier 1: PM 10.07-10.28; Barrier 2: PM 10.56 – 10.70).
- Should no sound walls be used for the project, provide aesthetic enhancements of texture and color appropriate for the area to all concrete barriers.

Relocations

Relocation assistance payments and counseling will be provided to persons and businesses in accordance with the Federal Uniform Relocation Assistance and Real Properties Acquisition Policies Act, as Amended, to ensure adequate relocation and a decent, safe, and sanitary home for displaced residents. All eligible displacees will be entitled to moving expenses. All benefits and services will be provided equitably to all residential and business relocatees without regard to race, color, religion, age, national origins and disability as specified under Title VI of the Civil Rights Act of 1964.

Mitigation

- On the west side of SR 49, a fence or wall should be included as a visual buffer for two single family homes near Mountain Air Drive and a single family home north of the Fire Station.
- Permanent impacts to the Waters of the U.S. will be mitigated through creation of waters on or off-site, purchasing credits at an approved mitigation bank, contributing to an in-lieu fee program, or by using a combination of these measures.

List of Technical Studies that are Bound Separately

Draft Relocation Report

Air Quality Report

Noise Study Report

Water Quality Report

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

- Historic Resource Evaluation Report
- Archaeological Survey Report

Hazardous Waste Reports:

- Initial Site Assessment
- Preliminary Site Investigation (Geophysical Survey)

Scenic Resource Evaluation/Visual Assessment

Community Impact Assessment