State Route 88 Pine Grove Corridor Improvement Project

TOWN OF PINE GROVE, AMADOR COUNTY, CALIFORNIA
DISTRICT 10 – AMA – 88 – (PM 21.6-24.6)
EA# 10-0G550
Project ID# 1000000047

Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment and Section 4(f) Evaluation

Prepared by the State of California Department of Transportation and the Amador County Transportation Commission

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

October 2015

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), in cooperation with the Amador County Transportation Commission, has prepared this Initial Study/Environmental Assessment (IS/EA), which examines the potential environmental impacts for the proposed project in the town of Pine Grove in Amador County, California. Caltrans is the lead agency for both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), while the Amador County Transportation Commission is the cooperating agency. The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of the project, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document.
- Electronic copies of the document and related technical studies are available for review and download at the following internet address:
- http://www.dot.ca.gov/dist10/environmental/projects/sr88pine_grove/
- Hard copies of the document and the technical studies are available for review at the following locations:
  - Caltrans District 10 office at 1976 E. Dr. Martin Luther King Jr. Blvd, Stockton, CA 95201
  - Amador County Transportation Commission at 117 Valley View Way, Sutter Creek, CA 95685
  - Amador County Public Library (Pine Grove Branch) at 19889 Highway 88 (located in Town Hall), Pine Grove, CA 95665
- We'd like to hear what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline.
  - Submit comments via U.S. mail to:
    Attention: Kirsten Helton
    Caltrans Environmental Planning
    855 M Street, Suite 200, Fresno, CA 93721
  - Submit comments via email to: kirsten.helton@dot.ca.gov
- Be sure to submit comments by the deadline: 5:00 p.m. on November 23, 2015.

What happens next:
After comments are received from the public and reviewing agencies, Caltrans, as assigned by 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 obtained, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans District 10, Attn: Kirsten Helton, 855 M Street, Suite 200, Fresno, CA 93721; 559-445-6461 Voice, or use the California Relay Service (800) 735-2929 (TTY), (800) 735-2929 (Voice) or 711.

SCH# _____
10-AMA-88-PM 21.6-24.6
EA# 10-0G550
Project ID# 1000000047

Improve State Route 88, from west of Climax Road to east of Tabeaud
(PM 21.6 to 24.6) in the town of Pine Grove in Amador County, California

Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment and Section 4(f) Evaluation

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C) and 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation

Amador County Transportation Commission

Responsible Agencies: California Transportation Commission

10/14/15
Date of Approval

Julie Myrah
Office Chief (Acting), Central Region
Environmental North
NEPA/CEQA Lead Agency

The following person can be contacted for additional information concerning this document:

Kirsten Helton
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855 M Street, Suite 200
Fresno, CA 93721
(559) 445-6461

SCH:

PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) in cooperation with the Amador County Transportation Commission proposes to make improvements to the segment of State Route 88 (SR 88) from post mile 21.6 near Climax Road to post mile 24.6 near Tabeaud Road in the town of Pine Grove in Amador County, California. Improvements include intersection and lane reconfiguration, pedestrian and bicycle improvements, and roadway-related improvements along State Route 88.

Determination

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

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

The proposed project would have no effect on land use and planning, air quality, cultural resources, agriculture and forest resources, mineral resources, growth, geology and soils, population and housing, the coastal zone, wild and scenic rivers, or paleontological resources.

In addition, the proposed project would have less than significant effects to parks and recreation facilities, noise, water quality and storm water runoff, hydrology and water quality, utilities and emergency services, public services, traffic and transportation systems, hazards and hazardous materials, greenhouse gas emissions, and aesthetic resources.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to biological resources:

- Biological Resources Measures BIO-1 through BIO-20

These measures can be found throughout the document in their respective discussion sections and in Appendix E: Environmental Commitment Record.

_____ _____

Julie Myrah
Office Chief (Acting), Central Region
Environmental North
NEPA/CEQA Lead Agency

Date

DRAFT

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CHAPTER 1 - PROPOSED PROJECT

1.1 Introduction

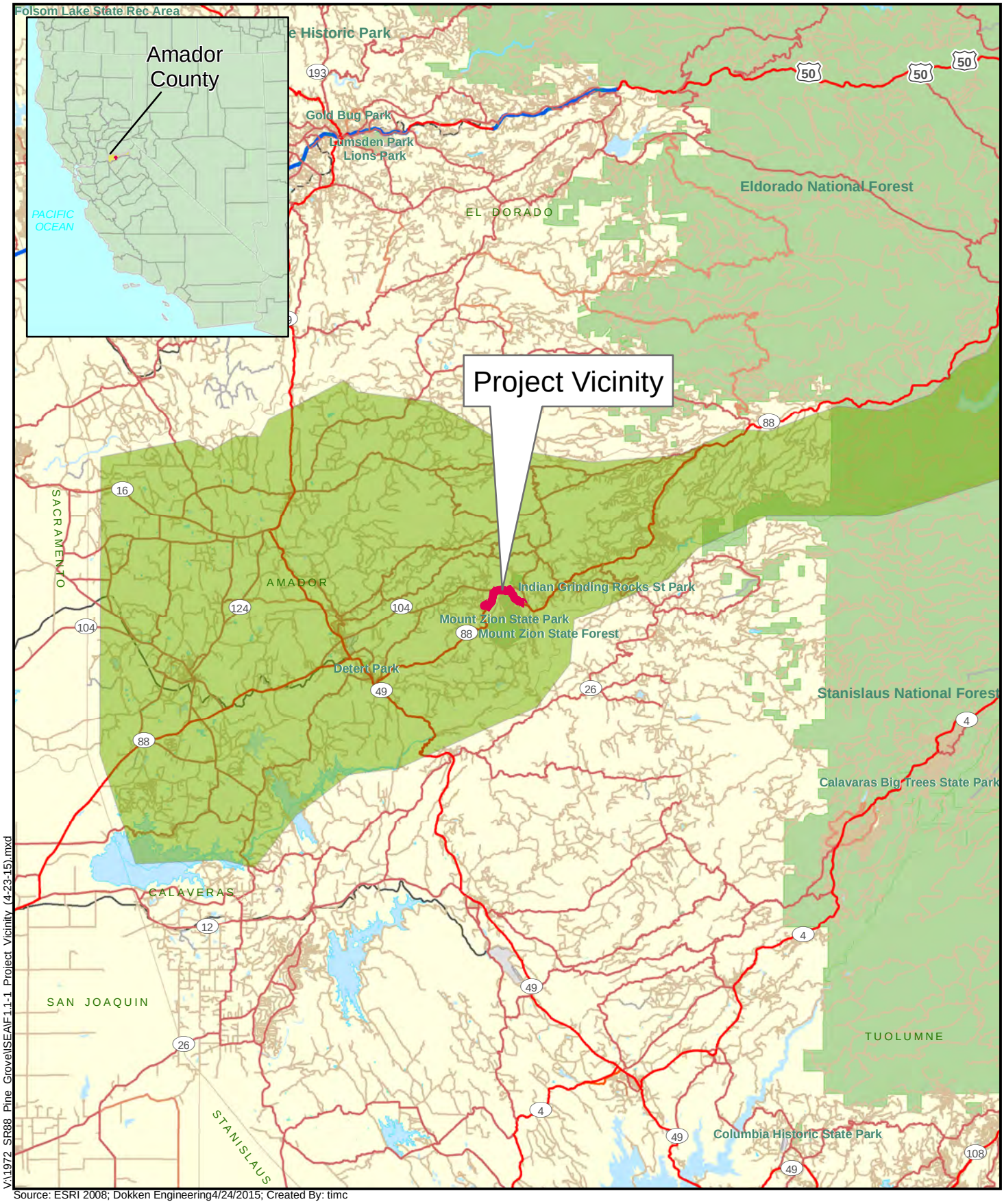
The California Department of Transportation (Caltrans) in cooperation with the Amador County Transportation Commission proposes to make improvements to the segment of State Route 88 (SR 88) from post mile 21.6 near Climax Road to post mile 24.6 near Tabeaud Road in the town of Pine Grove in Amador County, California. Total length of the project is about 3 miles. The existing roadway is a two-lane highway with minimal shoulders. Figure 1.1-1 shows the project vicinity. Figure 1.1-2 shows the project location. Caltrans is the lead agency for both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA). The Amador County Transportation Commission is the cooperating agency.

This Initial Study/Environmental Assessment has been prepared as a joint California Environmental Quality Act/National Environmental Policy Act environmental document to provide decision makers, the public, and reviewing agencies a complete description of the project, its purpose and need, and a description of how this project has the potential to impact the natural and human environment. The document has been prepared following the Caltrans joint document format, which provides an overview of the project in Chapter 1, evaluates each environmental resource for potential impacts and measures to reduce those impacts in Chapter 2, and outlines the environmental process and public involvement in Chapter 3.

The Pine Grove Corridor Improvement Project is included in the fiscal year 2014/2015 Federal Statewide Transportation Improvement Program (FSTIP). It is also included in the Amador County 2004 Regional Transportation Plan (RTP) and the 2004 cost-constrained Federal Transportation Improvement Program (FTIP).

In 2007, Caltrans and the Amador County Transportation Commission initiated the proposed project to evaluate improvements to the SR 88 corridor through the town of Pine Grove. The project began with a substantial scoping, public outreach, and alternative analysis effort. A stakeholder working group was established in fall of 2009, and its participation in the alternative analysis process resulted in the current project being selected as the locally preferred alternative to provide corridor improvements. This scoping process was completed in fall of 2011.

The SR 88 Pine Grove Corridor Improvement Project is expected to be built in three phases due to construction funding constraints. The first phase would construct improvements between Berry Street and Hilltop Road, the second phase would construct improvements between Climax Road and Berry Street, and the third phase would construct improvements between Hilltop Road and Tabeaud Road. A full discussion of construction phasing is discussed in Section 1.4.1.



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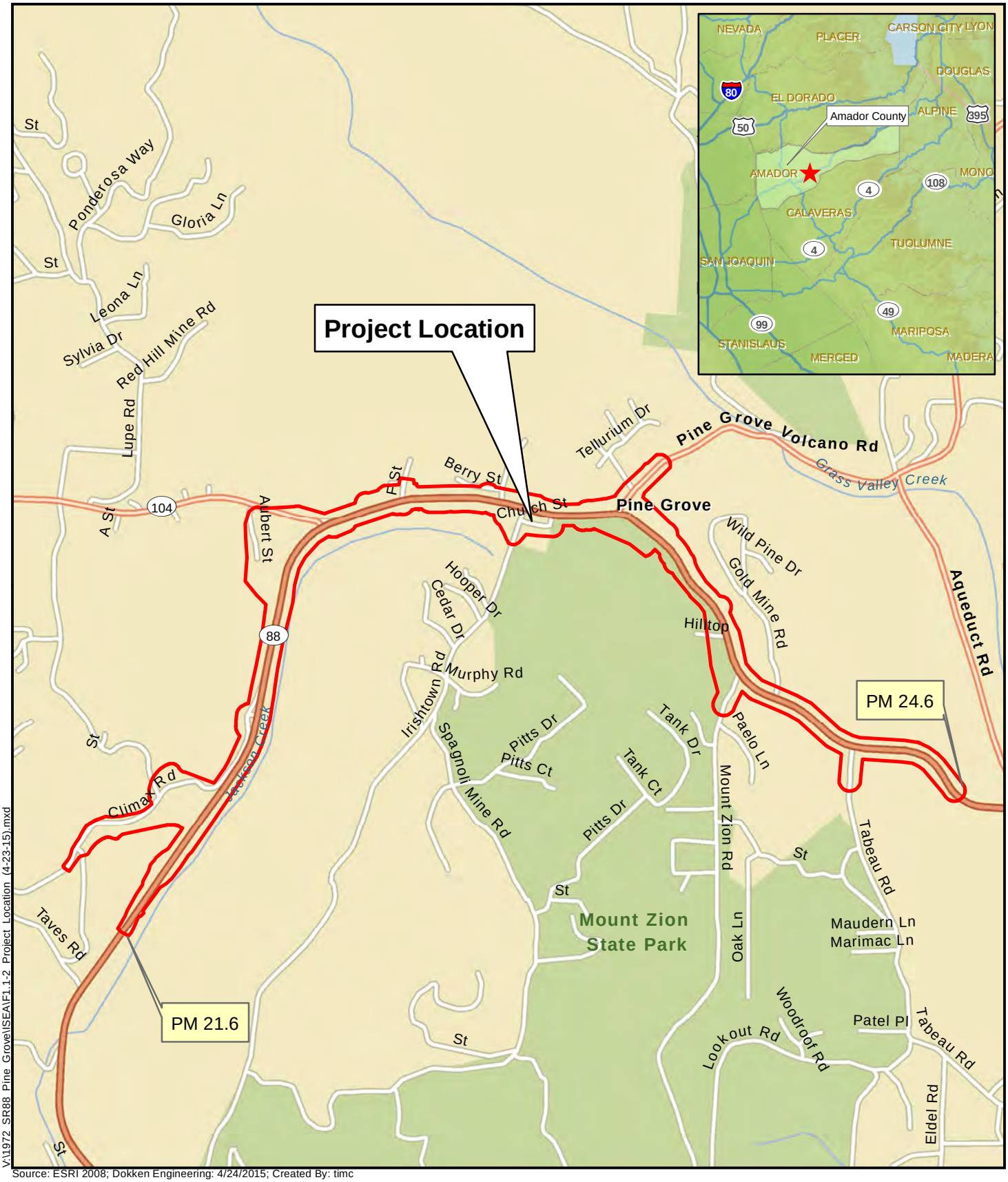
Source: ESRI 2008; Dokken Engineering4/24/2015; Created By: timc

0 5 10 Miles

FIGURE 1.1-1
Project Vicinity
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6



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0 0.25 0.5 0.75 1 Miles

FIGURE 1.1-2
Project Location
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M. 21.6/24.6

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the SR 88 Pine Grove Corridor Improvement Project is to:

- Improve existing and future SR 88 operations.
- Alleviate existing congestion in the project area.
- Provide a transportation facility consistent with Caltrans Roadway Design Standards and local, regional, and statewide plans.

1.2.2 Need

The SR 88 Pine Grove Corridor Improvement Project is needed because vehicle operations through the town of Pine Grove are projected to deteriorate to failing levels of service by 2044, resulting in unacceptable vehicle delays at key intersections on SR 88. These intersections are experiencing congestion during peak hours from increased traffic volumes on Climax Road, Ridge Road, and Volcano Road. The resulting congestion affects both local and regional traffic. Because of the growing congestion, there is a need to improve long-term traffic circulation in the Pine Grove area.

In addition, the existing SR 88 corridor in the project area is not consistent with current Caltrans roadway design standards. At both approaches into Pine Grove, the existing SR 88 is a two-lane highway with minimal shoulders. Paved shoulders in the project area range from 1-8 feet wide and are contiguous with informal on-street parking in Pine Grove. From Ridge Road to Tabeaud Road within the Pine Grove Corridor, a two-way left-turn lane is introduced, but minimal shoulders remain. Parking is limited and there are only a few sidewalks near the Pine Grove Elementary School. Major intersections that cross SR 88 through Pine Grove are Ridge Road, Irish Town Road, and Volcano Road. Ridge Road and Volcano Road intersect SR 88 at skewed angles because of the geometrics of the highway, and only Ridge Road has a signal.

Through Pine Grove, the project is bounded on both sides with some residential housing, but mostly commercial properties. Formal driveway access exists along the highway, but several properties have informal driveway access to SR 88 where vehicles can enter or exit the highway in multiple locations along those properties. In select locations throughout Pine Grove, the highway is also bounded on one side by retaining walls and/or steep cut slopes/embankments.

Lack of pedestrian and bicycle facilities (sidewalks and bike lanes) greatly reduces the non-vehicular traffic through town and limits multimodal access to local businesses. Also, lack of sufficient sidewalks hinders safe walking to the elementary school and contributes to vehicle queuing (vehicles lined up) at peak drop-off and pick-up times because parents drive their children to school rather than have them walk.

Table 1.2.2-1 shows existing and future traffic volumes on SR 88 and local roads in the project area. The volume of traffic using SR 88 is projected to grow, so congestion will increase.

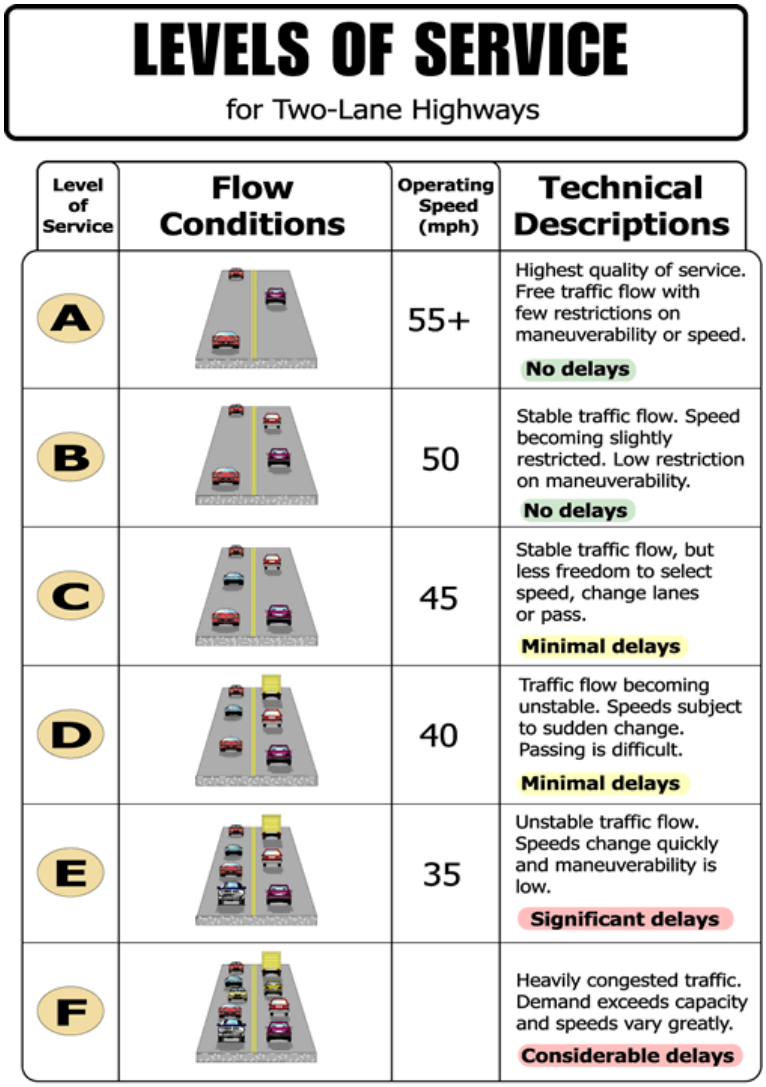
Table 1.2.2-1: Existing and Future Average Daily Traffic Volumes

Segment	Existing Traffic Volume	Projected Volume in 2024	Projected Volume in 2044
SR 88 from post mile 22.0 to Climax Road	6,800	8,200	10,200
SR 88 from Climax Road to Ridge Road	7,500	9,300	11,800
SR 88 from Ridge Road to Irish Town Road	14,200	17,900	23,100
SR 88 from Irish Town Road to Volcano Road	15,000	18,500	23,500
SR 88 from Volcano Road to Mt. Zion Road	12,900	16,500	21,600
SR 88 from Mt. Zion Road to Tabeaud Road	12,500	16,000	21,100
SR 88 from Tabeaud Road to post mile 24.3	10,300	13,800	18,800
Climax Road intersection with SR 88	800	1,300	2,000
Ridge Road intersection with SR 88	7,500	9,100	11,400
Irish Town Road intersection with SR 88	1,200	1,200	1,300
Volcano Road intersection with SR 88	1,900	2,400	3,000
Mt. Zion Road intersection with SR 88	400	400	500
Tabeaud Road intersection with SR 88	2,800	2,900	3,100

Source: Traffic Operations Analysis Report 2015

Figure 1.2.2-1 below shows how vehicular traffic and delays are identified as level of service (LOS).

Figure 1.2.2-1: Levels of Service for Two-Lane Highways



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

Table 1.2.2-2 shows the Pine Grove segment of SR 88 currently operates at acceptable levels of service (Caltrans standards require level of service C in rural areas and level of service D in urban areas). However, traffic projections for the project area show worsening levels of service by 2024, the proposed construction year, and failing levels of service in 2044, the design year. Tables 1.2.2-3 and 1.2.2-4 show which intersections would fail during morning and evening peak hour traffic in 2024 and 2044, respectively.

Table 1.2.2-2: Intersection Analysis – Existing Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	14.7 (EB LT)	B	0.8 (EB LT)	A
			7.2 (SB LT)	A	6.9 (SB LT)	A
			1.9 (Entire)	A	1.2 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	5.6 (Entire)	A	8.5 (Entire)	A
3	SR 88/Berry Street	Side-Street Stop	6.9 (EB LT)	A	3.5 (EB LT)	A
			13.3 (SB LT)	B	11.0 (SB LT)	B
			0.9 (Entire)	A	0.9 (Entire)	A
4	SR 88/Irish Town Road	Side-Street Stop	6.2 (EB LT)	A	3.0 (EB LT)	A
			3.7 (WB LT)	A	7.2 (WB LT)	A
			15.8 (NB LT)	C	14.3 (NB LT)	B
			22.4 (SB LT)	C	14.1 (SB LT)	B
			2.0 (Entire)	A	1.5 (Entire)	A
5	SR 88/Church Street	Pedestrian Crossing	18.5 (EB LT)	C	7.0 (EB LT)	A
			6.9 (WB LT)	A	12.6 (WB LT)	B
			12.0 (NB LT)	B	10.1 (NB LT)	B
			12.5 (SB LT)	B	10.7 (SB LT)	B
			4.0 (Entire)	A	3.6 (Entire)	A
6	SR 88/Volcano Road	Side-Street Stop	7.6 (EB LT)	A	4.6 (EB LT)	A
			17.7 (SB LT)	C	14.0 (SB LT)	B
			10.2 (SB RT)	B	4.0 (SB RT)	A
			1.9 (Entire)	A	1.6 (Entire)	A
7	SR 88/Mount Zion Road	Side-Street Stop	1.8 (WB LT)	A	3.8 (WB LT)	A
			16.4 (NB LT)	C	13.5 (NB LT)	B
			0.6 (Entire)	A	0.4 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	4.7 (EB LT)	A	1.8 (EB LT)	A
			13.7 (SB LT)	B	12.2 (SB LT)	B
			0.5 (Entire)	A	0.6 (Entire)	A
9	SR 88/Tabeaud Road	Side-Street Stop	2.3 (WB LT)	A	3.7 (WB LT)	A
			23.2 (NB LT)	C	12.9 (NB LT)	B
			5.4 (Entire)	A	2.4 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	5.7 (EB LT)	A	2.5 (EB LT)	A
			2.9 (WB LT)	A	4.8 (WB LT)	A
			11.7 (NB LT)	B	11.7 (NB LT)	B
			3.8 (NB RT)	A	7.2 (NB RT)	A
			1.3 (Entire)	A	0.9 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	2.3 (WB LT)	A	5.2 (WB LT)	A
			21.6 (NB LT)	C	14.2 (NB LT)	B
			3.4 (NB RT)	A	7.0 (NB RT)	A
			1.4 (Entire)	A	1.6 (Entire)	A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop-controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

Table 1.2.2-3: Intersection Analysis – 2024 No-Build Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	2.0 (EB LT)	A	1.4 (EB LT)	A
			8.1 (SB LT)	A	8.5 (SB LT)	A
			1.3 (Entire)	A	1.6 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	7.3 (Entire)	A	9.7 (Entire)	A
3	SR 88/Berry Street	Side-Street Stop	8.1 (EB LT)	A	4.6 (EB LT)	A
			19.8 (SB LT)	C	18.2 (SB LT)	C
			1.1 (Entire)	A	1.1 (Entire)	A
4	SR 88/Irish Town Road	Side-Street Stop	8.8 (EB LT)	A	4.2 (EB LT)	A
			4.6 (WB LT)	A	8.1 (WB LT)	A
			30.0 (NB LT)	D	27.8 (NB LT)	D
			21.2 (SB LT)	C	28.0 (SB LT)	D
			2.4 (Entire)	A	2.5 (Entire)	A
5	SR 88/Church Street	Pedestrian Hybrid Beacon	18.1 (EB LT)	C	8.1 (EB LT)	A
			9.6 (WB LT)	A	14.9 (WB LT)	B
			14.7 (NB LT)	B	14.3 (NB LT)	B
			13.6 (SB LT)	B	11.9 (SB LT)	B
			4.7 (Entire)	A	4.0 (Entire)	A
6	SR 88/Volcano Road	Side-Street Stop	11.6 (EB LT)	B	7.2 (EB LT)	A
			3.5 (WB LT)	A	7.1 (WB LT)	A
			30.6 (NB LT)	D	26.9 (NB LT)	D
			60.0 (SB LT)	**F**	31.8 (SB LT)	D
			19.6 (SB RT)	C	5.7 (SB RT)	A
			4.8 (Entire)	A	2.9 (Entire)	A
7	SR 88/Mount Zion Road	Side-Street Stop	2.7 (WB LT)	A	5.6 (WB LT)	A
			23.2 (NB LT)	C	25.2 (NB LT)	D
			0.9 (Entire)	A	0.7 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	5.7 (EB LT)	A	2.8 (EB LT)	A
			21.0 (SB LT)	C	15.3 (SB LT)	C
			0.7 (Entire)	A	0.8 (Entire)	A
9	SR 88/Tabeaud Road	Side-Street Stop	3.7 (WB LT)	A	6.1 (WB LT)	A
			>80 (NB LT)	**F**	27.0 (NB LT)	D
			15.4 (Entire)	C	3.1 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	7.0 (EB LT)	A	3.4 (EB LT)	A
			3.6 (WB LT)	A	6.8 (WB LT)	A
			19.3 (NB LT)	C	19.0 (NB LT)	C
			5.9 (NB RT)	A	8.0 (NB RT)	A
			1.6 (Entire)	A	1.2 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	3.3 (WB LT)	A	5.5 (WB LT)	A
			38.2 (NB LT)	**E**	21.1 (NB LT)	C
			4.2 (NB RT)	A	7.5 (NB RT)	A
			2.0 (Entire)	A	1.8 (Entire)	A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

Table 1.2.2-4: Intersection Analysis – 2044 No-Build Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	2.4 (EB LT)	A	2.1 (EB LT)	A
			9.9 (SB LT)	A	11.3 (SB LT)	B
			1.7 (Entire)	A	2.1 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	10.8 (Entire)	B	12.1 (Entire)	B
3	SR 88/Berry Street	Side-Street Stop	9.7 (EB LT)	A	5.6 (EB LT)	A
			33.8 (SB LT)	D	**41.3 (SB LT)**	**E**
			1.5 (Entire)	A	1.6 (Entire)	A
4	SR 88/Irish Town Road	Side-Street Stop	10.9 (EB LT)	B	5.4 (EB LT)	A
			6.7 (WB LT)	A	15.3 (WB LT)	C
			>60 (NB LT)	**F**	**>130 (NB LT)**	**F**
			47.5 (SB LT)	**E**	**>75 (SB LT)**	**F**
			4.4 (Entire)	A	10.0 (Entire)	A
5	SR 88/Church Street	Pedestrian Hybrid Beacon	23.6 (EB LT)	C	9.8 (EB LT)	A
			12.5 (WB LT)	B	21.1 (WB LT)	C
			16.9 (NB LT)	C	17.0 (NB LT)	C
			17.6 (SB LT)	C	16.6 (SB LT)	C
			5.6 (Entire)	A	4.4 (Entire)	A
6	SR 88/Volcano Road	Side-Street Stop	21.6 (EB LT)	C	10.8 (EB LT)	B
			5.3 (WB LT)	A	9.5 (WB LT)	A
			>100 (NB LT)	**F**	**>100 (NB LT)**	**F**
			>180 (SB LT)	**F**	**>180 (SB LT)**	**F**
			>180 (SB RT)	**F**	**>180 (SB RT)**	**F**
			54.3 (Entire)	**F**	**38.3 (Entire)**	**E**
7	SR 88/Mount Zion Road	Side-Street Stop	4.0 (WB LT)	A	11.0 (WB LT)	B
			>110 (NB LT)	**F**	**>60 (NB LT)**	**F**
			4.2 (Entire)	A	1.8 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	10.2 (EB LT)	B	4.4 (EB LT)	A
			37.2 (SB LT)	**E**	**39.5 (SB LT)**	**E**
			1.4 (Entire)	A	1.6 (Entire)	A
9	SR 88/Tabeaud Road	Side-Street Stop	6.1 (WB LT)	A	8.6 (WB LT)	A
			>180 (NB LT)	**F**	**>90 (NB LT)**	**F**
			>110 (Entire)	**F**	7.3 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	10.6 (EB LT)	B	4.1 (EB LT)	A
			5.1 (WB LT)	A	9.3 (WB LT)	A
			34.5 (NB LT)	D	**39.4 (NB LT)**	**E**
			9.2 (NB RT)	A	9.2 (NB RT)	A
			2.3 (Entire)	A	2.3 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	5.0 (WB LT)	A	9.5 (WB LT)	A
			>90 (NB LT)	**F**	**45.3 (NB LT)**	**E**
			4.9 (NB RT)	A	12.4 (NB RT)	B
			3.1 (Entire)	A	2.1 (Entire)	A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

1.2.3 Independent Utility and Logical Termini

Federal Highway Administration regulations (23 Code of Federal Regulations 771.111 [f]) require that the action being evaluated have “Independent Utility” and “Logical Termini,” and that the action not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Independent utility refers to the project being usable on its own and being a reasonable expenditure even if no additional transportation improvements in the area are made. Logical termini are the limits of the project that are of sufficient length to address environmental concerns.

Independent utility and logical termini have been determined for this project with consideration of where congestion currently exists and where future traffic volumes are expected to increase. The project is designed to accommodate potential future demand on Climax Road while maintaining the existing vehicle transit configuration through Pine Grove. The western end is about half a mile west of the existing Climax Road intersection, which will allow for improvements to the intersection and widening of SR 88 east of the intersection for an acceleration lane for future truck traffic coming from Climax Road. Pine Grove’s commercial area extends up to Tabeaud Road. The eastern end is about 900 feet east of Tabeaud Road, similarly allowing for tie-in to the existing configuration of SR 88. The intersections at SR 88/Climax Road and SR 88/Tabeaud Road are logical termini for this project because they represent the extent of substantive traffic generation in the vicinity of Pine Grove. The proposed project does not restrict consideration of alternatives for reasonably foreseeable transportation improvements.

Due to constraints associated with construction funding, this project may be constructed in phases. The three phases that have been identified during preliminary engineering include improvements from Berry Street to Hilltop Road, improvements from Climax Road to Berry Street, and improvements from Hilltop Road to Tabeaud Road. The 2015 Supplemental Traffic Study prepared for the project confirmed that each phase can operate independently and would provide incremental operational improvements to the SR-88 corridor through the project area. Since the project does not propose any increase in the mainline capacity, it is unlikely that improvements at one phase would result in any worsening of conditions throughout the project area. Climax Road, Berry Street, Hilltop Road, and Tabeaud Road were identified as logical termini for the three phases as they are each clearly defined intersections within the corridor where corridor improvements can naturally tie back into the existing condition. For a detailed discussion of the proposed phased improvements, please see Section 1.4.1 (Phased Construction) of this environmental document.

1.3 Project Description

This section describes the proposed action and the project alternative that was developed to meet the identified purpose and need of the project while avoiding or minimizing environmental impacts. The Build Alternative is discussed below and is contrasted with a No-Build Alternative.

The project would include improvements to the segment of SR 88 in Amador County from post mile 21.6 near Climax Road to post mile 24.6 near Tabeaud Road. Improvements include widening shoulders, adding sidewalks in some areas, and improvements to driveways. Total

length of the project is about 3 miles. The existing roadway is a two-lane highway with minimal shoulders.

Existing culverts will be extended where necessary for standard shoulders to be added throughout the project. The project would improve access for non-motorized modes of transportation by making the SR 88 facility consistent with Caltrans and County roadway design standards, and by reducing congestion with improvement of operations of the highway facility. The project would enhance safety by including standard shoulders, sidewalks, and formalized driveways; squaring intersections; improving the clear recovery zone; removing a free right-turn at SR 88/Ridge Road; and removing nonstandard access at the SR 88/Volcano Road intersection. Widening improvements would also accommodate a Class III bikeway throughout the project area.

1.4 Alternatives

Two alternatives are under consideration for the proposed project, the Build Alternative and the No-Build Alternative. This section describes the proposed action and the Build Alternative that was developed to meet the identified purpose and need for the project, while avoiding or minimizing environmental impacts. This environmental document considers the Build Alternative and considers the potential for environmental impacts when compared with the No-Build Alternative (see Section 1.4.2). Although several build alternatives were considered in the preliminary planning stage, only one Build Alternative was selected for full analysis in this document. The selection was made after an exhaustive screening process in which stakeholders and context-sensitive-alternative issues were considered. Other alternatives that were considered were eliminated from further consideration because of substantial environmental impacts, public and agency comments, and/or cost. The Build Alternative is described below; alternatives that were eliminated from further consideration are outlined in Section 1.4.3.

1.4.1 Proposed Build Alternative

The project will change SR 88 by adding 8-foot shoulders with 0.5 foot overlay of pavement to the north and south sides of the highway from 900 feet west of the new Climax Road intersection to 900 feet east of Tabeaud Road. A Class III bikeway will be provided in the widened and improved roadway shoulders. Generally, 6-foot wide sidewalk will be added to the south side of the highway from the Ridge Road intersection to Irish Town Road intersection, for a distance of 400 feet there will be a 6-foot minimum Americans with Disabilities Act-accessible, asphalt path beginning 600 feet east of Ridge Road. Sidewalks will also be added on both the north and south sides from Irish Town Road to the driveway entrance to Pine Grove Elementary School.

Climax Road will be realigned to eliminate the existing nonstandard intersection at SR 88. The new alignment will go south directly to a new “T” intersection with stop signs at the termination of Climax Road at SR 88. A westbound dedicated right-turn lane will be provided to Climax Road. A second eastbound through lane will be added from the intersection and dropped just east of the intersection. Peterson Ranch Drive will also be realigned to tie into the realigned Climax Road. No widening or additional capacity is included with the realignment of either of these local roads. The existing alignment of Climax Road and the existing intersection at SR 88 will be abandoned, and the existing pavement will be removed.

The intersection of SR 88/Ridge Road will get signals and geometrics of the intersection will be

expanded to include a second left-turn lane from Ridge Road onto eastbound SR 88. A second through lane will also be added to eastbound SR 88 after the Ridge Road intersection and will end 500 feet after the intersection. Driveway approaches off of the highway will be improved to provide a standard width and curb style for ease of traversing.

The intersection of SR 88 and Irish Town Road will get signals, and a parking lot will be constructed at the southwest corner to provide replacement parking for on-street parking spaces lost as a result of the roadway improvements. The eastern end of Church Street onto SR 88 will be changed to a right-in, right-out configuration.

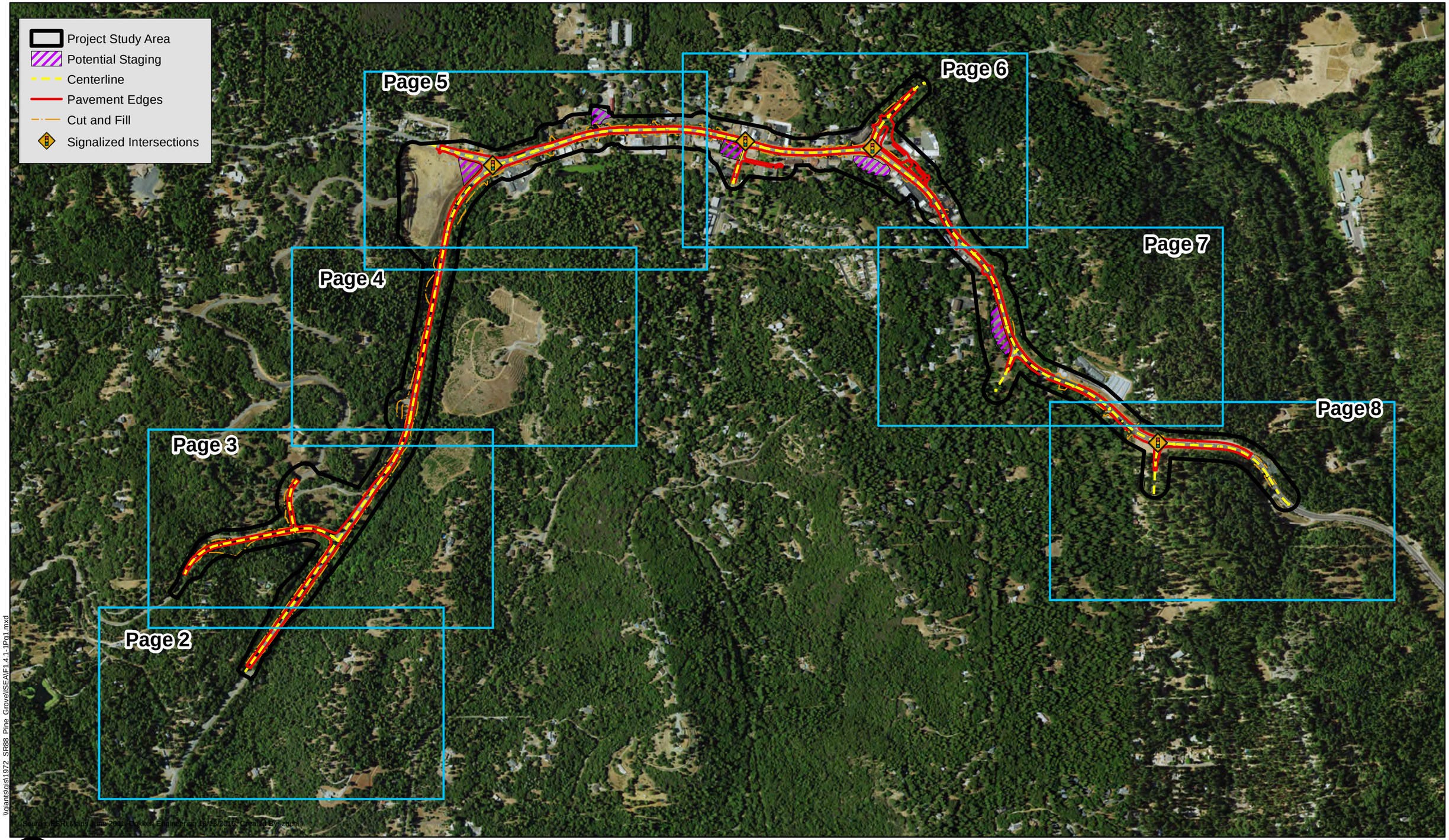
The intersection of SR 88/Volcano Road will get signals. The driveway exit of Pine Grove Elementary School will be relocated from SR 88 onto Volcano Road and the entrance will remain at the current location along SR 88. Retaining walls will be constructed where necessary when embankment/cut slope of the roadway and sidewalks would otherwise encroach into areas that have constraints.

The intersection of Tabeaud Road/SR 88 will get signals, and the existing westbound climbing lane will be extended to Tabeaud Road and dropped just west of the intersection. Dedicated turn pockets will be added at various intersections where needed for traffic demands along the project limits, and the two-way left-turn lane will be maintained from Ridge Road to Tabeaud Road.

Utility poles will be relocated and some trees removed due to the proposed improvements and to provide the proper clear recovery zone. Underground utilities will have to be relocated for the proposed storm drain system improvements. Storm drain-related improvements include curb and gutter, additional or relocated drainage inlets, and construction of adequate drainage basins to divert surface water and prevent flooding on the roadway. In addition, sewer, water and electric/cable vaults and manholes will be adjusted to grade and/or relocated during construction of the proposed improvements.

Improvements at Volcano Road, Climax Road, and Ridge Road intersections will be designed to accommodate 65 foot California Legal Trucks. All other road intersections will be designed to accommodate 45 foot long buses.

Figure 1.4.1-1 provides a graphical summary of the proposed improvements. The figure includes the project area (environmental study area), proposed project work, and potential construction staging areas. Figure 1.4.1-2 provides three representative typical sections of the lane configurations for segments of the proposed improvements.



0 0.25 0.5 0.75 1 Miles

FIGURE 1.4.1-1
Build Alternative Project Features
Page 1 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 3

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Source: ESRI Maps June 2011; Dokken Engineering 4/24/2015; Created By: timc

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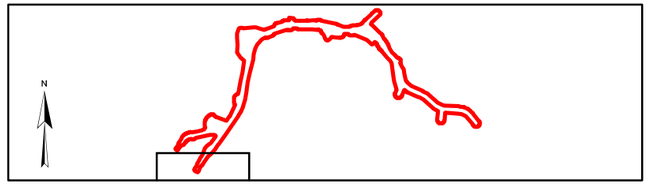
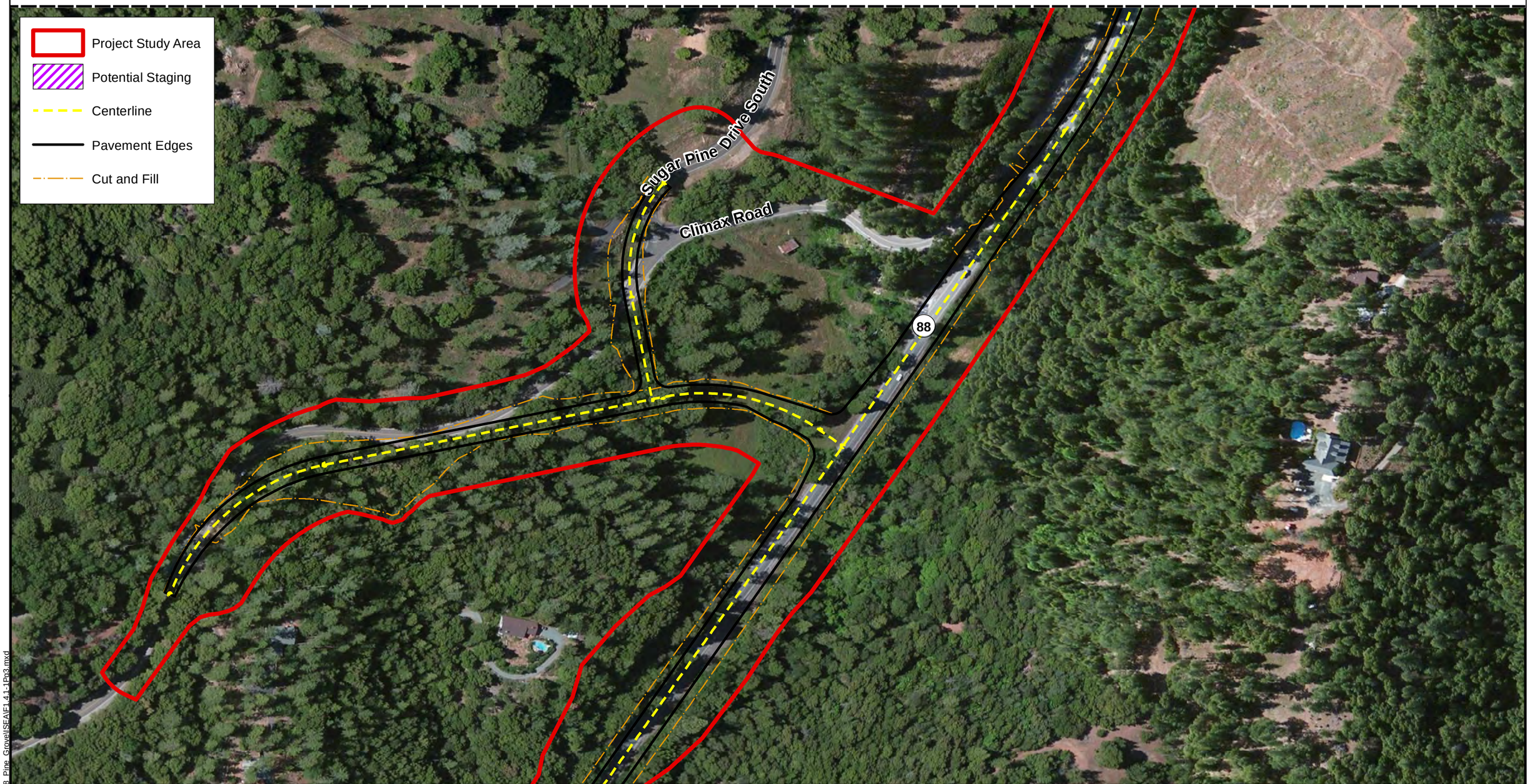


FIGURE 1.4.1-1
Build Alternative Project Features
Page 2 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 4



Match Line - See Page 2

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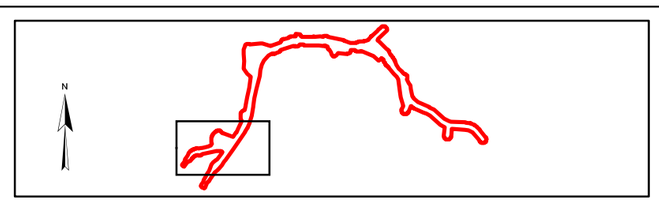

FIGURE 1.4.1-1
Build Alternative Project Features
Page 3 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 5

Match Line - See Page 3

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Source: ESRI Maps June 2011; Dokken Engineering 6/4/2015; Created By: timc

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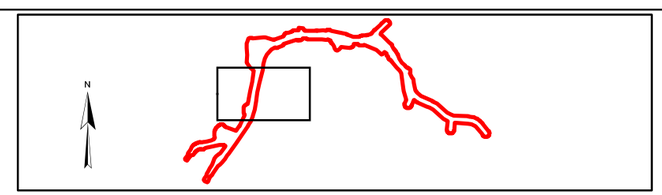

FIGURE 1.4.1-1
Build Alternative Project Features
Page 4 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Source: ESRI Maps June 2011; Dokken Engineering 10/13/2015; Created By: zachl

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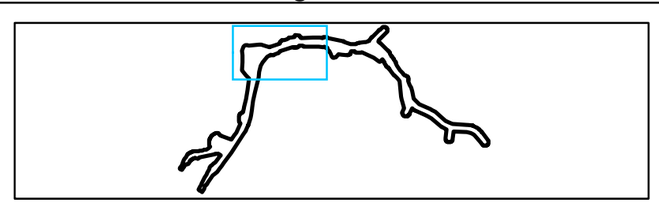
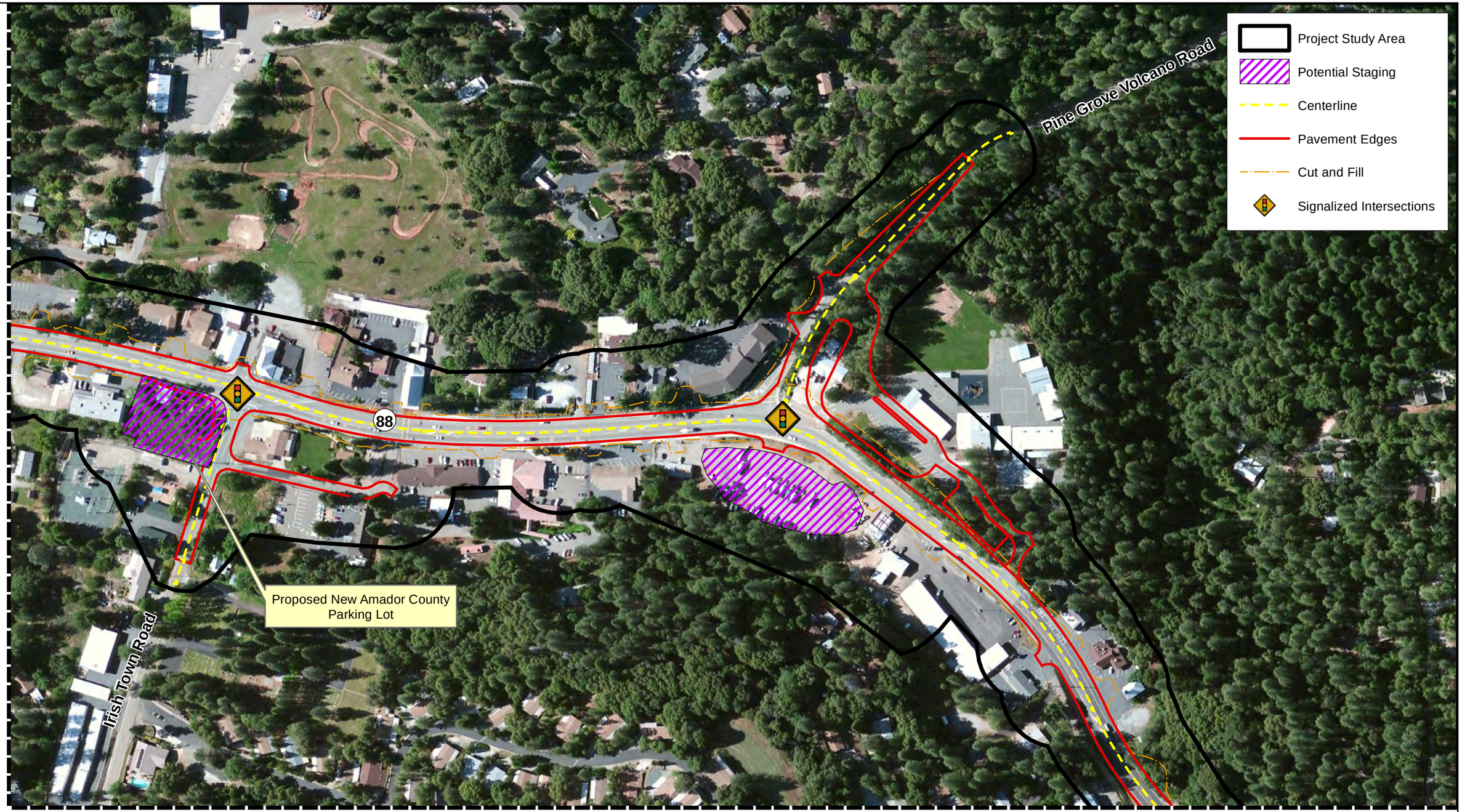


FIGURE 1.4.1-1
Build Alternative Project Features
Page 5 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 5



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Source: ESRI Maps June 2011; Dokken Engineering 10/13/2015; Created By: zachl

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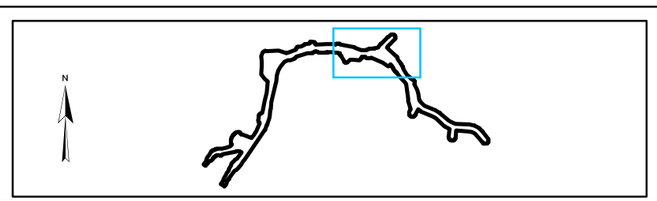

FIGURE 1.4.1-1
Build Alternative Project Features
Page 6 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 6

Match Line - See Page 8

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Source: ESRI Maps June 2011; Dokken Engineering 9/18/2015; Created By: zachl

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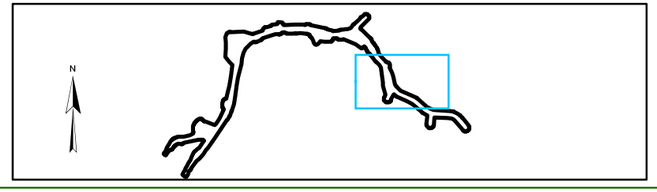

FIGURE 1.4.1-1
Build Alternative Project Features
Page 7 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 7

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Source: ESRI Maps June 2011; Dokken Engineering 10/13/2015; Created By: zachl

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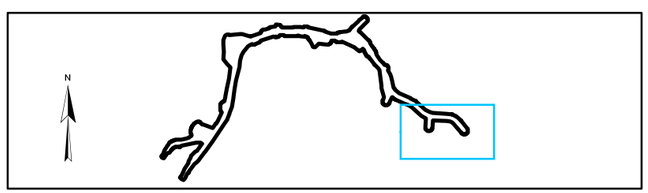
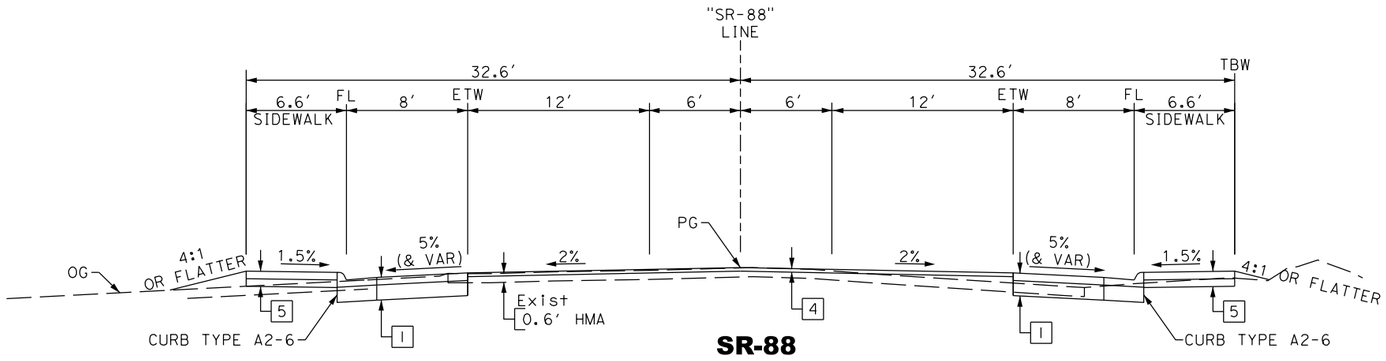


FIGURE 1.4.1-1
Build Alternative Project Features
Page 8 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

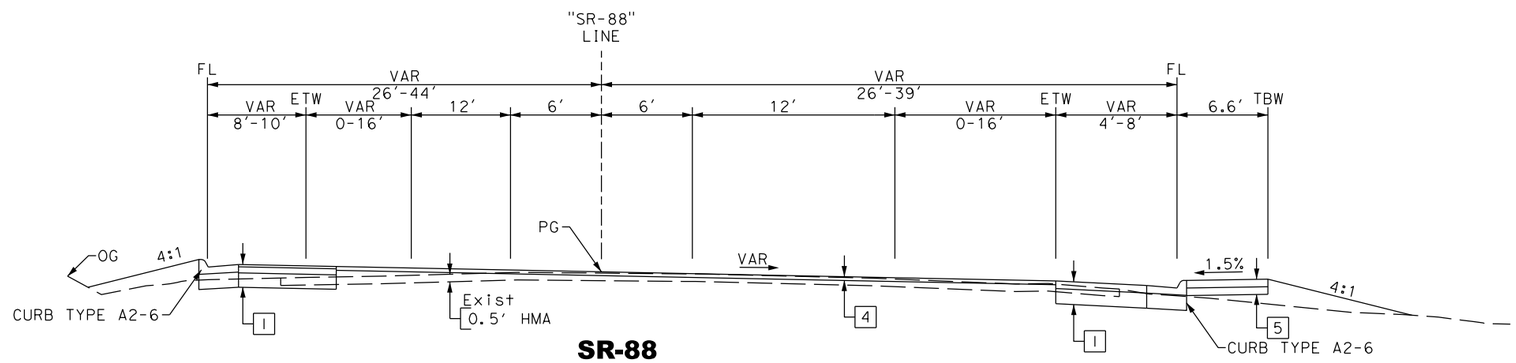


SR-88

400′ WEST OF VOLCANO ROAD INTERSECTION

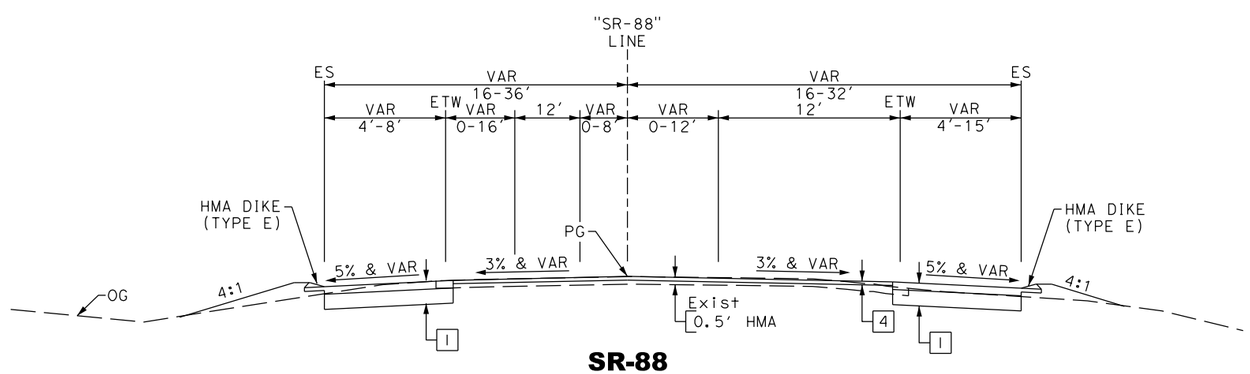
PAVEMENT SECTIONS:

1	=	0.20′ RHMA-G 0.50′ HMA (TYPE A) 1.35′ CLASS 2 AB
2	=	0.50′ HMA (TYPE A) 1.00′ CLASS 2 AB
3	=	0.50′ HMA (TYPE A) 1.10′ CLASS 2 AB
4	=	0.20′ - 0.50′ RHMA-G
5	=	0.40′ PCC 1.40′ CLASS 2 AB



SR-88

1000′ WEST OF IRISHTOWN ROAD INTERSECTION



SR-88

300′ WEST OF RIDGE ROAD INTERSECTION

Not to Scale

Figure 1.4.1-2
Representative Typical Sections
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M. 21.6/24.6

Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives

Transportation Systems Management (TSM) strategies increase the efficiency of existing facilities and increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Transportation Systems Management measures were evaluated as a possible project alternative but were removed from further consideration as an independent alternative because they would not satisfy the purpose and need of the proposed project. Although a Transportation Systems Management/Transportation Demand Management alternative would not satisfy the purpose and need of the project on its own, the following Transportation Systems Management measures have been incorporated into the Build Alternative for this proposed project because they would provide further improvements over an alternative that did not include them:

- Add a two-way left-turn lane from Ridge Road to Tabeaud Road.
- Add a second left-turn lane from Ridge Road onto eastbound SR 88 heading into Pine Grove.
- Incorporate pedestrian features, including sidewalks with grades and curb ramps at intersections that satisfy Americans with Disabilities Act requirements, in the proposed project.
- Place traffic signals at the Volcano Road intersection.

Phased Construction

The project would be built in phases. Large transportation improvement projects are often broken into phases of construction due to funding constraints that do not allow the entire project to be built at once. Phased construction allows for portions of the project improvements to be built and function as part of the greater transportation network in an interim condition. Because availability of funding for construction is unpredictable, phased construction plans often change to construct the most beneficial portion of the project based on the available funding.

Because of the limited availability of construction funding, the SR 88 Pine Grove Corridor Improvement Project will be built in three separate phases—Phases A, B, and C, as shown in Figure 1.5-1. Phase A will involve the improvements from Berry Street to Hilltop Road at a construction cost of $8.6 million. Phase B will involve the improvements from Climax Road to Berry Street at a construction cost of $9.7 million. Phase C will involve the improvements from Hilltop Road to Tabeaud Road at a construction cost of $5.6 million.

The improvements in Phase A are expected to take place by 2024; improvements in Phases B and C will be constructed as soon as construction funding becomes available. A detailed description of the improvements in each construction phase is provided below.

Phase A (Berry Street to Hilltop Road)

Open to traffic in 2024 with an estimated construction cost of $8.6 million.

1. Under construction year 2024 conditions, the existing flashing yellow pedestrian crossing would remain at the SR 88/Church Street intersection because the SR 88/Irish Town intersection does not meet peak hour signal warrants.
2. The existing flashing yellow pedestrian crossing at SR 88/Church Street would be eliminated, and pedestrian crossings would occur at the warranted/signalized SR 88/Irish Town Road intersection to provide improved operations for vehicles and pedestrians under design year 2044.
3. A 100-foot eastbound right-turn lane would be provided at the SR 88/Irish Town Road intersection.
4. The SR 88/Volcano Road intersection would be reconstructed, with signals added, to improve operations for vehicles and pedestrians.
5. A 340-foot westbound right-turn lane would be provided at the SR 88/Volcano Road intersection.
6. The entry/exit at Pine Grove Elementary School would be improved to eliminate backups and delays to State Route 88.
7. A pedestrian signal would be added at the SR 88/Pine Grove Village/Pine Grove Elementary School.

Phase B (Climax Road to Berry Street)

Open to traffic by 2044 with an estimated construction cost of $9.7 million.

1. The SR 88/Climax Road intersection would be reconstructed approximately 1,500 feet south of its existing location to improve operations for vehicles. It would remain a side-street stop-controlled intersection.
2. A 530-foot eastbound left-turn lane, a 390-foot westbound right-turn lane and a 110-foot southbound right-turn lane would be provided at the SR 88/Climax Road intersection.
3. The SR 88/Ridge Road intersection would be reconstructed to improve operations for vehicles and pedestrians.
4. A 470-foot eastbound left-turn lane, a second 160-foot southbound left-turn lane, and a 360-foot westbound right-turn lane would be provided at the SR 88/Ridge Road intersection.

Phase C (Hilltop Road to Tabeaud Road)

Open to traffic by 2044 with an estimated construction cost of $5.6 million.

1. The SR 88/Tabeaud Road intersection would be reconstructed to improve operations for vehicles. With signals added, under design year 2044 conditions, the intersection would meet peak hour signal warrants.
2. A 205-foot eastbound right-turn lane, 360-foot westbound left-turn lane, and a 110-foot northbound right-turn lane would be provided at the SR 88/Tabeaud Road intersection.
3. The SR 88/Mt. Zion Road intersection would be reconstructed to improve operations for vehicles.
4. A 100-foot westbound left-turn lane and a 60-foot northbound right-turn lane would be provided at the SR 88/Mt. Zion Road intersection.

1.4.2 No-Build Alternative

The No-Build Alternative would result in no changes to the existing transportation facility within the project area. Existing congestion at key intersections would continue to occur during the peak travel hours and is expected to worsen as the amount of average daily trips increases along SR 88. Operations would continue to worsen and key intersections would incur failing level of service by the design year (2044). The existing nonstandard shoulders would not be improved, and bicycle and pedestrian facilities would remain nonstandard. The No-Build Alternative is not consistent with regional planning, planned improvements, or the purpose and need of the project.

1.4.3 Alternatives Considered But Eliminated From Further Discussion

In 2009-2011, Caltrans and the Amador County Transportation Commission prepared a thorough evaluation of many alternatives to provide transportation improvements to SR 88 in and near the Pine Grove Corridor. This evaluation included preliminary engineering, cost estimates, and public outreach with members of the community and stakeholders. Numerous alternatives, including multiple versions of a Pine Grove bypass, were considered but ultimately eliminated from further consideration. These alternatives were rejected for a variety of reasons including excessive cost, substantial environmental impacts, access and geometric deficiencies, topographical and engineering concerns, and the need for a substantial amount of right-of-way.

This alternative evaluation was performed in coordination with a Stakeholder Working Group that was established for the SR 88 Pine Grove Corridor Improvement Project in fall 2009; the group has continued to meet periodically throughout the project development phase. In addition to input from the Stakeholder Working Group, numerous comments and feedback were received from the public during public meetings and workshops held between 2009 and 2012. Strong objections were raised over the alternatives provided below, and the general local consensus was that a bypass alternative would not meet the local and regional goals of the community. As a result, the project was scoped down to corridor improvement work along the existing SR 88 alignment. A summary of the public outreach performed for this project is provided in Chapter 3 of this document.

The proposed plan to improve the existing conditions of the corridor through Pine Grove was chosen because it has minimal impacts to right-of-way, minimal impacts to the character of the community and minimal cost compared to the more extensive alternatives.

1.4.3.1 North Bypass 1

This design alternative proposed a new SR 88 bypass roadway north of town between Ridge Road and Mount Zion Road. The bypass was designed to run north of the Pine Grove Elementary School. This alternative was removed from consideration because of right-of-way impacts, environmental impacts, cost, and public controversy.

1.4.3.2 North Bypass 2

This design alternative proposed a new SR 88 bypass roadway north of town between Ridge Road and Mount Zion Road. Although similar to the North Bypass 1 Alternative, this route would reconnect with the existing SR 88 south of the Pine Grove Elementary School. This alternative

was removed from consideration because of right-of-way impacts, environmental impacts, cost, and public controversy.

1.4.3.3 South Bypass 1

This design alternative proposed a new SR 88 bypass south of town between Climax Road and Mount Zion Road. This route would be designed without any through town connections to the existing SR 88. This alternative was removed from consideration because of right-of-way impacts, environmental impacts, cost, and public controversy.

1.4.3.4 South Bypass 2

This design alternative proposed a new SR 88 bypass south of town between Climax Road and Mount Zion Road. This route is similar to South Bypass 1 but located on a more southern alignment. This alternative was removed from consideration because of excessive cost.

1.4.3.5 South Bypass 3

This design alternative proposed a new SR 88 roadway south of town between Climax Road and Mount Zion Road. This route is similar to South Bypass 2 but located on a more southern alignment. This alternative was removed from consideration because of excessive cost.

1.4.3.6 South Bypass 4

This design alternative proposed a new SR 88 bypass south of town between Climax Road and Mount Zion Road. This route is similar to South Bypass 3 but located on a more southern alignment. This alternative was removed from consideration because of excessive cost.

1.4.3.7 South Bypass One-Way Couplet

This design alternative proposed a new SR 88 bypass south of town between Climax Road and Mount Zion Road. This route would be designed as a one-way couplet to shift half of the through town traffic away from Main Street. The one-way couplet would run on an alignment parallel and just south of the existing SR 88. This alternative was removed from consideration because of concerns relating to right-of-way impacts, environmental impacts, cost, and public controversy.

1.4.3.8 Through Town – 100-Foot Typical Section

This design alternative proposed that the existing alignment of SR 88 be widened through town from the existing two lanes plus turn lane to a 100-foot-wide four-lane facility. Widening the existing facility would provide additional traffic capacity through town, but impact businesses and other resources next to the existing right-of-way. This alternative was removed from consideration because of right-of-way impacts, environmental impacts, cost, and public controversy.

1.4.3.9 South Bypass 5

This design alternative proposed a new SR 88 bypass roadway south of town between Ridge Road and Mount Zion Road. This alternative would provide a relatively straight route between the intersections unlike many of the other southern bypass alternatives that curve to connect

with existing roadways and topography. This alternative was removed from consideration because of right-of-way impacts, environmental impacts, cost, and public controversy.

1.4.3.10 South Bypass 6

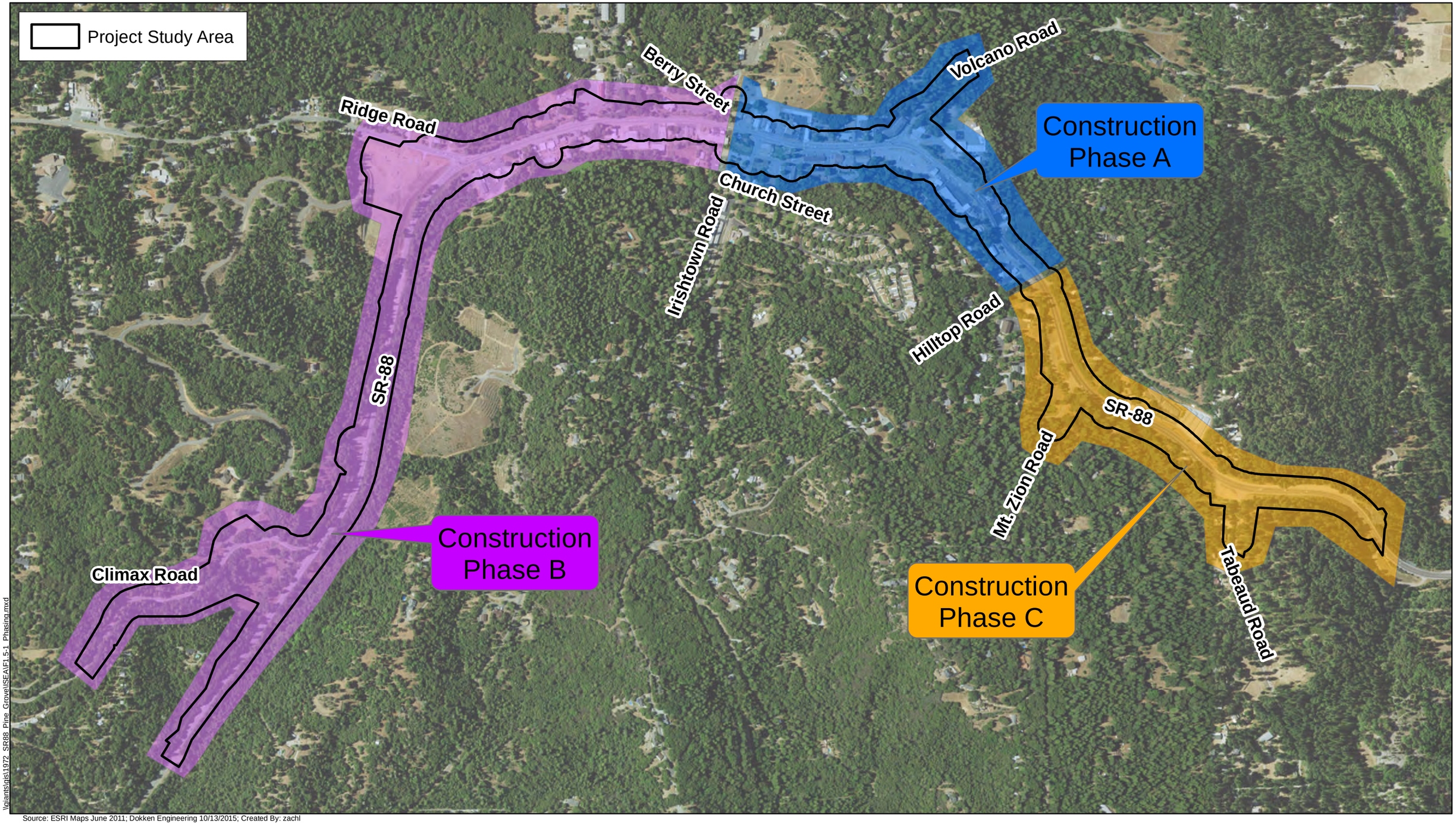
This design alternative proposed a new SR 88 bypass roadway south of town between Climax Road and Mount Zion Road. This is a relatively straight route between the intersections unlike many of the other southern bypass alternatives that curve to connect with existing roadways and topography. This alternative was removed from consideration because of excessive cost.

1.4.3.11 North Bypass 3

This design alternative proposed a new SR 88 bypass roadway north of town between Ridge Road and Aqueduct Road. It was designed as a much longer route that would use existing portions of Volcano Road and Aqueduct Road. This alternative was removed from consideration because of excessive cost.

1.4.3.12 North/South One-Way Couplet

This design alternative proposed new SR 88 bypass roadways, in a one-way configuration, both north and south of town between Ridge Road and Mount Zion Road. The westbound bypass road would be built north of town; the eastbound bypass road would be built south of town. This alternative was removed from consideration because of excessive cost. This alternative was added late in the evaluation process, and the exact alignments were never fully established.



\\jiantsqis\1972_SR88_Pine_Grove\ISEA\F1.5-1_Phasing.mxd

Source: ESRI Maps June 2011; Dokken Engineering 10/13/2015; Created By: zachl

0 0.25 0.5 0.75 1 Miles

FIGURE 1.5-1
Proposed Construction Phasing
SR 88 Pine Grove Corridor Project
Pine Grove, Amador County, California
EA 10-0G550; PM 21.6/24.6

1.5 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction. All permits listed below are expected to be required for all phases of construction.

Table 1.6-1: Permits and Approvals

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service (USFWS)	Section 7 Informal Consultation for threatened and endangered species (California red-legged frog)	On March 6, 2015, Caltrans received a letter of concurrence from the U.S. Fish and Wildlife Service agreeing that the project may affect but is not likely to adversely affect the California red-legged frog.
U.S. Army Corps of Engineers (USACE)	Section 404 Permit (Nationwide 14) for fill into Waters of the U.S.	Permit application and agency coordination will occur during final design.
Central Valley Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification for discharges to a water body	Permit application and agency coordination will occur during final design.
Central Valley Regional Water Quality Control Board (RWQCB)	Section 402 National Pollution Discharge Elimination System Construction General Permit	Permit application and agency coordination will occur during final design.
California Department of Fish and Wildlife (CDFW)	Section 1602 Streambed Alteration Agreement for modifications of the bed, bank, or channel of a stream, including impacts to vegetation	Permit application and agency coordination will occur during final design.

CHAPTER 2 - AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES AND AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

This chapter explains the impacts that the proposed project could 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 from the Build Alternative, and proposed avoidance, minimization, and/or mitigation measures pursuant to California Environmental Quality Act and National Environmental Policy Act requirements. A California Environmental Quality Act checklist that evaluates the level of impacts under each environmental resource is provided in Appendix A.

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

- Existing and Future Land Uses – The project is located mostly within existing state right-of-way. Some small areas will be acquired to accommodate the roadway improvements (discussed in Section 2.1.1.2); however, these improvements will not substantially change existing or future land uses in the project area (Community Impact Assessment, September 2015).

- Consistency with State, Regional, and Local Plans – The project was evaluated for consistency with the Amador County 2004 Regional Transportation Plan, the Amador County 2006 General Plan and 2011 General Plan Update, and the Federal Transportation Improvement Program. The proposed Build Alternative would be consistent with all applicable state, regional, and local plans (Community Impact Assessment, September 2015). By maintaining the existing condition, the No-Build Alternative would be inconsistent with some state, regional, and local plans and policies.

- Coastal Zone – The project is located outside of, and is not contiguous to, the coastal zone. It is not anticipated to have any effects on coastal resources.

- Wild and Scenic Rivers –There are no designated Wild and Scenic Rivers in the vicinity of the project.

- Growth – Most of the land surrounding the project area cannot support additional growth. Much of the land within the project area has already been developed. Areas of undeveloped land in the vicinity of the project are limited. Unplanned growth as a result of this project is not anticipated or reasonably foreseeable (Community Impact Assessment, September 2015).

- Farmlands/Timberlands – The project area does not contain farmlands or timberlands. The project area is made up mostly of residential, commercial, recreational, and transportation land uses, plus open space.

- Community Character and Cohesion – The proposed changes to the transportation facility would have no impact to community character and cohesion. The project would improve existing roadways and intersections, and therefore, it would not cause any physical divisions of the community and would not result in isolation or separation of existing residences from businesses and community facilities (Community Impact Assessment, September 2015).

- Environmental Justice – No minority or low-income populations exist within the project area, and therefore, the Build Alternative would not cause disproportionately high and adverse effects on any minority or low-income populations per Executive Order 12898 regarding environmental justice (Community Impact Assessment, September 2015).

- Cultural Resources – After a thorough evaluation of all potential cultural resources within the Area of Potential Effects, Caltrans has determined that there are no resources that are eligible for inclusion in the National or California Register of Historic Places. Caltrans has also determined that a finding of "No Historic Properties Affected" is appropriate for this undertaking (Historic Property Survey Report, September 2015).

- Geology/Soils/Seismic/Topography – The project area has a low probability of a major seismic event. Only relatively minor alterations to the existing soils and topography are necessary and would be constructed consistent with Caltrans design standards. As a result, the project is not expected to have any impacts to geology, soils, seismicity, or topography.

- Paleontology – The project site sits on metasedimentary rocks dating to the Paleozoic Era. Metasedimentary rocks are sedimentary rocks that have undergone deformation and metamorphism. This type of geology does not support preservation of paleontological resources; therefore, it is not expected that the project will have any effects on undiscovered paleontological resources (Paleontology Memorandum, July 2013).

- Air Quality – Amador County is in attainment for all federal and state criteria pollutants including ozone, nitrogen dioxide, carbon monoxide, and particulate matter (PM2.5 and PM10). The project is exempt from federal air quality conformity review (Air Quality Memorandum, March 2015).

- Plant Species – Focused surveys were conducted for each of the three special-status plant species discussed in the Affected Environment section. During the focused botanical surveys on June 19, 2013, no sensitive plant species were observed; therefore, all plant species are presumed absent. No impacts to special-status plant species are expected as a result of this project (Natural Environment Study, January 2014, Revised September 2015).

2.1 Human Environment

2.1.1 Land Use

2.1.1.1 Parks and Recreational Facilities

Regulatory Setting

This project will affect facilities that are protected by the Park Preservation Act (California Public Resources Code Sections 5400-5409). The Park Preservation Act prohibits local and state agencies from acquiring any property that is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

Pine Grove Community Park

Pine Grove Community Park is east of the SR 88/Irish Town Road intersection in Pine Grove. The approximately 0.38-acre park is a free day-use facility that offers recreational opportunities for picnics, playground activity and other small community gatherings. Recreational facilities in the park include the following:

- Covered picnic areas
- Small fountain
- Playground
- Small grass lawn
- Parking

As a recreational resource that is open to the public, Pine Grove Community Park is considered a Section 4(f) resource.

Pine Grove Elementary School Playground

The Pine Grove Elementary School playground is approximately 1 acre and sits northeast of the SR 88/Volcano Road intersection. Recreational facilities found in the park include the following:

- Baseball diamond
- Playground
- Basketball court
- Grass lawn
- Parking

The Pine Grove Elementary School playground is part of a kindergarten-through-sixth-grade elementary school, but is open to public use when school is not in session. The playground provides the community with opportunities for sports and recreational games. As a recreational resource that is open to the public, the Pine Grove Elementary School playground is considered a Section 4(f) resource.

Environmental Consequences

Pine Grove Community Park

Build Alternative

Permanent impacts to Pine Grove Community Park will have a negligible impact to members of the public who use the park and will not be a detriment to any of the existing recreation facilities. The project would acquire a very small portion of the park's right-of-way. Figure 2.1.1-1 shows the proposed permanent impacts to Pine Grove Community Park, which include acquisition of approximately 0.01 acre (500 square feet). The area of acquisition has been minimized through the use of a small retaining wall; however, these permanent impacts could not be entirely avoided. The project would acquire approximately 3% of the 0.38 acre park. The area to be acquired is currently part of the existing roadway shoulder that falls within the boundary of the park parcel. No existing recreational facilities would be permanently affected by construction. In addition, parking, sidewalks, and access to the park will be improved, resulting in a long-term improvement to the existing recreational facility.

Temporary construction impacts may occur and could include reduced parking and access to the park. During construction, the parking lot east of the park and Church Street may be temporarily closed to public access. The measures provided below would ensure that public access to the park is maintained throughout construction to minimize the potential for temporary impacts. Construction noise may cause temporary nuisance type impacts; however, these impacts are minimized with the use of best management practices that are summarized in Section 2.2.4. All temporarily impacted recreational areas, as well as all supporting facilities such as parking and access, would be restored before the end of construction.

Pine Grove Community Park is a recreational resource protected under Section 4(f) of the Department of Transportation Act as a recreational facility open to the public. Amador County Parks Department owns and operates the park and is considered the agency with jurisdiction over the park as a Section 4(f) resource. A full discussion of impacts to the park as a Section 4(f) resource and coordination with the Amador County Parks Department is provided in Appendix B. This evaluation determined that the project will have a *de minimis* impact on the Pine Grove Community Park as a Section 4(f) resource.

Impacts to Pine Grove Community Park under the California Environmental Quality Act are not expected to be substantial, and the minimization measures discussed in the section below would further reduce the project's impacts on the park resource.

No-Build Alternative

Under the No-Build Alternative, no construction would occur, and no impacts of any kind would result to Pine Grove Community Park.

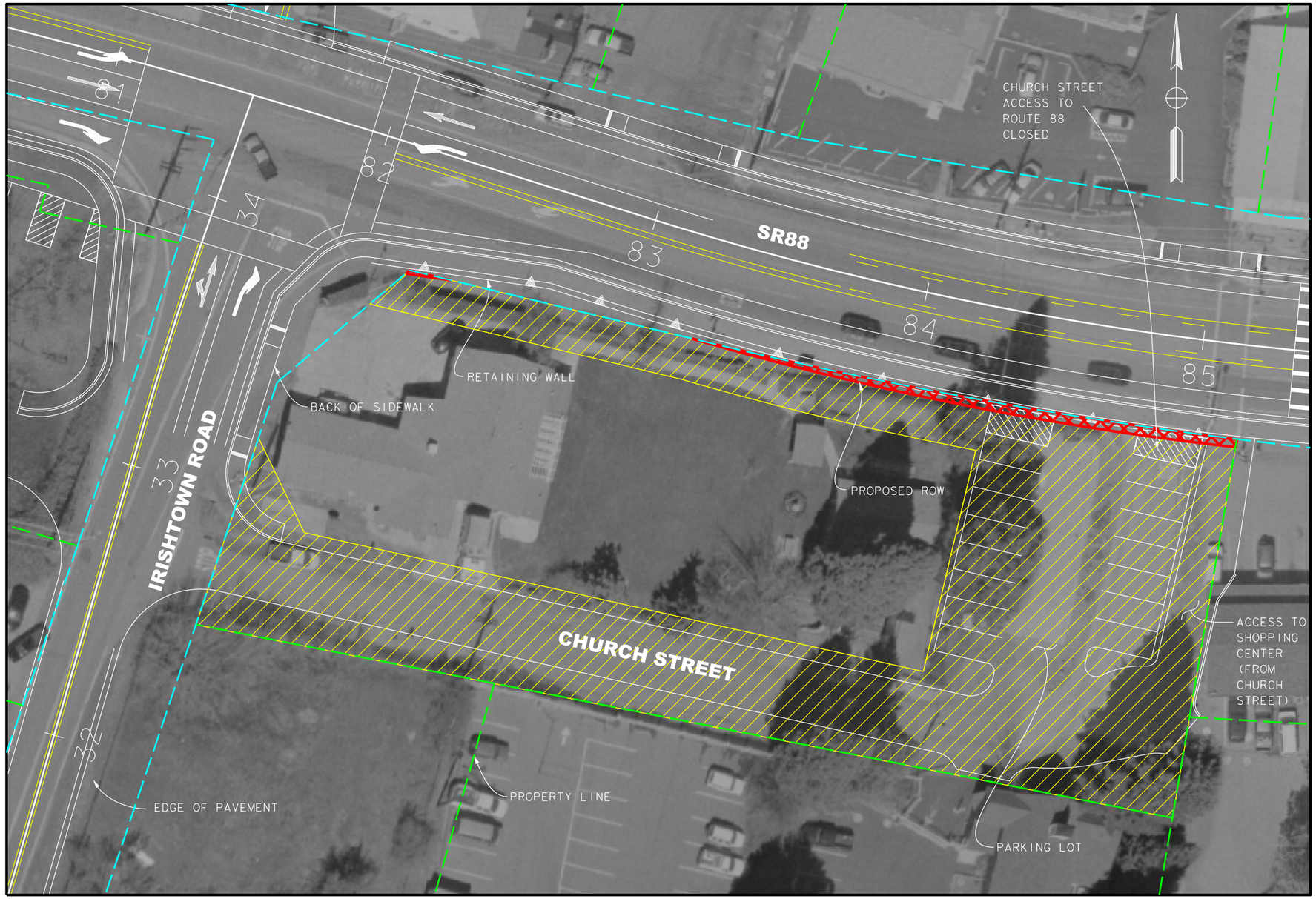
LEGEND:

- EXISTING RIGHT OF WAY
- PROPERTY LINE
- PROPOSED ROADWORK/STRIPING
- PROPOSED CENTERLINE (84 – 85)
- PROPOSED RETAINING WALL

RIGHT OF WAY NEEDS		500 SQFT
TEMPORARY CONSTRUCTION EASEMENT		25,500 SQFT

PROJECT IMPACTS

-WIDEN SHOULDERS ALONG SR88
-ADD SIDEWALK ALONG SR88 AND ALONG IRISHTOWN ROAD
-SIGNALIZE INTERSECTION OF SR88 AND IRISHTOWN ROAD AND ADD RIGHT TURN POCKET TO NORTHBOUND IRISHTOWN.
-CLOSE ACCESS TO CHURCH STREET FROM SR88 AND EXPAND PARKING LOT.



0 40 80 120 160 200 Feet

Figure 2.1.1-1
Impacts to Pine Grove Community Park
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M. 21.6/24.6

Pine Grove Elementary School Playground

Build Alternative

There will be no direct or permanent impacts to the Pine Grove Elementary School as a result of the proposed project. Minor temporary and indirect impacts such as reduced parking or access at the school during construction may occur; however, school access will be maintained at all times, and construction work would comply with applicable best management practices to minimize temporary impacts. The project would realign the driveway exit of Pine Grove Elementary School onto Volcano Road instead of SR 88, but this change is not expected to affect the school playground in any way.

The Pine Grove Elementary School playground is a recreational resource protected under Section 4(f) of the Department of Transportation Act as a recreational facility open to the public. The proposed project will not result in any use of the facility, and no impacts as a Section 4(f) resource are expected.

No-Build Alternative

Under the No-Build Alternative, there would be no temporary or construction-related impacts to parks and recreational facilities.

Avoidance, Minimization, and/or Mitigation Measures

In addition to the measures listed below, Measures NOI-1 and NOI-2 (see Section 2.2.4) would help minimize impacts to the parks and recreational resources in the project area caused by temporary construction noise.

Measure PRF-1: Access to Pine Grove Community Park will remain open throughout construction of the proposed project. If lane closure is necessary in the immediate vicinity of the intersection, a flag person will be designated to direct traffic though construction zones and ensure users can continue to access the recreational opportunities provided.

Measure PRF-2: Exclusionary fencing will be used during construction activities to minimize areas of disturbance, by limiting access and protecting against the possible inadvertent destruction of Pine Grove Community Park. The exclusionary fencing will also limit the movements of heavy equipment and construction activities.

Measure PRF-3: Temporary impacts to land associated with Pine Grove Community Park will be returned to the prior condition after associated construction activities are completed.

2.1.1.2 Relocations and Real Property Acquisition

Regulatory Setting

Caltrans' Relocation Assistance Program (RAP) 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. 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 U.S. Code 2000d, et seq.). See Appendix C for a copy of Caltrans' Title VI Policy Statement.

Affected Environment

Discussion of relocation and real property acquisition is based on the Community Impact Assessment prepared for the project in September 2015. The project uses mostly existing right-of-way associated with SR 88, Volcano Road, Ridge Road, and Climax Road. Properties next to the roadway improvements generally include commercial and residential uses and outside of the central Town of Pine Grove, land uses are mostly undeveloped or low density residential.

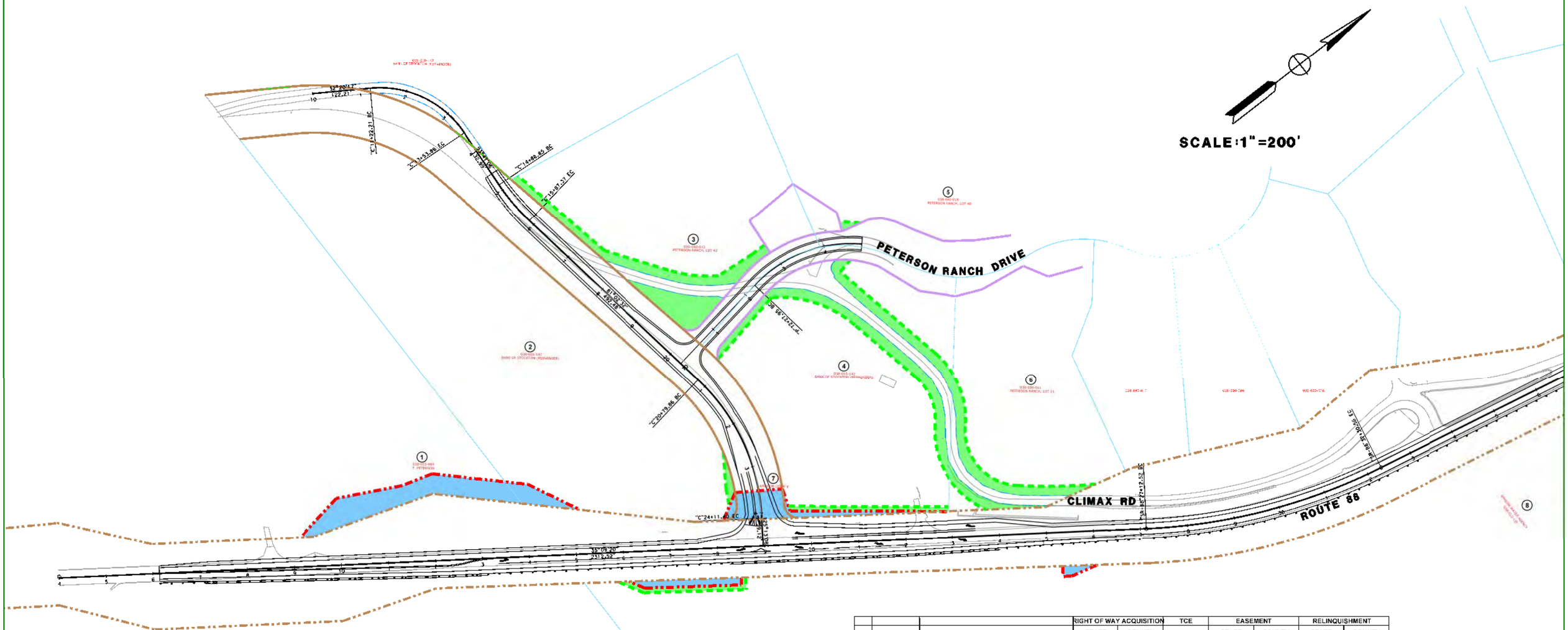
Between Berry Street and Hilltop Road, properties adjacent to SR 88 include retail commercial, heavy commercial, residential, and some special land uses such as the Pine Grove Community Park and the Pine Grove Elementary School. Between Climax Road and Berry Street, properties adjacent to SR 88 include undeveloped land, low- and medium-density residential, and commercial land uses. Between Hilltop Road and Tabeaud Road, properties adjacent to SR 88 include residential, commercial, and some special land uses such as the Mount Zion Church.

Environmental Consequences

<u>Build Alternative</u>

Under the Build Alternative, one full commercial property acquisition is needed to construct the proposed improvements to SR 88. The property (APN 030-200-028), an auto parts business, is on the northeast corner of SR 88 and Volcano Road, next to Pine Grove Elementary School. This parcel is needed to realign the Pine Grove Elementary School driveway exit, which is used for parking access as well as student drop-off and pick-up. This part of the SR 88 design improvement is needed to ensure that the intersection at SR 88 and Volcano Road, with signals, functions at acceptable levels of service in the future.

In addition to the commercial acquisition, two full residential property acquisitions are needed. These two properties (APNs 030-192-003 and 030-192-002)) are located at the southwest corner of the intersection of SR 88 and Irish Town Road. APN 030-192-003 is a vacant residential property that has already been acquired by Amador County and will be dedicated to Caltrans for SR 88 right-of-way. APN 030-192-002 is an undeveloped residential lot. A portion of APN 030-192-002 would be used for the planned development of a small parking lot to replace on-street parking lost to the proposed improvements along SR 88. The parcel numbers and size of the full acquisition are shown in Table 2.1.1-1 and on Page 3 of Figure 2.1.1-2.



	APN	OWNER	RIGHT OF WAY ACQUISITION				TCE		EASEMENT				RELINQUISHMENT			
			STATE		COUNTY				STATE		COUNTY		STATE		COUNTY	
			SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES
1	038-010-084	F. PETERSON	19,950	0.458	-	-	-	-	-	-	-	-	-	-	-	-
2	038-010-142	BANK OF STOCKTON (REMAINDER)	4,319	0.099	-	-	1,186	0.027	-	-	-	-	-	-	-	-
3	038-690-012	PETERSON RANCH, LOT 42	-	-	-	-	20,889	0.480	-	-	-	-	-	-	-	-
4	038-010-142	BANK OF STOCKTON (REMAINDER)	2,832	0.056	-	-	26,056	0.599	-	-	-	-	-	-	-	-
5	038-690-018	PETERSON RANCH, LOT 40	-	-	-	-	460	0.011	-	-	-	-	-	-	-	-
6	038-690-011	PETERSON RANCH, LOT 21	-	-	-	-	12,347	0.284	-	-	-	-	-	-	-	-
7	-	AMADOR COUNTY	6,437	0.148	-	-	-	-	-	-	-	-	-	-	-	-
8	038-010-135	AMADOR WATER AGENCY	4,389	0.101	-	-	7,266	0.168	-	-	-	-	-	-	-	-

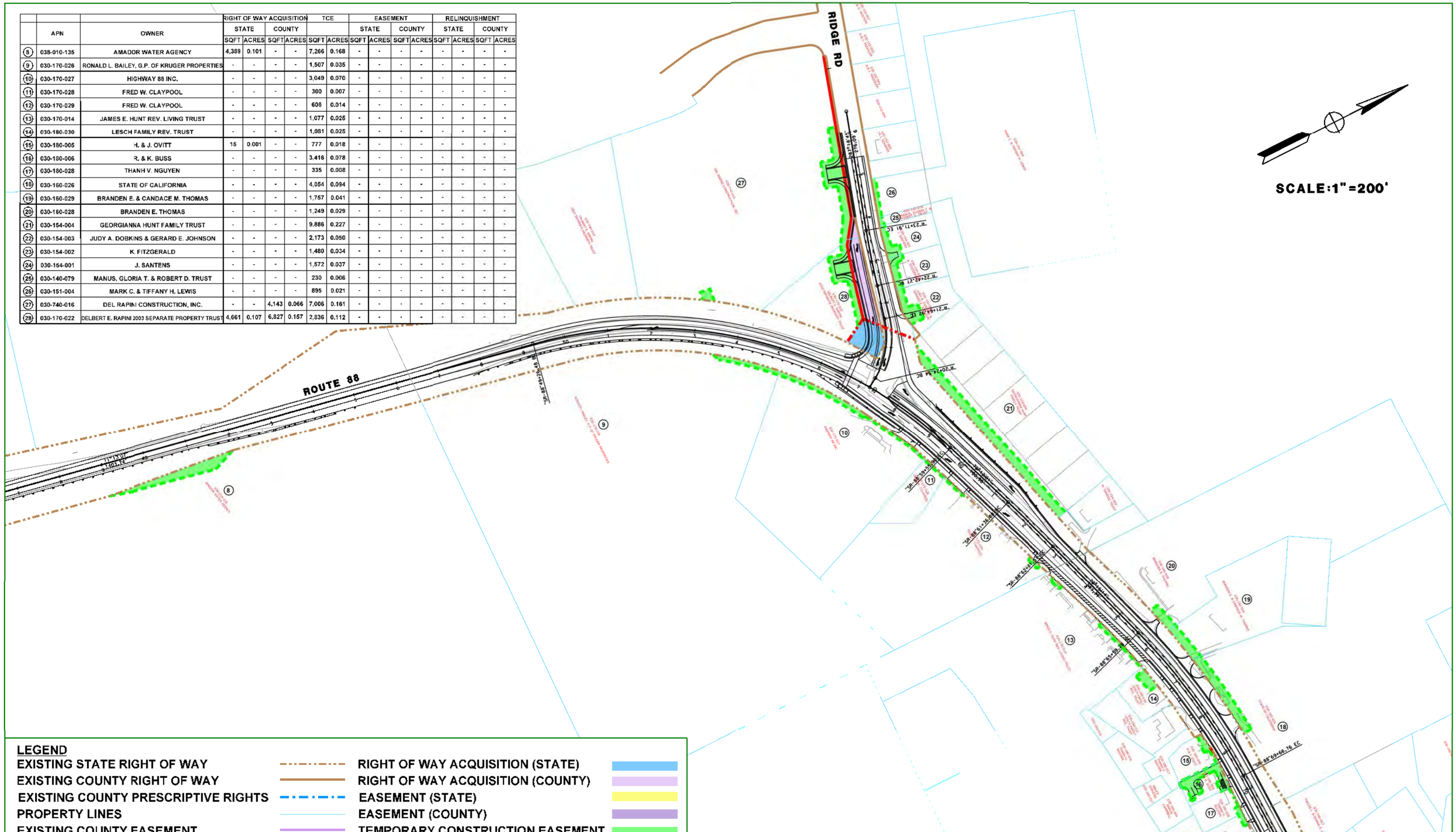
LEGEND

- EXISTING STATE RIGHT OF WAY
- EXISTING COUNTY RIGHT OF WAY
- EXISTING COUNTY PRESCRIPTIVE RIGHTS
- PROPERTY LINES
- EXISTING COUNTY EASEMENT
- PROPOSED STATE RIGHT OF WAY
- PROPOSED COUNTY RIGHT OF WAY
- PROPOSED STATE EASEMENT
- PROPOSED COUNTY EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- RIGHT OF WAY ACQUISITION (STATE)
- RIGHT OF WAY ACQUISITION (COUNTY)
- EASEMENT (STATE)
- EASEMENT (COUNTY)
- TEMPORARY CONSTRUCTION EASEMENT
- STATE RELINQUISHMENT
- COUNTY RELINQUISHMENT
- PROPOSED IMPROVEMENTS
- EXISTING FEATURES

PROJECT:
SR 88 PINE GROVE
CORRIDOR IMPROVEMENTS

EXHIBIT:
FIGURE 2.1.1-2: RIGHT-OF-WAY IMPACTS
PAGE 1 OF 4

	APN	OWNER	RIGHT OF WAY ACQUISITION				TCE		EASEMENT				RELINQUISHMENT			
			STATE		COUNTY				STATE		COUNTY		STATE		COUNTY	
			SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES
8	038-010-135	AMADOR WATER AGENCY	4,389	0.101	-	-	7,266	0.168	-	-	-	-	-	-	-	-
9	030-170-026	RONALD L. BAILEY, G.P. OF KRUGER PROPERTIES	-	-	-	-	1,507	0.035	-	-	-	-	-	-	-	-
10	030-170-027	HIGHWAY 88 INC.	-	-	-	-	3,049	0.070	-	-	-	-	-	-	-	-
11	030-170-028	FRED W. CLAYPOOL	-	-	-	-	300	0.007	-	-	-	-	-	-	-	-
12	030-170-029	FRED W. CLAYPOOL	-	-	-	-	608	0.014	-	-	-	-	-	-	-	-
13	030-170-014	JAMES E. HUNT REV. LIVING TRUST	-	-	-	-	1,077	0.025	-	-	-	-	-	-	-	-
14	030-180-030	LESCH FAMILY REV. TRUST	-	-	-	-	1,081	0.025	-	-	-	-	-	-	-	-
15	030-180-005	H. & J. OVITT	15	0.001	-	-	777	0.018	-	-	-	-	-	-	-	-
16	030-180-006	R. & K. BUSS	-	-	-	-	3,416	0.078	-	-	-	-	-	-	-	-
17	030-180-028	THANH V. NGUYEN	-	-	-	-	335	0.008	-	-	-	-	-	-	-	-
18	030-160-026	STATE OF CALIFORNIA	-	-	-	-	4,054	0.094	-	-	-	-	-	-	-	-
19	030-160-029	BRANDEN E. & CANDACE M. THOMAS	-	-	-	-	1,757	0.041	-	-	-	-	-	-	-	-
20	030-160-028	BRANDEN E. THOMAS	-	-	-	-	1,249	0.029	-	-	-	-	-	-	-	-
21	030-154-004	GEORGIANNA HUNT FAMILY TRUST	-	-	-	-	9,886	0.227	-	-	-	-	-	-	-	-
22	030-154-003	JUDY A. DOBKINS & GERARD E. JOHNSON	-	-	-	-	2,173	0.050	-	-	-	-	-	-	-	-
23	030-154-002	K. FITZGERALD	-	-	-	-	1,480	0.034	-	-	-	-	-	-	-	-
24	030-154-001	J. SANTENS	-	-	-	-	1,572	0.037	-	-	-	-	-	-	-	-
25	030-140-079	MANUS, GLORIA T. & ROBERT D. TRUST	-	-	-	-	230	0.006	-	-	-	-	-	-	-	-
26	030-151-004	MARK C. & TIFFANY H. LEWIS	-	-	-	-	895	0.021	-	-	-	-	-	-	-	-
27	030-740-016	DEL RAPINI CONSTRUCTION, INC.	-	-	4,143	0.066	7,006	0.161	-	-	-	-	-	-	-	-
28	030-170-022	DELBERT E. RAPINI 2003 SEPARATE PROPERTY TRUST	4,661	0.107	6,827	0.157	2,836	0.112	-	-	-	-	-	-	-	-



LEGEND

- EXISTING STATE RIGHT OF WAY
- EXISTING COUNTY RIGHT OF WAY
- EXISTING COUNTY PRESCRIPTIVE RIGHTS
- PROPERTY LINES
- EXISTING COUNTY EASEMENT
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- STATE RELINQUISHMENT
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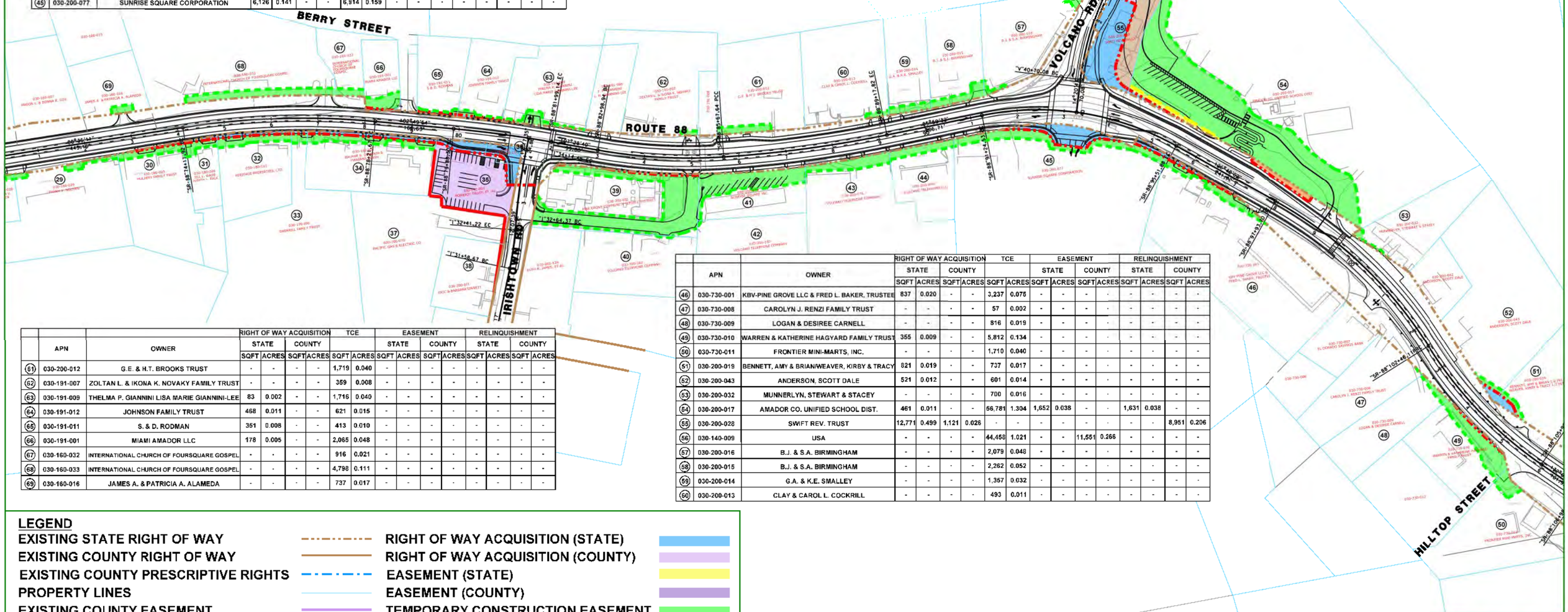
- PROPOSED IMPROVEMENTS
- EXISTING FEATURES

PROJECT:
SR 88 PINE GROVE
CORRIDOR IMPROVEMENTS

EXHIBIT:
FIGURE 2.1.1-2: RIGHT-OF-WAY IMPACTS
PAGE 2 OF 4

	APN	OWNER	RIGHT OF WAY ACQUISITION				TCE		EASEMENT				RELINQUISHMENT			
			STATE		COUNTY				STATE		COUNTY		STATE		COUNTY	
			SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES
29	030-180-029	THANH V. NGUYEN	-	-	-	-	1,334	0.031	-	-	-	-	-	-	-	-
30	030-180-025	MULDERY FAMILY TRUST	245	0.006	-	-	2,035	0.047	-	-	-	-	-	-	-	-
31	030-180-026	JILL L. WADE JUDITH L. FALK	352	0.009	-	-	1,411	0.033	-	-	-	-	-	-	-	-
32	030-180-011	HERITAGE PROPERTIES, LTD.	1,074	0.025	-	-	2,584	0.060	-	-	-	-	-	-	-	-
33	030-170-006	SHERRILL FAMILY TRUST	176	0.004	-	-	673	0.016	-	-	-	-	-	-	-	-
34	030-192-001	BALHAR S. DOSANJH & HARBANS SINGH	2,224	0.052	-	-	3,740	0.086	-	-	-	-	-	-	-	-
35	030-192-003	POMEROY TRUST, ET. AL.	3,140	0.072	20,060	0.462	-	-	-	-	-	-	-	-	-	-
36	030-192-002	AMADOR COUNTY	2,338	0.054	-	-	-	-	-	-	-	-	-	-	-	-
37	030-200-070	PACIFIC GAS & ELECTRIC CO.	-	-	415	0.010	-	-	-	-	-	-	-	-	-	-
38	030-200-071	ERIC & BARBARA SINNETT	-	-	281	0.007	-	-	-	-	-	-	-	-	-	-
39	030-200-030	PINE GROVE COMMUNITY SERVICE DISTRICT	475	0.011	-	-	21,875	0.502	-	-	-	-	-	-	-	-
40	030-200-062	VOLCANO TELEPHONE COMPANY	-	-	-	-	114	0.003	-	-	-	-	-	-	-	-
41	030-200-074	SUNRISE SQUARE INC.	-	-	-	-	9,231	0.212	-	-	-	-	-	-	-	-
42	030-200-130	VOLCANO TELEPHONE COMPANY	-	-	-	-	62	0.001	-	-	-	-	-	-	-	-
43	030-200-076	VOLCANO TELEPHONE COMPANY	-	-	-	-	3,503	0.081	-	-	-	-	-	-	-	-
44	030-200-078	VOLCANO TELEPHONE COMPANY	-	-	-	-	2,315	0.054	-	-	-	-	-	-	-	-
45	030-200-077	SUNRISE SQUARE CORPORATION	6,126	0.141	-	-	6,914	0.159	-	-	-	-	-	-	-	-



	APN	OWNER	RIGHT OF WAY ACQUISITION				TCE		EASEMENT				RELINQUISHMENT			
			STATE		COUNTY				STATE		COUNTY		STATE		COUNTY	
			SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES
61	030-200-012	G.E. & H.T. BROOKS TRUST	-	-	-	-	1,719	0.040	-	-	-	-	-	-	-	-
62	030-191-007	ZOLTAN L. & IKONA K. NOVAKY FAMILY TRUST	-	-	-	-	359	0.008	-	-	-	-	-	-	-	-
63	030-191-009	THELMA P. GIANNINI LISA MARIE GIANNINI-LEE	83	0.002	-	-	1,716	0.040	-	-	-	-	-	-	-	-
64	030-191-012	JOHNSON FAMILY TRUST	468	0.011	-	-	621	0.015	-	-	-	-	-	-	-	-
65	030-191-011	S. & D. RODMAN	351	0.008	-	-	413	0.010	-	-	-	-	-	-	-	-
66	030-191-001	MIAMI AMADOR LLC	178	0.005	-	-	2,065	0.048	-	-	-	-	-	-	-	-
67	030-160-032	INTERNATIONAL CHURCH OF FOURSQUARE GOSPEL	-	-	-	-	916	0.021	-	-	-	-	-	-	-	-
68	030-160-033	INTERNATIONAL CHURCH OF FOURSQUARE GOSPEL	-	-	-	-	4,798	0.111	-	-	-	-	-	-	-	-
69	030-160-016	JAMES A. & PATRICIA A. ALAMEDA	-	-	-	-	737	0.017	-	-	-	-	-	-	-	-

	APN	OWNER	RIGHT OF WAY ACQUISITION				TCE		EASEMENT				RELINQUISHMENT			
			STATE		COUNTY				STATE		COUNTY		STATE		COUNTY	
			SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES
46	030-730-001	KBV-PINE GROVE LLC & FRED L. BAKER, TRUSTEE	837	0.020	-	-	3,237	0.075	-	-	-	-	-	-	-	-
47	030-730-008	CAROLYN J. RENZI FAMILY TRUST	-	-	-	-	57	0.002	-	-	-	-	-	-	-	-
48	030-730-009	LOGAN & DESIREE CARNELL	-	-	-	-	816	0.019	-	-	-	-	-	-	-	-
49	030-730-010	WARREN & KATHERINE HAGYARD FAMILY TRUST	355	0.009	-	-	5,812	0.134	-	-	-	-	-	-	-	-
50	030-730-011	FRONTIER MINI-MARTS, INC.	-	-	-	-	1,710	0.040	-	-	-	-	-	-	-	-
51	030-200-019	BENNETT, AMY & BRIAN/WEAVER, KIRBY & TRACY	821	0.019	-	-	737	0.017	-	-	-	-	-	-	-	-
52	030-200-043	ANDERSON, SCOTT DALE	521	0.012	-	-	601	0.014	-	-	-	-	-	-	-	-
53	030-200-032	MUNNERLYN, STEWART & STACEY	-	-	-	-	700	0.016	-	-	-	-	-	-	-	-
54	030-200-017	AMADOR CO. UNIFIED SCHOOL DIST.	461	0.011	-	-	56,781	1.304	1,652	0.038	-	-	1,631	0.038	-	-
55	030-200-028	SWIFT REV. TRUST	12,771	0.499	1,121	0.026	-	-	-	-	-	-	-	-	8,951	0.206
56	030-140-009	USA	-	-	-	-	44,458	1.021	-	-	11,551	0.266	-	-	-	-
57	030-200-016	B.J. & S.A. BIRMINGHAM	-	-	-	-	2,079	0.048	-	-	-	-	-	-	-	-
58	030-200-015	B.J. & S.A. BIRMINGHAM	-	-	-	-	2,262	0.052	-	-	-	-	-	-	-	-
59	030-200-014	G.A. & K.E. SMALLEY	-	-	-	-	1,357	0.032	-	-	-	-	-	-	-	-
60	030-200-013	CLAY & CAROL L. COCKRILL	-	-	-	-	493	0.011	-	-	-	-	-	-	-	-

LEGEND

- EXISTING STATE RIGHT OF WAY
- EXISTING COUNTY RIGHT OF WAY
- EXISTING COUNTY PRESCRIPTIVE RIGHTS
- PROPERTY LINES
- EXISTING COUNTY EASEMENT
- PROPOSED STATE RIGHT OF WAY
- PROPOSED COUNTY RIGHT OF WAY
- PROPOSED STATE EASEMENT
- PROPOSED COUNTY EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- RIGHT OF WAY ACQUISITION (STATE)
- RIGHT OF WAY ACQUISITION (COUNTY)
- EASEMENT (STATE)
- EASEMENT (COUNTY)
- TEMPORARY CONSTRUCTION EASEMENT
- STATE RELINQUISHMENT
- COUNTY RELINQUISHMENT
- PROPOSED IMPROVEMENTS
- EXISTING FEATURES

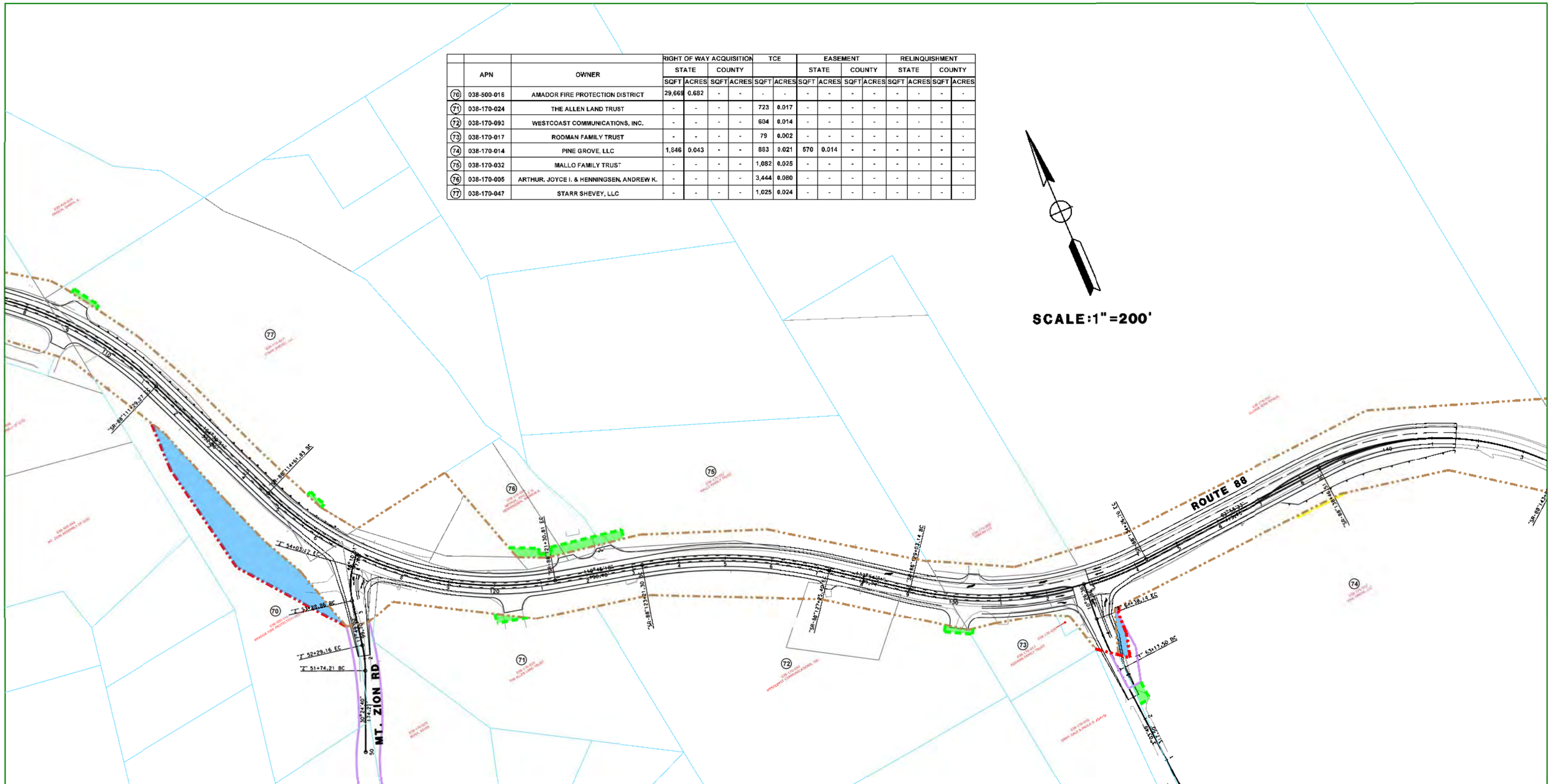
PROJECT:

SR 88 PINE GROVE CORRIDOR IMPROVEMENTS

EXHIBIT:

FIGURE 2.1.1-2: RIGHT-OF-WAY IMPACTS PAGE 3 OF 4

	APN	OWNER	RIGHT OF WAY ACQUISITION				TCE		EASEMENT				RELINQUISHMENT			
			STATE		COUNTY				STATE		COUNTY		STATE		COUNTY	
			SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES	SQFT	ACRES
70	038-500-016	AMADOR FIRE PROTECTION DISTRICT	29,669	0.682	-	-	-	-	-	-	-	-	-	-	-	-
71	038-170-024	THE ALLEN LAND TRUST	-	-	-	-	723	0.017	-	-	-	-	-	-	-	-
72	038-170-093	WESTCOAST COMMUNICATIONS, INC.	-	-	-	-	604	0.014	-	-	-	-	-	-	-	-
73	038-170-017	RODMAN FAMILY TRUST	-	-	-	-	79	0.002	-	-	-	-	-	-	-	-
74	038-170-014	PINE GROVE, LLC	1,846	0.043	-	-	883	0.021	570	0.014	-	-	-	-	-	-
75	038-170-032	MALLO FAMILY TRUST	-	-	-	-	1,082	0.025	-	-	-	-	-	-	-	-
76	038-170-005	ARTHUR, JOYCE I. & HENNINGSEN, ANDREW K.	-	-	-	-	3,444	0.080	-	-	-	-	-	-	-	-
77	038-170-047	STARR SHEVEY, LLC	-	-	-	-	1,025	0.024	-	-	-	-	-	-	-	-



LEGEND

- EXISTING STATE RIGHT OF WAY
- EXISTING COUNTY RIGHT OF WAY
- EXISTING COUNTY PRESCRIPTIVE RIGHTS
- PROPERTY LINES
- EXISTING COUNTY EASEMENT
- PROPOSED STATE RIGHT OF WAY
- PROPOSED COUNTY RIGHT OF WAY
- PROPOSED STATE EASEMENT
- PROPOSED COUNTY EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- RIGHT OF WAY ACQUISITION (STATE)
- RIGHT OF WAY ACQUISITION (COUNTY)
- EASEMENT (STATE)
- EASEMENT (COUNTY)
- TEMPORARY CONSTRUCTION EASEMENT
- STATE RELINQUISHMENT
- COUNTY RELINQUISHMENT
- PROPOSED IMPROVEMENTS
- EXISTING FEATURES

PROJECT:
SR 88 PINE GROVE
CORRIDOR IMPROVEMENTS

EXHIBIT:
FIGURE 2.1.1-2: RIGHT-OF-WAY IMPACTS
PAGE 4 OF 4

Table 2.1.1-1: Potential Full Acquisitions

Map Reference	APN	Area Impacted (sf)	Type of Property
35	030-192-003	23,228	Residential (Undeveloped)
36	030-192-002	2,338	Residential (vacant)
55	030-200-028	13,892	Commercial Retail - ATI Auto Parts Store

Source: Project Report, Right-of-Way Data Sheet, 2015

There is a potential for partial property acquisitions needed at up to 28 parcels throughout the project area. Several of these parcels may require access changes such as a new driveway tie-in with SR 88, while other partial acquisitions are needed to accommodate the new sidewalks and widened shoulders along the highway. Parcels that may require partial acquisition include commercial and residential properties, as well as Pine Grove Elementary School. The project includes realignment and reconstruction of the school's access, but full access will be provided to the school throughout construction.

Table 2.1.1-2 shows the parcels and estimated size of the partial acquisitions that are expected based on preliminary engineering. The exact location and size of all right-of-way impacts caused by the project will be determined during final design of the project.

In addition to the 28 parcels identified that will require partial acquisitions, an additional 46 parcels will involve a right-of-way component for permanent and/or temporary easements. Permanent easements may include slope or maintenance easements (such as for a retaining wall). Temporary easements will predominantly be temporary construction easements. These proposed easements are identified in detail on Table 2.1.1-2 below.

Table 2.1.1-2: Potential Partial Property Acquisitions

Map Reference	APN	Parcel Size (sf)	Area Impacted (sf)	% of Parcel to be Acquired	Type of Property
1	038-010-084	21,780	19,950	91.6%	Residential
2	038-010-142	1,474,506	4,319	0.3%	Commercial/Residential
4	038-010-142	1,474,506	2,832	0.2%	Commercial/Residential
7	Amador County	N/A	6,437	N/A	Road Right-of-Way
8	038-010-135	3,030,033	4,389	0.1%	Commercial
15	030-180-005	6,488	15	0.2%	Residential
27	030-740-016	243,104	4,143	1.7%	Commercial
28	030-170-022	37,590	11,488	30.6%	Commercial
30	030-180-025	33,105	245	0.7%	Commercial
31	030-180-026	10,171	352	3.5%	Commercial
32	030-180-011	26,571	1,074	4.0%	Commercial
33	030-170-006	207,345	176	0.1%	Residential
34	030-192-001	20,382	2,224	10.9%	Commercial
37	030-200-070	78,488	415	0.5%	Special Use District
38	030-200-071	19,602	281	1.4%	Special Use District
39	030-200-030	47,044	475	1.0%	Commercial
45	030-200-077	195,584	6,126	3.1%	Commercial
46	030-730-001	83,635	837	1.0%	Commercial
49	030-730-010	26,571	355	1.3%	Commercial
51	030-200-019	75,358	821	1.1%	Commercial
52	030-200-043	71,438	521	0.7%	Commercial
54	038-200-017	239,580	461	0.2%	School
63	030-191-009	26,571	83	0.3%	Commercial
64	030-191-012	17,859	468	2.6%	Commercial
65	030-191-011	16,552	351	2.1%	Commercial
66	030-191-001	10,890	178	1.6%	Residential
70	038-500-016	147,668	29,669	20.1%	Vacant
74	038-170-014	916,066	1,846	0.2%	Residential

Source: Project Report, Right-of-Way Data Sheet, 2015
APN = Assessor's Parcel Number
sf = square feet

No-Build Alternative

Under the No-Build Alternative, there would be no partial or full property acquisitions. No residents or businesses will require relocation advisory assistance.

Avoidance, Minimization and/or Mitigation Measures

Any business that is required to relocate is eligible for "Relocation Assistance." All activities would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources would be available to the displacees in compliance with Title VI and state statute, after eligibility has been determined. See Appendix D for the Summary of Relocation Benefits.

Relocation advisory assistance will be provided to any person, business, farm or non-profit organization displaced in compliance with Caltrans' Relocation Assistance Program, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and all applicable federal, state, and local regulations included in Appendix D of this environmental document. Non-residential displacees will be assisted and provided information on comparable properties for lease or purchase.

A survey of available properties in March 2014 identified multiple suitable locations within a 2-mile radius that could serve as relocation sites for the affected auto parts business.

Measure RLC-1: Property owners will be compensated in accordance with fair market values based on appraisals. Standard Relocation Assistance Programs will provide relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of acquisition of real property for public use.

Measure RLC-2: All efforts would be made to identify relocation opportunities for affected businesses. Wherever feasible, assistance would be made available in identifying suitable relocation sites within the service area of existing businesses.

2.1.2 Utilities and Emergency Services

Affected Environment

Utilities and emergency services have been analyzed as part of the *Community Impact Assessment* for the SR 88 Pine Grove Corridor Improvement Project (September 2015).

Utilities

Most of the town's utilities stem from a main alignment along the SR 88 corridor. Within the corridor are underground and overhead electrical, cable television, and telephone utilities, as well as underground sanitary sewer and water. Table 2.1.2-1 shows the utility companies that have facilities in the proposed project area and that expect utility relocations.

Table 2.1.2-1: Existing Utility Facilities

Utility Company	Description of Utility Facility	Utility Location
Pacific Gas and Electric*	Underground and overhead electrical lines, poles, utility boxes	Along and next to SR 88
Pine Grove Community Service District Water facilities*	Main pipes, auxiliary pipes, valves, and meters	Within SR 88 right-of-way or on adjacent properties
Comcast Cable television facilities*	Overhead cable lines, boxes and risers	Within SR 88 right-of-way or on adjacent properties
AT&T Telephone facilities*	Overhead and underground telephone lines, poles and risers	Within SR 88 right-of-way or on adjacent properties
Pine Grove Community Service District Sanitary sewer facilities*	Main pipes, auxiliary pipes, vaults, and manholes	Within SR 88 right-of-way or on adjacent properties

*Note: The above utilities have been identified as part of preliminary engineering for the SR 88 Pine Grove Corridor Improvement Project. Additional utility coordination will occur directly with each utility company that has facilities in the project area prior to completion of final design of the proposed project.
Source: CIA 2015

Emergency Services

Pine Grove is served by the Amador County Sheriff Department located in Jackson, CA and Amador County Fire Protection at Irish Town Road and SR 88 in Pine Grove for emergency services. The town receives paramedic services from the fire department and county local hospital ambulances. All of these emergency services providers use SR 88 for access. The Amador County Fire Protection is a small local station with a single fire truck; however, there is a Cal Fire Station at 19597 SR 88 with additional fire-fighting vehicles.

Environmental Consequences

Utilities

Build Alternative

The project will make accommodations for utilities during construction. Impacts from the project would not be major, but widening and improvements on SR 88 would require relocation of underground utilities to accommodate the proposed storm drain system improvements. In addition, sewer, water and electric/cable vaults and manholes will be adjusted to grade during construction of the proposed improvements. All utility improvements and relocations will be kept within the proposed project study area, and all environmental impacts associated with these utility relocations are accounted for in this environmental document.

Within the corridor are underground and overhead electrical, cable television, and telephone utilities, as well as underground sanitary sewer and water. Each of these utilities will require some amount of relocation or adjustment for the proposed project. Several power poles along the project alignment will require relocation, as will water mains and cable and telephone risers. Sanitary sewer covers affected by the project will be either relocated or adjusted to grade, depending on the type and function of the cover. Water valves affected by the project will be adjusted to grade.

Utilities that are impacted due to construction of the project will be relocated. Utility companies will be coordinated with to avoid any unnecessary disruption to utility services. Temporary interruption of service to utility customers during utility relocation for construction may occur; permanent interruptions will not occur.

No-Build Alternative

Under the No-Build Alternative, there would be no utility improvements or relocations within the study area.

Emergency Services

Build Alternative

The project would make accommodations for emergency services, and traffic control during construction. Access would remain open to the Fire Station throughout construction.

The fire station sits along SR 88 near the intersection at Irish Town Road. Access would remain open to the fire station throughout construction. Implementation of the project would increase operational efficiency and ultimately improve emergency access through the area by relieving existing congestion and improving the SR 88 roadway. The corridor improvement project includes emergency signal preemptive system improvements at all of the intersections with signals in the project area. This would improve emergency response times by allowing emergency vehicles to go through Pine Grove more efficiently in emergency situations.

Emergency service access could be temporarily affected during construction because of congestion and accessibility along SR 88. These impacts are expected to be temporary and would be further reduced through the implementation of Measures UTL/ES 1-3 noted in the Avoidance, Minimization and/or Mitigation Measures section below.

No-Build Alternative

Under the No-Build Alternative, the existing condition would not change. There would be no effect on emergency services, except that congestion on SR 88 would remain, potentially affecting each emergency service provider's ability to travel through the SR 88 corridor quickly and efficiently.

Avoidance, Minimization and/or Mitigation Measures

Construction of the Build Alternative would require relocation of utility facilities. A more detailed study would be conducted during the design phase of the project.

The following measures would apply prior to and during construction:

Measure UTL/ES-1: To minimize interruptions of service to utility customers, a series of coordination letters will be sent to all affected utility companies to identify utilities within the proposed project area. Letters will indicate where utility relocations are to be performed and the required time to relocate them. Design plans will be sent to involved utility owners during the project development phase. Meetings will be arranged with utility companies as necessary to discuss impacts and relocation plans.

Measure UTL/ES-2: A Transportation Management Plan (TMP) will be prepared. The plan should identify the construction schedule and any lane closures. It will be ensured that there is appropriately designed access for emergency services onto all roads involved in the proposed project. The transportation coordination plan will be provided to emergency services. If necessary, the plan will include a public awareness campaign to ensure that the public is aware of where and when any traffic closures, detours, or utility disruptions, if any, will occur.

Measure UTL/ES-3: Emergency services, local law enforcement agencies, and local businesses will be notified of the proposed project prior to the start of construction. Notification of specific lane closures will be provided by the contractor 48 hours before the closure occurs.

2.1.3 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration, 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.

In July 1999, the U.S. Department of Transportation issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the U.S. Department of Transportation regulations (49 Code of Federal Regulations Part 27) implementing Section 504 of the Rehabilitation Act (29 U.S. Code 794). The Federal Highway Administration has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

This section summarizes the *Traffic Operations Analysis Report for the SR 88 Pine Grove Corridor Improvement Project* (January, 2015) as well as the *Supplemental Traffic Operations Analysis Report* (Sept 2015). The supplemental traffic report was prepared to evaluate traffic conditions resulting from a phased construction as discussed in Section 1.4.1 of this document.

The traffic report was prepared in conformance with methodologies developed in coordination with Caltrans and the Amador County Transportation Commission. For the following intersections in the project area, traffic impacts were analyzed based on the effects from area-wide development and general population growth:

1. SR 88/Climax Road
2. SR 88/Ridge Road
3. SR 88/Berry Street
4. SR 88/Irish Town Road
5. SR 88/Church Street
6. SR 88/Volcano Road
7. SR 88/Mt. Zion Road

8. SR 88/Gold Mine Road
9. SR 88/Tabeaud Road
10. SR 88/Pine Grove Village/Pine Grove Elementary School (SR 88/driveway intersections)
11. SR 88/Pine Grove Market (SR 88/driveway intersections)

Development included both the proposed project and nearby future projects. Traffic counts were collected, and a morning and afternoon peak hour analysis was performed.

Existing Traffic Facilities

Except for the signal light at the SR 88/Ridge Road intersection, all streets that intersect SR 88 have stop signs (side-street stop controlled intersection) so that vehicles are required to stop before crossing or turning onto SR 88.

SR 88 is an east-west two-lane rural highway within the study area that connects SR 49 in Jackson (to the west) with US 395 in Nevada (to the east). It features an intersection with signals at the SR 88 and Ridge Road. In the eastbound direction, SR 88 has a posted speed limit of 55 miles per hour. Through Pine Grove, the posted speed limit ranges from 35 miles per hour to 50 miles per hour.

Climax Road – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Climax Road is the first intersection in the project study area. Climax Road provided one travel lane in each direction and connects SR 88 with Ridge Road and SR 49 to the west. For eastbound SR 88 vehicles, no left-turn pocket is provided, resulting in vehicles having to stop within the eastbound travel lane as they wait for gaps in westbound SR 88 traffic. Vehicles making a left-turn from Climax Road onto eastbound SR 88 do not have an acceleration lane as they come from a complete stop and accelerate to the posted speed limit of 55 miles per hour on eastbound SR 88. Lastly, westbound SR 88 traffic making a right turn onto Climax Road must merge with traffic at an awkward angle.

Ridge Road – As one travels eastbound on SR 88, the intersection with signals at SR 88/Ridge Road is the second intersection in the project study area and marks the beginning of the town of Pine Grove. Ridge Road provides one travel lane in each direction and connects SR 88 with SR 49 to the west. Based on increasing traffic volumes, Caltrans added a signal to this intersection about 10 years ago. The Pine Grove Market sits on the south side of the SR 88/Ridge Road T-intersection. The intersection currently operates at level of service A conditions during both weekday morning and afternoon peak hour conditions.

Berry Street – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Berry Street is the third intersection in the project study area. Berry Street provides one travel lane in each direction and is a local street connecting SR 88 with businesses and residences on the north side of SR 88 in Pine Grove.

Irish Town Road – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Irish Town Road is the fourth intersection in the project study area. Irish Town Road provides one travel lane in each direction and is a local street connecting SR 88 with businesses and residences on the south side of SR 88. On the north side of SR 88, the fourth leg of the intersection is a driveway serving businesses in Pine Grove.

Church Street – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Church Street is the fifth intersection in the project study area. Church Street provides

one travel lane in each direction and is a local street connecting SR 88 with Pine Grove Community Park, a community parking lot and businesses on the south side of SR 88. On the north side of SR 88, the fourth leg of the intersection is a driveway serving businesses and the Pine Grove Town Hall/Library. A pedestrian crossing is provided on the east side of the intersection.

Volcano Road – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Volcano Road is the sixth intersection in the project study area. Volcano Road provides one travel lane in each direction connecting SR 88 with the town of Volcano. Pine Grove Elementary School sits on the northeast corner. A vacant commercial property sits on the south side of SR 88. When school is in session, parents, faculty and buses entering and exiting the Pine Grove Elementary School parking areas result in congestion, traffic backups and delays on SR 88.

Mt. Zion Road – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Mt. Zion Road is the seventh intersection in the project study area. Mt. Zion Road provides one travel lane in each direction and is a local street connecting SR 88 with businesses and residences on the south side of SR 88. A future fire station is planned on the south-west corner of the SR 88/Mt. Zion Road intersection. As part of this future development project, an emergency vehicle signal will be constructed to give advanced warning to vehicles on SR 88 and Mt. Zion Road when an emergency vehicle is about to leave the station.

Gold Mine Road – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Mt. Zion Road is the eighth intersection in the project study area. Gold Mine Road provides one travel lane in each direction and is a local street connecting SR 88 with businesses and residences on the north side of SR 88.

Tabeaud Road – As one travels eastbound on SR 88, the side-street stop-controlled intersection of SR 88/Tabeaud Road is the ninth intersection in the project study area. It is considered by locals as the eastern side of the town of Pine Grove. Tabeaud Road provides one travel lane in each direction and is a local street connecting SR 88 with residences on the south side of SR 88.

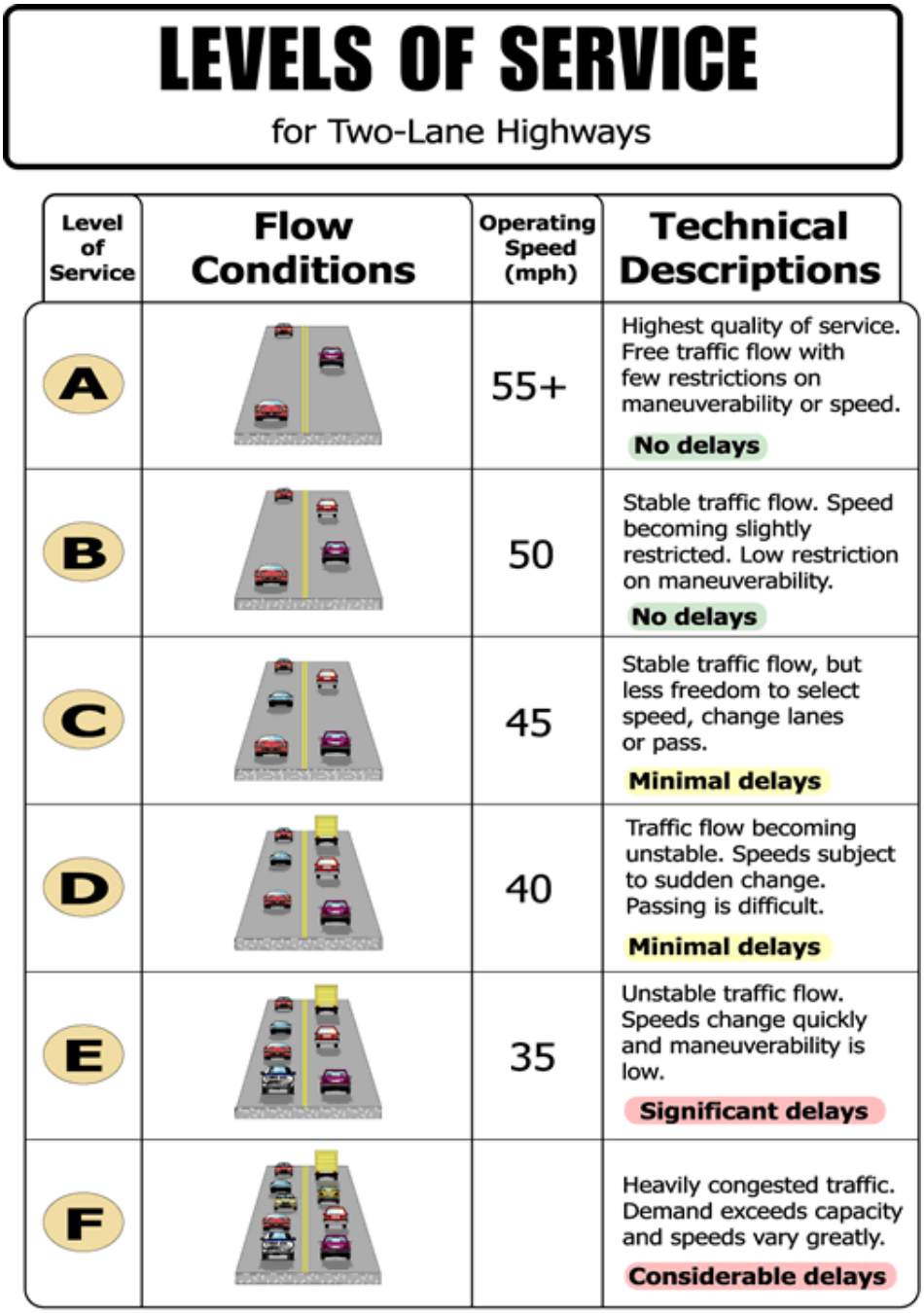
SR 88/Pine Grove Village/Pine Grove Elementary School –The Pine Grove Village and Pine Grove Elementary School are located on opposite sides of SR 88 just east of Volcano Road. The Pine Grove Elementary School has an entrance driveway and exit driveway that connects to SR 88 and the Pine Grove Village has two full access driveways that connect to SR 88. These four driveway connections are considered the tenth intersection in the project study area. The Pine Grove Village shopping center and Pine Grove Elementary School both have a relatively high volume of vehicle/driveway access control onto SR 88, particularly during peak hours.

SR 88/Pine Grove Market – The Pine Grove Market is located across SR 88 from Ridge Road on the west side of the Town of Pine Grove. The building where the Market is located also houses the Upcountry Community Center and there is an Auto Service and Recycling Center in the Market parking lot. The Market has two driveways connected to SR 88; the western driveway is a right-in/right-out and the eastern driveway provides full access to SR 88. These two driveways are considered the eleventh intersection in the project study area.

In the Traffic Operations Analyis Report Prepared for the project, the eleven intersections were evaluated using the level of service method to determine how well they currently operate. Level

of service is a scoring system similar to a report card with letter grades A through F, with A meaning the best level of service and F meaning the worst. Figures 2.1.3-1 and 2.1.3-2 provide a graphic to better understand level of service as it applies to intersections and SR 88 as a two lane highway.

Figure 2.1.3-1: Levels of Service for Two-Lane Highways



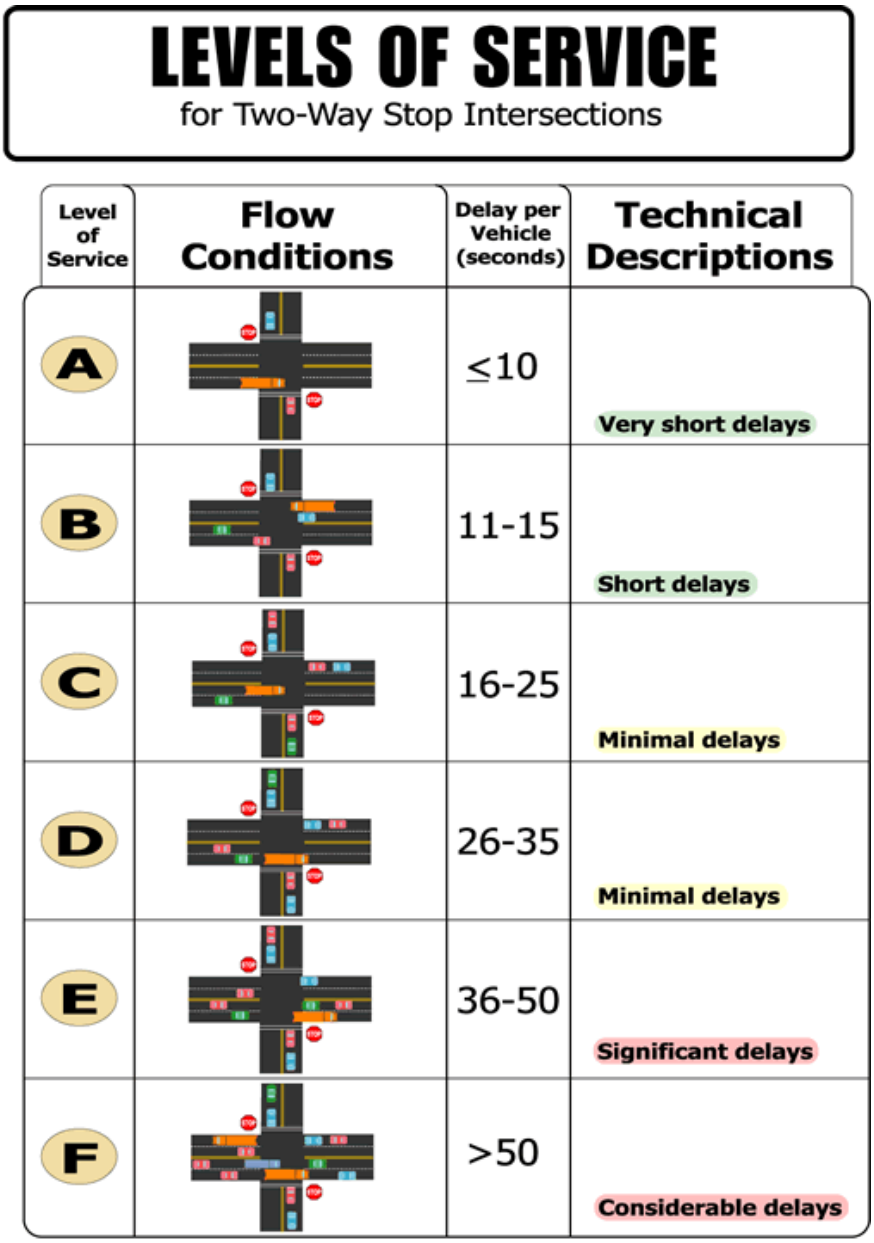
LEVELS OF SERVICE

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

Figure 2.1.3-2: Levels of Service for Two-Way Stop Intersections



Source: 2000 HCM, Exhibit 17-2, Level of Service Criteria for TWSC Intersections

Table 2.1.3-1 provides level of service and delay (in seconds per vehicle) at the eleven intersections that were studied for this project. Caltrans' goal is to maintain level of service C in rural areas and Amador County's goal is to maintain level of service D on county maintained roads.

Table 2.1.3-1: Level of Service for Existing Intersection Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (seconds per vehicle)	LOS	Delay (seconds per vehicle)	LOS
1	SR 88/Climax Road	Side-Street Stop	14.7 (EB LT)	B	0.8 (EB LT)	A
			7.2 (SB LT)	A	6.9 (SB LT)	A
			1.9 (Entire)	A	1.2 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	5.6 (Entire)	A	8.5 (Entire)	A
3	SR 88/Berry Street	Side-Street Stop	6.9 (EB LT)	A	3.5 (EB LT)	A
			13.3 (SB LT)	B	11.0 (SB LT)	B
			0.9 (Entire)	A	0.9 (Entire)	A
4	SR 88/Irish Town Road	Side-Street Stop	6.2 (EB LT)	A	3.0 (EB LT)	A
			3.7 (WB LT)	A	7.2 (WB LT)	A
			15.8 (NB LT)	C	14.3 (NB LT)	B
			22.4 (SB LT)	C	14.1 (SB LT)	B
			2.0 (Entire)	A	1.5 (Entire)	A
5	SR 88/Church Street	Pedestrian Crossing / Side-Street Stop	18.5 (EB LT)	C	7.0 (EB LT)	A
			6.9 (WB LT)	A	12.6 (WB LT)	B
			12.0 (NB LT)	B	10.1 (NB LT)	B
			12.5 (SB LT)	B	10.7 (SB LT)	B
			4.0 (Entire)	A	3.6 (Entire)	A
6	SR 88/Volcano Road	Side-Street Stop	7.6 (EB LT)	A	4.6 (EB LT)	A
			17.7 (SB LT)	C	14.0 (SB LT)	B
			10.2 (SB RT)	B	4.0 (SB RT)	B
			1.9 (Entire)	A	1.6 (Entire)	A
7	SR 88/Mount Zion Road	Side-Street Stop	1.8 (WB LT)	A	3.8 (WB LT)	A
			16.4 (NB LT)	C	13.5 (NB LT)	B
			0.6 (Entire)	A	0.4 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	4.7 (EB LT)	A	1.8 (EB LT)	A
			13.7 (SB LT)	B	12.2 (SB LT)	B
			0.5 (Entire)	A	0.6 (Entire)	A
9	SR 88/Tabeaud Road	Side-Street Stop	2.3 (WB LT)	A	3.7 (WB LT)	A
			23.2 (NB LT)	C	12.9 (NB LT)	B
			5.4 (Entire)	A	2.4 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	5.7 (EB LT)	A	2.5 (EB LT)	A
			2.9 (WB LT)	A	4.8 (WB LT)	A
			11.7 (NB LT)	B	11.7 (NB LT)	B
			3.8 (NB RT)	A	7.2 (NB RT)	A
			1.3 (Entire)	A	0.9 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	2.3 (WB LT)	A	5.2 (WB LT)	A
			21.6 (NB LT)	C	14.2 (NB LT)	B
			3.4 (NB RT)	A	7.0 (NB RT)	A
			1.4 (Entire)	A	1.6 (Entire)	A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals, and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop-controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

Most of the intersections in the project area currently operate at level of service A or B. During peak hours, some intersections have turn movements that operate at level of service C with vehicle delay of up to 23 seconds.

Since the purpose of this project is to provide operational improvements to the corridor without a major increase in the vehicle capacity of SR 88 (adding additional through lanes) it was important to identify how the project would improve the total network performance. Table 2.1.3-2 provides eight measures of total network performance in the existing condition and can be compared to Tables 2.1.3-4 and 2.1.3-5 for how these measures improve with the proposed Build Alternative.

Table 2.1.3-2: Total Network Performance with Existing Conditions

Measure of Effectiveness	Morning Peak Hour	Afternoon Peak Hour
Total Vehicle Hours of Delay	12.0	9.7
Total Stops	1,354	1,159
Delay Per Vehicle in Project Study Area	25.2 seconds	21.4 seconds
Vehicle Miles of Travel	3,349	3,189
Vehicle Hours of Travel	95.0	90.5
Total Fuel Consumption	109.3 gallons	101.3 gallons
Eastbound SR 88 Average Travel Speed	43 mph	41 mph
Westbound SR 88 Average Travel Speed	40 mph	42 mph
Notes: All results above based on SimTraffic report output for 12 runs.		

Source: Traffic Operations Analysis Report 2015

Vehicle Queuing

The Traffic Operations Analysis Report shows that the intersection with signals at SR 88/Ridge Road currently operates at acceptable level of service A during both the morning and afternoon peak hour conditions. In addition, all nine no-signal side-stop-controlled intersections in the project area operate at acceptable level of service conditions (level of service C or better) for both the entire intersection and minor street critical movements.

The main reason corridor operation improvements are needed is due to vehicle queuing (strings of vehicles lining up) at key intersections as well as on the mainline SR 88 during the drop-off and pick-up times at Pine Grove Elementary School. Drop-off traffic at the school has caused up to 74 feet of vehicle queuing along SR 88, where cars are waiting to turn into the school parking lot. This queuing has hindered operations on SR 88 during these specific times and has caused bottlenecks at or around the SR 88/Volcano Road intersection.

Existing Pedestrian and Bicycle Facilities

Large sections of the project area have no pedestrian facilities (sidewalks), and no dedicated bicycle facilities exist. In addition, large portions of SR 88 have nonstandard shoulders, further

reducing the potential for pedestrian and bicycle mobility through town. Sidewalks exist on the north side of SR 88 between the Pine Grove Town Hall and the intersection of SR 88 and Volcano Road. Isolated sidewalk facilities are also present on the south side of SR 88 near the intersection with Volcano Road. Lack of pedestrian and bicycle facilities greatly reduces the non-vehicular traffic through town and limits multimodal access to local businesses. Furthermore, lack of pedestrian facilities is not conducive to a safe route to the elementary school and contributes to the vehicle queuing at peak drop-off and pick-up times.

Accident and Safety Information

Accident data for State Route 88 through the study corridor is shown in Table 2.1.3-3, which shows a total of 18 accidents during a three-year period from April 2010 to March 2013. No fatality accidents occurred on SR 88 during the study period. SR 88 has a lower accident rate than the statewide average for similar facilities. Because increased traffic volumes are projected on SR 88, enhancing the safety of this corridor is desired.

Table 2.1.3-3: Accident History for SR 88

Facility	Number of Accidents			Accident Rate (accidents per million vehicle miles)					
				Actual			State Average		
	Total	Fatal	Fatal + Injury	Fatality	Fatal + Injury	Total	Fatality	Fatal + Injury	Total
SR 88 post miles 21.8 to 24.5	18	0	9	0.0	0.23	0.46	0.025	0.50	1.07
Notes: Rates expressed as - Number of accidents/Million vehicle miles									

Source: Caltrans District 10, Traffic Engineering Branch, TSN-TASAS for Highway 88, post miles 21.8 to 24.5, in Amador County. Period reported: April 1, 2010 to March 31, 2013.

Americans with Disabilities Act

The existing facilities through the town of Pine Grove include sidewalks and, in some sections of the roadway, some facilities compliant with the Americans with Disabilities Act (ADA); however, many areas do not have sidewalks and are not accessible by Americans with Disabilities Act standards.

Environmental Consequences

Build Alternative

The traffic study assumed an opening year of 2024 because the Amador County Transportation Commission does not expect full funding to become available until 2020. A 20-year design year of 2044 was used for the project when modeling future traffic conditions. Based on the projected model, traffic levels in the project vicinity (average of morning and afternoon peak hours) are projected to substantially increase over existing conditions by 2024 and congestion will further deteriorate by 2044. Table 2.1.3-4 shows the total network performance in 2024 comparing the No-Build Alternative with the Build Alternative. Table 2.1.3-5 shows the total network performance in 2044 comparing the No-Build Alternative with the Build Alternative.

Table 2.1.3-4: Total Network Performance in 2024

Measure of Effectiveness	No-Build Alternative		Build Alternative	
	Morning Peak Hour	Afternoon Peak Hour	Morning Peak Hour	Afternoon Peak Hour
Total Vehicle Hours of Delay	23.1	15.3	28.5	18.7
Total Stops	1,855	1,550	2,634	1,843
Delay Per Vehicle in Project Study Area	37.6 seconds	26.1 seconds	46.0 seconds	31.8 seconds
Vehicle Miles of Travel	4,162	4,021	4,162	4,030
Vehicle Hours of Travel	127.6	116.8	134.5	119.3
Total Fuel Consumption	137.5 gallons	128.3 gallons	136.0 gallons	127.8 gallons
Eastbound SR 88 Average Travel Speed	42 mph	40 mph	38 mph	36 mph
Westbound SR 88 Average Travel Speed	39 mph	41 mph	36 mph	40 mph
Notes: All results above based on SimTraffic report output for 12 runs.				

Source: Traffic Operations Analysis Report 2015

Table 2.1.3-5: Total Network Performance in 2044

Measure of Effectiveness	No-Build Alternative		Build Alternative	
	Morning Peak Hour	Afternoon Peak Hour	Morning Peak Hour	Afternoon Peak Hour
Total Vehicle Hours of Delay	123.8	51.3	76.2	40.7
Total Stops	2,638	2,261	4,168	3,306
Delay Per Vehicle in Project Study Area	151.6 seconds	66.2 seconds	92.7 seconds	51.7 seconds
Vehicle Miles of Travel	5,164	5,143	5,388	5,262
Vehicle Hours of Travel	254.0	181.8	212.0	174.1
Total Fuel Consumption	190.1 gallons	171.6 gallons	186.3 gallons	172.9 gallons
Eastbound SR 88 Average Travel Speed	41 mph	38 mph	37 mph	34 mph
Westbound SR 88 Average Travel Speed	37 mph	40 mph	30 mph	36 mph
Notes: All results above based on SimTraffic report output for 12 runs.				

Source: Traffic Operations Analysis Report 2015

The Traffic Operations Analysis Report prepared for this project includes an analysis of traffic conditions at each of the study intersections for the opening year (2024) and the design year, which is 20 years after opening (2044). This information can be compared to the projected conditions in 2024 and 2044 if no improvements are implemented in the project area (No-Build Alternative). The intersection operation results are presented in Tables 2.1.3-6 through 2.1.3-9. Note that the 2024 conditions show the full build of this project with a traffic signal added to the intersection at SR 88 and Volcano Road; however, the 2044 conditions expect additional intersection improvements, including signals at SR 88/Irish Town Road and SR 88/Tabeaud Road.

Table 2.1.3-6: Intersection Analysis – 2024 No-Build Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	2.0 (EB LT)	A	1.4 (EB LT)	A
			8.1 (SB LT)	A	8.5 (SB LT)	A
			1.3 (Entire)	A	1.6 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	7.3 (Entire)	A	9.7 (Entire)	A
3	SR 88/Berry Street	Side-Street Stop	8.1 (EB LT)	A	4.6 (EB LT)	A
			19.8 (SB LT)	C	18.2 (SB LT)	C
			1.1 (Entire)	A	1.1 (Entire)	A
4	SR 88/Irish Town Road	Side-Street Stop	8.8 (EB LT)	A	4.2 (EB LT)	A
			4.6 (WB LT)	A	8.1 (WB LT)	A
			30.0 (NB LT)	D	27.8 (NB LT)	D
			21.2 (SB LT)	C	28.0 (SB LT)	D
			2.4 (Entire)	A	2.5 (Entire)	A
5	SR 88/Church Street	Pedestrian Crossing / Side-Street Stop	18.1 (EB LT)	C	8.1 (EB LT)	A
			9.6 (WB LT)	A	14.9 (WB LT)	B
			14.7 (NB LT)	B	14.3 (NB LT)	B
			13.6 (SB LT)	B	11.9 (SB LT)	B
			4.7 (Entire)	A	4.0 (Entire)	A
6	SR 88/Volcano Road	Side-Street Stop	11.6 (EB LT)	B	7.2 (EB LT)	A
			3.5 (WB LT)	A	7.1 (WB LT)	A
			30.6 (NB LT)	D	26.9 (NB LT)	D
			60.0 (SB LT)	**F**	31.8 (SB LT)	D
			19.6 (SB RT)	C	5.7 (SB RT)	A
			4.8 (Entire)	A	2.9 (Entire)	A
7	SR 88/Mount Zion Road	Side-Street Stop	2.7 (WB LT)	A	5.6 (WB LT)	A
			23.2 (NB LT)	C	25.2 (NB LT)	D
			0.9 (Entire)	A	0.7 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	5.7 (EB LT)	A	2.8 (EB LT)	A
			21.0 (SB LT)	C	15.3 (SB LT)	C
			0.7 (Entire)	A	0.8 (Entire)	A
9	SR 88/Tabeaud Road	Side-Street Stop	3.7 (WB LT)	A	6.1 (WB LT)	A
			>80 (NB LT)	**F**	27.0 (NB LT)	D
			15.4 (Entire)	C	3.1 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	7.0 (EB LT)	A	3.4 (EB LT)	A
			3.6 (WB LT)	A	6.8 (WB LT)	A
			19.3 (NB LT)	C	19.0 (NB LT)	C
			5.9 (NB RT)	A	8.0 (NB RT)	A
			1.6 (Entire)	A	1.2 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	3.3 (WB LT)	A	5.5 (WB LT)	A
			38.2 (NB LT)	**E**	21.1 (NB LT)	C
			4.2 (NB RT)	A	7.5 (NB RT)	A
			2.0 (Entire)	A	1.8 (Entire)	A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals, and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop-controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

Table 2.1.3-7: Intersection Analysis – 2024 Build Alternative Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	1.8 (EB LT) 7.2 (SB LT) 1.0 (Entire)	A A A	1.2 (EB LT) 5.9 (SB LT) 1.1 (Entire)	A A A
2	SR 88/Ridge Road	Traffic Signal	7.0 (Entire)	A	9.1 (Entire)	A
3	SR 88/Berry Street	Side-Street Stop	9.8 (EB LT) 27.3 (SB LT) 1.7 (Entire)	A D A	6.2 (EB LT) 19.9 (SB LT) 2.1 (Entire)	A C A
4	SR 88/Irish Town Road	Side-Street Stop	12.6 (EB LT) 5.2 (WB LT) **39.3 (NB LT)** **36.0 (SB LT)** 3.4 (Entire)	B A **E** **E** A	4.3 (EB LT) 9.5 (WB LT) **35.4 (NB LT)** 28.8 (SB LT) 3.0 (Entire)	A A **E** D A
5	SR 88/Church Street	Pedestrian Hybrid Beacon / Side-Street Stop	22.0 (EB LT) 4.1 (NB RT) 19.3 (SB LT) 5.1 (Entire)	C A C A	6.3 (EB LT) 10.2 (NB RT) **43.8 (SB LT)** 3.3 (Entire)	A B **E** A
6	SR 88/Volcano Road	Traffic Signal	12.6 (Entire)	B	6.7 (Entire)	A
7	SR 88/Mount Zion Road	Side-Street Stop	3.4 (WB LT) 8.2 (NB LT) 0.9 (Entire)	A A A	7.5 (WB LT) 19.5 (NB LT) 0.9 (Entire)	A C A
8	SR 88/Gold Mine Road	Side-Street Stop	9.8 (EB LT) 19.0 (SB LT) 1.1 (Entire)	A C A	2.6 (EB LT) 7.0 (SB LT) 1.1 (Entire)	A C A
9	SR 88/Tabeaud Road	Side-Street Stop	3.1 (WB LT) 8.8 (NB LT) 3.1 (Entire)	A A A	4.6 (WB LT) 9.7 (NB LT) 1.6 (Entire)	A A A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	10.2 (WB LT) **43.0 (NB LT)** 9.6 (NB RT) 7.3 (Entire)	B **E** A A	11.9 (WB LT) **42.5 (NB LT)** 13.6 (NB RT) 4.1 (Entire)	B **E** B A
11	SR 88/Pine Grove Market	Side-Street Stop	1.0 (WB LT) **39.8 (NB LT)** 2.6 (NB RT) 1.8 (Entire)	A **E** A A	8.3 (WB LT) 24.3 (NB LT) 4.4 (NB RT) 1.8 (Entire)	A C A A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals, and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop-controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

Table 2.1.3-8: Intersection Analysis – 2044 No-Build Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	2.4 (EB LT) 9.9 (SB LT) 1.7 (Entire)	A A A	2.1 (EB LT) 11.3 (SB LT) 2.1 (Entire)	A B A
2	SR 88/Ridge Road	Traffic Signal	10.8 (Entire)	B	12.1 (Entire)	B
3	SR 88/Berry Street	Side-Street Stop	9.71 (EB LT) 33.8 (SB LT) 1.5 (Entire)	A D A	5.6 (EB LT) **41.3 (SB LT)** 1.6 (Entire)	A **E** A
4	SR 88/Irish Town Road	Side-Street Stop	10.9 (EB LT) 6.7 (WB LT) **>60 (NB LT)** **47.5 (SB LT)** 4.4 (Entire)	B A **F** **E** A	5.4 (EB LT) 15.3 (WB LT) **>130 (NB LT)** **>75 (SB LT)** 10.0 (Entire)	A C **F** **F** A
5	SR 88/Church Street	Pedestrian Crossing / Side-Street Stop	23.6 (EB LT) 12.5 (WB LT) 16.9 (NB LT) 17.6 (SB LT) 5.6 (Entire)	C B C C A	9.8 (EB LT) 21.1 (WB LT) 17.0 (NB LT) 16.6 (SB LT) 4.4 (Entire)	A C C C A
6	SR 88/Volcano Road	Side-Street Stop	21.6 (EB LT) 5.3 (WB LT) **>100 (NB LT)** **>180 (SB LT)** **>180 (SB RT)** **54.3 (Entire)**	C A **F** **F** **F** **F**	10.8 (EB LT) 9.5 (WB LT) **>100 (NB LT)** **>180 (SB LT)** **>180 (SB RT)** **38.3 (Entire)**	B A **F** **F** **F** **E**
7	SR 88/Mount Zion Road	Side-Street Stop	4.0 (WB LT) **>110 (NB LT)** 4.2 (Entire)	A **F** A	11.0 (WB LT) **>60 (NB LT)** 1.8 (Entire)	B **F** A
8	SR 88/Gold Mine Road	Side-Street Stop	10.2 (EB LT) **37.2 (SB LT)** 1.4 (Entire)	B **E** A	4.4 (EB LT) **39.5 (SB LT)** 1.6 (Entire)	A **E** A
9	SR 88/Tabeaud Road	Side-Street Stop	6.1 (WB LT) **>180 (NB LT)** **>110 (Entire)**	A **F** **F**	8.6 (WB LT) **>90 (NB LT)** 7.3 (Entire)	A **F** A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	10.6 (EB LT) 5.1 (WB LT) 34.5 (NB LT) 9.2 (NB RT) 2.3 (Entire)	B A D A A	4.1 (EB LT) 9.3 (WB LT) **39.4 (NB LT)** 9.2 (NB RT) 2.3 (Entire)	A A **E** A A
11	SR 88/Pine Grove Market	Side-Street Stop	5.0 (WB LT) **>90 (NB LT)** 4.9 (NB RT) 3.1 (Entire)	A **F** A A	9.5 (WB LT) **45.3 (NB LT)** 12.4 (NB RT) 2.1 (Entire)	A **E** B A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals, and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop-controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

Table 2.1.3-9: Intersection Analysis – 2044 Build Alternative Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	3.4 (EB LT)	A	1.8 (EB LT)	A
			8.9 (SB LT)	A	6.8 (SB LT)	A
			1.2 (Entire)	A	1.4 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	10.1 (Entire)	B	11.6 (Entire)	B
3	SR 88/Berry Street	Side-Street Stop	23.6 (EB LT)	C	14.2 (EB LT)	B
			>80 (SB LT)	**F**	**>150 (SB LT)**	**F**
			4.5 (Entire)	A	9.0 (Entire)	A
4	SR 88/Irish Town Road	Traffic Signal	9.1	A	10.8	B
5	SR 88/Church Street	Pedestrian Hybrid Beacon / Side-Street Stop	**53.5 (EB LT)**	**F**	12.9 (EB LT)	B
			9.1 (NB RT)	A	23.5 (NB RT)	C
			>120 (SB LT)	**F**	**>100 (SB LT)**	**F**
			7.1 (Entire)	A	4.4 (Entire)	A
6	SR 88/Volcano Road	Side-Street Stop	22.2 (Entire)	C	11.2 (Entire)	B
7	SR 88/Mount Zion Road	Side-Street Stop	7.5 (WB LT)	A	16.4 (WB LT)	C
			15.8 (NB LT)	C	**49.9 (NB LT)**	**F**
			2.5 (Entire)	A	2.2 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	23.7 (EB LT)	C	6.7 (EB LT)	A
			>60 (SB LT)	**F**	13.1 (NB LT)	**B**
			2.9 (Entire)	A	2.0 (Entire)	A
9	SR 88/Tabeaud Road	Traffic Signal	12.7 (Entire)	B	6.4 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop	**40.4 (WB LT)**	**E**	19.2 (WB LT)	B
			42.2 (NB LT)	**E**	**40.6 (NB LT)**	**E**
			13.7 (NB RT)	B	20.7 (NB RT)	C
			25.2 (Entire)	D	5.3 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	5.0 (WB LT)	A	12.5 (WB LT)	B
			>120 (NB LT)	**F**	**56.3 (NB LT)**	**F**
			3.6 (NB RT)	A	8.7 (NB RT)	A
			3.0 (Entire)	A	2.3 (Entire)	A

Notes: Intersection delay is based on the average intersection control delay for intersections with signals, and all-way stop-controlled intersections. The worst-case movement is reported for side-street stop-controlled intersections.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Traffic Operations Analysis Report 2015

With implementation of the Build Alternative, traffic operations in the project area and on the local transportation network would improve. The level of service at the modeled intersections would be generally better in both the opening year and design year compared to the No-Build Alternative. The congestion relief benefits are more clearly identified in the design year (2044), when an increased number of trips will strain the existing roadway.

As Table 2.1.3-8 shows, 8 out of 11 intersections would be operating at a level of service E or F during at least one peak hour. Improving the SR 88 corridor through Pine Grove is a critical goal of both the Amador County General Plan Circulation Element and the Amador County Regional Transportation Plan. As shown in Table 2.1.3-9, the average delay would be reduced with the Build Alternative compared to the No-Build Alternative for most intersections.

Since the project does not include additional through lanes on SR 88 through Pine Grove and generally does not increase vehicular capacity on the mainline, other strategies have been incorporated to reduce traffic conflicts and improve traffic operations on SR 88 and the intersections within the project area. These improvements include constructing formal driveways for properties that have direct access to SR 88 and reducing the total number of driveway access points along SR 88. In many locations in the project area SR 88 can be accessed anywhere along an adjacent property which can result in less efficient operations on the highway. This will be accomplished by installing sidewalks and formalizing driveways for businesses, in some cases creating a shared access point for multiple adjacent businesses. Existing street parking along SR 88 will be removed and be replaced with expanded off-street parking lots. One parking lot would be built at the southwest quadrant of the intersection of Church Street and SR 88; another parking lot would be built at the southwest corner of SR 88 and Irish Town Road.

The intersection of SR 88 and Volcano Road will be improved with a traffic signal, and the driveway exit of the Pine Grove Elementary school will be moved onto Volcano Road instead of SR 88. These improvements will help increase vehicular movement through Pine Grove and reduce congestion through improvement of operations on the highway facility, consistent with the purpose and need of the project. Vehicle queuing on SR 88 is also expected to decrease with construction of contiguous pedestrian facilities, which will improve pedestrian mobility around Pine Grove Elementary School and reduce the number of vehicle pick-up and drop off trips.

During construction of the Build Alternative, access for vehicles may be affected. Travel lane closures may occur during various phases of construction, resulting in detours and temporary traffic delays for the construction period.

Impacts to Traffic and Transportation facilities are not expected to be substantial, and these impacts would be further reduced through implementation of minimization measures provided in the Avoidance, Minimization, and Mitigation section below.

Pedestrian and Bicycle Facilities

The project would include construction of sidewalks, shoulders, crosswalks at intersections with signals, and a pedestrian hybrid signal crossing SR 88 near Church Street. Class III bicycle lanes will be provided in the widened and improved roadway shoulders. These improvements would significantly improve walkability and multimodal characteristics of SR 88 in Pine Grove. Providing better pedestrian and bicycle facilities will also help reduce the number of vehicle trips that occur within Pine Grove, most of which use SR 88 as the main route through town.

Pedestrian facilities will also provide a safe walking route to Pine Grove Elementary School for some users, which will reduce the queuing and resulting traffic impacts during peak drop-off and pick-up times. Intersections with signals and crosswalks will improve safety for pedestrians crossing SR 88, and all of these updated facilities will improve non-vehicular access and safety throughout the project area.

During construction of the Build Alternative, access for pedestrians and bicyclists may be affected. Sidewalk and shoulder closures may occur during various phases of construction, resulting in longer routes. These impacts are not expected to be substantial because the existing pedestrian and bicycle facilities are so fragmented and nonstandard.

Americans with Disabilities Act

The Build Alternative would provide sidewalks and standard shoulders throughout the project area. Wherever sidewalks or other pedestrian access is improved in the project area, access that complies with the Americans with Disabilities Act will also be provided.

Phased Construction

The Supplemental Traffic Operations Analysis Report for the project evaluated how each phase of the project would affect traffic operations if built separately from the complete project. The main conclusion from this study is that each phase of the project can function independently and would not result in any worsening of traffic operations or congestion in the project area. Because the project would not increase roadway capacity, no new bottlenecks would be introduced by only constructing part of the project. Each independent phase of the project was analyzed for its benefits to traffic operations in the project area under the following criteria:

1. Level of service standards
2. Operation of intersections with signals
3. Queuing analysis
4. Total vehicle hours of delay
5. Total number of stops
6. Total average delay per vehicle
7. Total vehicle miles of travel
8. Total fuel consumption
9. Total vehicle emissions
10. Average travel speed on SR 88

Based on results of the opening year 2024 and design year 2044 morning and afternoon peak hour intersection level of service operations analysis, 95th percentile queuing analysis, and network-wide measures of effectiveness analysis, the Supplemental Traffic Operations Analysis Report concluded that Phase A would provide the highest level of benefits to vehicles, trucks, pedestrians and bicyclists for the entire project study area. Phase B would provide a moderate/low level of benefits to vehicles, trucks, pedestrian, and bicyclists for the entire project study area. Phase C would provide a moderate level of benefits to vehicles, trucks, pedestrian, and bicyclists for the entire project study area.

All three phases do provide tangible benefits for each of the modes of transportation and meet the overall purpose and need of the project; however, based on the Supplemental Traffic Operations Analysis Report, Phase A should be built first because it would provide the greatest transportation benefits to SR 88 and the Pine Grove community. Because Phase A provides the

greatest transportation benefits to SR 88 and the Pine Grove community, it is expected that network performance will not be negatively affected because Phases B and C will be built at later dates.

When comparing the full project with just Phase A for both 2024 and 2024 conditions, most intersections within the study area would operate with the same or similar LOS. The key exceptions are the intersections of SR 88/Tabeaud Road and SR 88/Mt. Zion Road. It is understandable that these intersections would operate at substantially worse level of service under the Phase A conditions since the improvements planned for those intersections would occur with Phase C. None of the intersections studied in the project are would operate at substantially worse conditions when comparing Phase A with the No-Build Alternative for both 2024 and 2044. Intersection analysis for Phase A in 2024 and 2044 is provided in Tables 2.1.3-10 and 2.1.3-11 respectively.

Table 2.1.3-10: Intersection Analysis – 2024 With Phase A Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	3.0 (EB LT)	A	2.1 (EB LT)	A
			8.1 (SB LT)	A	8.4 (SB LT)	A
			4.7 (Entire)	A	3.7 (Entire)	A
			1.6 (Entire)	A	2.1 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	7.9	A	11.2	B
3	SR 88/Berry Street	Side-Street Stop	9.9 (EB LT)	A	6.2 (EB LT)	A
			26.3 (SB LT)	D	19.2 (SB LT)	C
			13.6 (SB RT)	B	5.4(SB RT)	A
			1.4 (Entire)	A	2.1 (Entire)	A
4	SR 88/Irish Town Road	Side-Street Stop	9.6 (EB LT)	A	4.0 (EB LT)	A
			5.4 (WB LT)	A	10.2 (WB LT)	B
			40.4 (NB LT)	**E**	**42.5 (NB LT)**	**E**
			6.1 (NB RT)	A	14.7 (NB RT)	B
			31.1 (SB LT)	D	30.9 (SB LT)	D
			19.2 (SB RT)	C	8.8 (SB RT)	A
			3.4 (Entire)	A	3.0 (Entire)	A
5	SR 88/Church Street	Pedestrian Hybrid Beacon / Side-Street Stop	22.6 (EB LT)	C	8.4 (EB LT)	A
			3.7 (NB RT)	A	11.7 (NB RT)	B
			14.9 (SB LT)	B	**45.2 (SB LT)**	**E**
			12.7 (SB RT)	B	5.8 (SB RT)	A
			5.3 (Entire)	A	3.4 (Entire)	A
6	SR 88/Volcano Road	Traffic Signal	12.6 (Entire)	B	6.3 (Entire)	A
7	SR 88/Mount Zion Road	Side-Street Stop	3.7 (WB LT)	A	7.3 (WB LT)	A
			>80 (NB LT)	**F**	31.3 (NB LT)	D
			5.8 (NB RT)	A	7.7 (NB RT)	A
			3.0 (Entire)	A	1.4 (Entire)	A
8	SR 88/Gold Mine Road	Side-Street Stop	7.9 (EB LT)	A	3.4 (EB LT)	A

			29.3 (SB LT)	D	17.4 (SB LT)	C
			9.1 (SB RT)	A	4.6 (SB RT)	A
			1.2 (Entire)	A	1.4 (Entire)	A
9	SR 88/Tabeaud Road	Side-Street Stop	5.2 (WB LT)	A	2.6 (WB LT)	A
			>120 (NB LT)	**F**	32.1 (NB LT)	D
			77.2 (NB RT)	**F**	9.1 (NB RT)	A
			20.7 (Entire)	C	3.7 (Entire)	A
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop / Pedestrian Signal	8.4 (WB LT)	A	10.6 (WB LT)	B
			44.3 (NB LT)	**E**	**39.5 (NB LT)**	**E**
			9.7 (NB RT)	A	13.7 (NB RT)	B
			6.4 (Entire)	A	3.7 (Entire)	A
11	SR 88/Pine Grove Market	Side-Street Stop	3.6 (WB LT)	A	7.3 (WB LT)	A
			38.6 (NB LT)	**E**	23.7 (NB LT)	C
			3.9 (NB RT)	A	9.0 (NB RT)	A
			2.1 (Entire)	A	2.0 (Entire)	A

Notes: SimTraffic Version 8.0 report output for 12 runs. **Bold and underlined** identifies unacceptable operations.
SB = Southbound, NB = Northbound, LT = Left Turn

Source: Supplemental Traffic Operations Analysis Report 2015

Table 2.1.3-11: Intersection Analysis – 2044 With Phase A Conditions

Intersection		Control	Morning Peak Hour		Afternoon Peak Hour	
			Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	SR 88/Climax Road	Side-Street Stop	3.0 (EB LT)	A	3.1 (EB LT)	A
			11.5 (SB LT)	B	12.5 (SB LT)	B
			5.8 (SB RT)	A	6.0 (SB RT)	A
			2.1 (Entire)	A	2.8 (Entire)	A
2	SR 88/Ridge Road	Traffic Signal	6.2	A	15.0	B
3	SR 88/Berry Street	Side-Street Stop	15.4 (EB LT)	C	15.1 (EB LT)	C
			>70 (SB LT)	**F**	**>120 (SB LT)**	**F**
			37.7 (SB RT)	**E**	**>120(SB RT)**	**F**
			3.0 (Entire)	A	11.4 (Entire)	B
4	SR 88/Irish Town Road	Traffic Signal	7.1	A	9.5	A
5	SR 88/Church Street	Pedestrian Hybrid Beacon / Side-Street Stop	**37.6 (EB LT)**	**E**	10.0 (EB LT)	A
			6.9 (NB RT)	A	24.4 (NB RT)	C
			>80 (SB LT)	**F**	**>100 (SB LT)**	**F**
			40.6 (SB RT)	**E**	12.1 (SB RT)	B
			5.2 (Entire)	A	4.2 (Entire)	A
6	SR 88/Volcano Road	Traffic Signal	16.7	B	10.6	B
7	SR 88/Mount Zion Road	Side-Street Stop	6.5 (WB LT)	A	15.8 (WB LT)	C
			>100 (NB LT)	**F**	**>120 (NB LT)**	**F**
			>100 (NB RT)	**F**	29.7 (NB RT)	D
			18.5 (Entire)	C	4.6 (Entire)	A

8	SR 88/Gold Mine Road	Side-Street Stop	16.3 (EB LT) **>70 (SB LT)** 20.4 (SB RT) 2.6 (Entire)	C **F** C A	5.3 (EB LT) **42.2 (SB LT)** 8.3 (SB RT) 2.3 (Entire)	A **E** A A
9	SR 88/Tabeaud Road	Side-Street Stop	8.2 (WB LT) **>120 (NB LT)** **>120 (NB RT)** **>120 (Entire)**	A **F** **F** **F**	15.7 (WB LT) **>120 (NB LT)** **>120 (NB RT)** 20.3 (Entire)	C **F** **F** C
10	SR 88/Pine Grove Village/Pine Grove Elementary School	Side-Street Stop / Pedestrian Signal	16.4 (WB LT) **43.7 (NB LT)** 13.5 (NB RT) 9.3 (Entire)	C **E** B A	22.9 (WB LT) **43.4 (NB LT)** 22.2 (NB RT) 5.4 (Entire)	C **E** C A
11	SR 88/Pine Grove Market	Side-Street Stop	5.4 (WB LT) **>120 (NB LT)** 6.5 (NB RT) 4.5 (Entire)	A **F** A A	13.0 (WB LT) **50.6 (NB LT)** 15.9 (NB RT) 2.6 (Entire)	B **F** C A
Notes: SimTraffic Version 8.0 report output for 12 runs. **Bold and underlined** identifies unacceptable operations. *SB = Southbound, NB = Northbound, LT = Left Turn*						

Source: Supplemental Traffic Operations Analysis Report 2015

No-Build Alternative

Results of the traffic operations analyses for intersections, presented in Tables 2.1.3-6 through 2.1.3-9, indicate deficiencies under existing and future conditions. Nearly all intersections in and around the project area would suffer worse congestion conditions under the No-Build Alternative in 2024, and traffic conditions are expected to continue to worsen through 2044. The No-Build Alternative would be inconsistent with the Amador County General Plan and the Amador County Regional Transportation Plan.

Under the No-Build Alternative, no improvements would be made for bicycle and pedestrian facilities, and accessibility and connectivity would remain deficient in the project area. The No-Build Alternative would not change existing traffic patterns for residents and businesses. Under the No-Build Alternative, no improvements would be constructed; therefore, construction period effects on the transportation system do not apply to this alternative.

Avoidance, Minimization and/or Mitigation Measures

To ensure that there are no negative effects on existing transportation, a Transportation Management Plan (Measure UTL/ES-2) for the Build Alternative would be developed and implemented. If the project is built in phases, all applicable avoidance, minimization, and mitigation measures would be implemented during each construction phase and the following measures would be implemented to minimize traffic impacts in the project vicinity:

Measure TRAF-1: All existing non-motorized facilities will be maintained to Americans with Disabilities Act standards.

Measure TRAF-2: To minimize the temporary effects to travelers, a Traffic Management Plan will be prepared. Such strategies might include public information campaigns, motorist information, incident management, and inclusion of night work for construction activities.

2.1.4 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, as well as aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act (23 U.S. 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.

The California Environmental Quality Act 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

A Visual Impact Assessment (February 2015) was prepared to evaluate potential impacts the proposed project could have on visual resources in the project area. The report was prepared to define the project setting and viewshed (the area in view), identify key views for visual assessment, analyze existing visual resources and viewer response, show the visual appearance of project alternatives, assess the visual impacts of project alternatives, and propose methods to reduce adverse visual impacts.

The project lies in the Sierra Nevada Foothills. The land use within the corridor is primarily urban, including residential and commercial areas as well as a school and a park. The study area also includes of montane hardwood-conifer, disturbed nonnative annual grasslands, montane riparian, and mixed chaparral. The regional vegetation typically includes oak-dominant and grassland-dominant series such as that California annual grassland series. See Section 2.3.1 Natural Communities for more information on the habitat types in the project area.

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur as a result of the project. The three criteria for evaluating visual quality are defined below:

- **Vividness** is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- **Intactness** is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- **Unity** is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The project study area was divides into a series of “outdoor rooms” or visual assessment units, each with its own visual character and visual quality. It is typically defined by the limits of a particular viewshed and referred to as key viewpoints.

The existing visual quality of the project area is moderate to moderate-low because of the lack of vividness, intactness, and unity of the adjacent visual elements and landscape units. Farther east, SR 88 is a State Scenic Highway. In the project area, SR 88 is not a State Scenic Highway, but has been identified as eligible for that status in the future in the streets and highway code. Character through the town of Pine Grove lacks notable or distinctive features signifying the history of the highway. Because the existing visual character of the project area is a combination of natural and constructed elements, this leads to a moderate intactness and unity due to the variations between build/man-made landscapes and undeveloped land.

The Built/Residential landscape unit consists of SR 88, Ridge Road, Tabeaud Road, Volcano Road, and other side streets, as well as adjacent commercial buildings, residential neighborhoods, and an elementary school. The highway is also in need of repair in this area with gravel shoulders and unfinished asphalt edges that detract from the unity of the highway.

The Open Space landscape unit is comprised of natural open space surfaces with maintained park areas, montane forest, and riparian areas.

Four types of viewer groups would use the project vicinity and have been identified as motorists, recreationists, residents, and business owners:

- Motorists—their sensitivity is low because of the relatively short time spent along the proposed project area. Views from the roadway are minimally exposed because of the topography and dense woodland vegetation.

- Recreationists—this group consists of individuals visiting the town and/or nearby recreation areas. They have a high sensitivity, but they are only occasional viewers of the area and their views can be obscured by the topography.

- Residents of the town of Pine Grove—their sensitivity is high because of the amount of time they spend in the area and possible changes to their views if their homes face SR 88. Many of these views are partially obscured by the steep cut slopes on either side of SR 88.

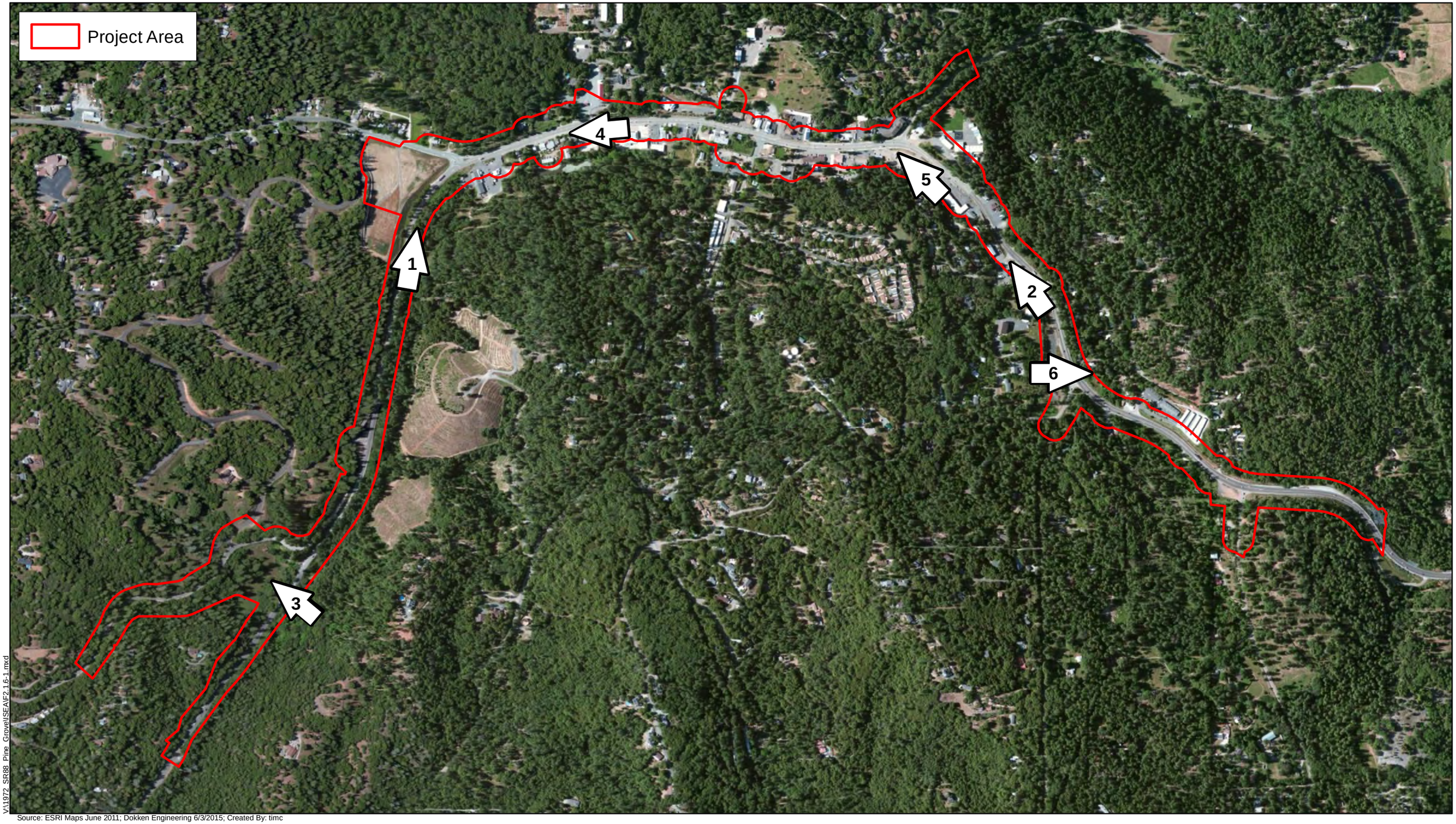
- Commercial businesses—their viewer exposure is high because of their long-term and constant presence in the area. Their viewer awareness is moderate because most of the businesses sit along the flatter portion of SR 88, where there are fewer steep slopes and a lack of memorable distant views. It is also presumed that commercial businesses in the project area were not likely drawn to this location because of the viewshed.

Environmental Consequences

Build Alternative

Key viewpoints 1, 2, 3, 4, 5 and 6 were selected to display the visual results of the proposed project as viewed from primary viewer groups potentially affected. The visual quality of each key

view was quantified using an evaluation scale of 1-7 (1=Very Low, 4=Medium, 7=Very High) for vividness, intactness, and unity. Vividness, intactness, and unity were evaluated for landscape units 1) inside the right-of-way, 2) outside the right-of-way within the local landscape unit, and 3) outside the right-of-way outside the local landscape unit. The location and direction of each key view are shown in Figure 2.1.4-1.



V:\1972_SR88_Pine_Grove\SEA\F2.1.6-1.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2015; Created By: timc

0 0.25 0.5 0.75 1 Miles

FIGURE 2.1.4-1
Visual Assessment Units
SR 88 Pine Grove Corridor Project
Pine Grove, Amador County, California
EA 10-0G550; PM 21.6/24.6

Key Viewpoint 1 – Facing North on SR 88

Key View 1 shows the view from the eastbound lanes along SR 88 looking north toward the intersection with Ridge Road. This photograph was taken on SR 88 west of the Ridge Road intersection. This view is typical of that experienced by motorists traveling on SR 88 as they approach Pine Grove from the west. The open-space landscape unit and the built landscape equally show in this view. The background vista encompasses evergreen forest behind the intersection of Ridge Road and SR 88, with utilities overhead. The immediate foreground shows SR 88 and road signs. The middle ground consists of SR 88, graded land with sparse grass and duff, and a small number of evergreen trees. No residences or businesses within the project vicinity have a view of the existing facility.

Key View 1 is of low to moderate visual quality. Viewers of this key view are motorists. Due to their low sensitivity, viewer response is anticipated to be moderate-low. The level of vividness is due to the road that breaks up the natural environment, including the existing trees within the open space, which does not create a vivid or memorable experience. Intactness and unity is also lower than moderate due to the moderate amount of development within the project vicinity for that creates a neither intact nor unified landscape unit.

With the Build Alternative, visual quality will remain moderately low. The proposed road improvements would increase pavement width and would include pedestrian and cycling facilities. Viewers in this location will continue to be primarily motorists traveling east on SR 88 who are not considered high sensitivity viewers, as exposure to the proposed structure will be fleeting. Due to the road being wider, more paved surfaces will be visible and open space in the middle ground will be more obscured. Background tree tops will still be visible. Intactness and unity were rated slightly higher with the build condition due to improved conditions and a new facility. There will be a slight positive impact on the existing visual quality or character. Based on the visual condition of the proposed alternative from this key view, and considering visual character and visual quality, the overall level of resource change is moderate-low.

Figure 2.1.4-2: Key Viewpoint 1 Existing Conditions

Key Viewpoint 2 – Facing East Near Hilltop Road

Key View 2 shows the view looking east at SR 88 toward Hilltop Road. This view is typical of that experienced by motorists and recreationists along SR 88. The photograph shows the open space and built landscape units in the viewshed. The background consists of the existing trees next to SR 88 that are of a mostly homogenous color, texture, and form. The immediate foreground consists of the shoulder of SR 88 and road signs. The middle ground consists of SR 88, the driveway for a business, grassy median, a gravel lot, road signs, and overhead utility lines.

Key View 2 is of low to moderate visual quality. Vividness is moderate-low due to the lack of memorable natural or manmade features existing within the project areas. Intactness and unity are moderate, based on the relatively small amount of man-made features in the view and general visual compatibility between them.

The Build Alternative view will include a wider roadway with formalized driveways and pedestrian facilities. The visual quality will remain moderately low. The proposed road improvements form the center of this view with an increased pavement width including pedestrian and cycling facilities. Because the road would be wider, more paved surfaces will be visible and open space in the middle ground will be more obscured. Background tree tops will still be visible. Intactness and unity are slightly higher with the build condition due to improved conditions and a new facility. Viewers in this location will continue to be mainly motorists traveling east on SR 88 who are not considered high sensitivity viewers, as exposure to the proposed structure will be fleeting. Viewers are anticipated to have moderate-low viewer response. Vividness and intactness would be increased due to fewer areas showing disrepair and an increased ease of walking and cycling in the area. While the proposed project will have improved vividness and intactness, the overall visual quality rating still remains moderately low. The unity for the view will increase moderately, as driveways and pedestrian facilities are improved with a continuous design scheme. When considering visual character and visual quality, the overall level of resource change is moderate.

Figure 2.1.4-3: Key Viewpoint 2 Existing Conditions

Key Viewpoint 3 – Facing Northwest, Southwest of the SR 88 and Climax Road Intersection

Key View 3 shows the view from the eastbound lanes along SR 88 looking northwest to the new proposed location of Climax Road. This photograph was taken on SR 88 south of the existing Climax Road intersection. The view is typical of that experienced by motorists traveling on SR 88 as they approach Pine Grove from the west. The open-space landscape unit dominates the view. The background vista encompasses evergreen forest throughout the proposed Climax Road intersection with SR 88, with utilities overhead. The immediate foreground shows SR 88 and evergreen forest with a utility pole. The middle ground consists of SR 88, graded land with sparse grass and duff, and a few evergreen trees. No residences or businesses in the project vicinity have a view of the existing facility. Key View 3 is of low to moderate visual quality. Viewers of this key view are motorists. Viewer response is anticipated to be moderate-low.

The existing view has visual quality less than moderate for all three categories. Vividness is low because of the lack of memorability of the landscape. The view lacks contrasting landscape that has components with striking and distinctive visual patterns. Intactness and unity are also lower than moderate because of the moderate amount of development in the project vicinity that creates a landscape unit that is neither intact nor unified.

With the build alternative, visual quality will remain moderately low. The proposed road improvements form the center of this view with additional pavement. Viewers in this location will continue to be mainly motorists traveling east and west on SR 88 who are not considered high sensitivity viewers because exposure to the road will be fleeting. With construction, more paved surfaces will be visible and open space in the middle ground will be more obscured. Background tree tops will still be visible. Intactness and unity were rated slightly lower with the build condition due to the addition of a new road. There will be a slight negative impact on the existing visual quality or character. Based on the visual condition of the proposed alternative from this key view, and considering visual character and visual quality, the overall level of resource change is moderate-low. Figure 2.1.4-4 shows a visual simulation of what the proposed condition of the realigned Climax Road would look like.

Figure 2.1.4-3: Key Viewpoint 3 Existing Conditions

Figure 2.1.4-4: Key Viewpoint 3 Proposed Condition (Simulation)

Key Viewpoint 4 – Facing West on SR 88 from the Town of Pine Grove

Key View 4 shows the view from the town of Pine Grove looking west down SR 88. This photograph was from the parking lot of a business along SR 88. The view is typical of that experienced by motorists, residents, and business owners in Pine Grove. The photograph shows the built landscape units in the viewshed. The background consists of the intersection of Ridge Road and SR 88 with utilities and traffic lights, as well as a portion of steep human-made cut slope and a small amount of homogenous forest. The immediate foreground consists of the shoulder of SR 88 with asphalt patches. The middle ground consists of businesses and residences along SR 88, with utilities and road signs. Viewers are of all types and viewer response is expected to be moderate-low.

Key View 4 is of low to moderate visual quality. The lower than moderate vividness rating is attributed to the lack of memorable natural or manmade features existing within the project areas. Intactness and unity are moderately low based on the road and built environment existing in the view and lack of visual cohesion between them.

With the Build Alternative, visual quality will remain moderately low. The project would include a wider roadway with formalized driveways and parking areas. Vividness and intactness would increase due to increased ease of parking and fewer areas showing disrepair. While the project will improve vividness and intactness, the overall visual quality rating would still remain moderately low. The unity for the view will increase moderately, as driveways and pedestrian facilities are improved with a continuous design scheme. There will be a slight positive impact on the existing visual quality or character. Based on the visual condition of the proposed alternative from this key view, and considering visual character and visual quality, the overall level of resource change is moderate.

Figure 2.1.4-5: Key Viewpoint 4 Existing Conditions

Key Viewpoint 5 – Facing North toward SR 88 near Volcano Road

Key View 5 shows the view facing north from the gravel lot south of the intersection of SR 88 and Volcano Road. This view is typical of that experienced by residents and business owners, who often use this area as overflow parking due to lack of adequate parking for businesses in the town of Pine Grove. Both built and open-space landscape units are in this view. The background consists of homogenous forest behind a business development. The immediate foreground consists of the gravel lot and vehicles. The middle ground consists of SR 88 and overhead utilities. Viewers are residents. Viewer response is expected to be low.

Key View 5 is of low visual quality. Vividness is low due to the lack of memorable natural or manmade features existing within the view. Intactness and unity are rated moderately low based on the number of man-built features in the view and lack of visual compatibility between them.

With the Build Alternative, visual quality will improve slightly. The project would include a wider roadway with formalized driveways and parking areas, including improvements to the gravel lot. Vividness and intactness would increase due to increased ease of parking and fewer areas showing disrepair and potholes. Due to these improvements, the proposed project will have an overall visual quality rating that remains moderate. The unity for the view will increase moderately, as driveways and pedestrian facilities are improved with a continuous design scheme. There will be a slight positive impact on the existing visual quality or character. Based on the visual condition of the proposed alternative from this key view, and considering visual character and visual quality, the overall level of resource change is moderate-low.

Figure 2.1.4-6: Key Viewpoint 5 Existing Conditions

Key Viewpoint 6 – Facing East toward SR 88 near Gold Mine Road

Key View 6 shows the view from in front of a set of business offices on the north side of SR 88 at Gold Mine Road. This photograph was taken facing east from the grass between the offices and the driveway. This view is typical of that experienced by businesses along SR 88. The photograph shows the open space landscape units in the viewshed. The background consists of the existing trees next to SR 88 to the south that are mostly homogenous in color, texture, and form. The immediate foreground consists of the landscaped grassy area in front of the business offices. The middle ground consists of SR 88, the driveway for the business, grassy median, gravel lot, portion of Gold Mine road, and overhead utility lines. Viewers are residents and business. Viewer response is moderate-low.

Key View 6 is of low to moderate visual quality. Vividness is lower than moderate due to the lack of memorable natural or manmade features existing within the project areas. Intactness and unity are rated moderately low based on the number of man-made features in the view and lack of visual compatibility between them, as well as lack of compatibility with the natural features.

With the Build Alternative, visual quality will remain moderately low. The proposed project would include a wider roadway with formalized driveways and pedestrian facilities. Vividness and intactness increased due to fewer areas showing disrepair, improvement of the intersection, and increased ease of walking and cycling in the area. While the proposed project will have improved vividness and intactness, the overall visual quality rating still remains moderately low. The unity for the view will increase moderately, as driveways and pedestrian facilities are improved with a continuous design scheme. There will be a slight positive impact on the existing visual quality or character. Based on the visual condition from this key view, and considering visual character and visual quality, the overall level of resource change is moderate.

Figure 2.1.4-7: Key Viewpoint 6 Existing Conditions

The changes to SR-88 will not substantially impair or diminish the public's visual enjoyment of the area. The proposed road improvements will constitute a moderate change from the existing roadway, and the road will not be out of place or represent an undue change from what will typically be anticipated in a highway setting. Noticeable change along SR-88 will be viewed by motorists traveling on SR-88 or turning onto SR-88 from adjoining roads, as the result of additional pavement, new turn lanes, new pedestrian and bicycle facilities, and new utility and light poles. Changes will also be viewed by business owners as parking in front of Pine Grove businesses is formalized and expanded.

Light and Glare: Standard street lighting along SR 88 will not add a new source of lighting to the area. Any additional lighting required will be shielded with downcasting. Substantial light or glare is not expected because Caltrans lighting standards will be used.

Temporary Impacts

During construction of the proposed project, temporary activities in the project area will be visible to motorists traveling along SR 88 and the adjacent roadways, as well as from surrounding business and residential properties that operate within project vicinity. These temporary activities include grading, asphalt laying, excavation, truck movement and truck shipments, and other routine construction activities. Construction-related materials, such as road-building material, stockpiles, temporary traffic barriers, and construction equipment will be visible to these viewer groups. These areas may also be lighted during construction. Motorists and other viewer groups will experience a change in their physical view of the highway; however, the change is temporary and construction will be subject to local state ordinances on construction time periods and lighting. The construction area will be kept neat and orderly with regard to trash. Standard special provisions regarding site maintenance will be implemented.

No-Build Alternative

The No-Build Alternative will not result in changes to SR-88. There will be no change in resources or the viewer's response.

Avoidance, Minimization and/or Mitigation Measures

The SR 88/Pine Grove Road Improvements Project will not change the visual quality of the immediate area or detrimentally affect views of the location. The following measures to minimize visual impacts will be incorporated into the project:

Measure VR-1: Any riparian and/or upland vegetation removal necessary to provide space for construction activities will be replaced through a revegetation plan developed in coordination between the Amador County Transportation Commission and Caltrans. The revegetation plan will be developed to address the loss of vegetation resulting from construction.

Measure VR-2: Projects will be subject to the requirements of all relevant guidelines as identified in the County of Amador's General Plans and all other applicable standards, policies, guidelines, and/or regulations pertaining to scenic vistas/aesthetic resources.

Measure VR-3: A lighting plan will be developed to require project lighting to be appropriately shielded. The project's lighting design will be consistent with the Amador County lighting guidelines and standards.

Measure VR-4: Architectural features, developed in coordination with the Amador County Transportation Commission, will be considered, as appropriate, to meet the desired goals of the community. These features may include hardscape, street lights, retaining wall aesthetics, or other aesthetic design features.

2.2 Physical Environment

2.2.1 Hydrology and Floodplain

Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A.

The following must be analyzed for agencies to comply with the regulation:

- Practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Affected Environment

This section is summarized from the Floodplain Evaluation Memorandum (March 2015) and the Preliminary Drainage Report (May 2015).

A review of the Federal Emergency Management Agency Flood Insurance Rate Maps found that no 100-year floodplains occur in the proposed project area. A Location Hydraulic Study was not required for the project because the proposed improvements would not encroach on the 100-year floodplain.

The project area has a Mediterranean-type climate characterized by wet, moderate winters and warm, dry summers. On average, Amador County has about 260 dry days per year with a typical high temperature of 96˚Fahrenheit and a typical low of 34˚Fahrenheit. The average annual precipitation is about 40 inches.

Existing drainage facilities used to convey off-site runoff consist of cross culverts, ranging in size from 18 to 48 inches in diameter. On-site drainage facilities used to convey water from the roadway consist of roadside ditches, inlets/storm drains, downdrains, and asphalt concrete overside drains.

Environmental Consequences

<u>Build Alternative</u>

Drainage from the project area is conveyed to Jackson Creek or one of two Grass Valley Creek tributaries. The proposed project will increase the amount of impervious surface within the

project limits. As a result, it is expected that peak flow runoff from the project site will increase accordingly. Based on the hydrological analysis prepared in the Preliminary Drainage Report prepared for the project, runoff to two of the three water features that receive flow from the project site will increase. Table 2.2.1-1 shows the existing flows, proposed flows with the project, and the modeled change in flow for each of these drainage features.

Table 2.2.1-1: Change in 100-Year Peak Flow

Creek	Existing Flow (cubic feet/second)	Proposed Flow (cubic feet/second)	Change in Flow (cubic feet/second)
Jackson Creek	459.2	460.0	0.8
Grass Valley Creek Tributary 1	247.3	248.7	1.4
Grass Valley Creek Tributary 2	111.0	111.0	0.0

Source: Preliminary Drainage Report, 2015

The proposed project improvements include providing standard shoulders along SR 88, realigning local road intersections with SR 88, and adding sidewalk along eastbound SR 88 through Pine Grove. These improvements will require that existing drainage facilities, including roadside ditches, overside drains, inlets, storm drains, and cross culverts, be modified or replaced to maintain existing drainage patterns. In addition, two detention basins will be needed to reduce runoff to pre-project conditions. This preliminary analysis focuses on calculating peak flows for the drainage facilities that have the potential to impact environmental and right of way limits, such as ditches (roadside and top of cut) and detention basins. Hydrologic analyses for other on-site facilities will be performed during final design.

Two detention basins will be used to attenuate peak flow runoff: one within the Jackson Creek watershed, proposed to be located just east of the SR 88/Climax Road intersection, and one within the Grass Valley Creek Tributary 1 watershed, proposed to be located just west of the SR 88/Mount Zion Road intersection. These detention basins have been designed to provide adequate hydrologic capacity for a 100-year peak storm flow. Improvements to storm drain facilities would be sized to provide adequate hydrological capacity for the project area. By providing this additional hydrologic capacity no adverse environmental impacts to hydrology and water quality are expected with the proposed project.

No-Build Alternative

Under the No-Build Alternative, no construction would take place and there would be no changes to the existing hydrology or floodplain conditions; therefore, there would be no potential for impacts.

Avoidance, Minimization and/or Mitigation Measures

Measure HYD-1: Detention basis will be incorporated into the final design of the project to provide adequate hydrologic capacity for 100 year peak storm event flow.

Measure HYD-2: Improvements to storm drain facilities will be sized to provide adequate hydrologic capacity based on increases in impervious surfaces. Final storm drain improvements will be determined during final design.

2.2.2 Water Quality and Storm Water Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States from any point source[1] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the National Pollutant Discharge Elimination System permit scheme. The following are important sections of the Clean Water Act:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.
- Section 401 requires the applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge would comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers.

The goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers’ Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the U.S. Army Corps of Engineers decision to approve is based on compliance with the U.S. Environmental Protection Agency’s Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (guidelines) were developed by the U.S. EPA in conjunction with the U.S.

[1] A point source is any discrete conveyance such as a pipe or a human-made ditch.

Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The guidelines also restrict permitting activities that violate water quality or toxic effluent[2] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 Code of Federal Regulations 320.4. A discussion of the least environmentally damaging practicable alternative determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Clean Water Act and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Also, it prohibits discharges of "waste" as defined, and this definition is broader than the Clean Water Act definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act, and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable Regional Water Quality Control Board Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, the State Water Resources Control Board identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (National Pollutant Discharge Elimination System permits or WDRs), the Clean Water Act requires the establishment of Total Maximum Daily Loads (TMDLs). Total Maximum Daily Loads specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water

[2] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and National Pollutant Discharge Elimination System permits. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollutant Discharge Elimination System Program**

  Municipal Separate Storm Sewer Systems (MS4)

  Section 402(p) of the Clean Water Act requires the issuance of National Pollutant Discharge Elimination System permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). The U.S. EPA defines an MS4 as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water.” The State Water Resources Control Board has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. The State Water Resources Control Board or the Regional Water Quality Control Board issues National Pollutant Discharge Elimination System permits for five years, and permit requirements remain active until a new permit has been adopted.

  Caltrans’ MS4 Permit (Order No. 2012-0011-DWQ) was adopted on September 19, 2012 and became effective on July 1, 2013. The permit has three basic requirements:

  1. Caltrans must comply with the requirements of the Construction General Permit (see below).
  2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges.
  3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the State Water Resources Control Board determines to be necessary to meet the water quality standards.

  To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

  Construction General Permit

  The Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges

from construction sites that result in a Disturbed Soil Area of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to the Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the Regional Water Quality Control Board. Operators of regulated construction sites are required to develop storm water pollution prevention plans; implement sediment, erosion, and pollution prevention control measures; and obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, and 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans' Standard Specifications, a Water Pollution Control Plan is necessary for projects with a Disturbed Soil Area of less than one acre.

- **Section 401 Permitting**

  Under Section 401 of the Clean Water Act, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project would be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are Clean Water Act Section 404 permits issued by the U.S. Army Corps of Engineers. The 401 permit certifications are obtained from the appropriate Regional Water Quality Control Boards, dependent on the project location, and are required before the U.S. Army Corps of Engineers issues a 404 permit.

  In some cases the Regional Water Quality Control Boards may have specific concerns with discharges associated with a project. As a result, the Regional Water Quality Control Board may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Affected Environment

A *Water Quality Assessment* for the SR 88 Pine Grove Corridor Improvement Project was completed in May 2013. The project area contains many creeks, streams, and mountainous features. Topographical features in the project vicinity include Mount Zion within Mount Zion State Forest to the south and the Sierra Mountains to the east. Within the project vicinity, the elevation ranges from 2,300 to 2,550 feet above mean sea level.

The topography of the area is typical of the Sierra Nevada foothill terrain. Local drainage basins are relatively small. River channels are fairly steep and well defined. Slopes for this area range between 15% and 20%. Vegetation is good to fair with species of pine and oak with undercover of brushes, and grasses. Runoff storage is limited. No sole-source aquifers are at or near the project area (EPA 2010).

The proposed project lies within the Upper Mokelumne subbasin, which is part of the San Joaquin River basin and subregion. The San Joaquin basin includes the entire area drained by the San Joaquin River, which is approximately 15,880 square miles. Major tributaries within the basin are the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno rivers. Major water bodies are the Pardee, New Hogan, Millerton, McClure, Don Pedro, and New Melones reservoirs. All drainage water from the San Joaquin and Sacramento rivers ultimately meet and form the Sacramento-San Joaquin Delta and ultimately drain west to the Pacific Ocean through the San Francisco Bay. Within the Upper Mokelumne subbasin, the hydrologic subbasins are divided into watersheds and subwatersheds. The proposed project is within the Sutter Creek and Jackson Creek watershed within the Upper Jackson Creek and Upper Sutter Creek subwatershed.

Within the project area, two waters of the U.S. and state were identified: Jackson Creek and Grass Valley Creek. Jackson Creek runs parallel to SR 88 from the western side of Pine Grove to the City of Jackson. Approximately 0.65 acre is within the project area from 65 to100 feet east of SR 88. Jackson Creek contains a small to large rock substrate, with the divergence of tributaries, and is lined with dense Himalayan blackberry and other riparian corridor vegetation; it ranges from 2 to 15 feet wide with a constant flow of water. Grass Valley Creek cuts across the project area about 100 feet north of Gold Mine Road and exits the project area about 90 feet south of Gold Mine Road. Approximately 450 feet of Grass Valley Creek is within the project area. Grass Valley Creek retains its natural 2- to 3-foot-high banks, ranging from 2 to 15 feet wide, with a mix of cobble and sediment substrate within a dense montane riparian corridor.

Under the mandate of Section 303(d) of the Clean Water Act, the State is required to formulate a list of surface water bodies that exceed applicable water quality standards. Subsequently, the State is required to describe the impairment sources and prioritize these water bodies to develop Total Maximum Daily Loads. This list was updated in 2006 (SWRCB 2006) with proposed 2008 revisions available. Sutter Creek and Jackson Creek do not contain any water bodies that are listed on the State's Section 303(d) list of impaired waters. Jackson Creek and Grass Valley Creek are not listed as impaired water bodies.

Environmental Consequences

<u>Build Alternative</u>

Permanent Impacts

Project-related activities will permanently impact approximately 0.02 acre and temporarily impact approximately 0.03 acre of the Grass Valley Creek and its tributaries. Short-term water quality impacts to the groundwater via recharge will be minimal.

The project would potentially include widening of a culvert along Grass Valley Creek, which would result in an increase to the paved surface area on the adjacent SR 88. This would, in turn, increase the volume of storm water runoff from the roadway's surface that could enter the drainage system and eventually the creek itself. Roadways may contain oil, grease, petroleum

products, zinc, copper, lead, cadmium, iron, or other trace metals, any of which could harm aquatic life. Concentrations of these pollutants in storm water runoff would be greatest during the “first flush” storm event, generally the first major rains of the season.

Temporary Impacts

Short-term impacts associated with project construction activities would disturb the ground surface from earthwork, including grading and fill within Jackson Creek and Grass Valley Creek. Removal of the existing riparian vegetation would also be required, which would increase the potential for slope erosion. These activities could potentially increase the amount of sediments entering Jackson Creek and Grass Valley Creek. Runoff during the winter season is of greater concern due to the potential erosion of unprotected or graded surfaces during rains. Sediments could potentially harm aquatic resources and water quality.

Materials used during construction of the project (such as concrete curing compounds) could have chemicals that are potentially harmful to aquatic resources and water quality. Accidents or improper use of these materials could result in the release of contaminants into the environment, including the river itself. Also, oil and other petroleum products used to maintain and operate construction equipment could be accidentally released. Standard Best Management Practices would be included in the project to avoid or minimize the release of pollutants (including sediments and chemical toxins) into the environment during construction. The project would be constructed in accordance with applicable water quality regulations, and would not be expected to result in substantial water quality impacts during construction.

Suspended material is considered a pollutant of primary concern for construction projects. Loose soil exposure during excavation, grading, and filling activities during construction and its erosion are the primary source of suspended material. Most of the construction activities for this project would occur on or next to SR 88. The project would include some construction impacts to Jackson Creek and Grass Valley Creek and could temporarily increase the sediment load, thus increasing the turbidity and total dissolved solids present in stream water. The suspended solids, dissolved solids, and organic pollutants in surface water bodies could also increase while nearby soils are disturbed and dust is generated. These conditions would likely persist until construction activities are complete and long-term erosion control measures have been implemented.

Accidental spills of petroleum hydrocarbons (fuels and lubricating oils), sanitary wastes, and/or concrete waste are also a concern during construction activities. An accidental release of these wastes could adversely affect surface water quality, vegetation, and wildlife habitat, but the impact is expected to be acute and not cause a long-term impact. The extent of potential environmental effects depends on the eroding capability of the soil types encountered, type of construction practices, extent of disturbed area, duration of construction activities, timing of precipitation, and proximity to drainage channels.

Other short-term negative impacts to surface water quality that could occur during construction include slight changes in temperature, pH, dissolved oxygen, nutrient concentrations, toxicity, and ionic concentrations. These minor impacts would not have a substantial impact on water quality, but could negatively affect sensitive aquatic life.

As previously noted, Jackson Creek and Grass Valley Creek are not included in the Regional Water Quality Control Board’s list of impaired waters. Although there is the potential for a slight

increase in polluted runoff due to increased impervious surfaces, with the inclusion of standard best management practices, project impacts to water quality would be minimal.

No-Build Alternative

Under the No-Build Alternative, no construction would take place and there would be no changes to the drainage system. Consequently, there would be no impacts to water quality, and no improvements to the storm drainage system would occur.

Avoidance, Minimization and/or Mitigation Measures

The following measures are required for inclusion on applicable plans prepared for this project: All Best Management Practices and other measures should be prepared in consultation with the project engineer, Amador County Transportation Commission, Caltrans, the Regional Water Quality Control Boards, U.S. Army Corps of Engineers, and other regulatory agencies. The regulatory agencies may require additional measures that were not included in the Water Quality Assessment prepared for this project, to ensure acceptable water quality is maintained. Any requirements for additional avoidance, minimization, and/or mitigation measures will be contained in the permits obtained from all required regulatory agencies and included in the project.

Measure SWR-1: For project construction exceeding one acre, NPDES guidelines necessitate the development of a Storm Water Pollution Prevention Plan (SWPPP) by the contractor prior to construction to establish project-specific permanent and temporary Best Management Practices. During the design phase, a SWPPP will be prepared to determine the minimum control requirements to be included in the project. A Notice of Intent or Notice of Construction will be submitted to the State Water Resources Control Board along with the completed SWPPP.

Measure SWR-2: Best Management Practices include any facilities and methods used to remove, reduce, or prevent storm water runoff pollutants from entering receiving waters. Erosion control methods, temporary and permanent Best Management Practices, and improvement of drainage facilities along the roadway would minimize impacts from storm water runoff. The SWPPP and NPDES compliance measures would ensure no adverse impacts would occur to water quality associated with the Build Alternative. A list of Best Management Practices that will be incorporated into the Plans and Specifications are included in the Water Quality Assessment prepared for this project.

2.2.3 Hazardous Waste/Materials

Regulatory Setting

Hazardous materials, including hazardous substances and wastes are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The main federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned 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 waste generated by operating entities. Other federal laws include the following:

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

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

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material are vital if hazardous material is encountered, disturbed, or generated during project construction.

Affected Environment

A *Hazardous Waste Initial Site Assessment* was prepared in February 2014 for the project area; a *Hazardous Waste Initial Site Assessment Addendum* was prepared in May 2015. A Limited Phase II Environmental Site Assessment was prepared in February 2014 for the project area. The purpose of these assessments was to identify Recognized Environmental Conditions (REC) and potential Recognized Environmental Conditions within and next to the proposed improvement area that could affect the design, constructability, feasibility, and or/ cost of the proposed project. A record search of federal, state and local databases and a map review were conducted, and a field review was completed on June 19, 2013. The field review was conducted to visually confirm information gathered by aerial photos and database searches, and to ensure interviews were accurate and complete.

The entire project area, including the existing Caltrans right-of-way and many private parcels next to the right-of-way (approximately 86 acres), was evaluated for Recognized Environmental Conditions and/or Activity and Use Limitations (AULs). Recognized Environmental Conditions that have been identified in the project area are shown in Table 2.2.3-1. Recognized Environmental Conditions that could potentially be affected by construction of the project are

discussed in the Environmental Consequences section below. In addition to the parcels listed in the table, there are 19 parcels requiring a partial acquisition where no RECs and/or AUL were identified. There would be no risk to the project from hazardous waste or materials at these locations.

Within the project area there is one operating gas station (Pine Grove Station) and a former gas station site (Replanet Recycling). Either station may have a history of leaking underground fuel tanks and may require additional remediation of contaminated soils. The Pine Grove Station is located on SR 88 just southeast of the intersection at Volcano Road. Replanet Recycling is located at the site of the former Pine Grove Beacon Gas Station on the south side of SR 88 at the intersection at Ridge Road.

Buildings adjacent to SR 88 that are older than 1978 may potentially contain lead based pain and/or asbestos containing materials. Pavement striping on SR 88 and local roads may contain lead and heavy metals. There are pole-mounted electrical transformers that may contain PCBs. There could be elevated levels of petroleum hydrocarbons near any underground storage tanks. There is a potential for explosive hazards associated with the natural gas transmission pipeline within the project area.

Table 2.2.3-1: Potential Properties Requiring Acquisition and Recognized Environmental Conditions (REC) Evidence

Location	Description of Recognized Environmental Conditions Evidence Found	Description of Associated AUL	Right-of-way Acquisition	Risk to Project
030-192-002 030-192-003 (19786 SR 88)	Pre-1978 structure on-site, may need to be acquired and removed. Potential for asbestos-containing materials. New uses of asbestos-containing materials were banned by the EPA in 1989. Potential lead-based paint on existing buildings. Structures built before 1978 are presumed to contain lead-based paint unless proven otherwise, though buildings built after 1978 may also contain lead-based paints.	None found	Proposed full acquisition	Low
030-200-028 (Auto and Truck Parts Store)	Pre-1978 structure on-site, may need to be acquired and removed. Potential for asbestos-containing materials. New uses of asbestos-containing materials were banned by the EPA in 1989. Potential lead-based paint on existing buildings. Structures built before 1978 are presumed to contain lead-based paint unless proven otherwise, though buildings built after 1978 may also contain lead-based paints.	None found	Proposed full acquisition	Low
038-010-084 030-170-006 Previous Peterson Mine Site (Southwest of Climax Road and SR 88)	Known mine site at Climax Road has potential for contaminated soils (heavy metals including arsenic and lead).	Soil testing performed; no hazards identified	Proposed partial acquisition	None
030-160-026 Caltrans Maintenance Yard	Potential for contamination from petroleum hydrocarbon leakage from underground storage tanks. Case closed by Central Valley Regional Water Quality Control Board on July 2010.	Soil testing performed, no hazards identified	None	None
030-200-031 Pine Grove Station	Potential for contamination from petroleum hydrocarbon leakage. Central Valley Regional Water Quality Control Board has an open case for monitoring leakage of underground storage tanks.	Soil testing performed; no hazards identified	None	None
030-170-028 Replanet LLC (Former Gas Station Pine Grove Beacon)	Potential for petroleum hydrocarbon contamination from leaking underground storage tanks. The Pine Grove Beacon underground storage tank had a leak discovered on February 1997; the leak stopped in March 1997. The case was closed in 1999, and there are no current cleanup actions in place.	Soil testing performed; no hazards identified	None	None

Location	Description of Recognized Environmental Conditions Evidence Found	Description of Associated AUL	Right-of-way Acquisition	Risk to Project
Previous Tellurium Mine Site (along west side of Volcano Road)	Known mine site at Volcano Road has potential for contaminated soils (heavy metals including arsenic and lead).	Soil testing performed; no hazards identified	None	None
Exposed soil and rock fill in the project construction area	Potential elevated levels of arsenic or other contaminants in the exposed soil and rock fill from mine tailings that may have been dumped or used as fill within the project boundaries.	Soil testing performed; no hazards identified	N/A	None
Existing roadways within project boundaries	Potential lead and heavy metals associated with pavement striping. Implementation of improvements may require the removal and disposal of yellow traffic stripe and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape). Yellow paints made before 1995 may exceed hazardous waste criteria under Title 22, California Code of Regulations, and require disposal in a Class I disposal site.	None found	N/A	Low
Various pole - mounted electrical transformers within project boundaries	Potential PCB's in pole-mounted electrical transformers. As of the date of this Initial Site Assessment, the existence and/or levels of PCB's associated with the pole-mounted electrical transformers that may be encountered within the planned construction area had not been determined.	None found	N/A	Low
Existing wooden sign posts, guardrail posts, and other wooden materials throughout the project area	Potential for hazardous chemicals used in the treatment of sign posts and guardrail posts, etc.	None found	N/A	Low

Environmental Consequences

Build Alternative

The *Hazardous Waste Initial Site Assessment* prepared for the SR 88 Pine Grove Corridor Improvement Project identified multiple sources of potential hazardous waste/hazardous materials in the project area. If hazards are present, they could cause impacts to construction workers or locals if encountered during construction. Table 2.2.3-1 provides a list of all potential sources of hazardous materials and includes an evaluation of all properties that will require full or partial permanent acquisition to accommodate the proposed transportation improvements.

Soil Testing

Soil testing was done at the previously identified boring location and several other locations to adequately test soils associated with the Recognized Environmental Conditions identified in Table 2.2.3-1. Results of this testing is summarized in a Limited Phase II Environmental Site Assessment. The Environmental Site Assessment assessed the potential presence of petroleum hydrocarbons, benzene, toluene, ethylbenzene xylenes, methyl tert-butyl ether, and Title 22 Metals in soils throughout the project area. Soil testing at these locations did not encounter field indications of petroleum hydrocarbons, and laboratory testing indicated only one low-level hydrocarbon detection at a level below the Environmental Screening Levels (ESL) set by the Regional Water Quality Control Board.

The laboratory results for shallow soils in the vicinity of suspected former mining operations near the proposed future intersection of Climax Road and SR 88 indicated only two detections for metals above typical naturally occurring concentrations. Mercury was detected at 10 mg/kg which is above the Environmental Screening Level for residential use of 6.7 mg/kg and equal to the Environmental Screening Level for commercial and industrial use. Lead was detected at 110 mg/kg which is above the Environmental Screening Level for residential use at 80mg/kg, but below the Environmental Screening Level for commercial and industrial land use of 320 mg/kg.

Also, chromium was detected at 110 mg/kg near SR 88 and Volcano Road, which is greater than 10 times the soluble threshold limit concentration. The Environmental Site Assessment recommends that the materials sampled in this investigation are suitable for reuse beneath the roadway in the project area and would not present a risk to human health or the environment. If soils are to be excavated and removed from the project area, they will require additional sampling and analysis depending on their intended destination.

No-Build Alternative

The No-Build Alternative would not require any construction activities and would therefore have no chance of encountering hazardous waste or hazardous materials.

Avoidance Minimization and/or Mitigation Measures

Measure HW-1: Prior to the start of construction, asbestos surveys using a certified professional will be conducted to identify presence of asbestos-containing materials within any structures that may be altered or demolished to accommodate the planned construction.

Measure HW-2: Prior to the start of construction, lead-based paint surveys using a certified consultant will be conducted to identify the presence of lead-based paint within any structures that may be altered or demolished to accommodate the planned construction.

Measure HW-3: Removal of yellow striping and pavement marking materials would be performed in accordance with Caltrans Standard Special Provision 14-11.07 Remove Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue.

Measure HW-4: Any leaking transformers observed during the course of the project should be considered a potential polychlorinated biphenyl (PCB) hazard. Should leaks from electrical transformers (that will either remain within the construction limits or will require removal and/or relocation) be encountered during construction, the transformer fluid should be sampled and analyzed by qualified personnel for detectable levels of PCBs. Should PCBs be detected, the

transformer should be removed and disposed of in accordance with the appropriate regulatory agency. Any stained soil encountered below electrical transformers with detectable levels of PCBs should also be handled and disposed of in accordance with the appropriate regulatory agency.

Measure HW-5: As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from former underground storage tanks or potential explosive threat if a natural gas transmission pipeline is ruptured during construction). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in the Caltrans Hazards Procedures for Construction will be followed.

Measure HW-6: Sign posts, guardrail posts, or any other wood materials that have been treated with wood-preserving chemicals that are removed during project construction will require disposal in landfills or other disposal facility that accepts treated wood.

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 highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between National Environmental Policy Act and California Environmental Quality Act.

California Environmental Quality Act

The California Environmental Quality Act requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under the California Environmental Quality Act, then the act dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The California Environmental Quality Act noise analysis is included at the end of this section.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration (and the Department, as assigned) 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 include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criterion for residences (67 dBA L_{eq}) is lower than the noise abatement criterion for commercial areas (72 dBA L_{eq}). The following table lists the noise abatement criteria for use in the National Environmental Policy Act 23 Code of Federal Regulations 772 analysis.

Table 2.2.4-1: Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, Leq(h)	Description of Activity Category
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[1]	67 (Exterior)	Residential.
C[1]	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC – Reporting Only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC – Reporting Only	Undeveloped lands that are not permitted.

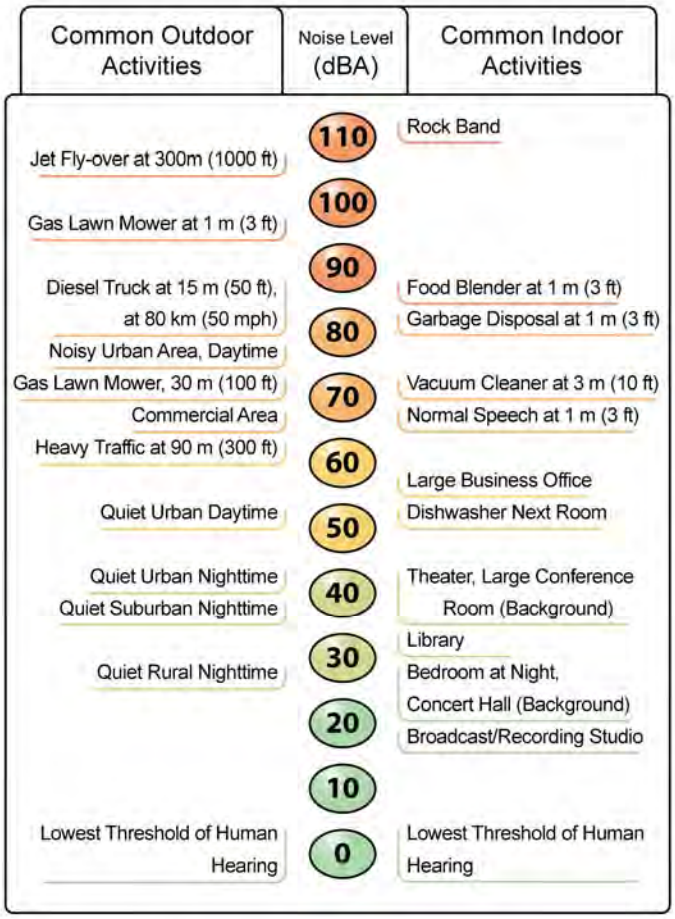
[1] Includes undeveloped lands permitted for this activity category.

According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, 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 L_{eq} or more increase) or when the future noise level with the project approaches or exceeds the noise abatement criteria. Approaching the noise abatement criteria is defined as coming within 1 dBA L_{eq} of the noise abatement criteria.

If it is determined that the project would 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 are incorporated into the project plans and specifications. This document discusses noise abatement measures (based on protocols described below) that would likely be incorporated in the project.

This document discusses noise abatement measures that would likely be incorporated in the project. Table 2.2.4-2 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Table 2.2.4-2: Typical Noise Levels



Source: Caltrans 2014

The 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 7 dBA L_{eq} 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 and the cost per benefited residence.

Affected Environment

A *Noise Study Report* (April 2015) was prepared for this project. The *Noise Study Report* analyzed existing and future noise at sensitive receptors in the project vicinity.

Land uses in the project noise study area consist mostly of residential and commercial uses, with a small park in the center of town and undeveloped land on the east and west sides. Sensitive receptors include a school and church adjacent to SR 88. Formal and informal driveway access exists along SR 88. Due to the mix of driveway openings and commercial properties, little shielding is provided for the residences next to SR 88. The dominant noise source for sensitive land uses in the project area is traffic traveling on SR 88.

Specific land uses identified in the proposed project area are where frequent human use would occur, such as single-family residences (Star Mobile Home Park), a school (Pine Grove Elementary School), a place of worship (Mt. Zion Church), a recreational area, and an outdoor eating area for a restaurant. These sensitive receivers fall into several noise abatement criteria Activity Categories, including B, C, E, F and G. Pine Grove Elementary School and Mt. Zion Church have interior activity areas; therefore, the interior activity criterion (Activity Category D) was used for the basis for determining a noise impact. The dominant noise source for these sensitive land uses is SR 88. Existing noise levels in the proposed project area range from 48 to 71 dBA L_{eq}. These noise levels fall below their respective noise abatement criteria Activity Category criterion.

Figure 2.2.4-1 shows the locations of short- and long-term noise measurement sites as well as modeled receiver locations.

Environmental Consequences

Build Alternative

The Build Alternative would change the alignment of SR 88 and Ridge Road by adding an acceleration lane from Climax Road to eastbound SR 88 and changing the geometrics of the SR 88 and Ridge Road intersection to include a second left-turn lane from Ridge Road onto eastbound SR 88. Also, a second through lane will be added to eastbound SR 88 before the Ridge Road intersection; it will terminate after the intersection. The intersection of SR 88 and Volcano Road will get a signal, and the realigned driveway exit of Pine Grove Elementary School will connect to Volcano Road instead of SR 88.

The design-year traffic noise modeling results for the Build Alternative range from 47 to 73 dBA L_{eq} as shown in Table 2.2.4-3. Noise levels for the design year under the Build Alternative are expected to increase by 2-5 dBA L_{eq} over the existing condition noise levels. Design-year No-Build Alternative noise levels are expected to increase by up to 3 dBA L_{eq} over existing conditions, due to an increase in traffic volumes. The improvements made to SR 88 and Ridge Road are not expected to increase traffic volumes from no-build conditions. Addition of the acceleration lane at Climax Road would not contribute to the increase in noise levels within the proposed project area because the proposed acceleration lane is more than 500 feet from the nearest sensitive land use.

The 1-2 dBA L_{eq} increase in noise levels are due to the improvements at the intersection of SR 88 and Ridge Road and the added signal and realignment occurring at the intersection of SR 88 and Volcano Road. The addition of a second left-turn lane would shift traffic traveling southbound on Ridge Road about 20 feet closer to sensitive receivers located near the intersection, which would increase noise levels. For example, this would occur at receiver R1, where noise levels would increase by 2 dBA L_{eq} under build conditions.

The project is proposing to add a signal at and realign the intersection of SR 88 and Volcano Road. The signal at this intersection will alter the flow of traffic and introduce braking and acceleration activity to this segment of the project area. The braking and acceleration activity will increase noise levels by up to 2 dBA L_{eq} for nearby receivers. Although evaluated receivers would experience an increase in design-year build noise levels, the increases do not cause noise levels to approach or exceed their respective noise abatement criteria Activity Category criterion. Noise levels ranging from 69 to 73 dBA L_{eq} are located in commercial and undeveloped land use areas, where either noise abatement criteria levels are higher or no standards are provided.

Match Line - See Page 2

Project Area
Long Term Noise Measurement Location
Modeled Receptor Location
Short Term Noise Measurement Location
Potential Staging Areas
Parcels

Sugar Pine Drive South
Climax Road
Jackson Creek
88
R1A
R1B

V:\1972- SR88 Pine Grove\ISEA\F2.2.4-1\p1.mxd

Source: BING Maps Online; Dokken Engineering 6/3/2015; Created By: timc

0 300 600 900 1,200 1,500 Feet

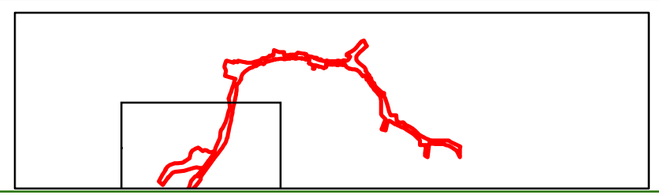


FIGURE 2.2.4.-1
Noise Measurement Sites and Modeled Noise Receptors
Page 1 of 3
SR 88 Pine Grove Corridor Project
Pine Grove, Amador County, California
EA 10-0G550; PM 21.6-24.6

Project Area
Long Term Noise Measurement Location
Modeled Receptor Location
Short Term Noise Measurement Location
Potential Staging Areas
Parcels

Ridge Road
88
Pine Grove
Pine Grove Volcano Road
Irish Town Road
Jackson Creek
R1
R2/ST1
R3/ST2
R4
R5
R6/LT1/ST3
R7
R8/ST4
R9
R10
R11/ST5
R12
R13/ST6
R14/ST7
R15/ST8

Match Line - See Page 1

Match Line - See Page 3

V:\1972_SR88_Pine_Grove\SEA\F2.2.4-1pg2.mxd

Source: BING Maps Online; Dokken Engineering 6/3/2015; Created By: timc

0 300 600 900 1,200 1,500 Feet

FIGURE 2.2.4.-1
Noise Measurement Sites and Modeled Noise Receptors
Page 2 of 3
SR 88 Pine Grove Corridor Project
Pine Grove, Amador County, California
EA 10-0G550; PM 21.6-24.6

Project Area
Long Term Noise Measurement Location
Modeled Receptor Location
Short Term Noise Measurement Location
Potential Staging Areas
Parcels

Match Line - See Page 2

88
R16
R19
R17/ST9
R20
R23/ST11
R24
R21
R22/ST10
R25
Mt Zion Road
R26
R27
88
Tabeaud Road

V:\1972_SR88_Pine_Grove\ISE\F2.2.4-1pg3.mxd

Source: BING Maps Online; Dokken Engineering 6/3/2015; Created By: timc

0 300 600 900 1,200 1,500 Feet

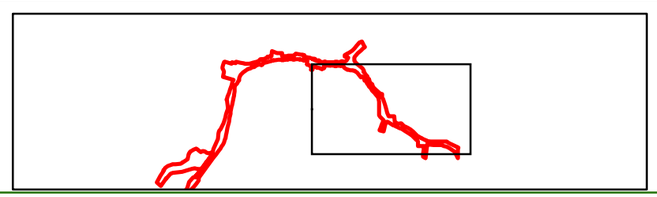


FIGURE 2.2.4.-1
Noise Measurement Sites and Modeled Noise Receptors
Page 3 of 3
SR 88 Pine Grove Corridor Project
Pine Grove, Amador County, California
EA 10-0G550; PM 21.6-24.6

Table 2.2.4-3: Predicted Future Noise and Barrier Analysis

Receptor # and Location	Land Use	Activity Category (NAC)	Existing Noise Level (dBA L_{eq})	Predicted Noise Level Without Project (dBA L_{eq})	Predicted Noise Level with Project (dBA L_{eq})	Noise Impact Requiring Abatement Consideration
R1A – 13420 Ponderosa Road	SFR	B (67)	44	47	47	No
R1B – 18925 SR 88	SFR	B (67)	51	54	54	No
R1 – 19365 Ridge Road	SFR	B (67)	52	55	57	No
R3/ST2 – Ridge Road	UND	G (None)	62	64	65	No
R4 – 19479 Ridge Road	SFR	B (67)	55	58	58	No
R5 – 19561 SR 88	SFR	B (67)	53	56	57	No
R6/LT1/ST3 – 19597 SR 88	MF	F (None)	71	73	73	No
R7 – 19560 SR 88	Office	E (72)	53	56	57	No
R8/ST4 – 19538 SR 88	Office	E (72)	57	60	60	No
R9 – 19766 SR 88	Office	E (72)	59	62	62	No
R10 – 19790 SR 88	SFR	B (67)	62	65	65	No
R11/ST5 – 19840 SR 88	REC	C (67)	61	64	64	No
R12 – 19895 SR 88	SFR	B (67)	56	58	58	No
R13/ST6 – 19955 SR 88	Office	E (72)	69	70	70	No
R14/ST7 – 20000 SR 88	Office	E (72)	69	69	69	No
R15/ST8 – 20101 SR 88	SCH	C (67)/ D (52)	59	61	62	No
R16 – 20145 SR 88	RES	E (72)	68	69	70	No
R17 – 13956 Hilltop Road	SFR	B (67)	50	52	53	No
R18 – 14030 Hilltop Road	SFR	B (67)	51	53	54	No
R19/ST9 – 20200 SR 88	COMM	E (72)	64	67	69	No
R20 – 20371 SR 88	SFR	B (67)	54	55	55	No
R21 – 20371 SR 88	SFR	B (67)	57	58	59	No
R22/ST10 – 20371 SR 88	SFR	B (67)	58	59	61	No
R23/ST11 – 13850 Cedar Pine Lane	POW	C (67)/ D (52)	49	51	52	No
R24 – 13891 Cedar Pine Lane	SFR	B (67)	52	54	55	No
R25 – 13820 Cedar Pine Lane	SFR	B (67)	48	50	51	No
R26 – 20400 SR 88	SFR	B (67)	52	54	55	No
R27 – 20572 SR 88	SFR	B (67)	56	59	60	No

Notes:
1. *Land Use* – SFR = Single Family Residence, UND = Undeveloped, MF = Maintenance Facility, REC = Recreation Area, SCH = School, RES = Restaurant, COMM = Commercial, POW = Place of Worship
2. *Activity Category* – for NAC reference category designations, see Table 2.2.4-1

Source:Noise Study Report, April 2015

Based on the above analysis, future noise levels in the project area would not approach or exceed the noise abatement criteria. Therefore, consideration of potential noise abatement measures (soundwalls, berms, etc.) is not required.

Interior Noise Analysis

Two locations were evaluated for potential future interior noise impacts for the project: receivers R15/ST8 and R23/ST11, which represent Pine Grove Elementary School and the Mt. Zion Church, respectively. Standard construction in California provides at least a 12 dBA L_{eq} exterior to interior noise attenuation with windows open and 20 dBA L_{eq} with windows closed. The facilities evaluated are already equipped with air conditioning units; therefore, no additional abatement measures are required.

Table 2.2.4-4 shows the results of the predicted future interior noise levels. For the two locations, interior noise levels would not approach or exceed the 52 dBA L_{eq} noise abatement criterion under the Build Alternative. Therefore, noise abatement measures would not be required.

Table 2.2.4-4: Interior Noise Analysis

Receiver No.	Location	Existing Noise Level (dBA L_{eq})		Exterior to Interior Attenuation (dBA L_{eq})	Build Alternative Noise Level (dBA L_{eq})	
		Exterior	Interior		Exterior	Interior
R15/ST8	Pine Grove Elementary School	59	39	20	62	32
R23/ST11	Mt. Zion Church	49	29	20	52	30

Source: Noise Study Report, April 2015

Construction Noise

Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA L_{eq} at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dBA L_{eq} per doubling of distance. Table 2.2.4-5 shows noise levels produced by construction equipment commonly used on roadway construction projects.

Table 2.2.4-5: Construction Equipment Noise

Equipment	Maximum Noise Level (dBA L_{eq} at 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 expected during most daytime hours because construction activities will be implemented in accordance with Caltrans Standard Specifications Section 14.8.02 and applicable local noise standards. In addition, construction noise would be short term, intermittent, and overshadowed by local traffic noise. However, during periods of

intensive park use (concerts, soccer tournaments, etc.), intensive construction activities could generate noise levels that interfere with such activities. Nighttime construction, particularly if it involves night pile driving, could result in adverse noise impacts at nearby residences. As a result, the measures described below are recommended to minimize the potential for adverse public reaction to construction noise.

No-Build Alternative

Under the No-Build Alternative, no improvements would be made; existing roadway conditions along this segment of SR 88 from Climax Road to Tabeaud Road would remain unchanged. The traffic noise modeling results for the design-year No-Build Alternative range from 50 to 73 dBA L_{eq}, as shown in Table 2.2.4-3. Noise levels for the design-year No-Build Alternative are expected to increase up to 3 dBA L_{eq} over existing noise levels due to projected traffic volume increases under existing conditions. No-Build Alternative noise levels at evaluated receivers do not approach or exceed their respective noise abatement criteria Activity Category criterion.

Avoidance, Minimization and/or Abatement Measures

Measures NOI-1 through NOI-2 should be implemented during construction to minimize the potential for construction-related noise impacts.

Measure NOI-1: The construction contractor will comply with Caltrans Standard Specifications Section 14-8.02, “Noise Control.” Section 14-8.02 provides information that can be considered in determining whether construction would result in adverse noise impacts. The specification states:

- The noise level from the contractor’s operations, between the hours of 9:00 p.m. and 6:00 a.m. will not exceed 86 dBA L_{eq} at 50 feet from the job site.
- All internal combustion engines will be equipped with the manufacturer-recommended muffler. Internal combustion engines will not be operated on the construction site without the appropriate muffler.

Measure NOI-2: As directed by Caltrans in coordination with the Amador County Transportation Commission, the contractor will implement appropriate noise mitigation measures, which may include: changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources. All equipment will have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an un-muffled exhaust.

California Environmental Quality Act Noise Analysis

Table 2.2.4-3 shows the predicted noise level with and without the project. All modeled receptor locations are expected to have one of the following outcomes when comparing the Build Alternative to the No-Build Alternative: 1) no change in the noise environment, 2) increase in noise levels of 1-3 decibels. This 0-3 decibel increase between the predicted future build versus no-build conditions would be barely perceptible to the human ear. Therefore, under the California Environmental Quality Act, no significant noise impact would occur as a result of the project, and no mitigation is required.

2.3 Biological Environment

The following sections summarize the *Natural Environment Study* (NES) prepared for the project in January 2014 and revised in September 2015. The biological study area (BSA) was established as the area within which permanent and temporary project impacts (such as cut slopes, fill areas, temporary access roads, and construction staging areas) could potentially occur. All potential impacts from the proposed Build Alternative are included in this area. The biological environment section of this document is divided into the following categories: natural communities, wetlands and other waters, animal species, threatened and endangered species, and invasive species. Biological studies for the proposed project were guided by correspondence with the relevant resource agencies.

In addition to the field work done, literature was research and reviewed to identify what types of sensitive plant and animal wildlife would likely occur within or near the project area. This research included review of the U.S. Fish and Wildlife Service (USFWS) Species List, California Department of Fish and Wildlife (CDFW) *California Natural Diversity Database* (CNDDB) and the California Native Plant Society (CNPS) *Electronic Inventory of Rare and Endangered Plants.*

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 corridors 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.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed in the Threatened and Endangered Species Section 2.3.4. Wetlands and other waters are also discussed in Section 2.3.2.

Affected Environment

This section is based on information from the *Natural Environment Study* prepared for the project in January 2014 and revised in September 2015. The biological study area was created with an approximate 20- to 125-foot buffer around all permanent and temporary project impacts, including proposed right-of-way, construction easements, and potential staging areas. The biological study area covers approximately 130 acres, 0.4 mile south of Climax Road to 0.20 mile east of Tabeaud Road along SR 88 in Pine Grove. Most of the biological study area is composed of urban hardscape, but it also contains montane hardwood conifer forest, montane riparian area, and waters. Commercial and residential developments along the project consist of hardscape, compacted soils, and disturbed native and non-native vegetation.

The biological study area sits in the U.S. Geological Survey (USGS) Pine Grove 7½-minute quadrangle topographical map. The area contains many creeks, drainages, and mountainous features. Topographical features in the project vicinity include Mount Zion within Mount Zion State Forest to the south and the Sierra Mountains to the east. Within the project vicinity, the elevation ranges from 2,300 to 2,550 feet above mean sea level.

Dominant soil types in the project area are sandy loam, silty loam and rocky loam. Soils are well drained, with many different slope conditions. Soil series in the biological study area include Holland very rocky coarse sandy loam (HfD), 9 to 16 percent slope; loamy alluvial land (Lo); rocky loam (SrC), 3 to 16 percent slope; Josephine-Mariposa complex (JxE), 16 to 51 percent slope; and Placer diggings and Riverwash (Pw) (Natural Resources Conservation Service 2010).

The biological study area is in the Sierra Nevada Foothill floristic region. Regional vegetation typically includes the following tree-dominated series: blue oak (*Quercus douglasii*), Sierran mixed conifer, valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*) series; grassland-dominated series such as California annual grassland series, montane meadow habitat and needle and thread (*Hesperostipa comate*) series; and shrubland-dominated series such as chamise (*Adenostoma fasciculatum*) series, deerbrush (*Ceanothus integerrimus*) series and tobacco brush (*Ceanothus velutinus*) series. Vegetation specific to the biological study area are urban, montane hardwood-conifer forest, montane riparian, mixed chaparral, and disturbed non-native grasslands (Figure 2.3.1-1. Biological Habitat). Descriptions of these habitats are provided below.

Urban

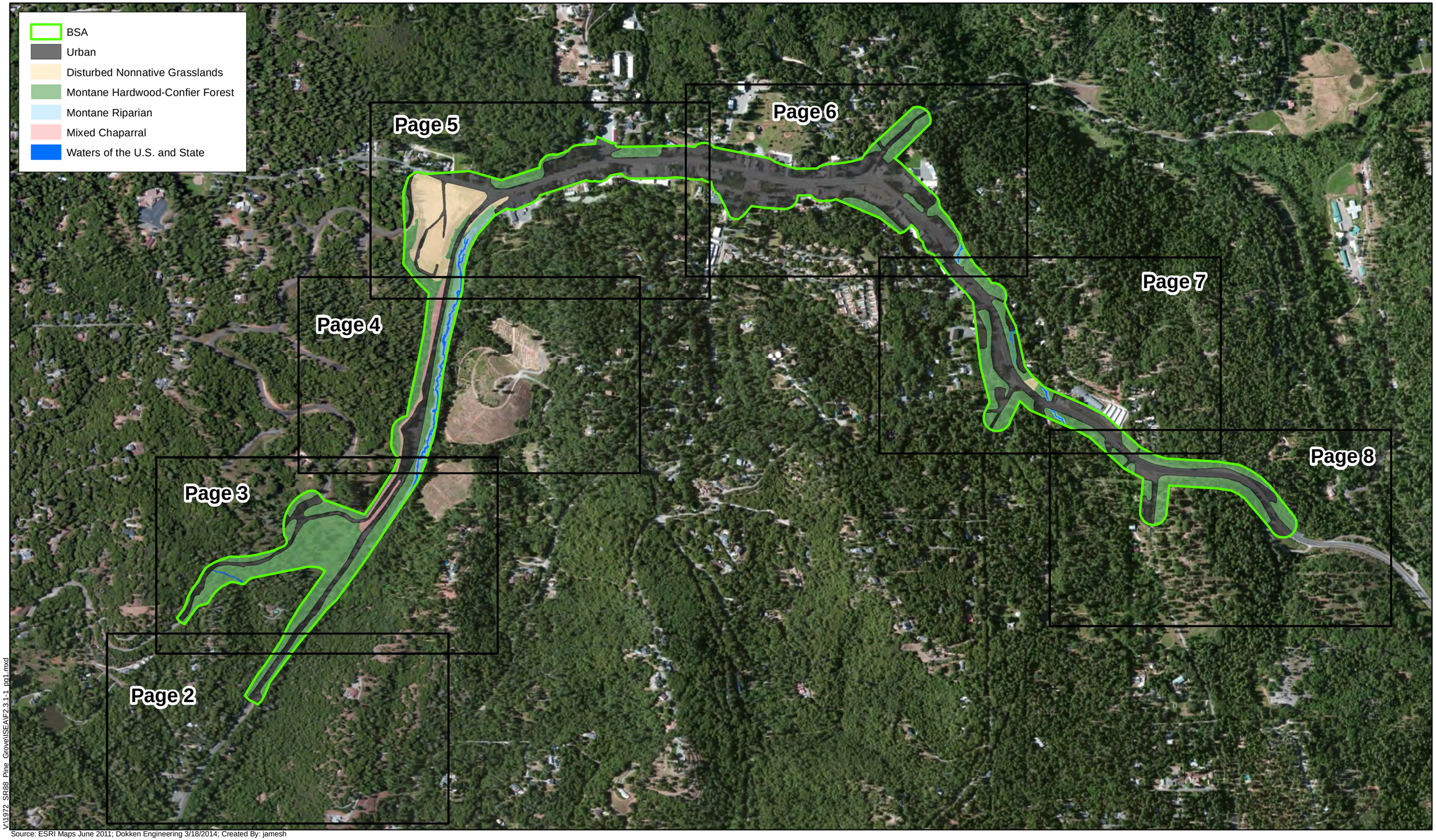
The urban habitat in the biological study area is a result of past disturbances from commercial, urban residential and pedestrian use. These urban areas consist of roads (SR 88 and side streets) and parking lots with developed commercial and developed residential areas. Urban areas are the dominant habitat type in the town of Pine Grove within the biological study area. Approximately 63 acres of urban areas exist in the biological study area.

Montane Hardwood-Conifer Forest

Montane hardwood-conifer forest is a transitional forest between dense coniferous forests and montane hardwoods, mixed chaparral or savannahs, characterized by hardwoods and conifers between 1,000 and 4,000 feet in elevation. In the Sierra Nevada northern range, species associated with the habitat include ponderosa pine (*Pinus ponderosa*), California black oak (*Quercus kelloggii*), canyon oak (*Quercus chrysolepis*), Douglas fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*), and incense-cedar (*Calocedrus decurrens*). The understory is sparse due to the dense bi-layered canopy, but can occur after the disturbance of fires or logging. Approximately 52 acres of montane hardwood-conifer forest exists within the biological study area consisting of ponderosa pine, Pacific madrone, black oak, and incense-cedar.

Disturbed Nonnative Annual Grasslands

Disturbed nonnative annual grassland vegetation exists within the biological study area. Annual grassland is an herbaceous community dominated by nonnative naturalized grasses with intermixed perennial and annual forbs, which exhibits a low level of diversity. Nonnative annual grasslands in the project area appear to have been disturbed in the past and are somewhat degraded. Dominant grasses known within nonnative annual grasslands consist of oat species (*Avena* sp.), brome species (*Bromus* sp.) and dominant forbs, which were observed to consist of redstem stork's bill filaree (*Erodium cicutarium*) and thistle species (*Cirsium* sp.). Ruderal (weedy) vegetation occurs in close proximity to disturbed nonnative annual grassland within hardscape and compacted soils.



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Source: ESRI Maps June 2011; Dokken Engineering 3/18/2014; Created By: jamesh

0 0.25 0.5 0.75 1 Miles

FIGURE 2.3.1-1
Biological Habitat
Page 1 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 3

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Source: ESRI Maps June 2011; Dokken Engineering 3/20/2014; Created By: jamesh

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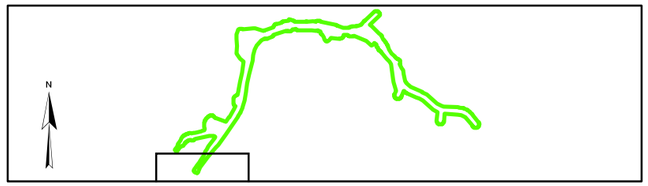

FIGURE 2.3.1-1
Biological Habitat
Page 2 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 4

Match Line - See Page 2

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Source: ESRI Maps June 2011; Dokken Engineering 3/20/2014; Created By: jamesh

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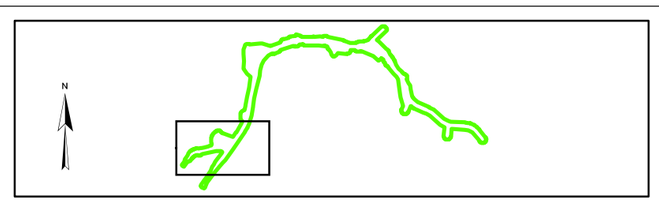

FIGURE 2.3.1-1
Biological Habitat
Page 3 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 5

Match Line - See Page 3

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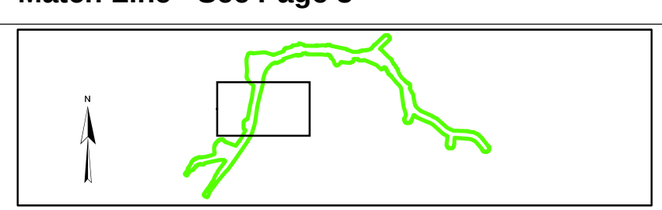

FIGURE 2.3.1-1
Biological Habitat
Page 4 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 6

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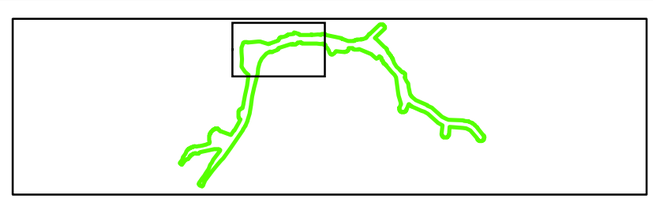

FIGURE 2.3.1-1
Biological Habitat
Page 5 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 5

Match Line - See Page 7

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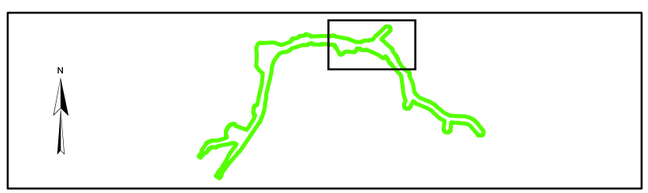

FIGURE 2.3.1-1
Biological Habitat
Page 6 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

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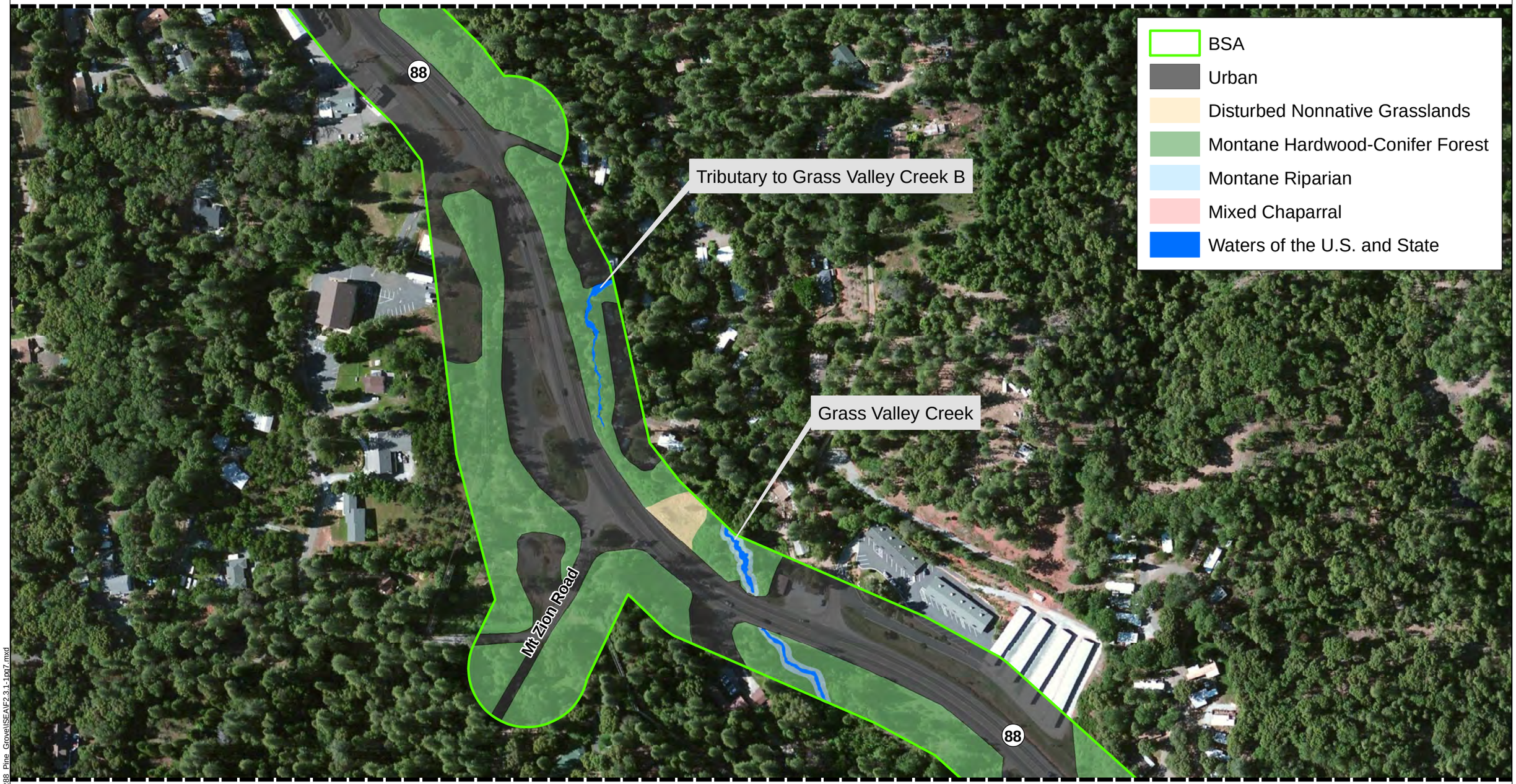

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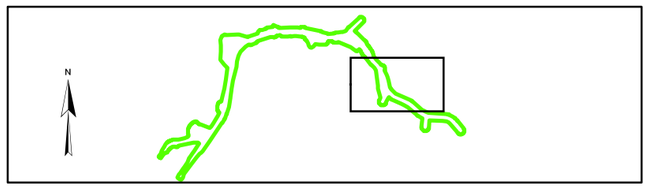
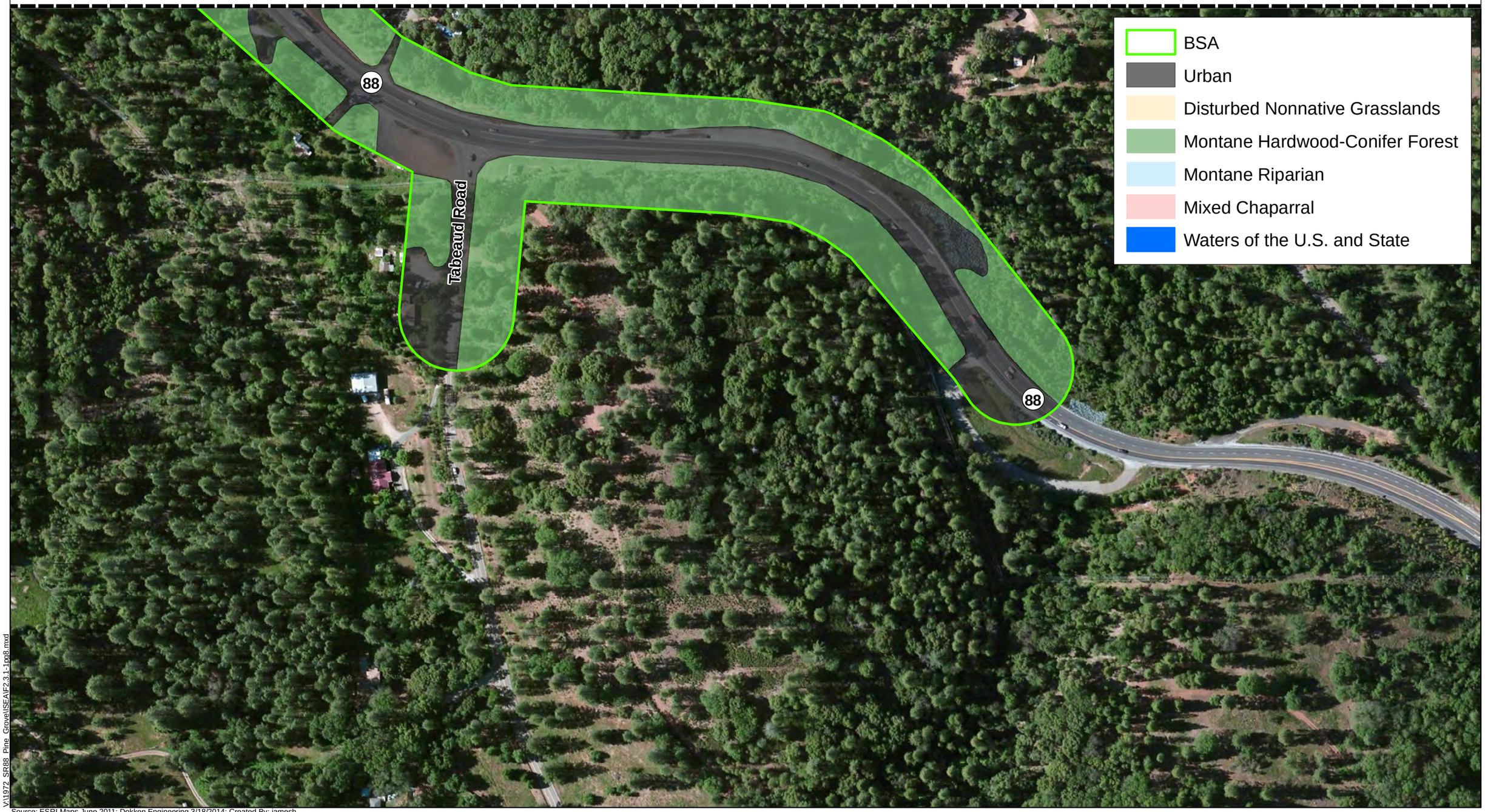


FIGURE 2.3.1-1
Biological Habitat
Page 7 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 7



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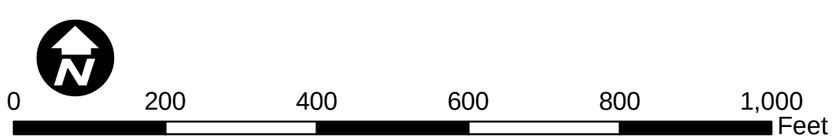


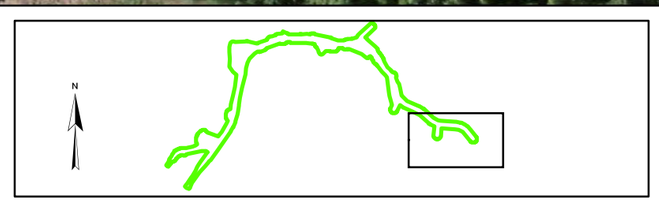


FIGURE 2.3.1-1
Biological Habitat
Page 8 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Approximately 9 acres of disturbed nonnative annual grasslands occur in the biological study area, consisting of oat species, brome species, redstem filaree, bull thistle (*Cirsium vulgare*), and dock species (*Rumex* sp.).

Montane Riparian

Montane riparian habitat is associated with lakes, ponds, seeps, rivers and streams. It is typically composed of trees and shrubs within montane forests. In the Sierra Nevada Range, tree species associated with the montane riparian habitat include black cottonwood (*Populus trichocarpa*), dogwood species, willow (*Salix* sp.) and white alder (*Alnus rhombifolia*), which occur along streams/creeks and seeps. Approximately 5 acres of montane riparian habitat exist within the biological study area, consisting of white alder, black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), Himalayan blackberry (*Rubus armeniacus*), poison oak (*Toxicodendron diversilobum*), and common snowberry (*Symphoricarpos albus*). Jackson Creek and Grass Valley Creek, both natural-lined creek features, likely act as migration corridors for wildlife in the area, providing access between wildlife habitats free from vehicular and human disturbance. Surveys identified fresh scat and bones, which indicate deer use the corridor along Jackson Creek and Grass Valley Creek.

Mixed Chaparral

Mixed chaparral vegetation is typically dominated by dense thickets of shrubs. It is often composed of woody plants, including scrub oak (*Quercus berberidifolia*), chaparral oak (*Quercus wislizeni*), ceanothus (*Ceanothus* sp.), manzanita (*Arctostaphylos* sp.), and associated toyon (*Heteromeles arbutifolia*), California buckeye (*Aesculus californica*), poison oak, sumac (*Rhus* sp.), and chamise below 5,000 feet above mean sea level. Incense-cedar and foothill pine (*Pinus sabiniana*) are frequently found in mixed chaparral. Mixed chaparral occurs on steep slopes with well-drained soils composed of rock and sand. Approximately 2.0 acres of mixed chaparral vegetation exist within the biological study area, consisting of buck brush (*Ceanothus cuneatus*), deer brush (*Ceanothus integerrimus*), manzanita species (*Arctostaphylos* sp.), canyon oak, toyon, poison oak, incense-cedar and foothill pine species.

Environmental Consequences

<u>Build Alternative</u>

The project area lies within the Sierra Nevada foothills, a biologically diverse ecosystem known to support unique and endemic species. Biological surveys were conducted to assess natural communities existing in the biological study area. Surveys concluded that Jackson Creek, Tributary to Jackson Creek, Grass Valley Creek, and Tributary A and Tributary B to Grass Valley Creek are jurisdictional waters of the U.S. and State. Waters of the State include waters of the U.S. and montane riparian, under jurisdiction of the California Department of Fish and Wildlife, which warrant special concern within the biological study area. As these areas are related to wetlands, Section 2.3.2 provides a more thorough evaluation of impacts to these sensitive habitats and includes avoidance, minimization, and mitigation measures appropriate to reduce potential impacts to the habitat within the project area. There are no other natural communities of special concern that exist within the biological study area.

Direct and indirect impacts to plant communities would occur under the proposed Build Alternative. A portion of urban habitat would be occupied and disturbed by construction, as would areas of montane hardwood-conifer, montane riparian corridor, mixed chaparral, and

disturbed grasslands. Impacted trees within these areas would need to be removed during the demolition and construction processes. Damage to adjacent trees' root systems may occur due to soil compaction during fill activities or due to direct root damage during cut activities. Trees and shrubs that may be indirectly affected were considered to be directly affected for the purposes of this analysis. As per **BIO-4,** vegetation would be trimmed, rather than removed, where possible.

However, work in proximity to the corridor will be minor and use of the corridor will only be temporarily affected; therefore, impacts to the migration corridor are not expected. At project completion, full use of the channel as a migration corridor would be restored.

No-Build Alternative

Under the No-Build Alternative, no impacts to natural communities are expected because no construction would occur. No trees would be removed, and no biological habitats would be affected.

Avoidance, Minimization, and/or Mitigation Measures

Measure BIO-1: The project limits in proximity to Jackson Creek, Tributary to Jackson Creek, Grass Valley Creek, Tributary A and B to Grass Valley Creek and montane riparian habitat will be marked with high visibility Environmentally Sensitive Area (ESA) fencing or staking to ensure construction will not further encroach into channels.

Measure BIO-2: Erosion Control Measures will be implemented during construction. To minimize the mobilization of sediment to adjacent water bodies, the following erosion-control and sediment-control measures will be included in the Storm Water Pollution Protection Plan (SWPPP) and the construction specifications and are based on standard Caltrans measures and standard dust-reduction measures. Soil exposure must be minimized through the use of temporary BMPs, groundcover, and stabilization measures; the contractor must conduct periodic maintenance of erosion- and sediment-control measures.

Measure BIO-3: To conform to water quality requirements, the SWPPP must include the following:

- Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants shall be a minimum of 100 ft from riparian or aquatic habitats. Any necessary equipment washing must occur where the water cannot flow into waters of the U.S. and State. The project proponent will prepare a spill prevention and clean-up plan;
- Construction equipment will not be operated in flowing water;
- Construction work must be conducted according to site-specific construction plans that minimize the potential for sediment input to waters of the U.S. and State;
- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering waters of the U.S. and State;
- Equipment used in and around waters must be in good working order and free of dripping or leaking engine fluids; and,
- Any surplus concrete rubble, asphalt, or other debris from construction must be taken to an approved disposal site.

Measure BIO-4: Vegetation clearing will only occur within the delineated project boundaries. An ESA fence will be provided on the final plans to delineate which trees can be saved and which will be removed. Where possible, trees will be trimmed rather than removed fully with the guidance of a qualified biologist (see NES Figure 6 Project Impacts). In areas that will be subject to re-vegetation, plants will only be cleared where necessary and when feasible will be cut above soil level.

Measure BIO-5: At construction completion the ACTC will re-vegetate temporarily disturbed sensitive natural habitat areas using a combination of hydroseed and plant materials. All plant materials to be planted and seeded onsite must be consistent with the native local montane hardwood-conifer forest and montane riparian communities. Species selected for the re-vegetation must be approved by the project biologist and will be selected from reference sites located within Amador County.

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 Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 U.S. Code 1344) is the main law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. 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 formed during 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 discharge of dredged or fill material cannot 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 U.S. Environmental Protection Agency (U.S. EPA).

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers' Standard permits. For Standard permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with Code of Federal Regulations Part 230 and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The

Guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. This order states that a federal agency, such as the Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds that: 1) 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 mainly by the California Department of Fish and Wildlife, the State Water Resources Control Board and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California 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 Wildlife before beginning construction. If the California Department of Fish and Wildlife 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 Wildlife 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 the 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 California Department of Fish and Wildlife.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Each Regional Water Quality Control Board also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the Clean Water Act. See the Water Quality Section for additional details.

Affected Environment

This section is based on information from the *Natural Environment Study* prepared for the proposed project in January 2014 and revised in September 2015, along with the Preliminary Jurisdictional Determination completed in November 2013.

A jurisdictional survey assessment was done to identify potential waters of the U.S., State and California Department of Fish and Wildlife. Surveys identified two creeks (Jackson Creek and Grass Valley Creek) and three tributaries (Tributary to Grass Valley Creek A, Tributary to Grass Valley Creek B, and Tributary to Jackson Creek). Jackson Creek drains into Lake Amador, while Grass Valley Creek drains into Sutter Creek and ultimately flows into Dry Creek. Features were provided preliminary jurisdictional status based on aerial photographs, investigations for connectivity to known jurisdictional waters, topography of the site in relation to the feature, presence or absence of aquatic vegetation, and likely source of flow. Drainage ditch features that parallel the length of the project and appear to collect roadway runoff were considered non-jurisdictional unless feeding directly into a jurisdictional feature.

As waters of the U.S. also fall under jurisdiction of the State and California Department of Fish and Wildlife, regulatory permits will be obtained from the U.S. Army Corps of Engineers,

Regional Water Quality Control Board, and California Department of Fish and Wildlife. These features are discussed in detail below.

Jackson Creek

During field surveys, Jackson Creek was observed running parallel to SR 88 and the biological study area from 2,245 to 2,425 feet above mean sea level from the western side of the town of Pine Grove to the city of Jackson. Approximately 0.67 acre of U.S., State and California Department of Fish and Wildlife jurisdictional waters with an additional approximate 3.3 acres of montane riparian vegetation (California Department of Fish and Wildlife Jurisdiction) are within the biological study area.

Jackson Creek is a channel 2 to 20 feet wide that retains natural banks with cobble substrate and a divergence of tributaries flowing south toward the city of Jackson. The creek supports a wide range of wildlife and associated species due to dense montane riparian vegetation, including Himalayan blackberry and poison oak (Figure 2.3.1-1: Biological Habitat, pages 3-5).

Tributary to Jackson Creek

Tributary to Jackson Creek is a naturally lined, approximately 2-foot-wide feature southeast of Climax Road and about 0.20 mile north of Jackson Creek (Figure 2.3.1-1: Biological Habitat, page 3). Tributary to Jackson Creek was observed at a pipe culvert (2,340 feet above mean sea level) southeast of Climax Road and about 240 feet north of Ponderosa Way. The 1- to 2-foot-deep defined channel contains occasional bedrock. About 300 feet (0.02 acre) of Tributary to Jackson Creek is within the biological study area in montane hardwood-conifer forest.

Grass Valley Creek

Field surveys found that Grass Valley Creek passes into the biological study area about 100 feet north of Gold Mine Road and exits the biological study area about 90 feet south of Gold Mine Road at 2,522 feet above mean sea level. Grass Valley Creek is a naturally lined 2- to 3-foot-high banked feature. The creek is about 4 to 5 feet wide and retains a natural mix of cobble and sediment substrate within a dense montane riparian corridor (approximately 0.2 acre). Grass Valley Creek flows north to eventually merge with Sutter Creek. About 0.06 acre of Grass Valley Creek is within the biological study area (Figure 2.3.1-1: Biological Habitat, page 7).

Tributary to Grass Valley Creek A

Tributary to Grass Valley Creek A is a naturally lined, approximately 2- to 3-foot-wide feature about 130 feet north of Hilltop Road. The tributary flows perpendicular to SR 88 at 2,500 feet above mean sea level and contains about 0.1 acre of montane riparian vegetation along its bank. About 150 feet (0.02 acre) of Tributary to Grass Valley Creek A is within the biological study area (Figure 2.3.1-1: Biological Habitat, page 6).

Tributary to Grass Valley Creek B

Tributary to Grass Valley Creek B is a naturally lined, approximately 1- to 1.5-foot-wide feature about 560 feet north of Grass Valley Creek at 2,530 feet above mean sea level. The tributary is east of SR 88, about 150 feet north of Mt. Zion Road, and an urban landscape of residential homes is along the tributary to the east, and frequently has undefined banks. Approximately 340

feet (0.05 acres) of Tributary to Grass Valley Creek B is within the biological study area's montane hardwood-conifer forest community (Figure 2.3.1-1: Biological Habitat, page 7).

Environmental Consequences

Build Alternative

Permanent Impacts

The project will place a 2:1 slope fill adjacent to Jackson Creek and will install retaining walls parallel to Jackson Creek. Impacts to Jackson Creek and associated montane riparian will occur with the installation of retaining walls. No permanent impacts to the Jackson Creek channel will occur. The culverts located at Grass Valley Creek and Tributary to Grass Valley Creek A will be extended to accommodate the widening of the highway, and a retaining wall is required along Tributary to Grass Valley Creek A.

The construction associated with the project will result in minimal permanent impacts to waters of the U.S. and State as shown on Figure 2.3.2-1: Impacts to Waters and in Table 2.3.2-1. There would be about 0.02 acres of permanent impacts to waters of the U.S. (less than 0.01 acre of Tributary to Jackson Creek, 0.01 acre of Tributary of Grass Valley Creek A and 0.01 acre of Tributary of Grass Valley Creek B). Temporary impacts would occur at all creeks and tributaries and be approximately 0.03 acres.

In addition, permanent impacts to State waters under California Department of Fish and Wildlife Jurisdiction would be about 0.05 acre to montane riparian (0.01 acre of Jackson Creek, 0.01 acre of Tributary to Grass Valley Creek A and 0.03 acre of Grass Valley Creek). Temporary impacts would be about 0.14 acres.

Table 2.3.2-1 is a compilation of anticipated impacts to waters of the U.S. and State within the project area. Figure 2.3.2-1 shows the limits of the waters of the U.S. and Waters of the State within the project area as well as the proposed impacts to waters and associated riparian habitat.

Temporary Impacts

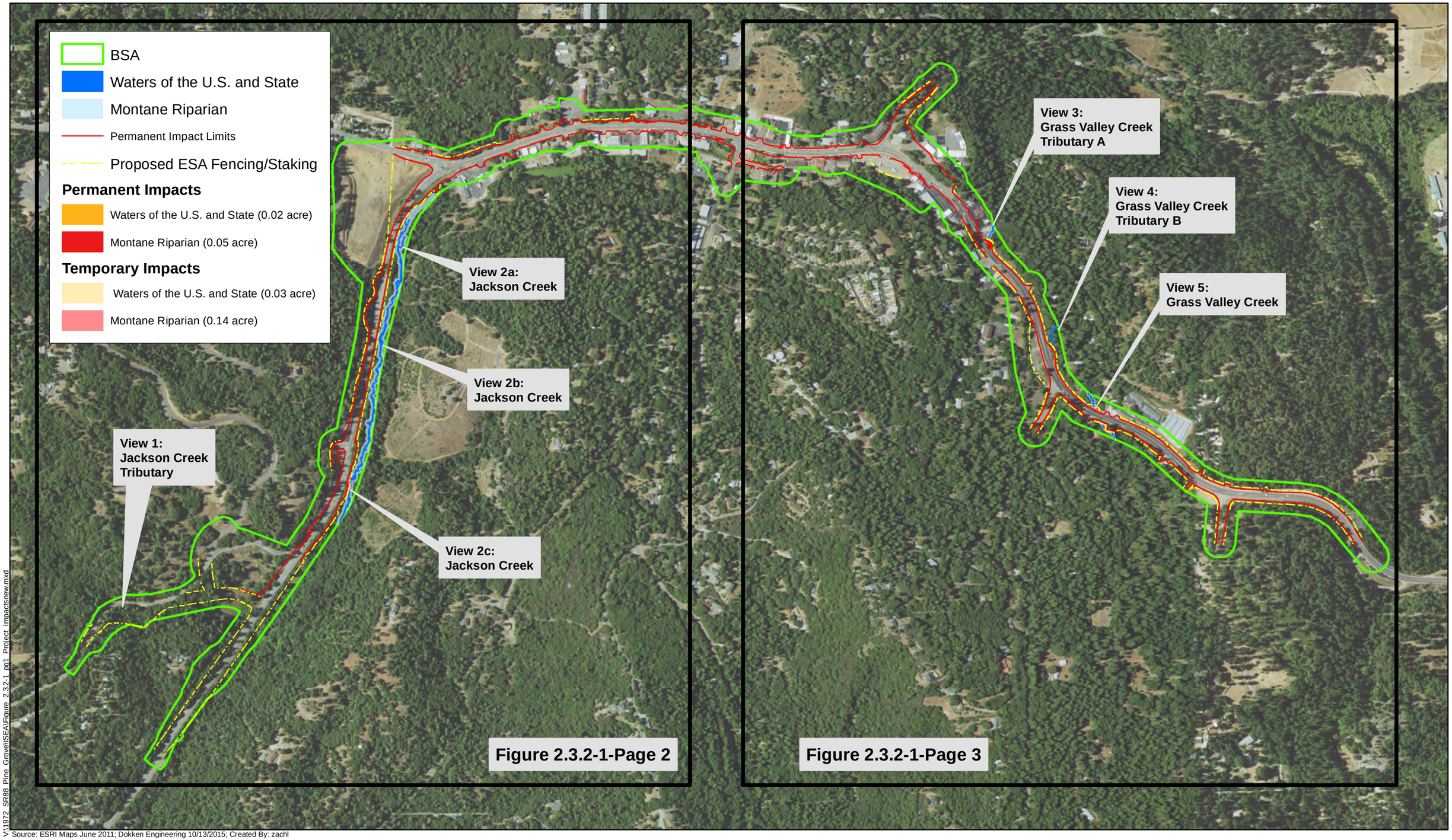
The widening of SR 88 will temporarily modify a small portion of Jackson Creek, Tributary to Jackson Creek, Grass Valley Creek and Tributaries to Grass Valley Creek A and B. The project will temporarily impact approximately 0.03 acre of waters of the U.S. and approximately 0.14 acre of waters of the State (California Department of Fish and Wildlife montane riparian) (Table 2.3.2-1 and Figure 2.3.2-1: Impacts to Waters).

Table 2.3.2-1: Impacts to Waters of the U.S. and the State

Feature	Waters of the U.S.		Waters of the State (CDFW Montane Riparian)	
	Temporary Impacts (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)	Permanent Impacts (acres)
Jackson Creek	<0.01	0.0	0.08	0.01

Tributary to Jackson Creek	<0.01	<0.01	0.0	0.0
Grass Valley Creek	0.02	0.0	0.05	0.01
Tributary to Grass Valley Creek A	<0.01	0.01	0.01	0.03
Tributary to Grass Valley Creek B	0.01	0.01	0.0	0.0
Total	**0.03**	**0.02**	**0.14**	**0.05**

< = less than
Source: Natural Environment Study (2015)



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Source: ESRI Maps June 2011; Dokken Engineering 10/13/2015; Created By: zachl

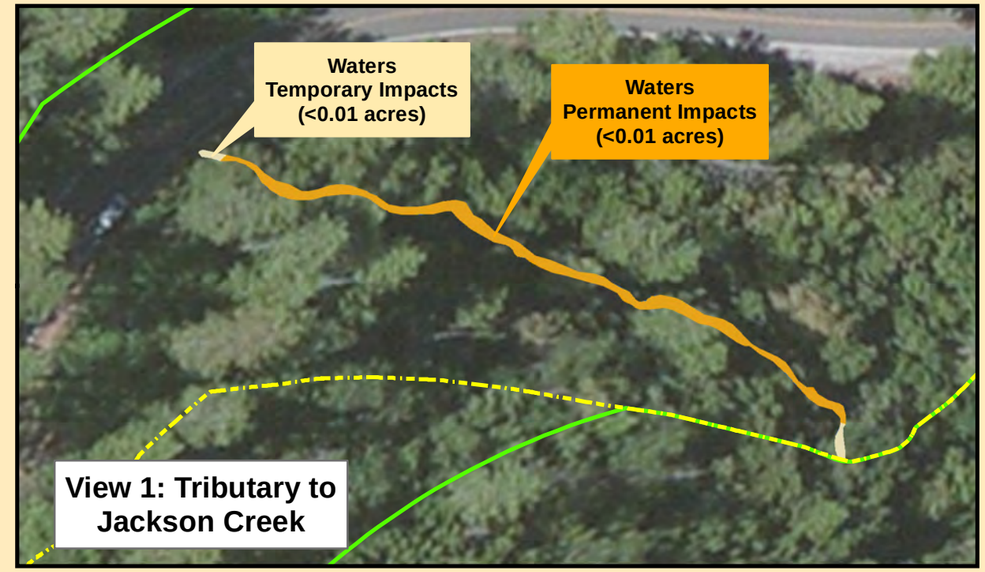
0 0.25 0.5 0.75 1 Miles

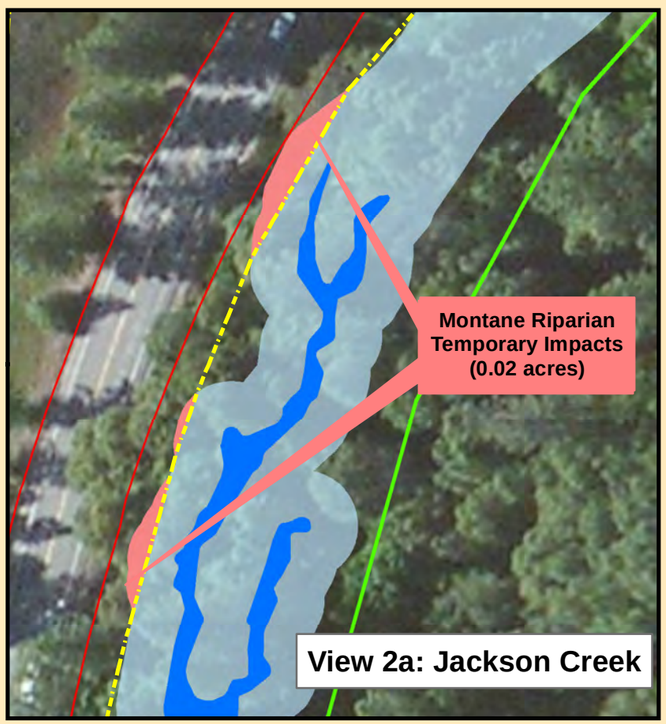
FIGURE 2.3.2-1
Impacts to Waters
Page 1 of 3
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; PM 21.6/24.6

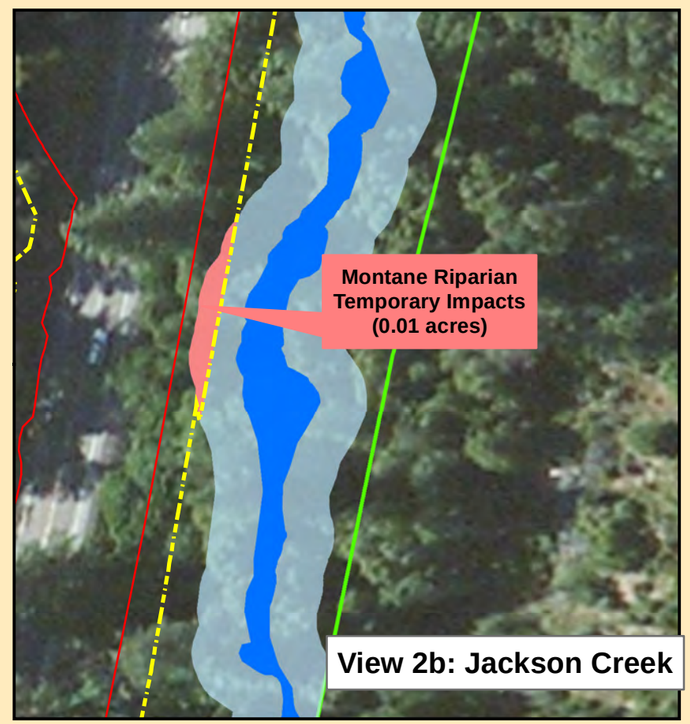
BSA
Waters of the U.S. and State
Montane Riparian
Permanent Impact Limits
Proposed ESA Fencing/Staking

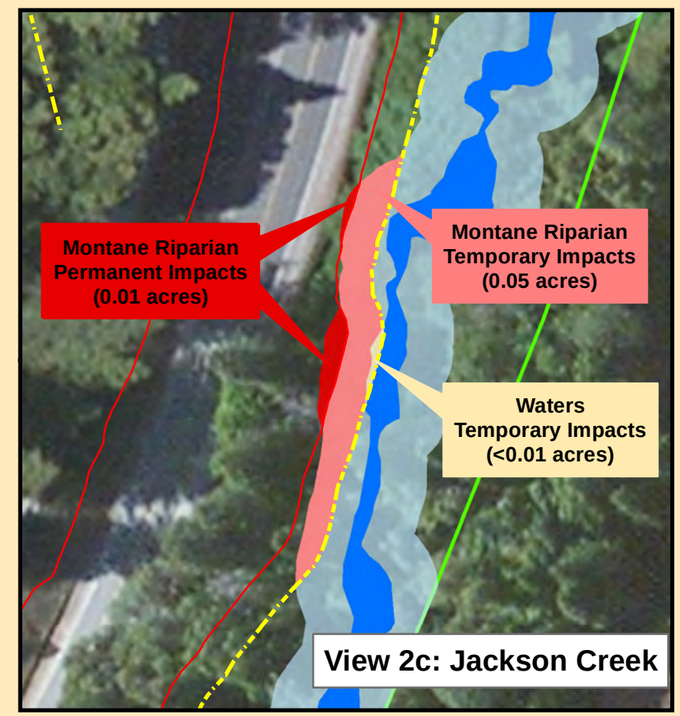
Permanent Impacts
Waters of the U.S. and State (0.02 acre)
Montane Riparian (0.05 acre)

Temporary Impacts
Waters of the U.S. and State (0.03 acre)
Montane Riparian (0.14 acre)









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Source: ESRI Maps June 2011; Dokken Engineering 10/13/2015; Created By: zachl

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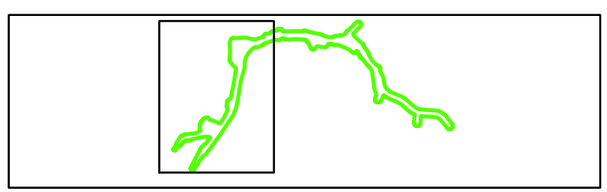
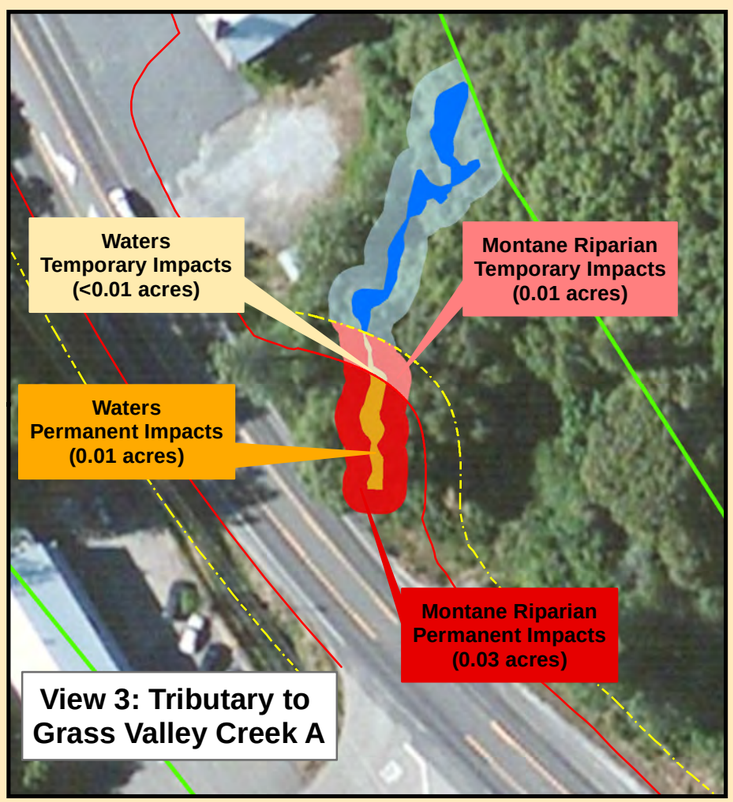


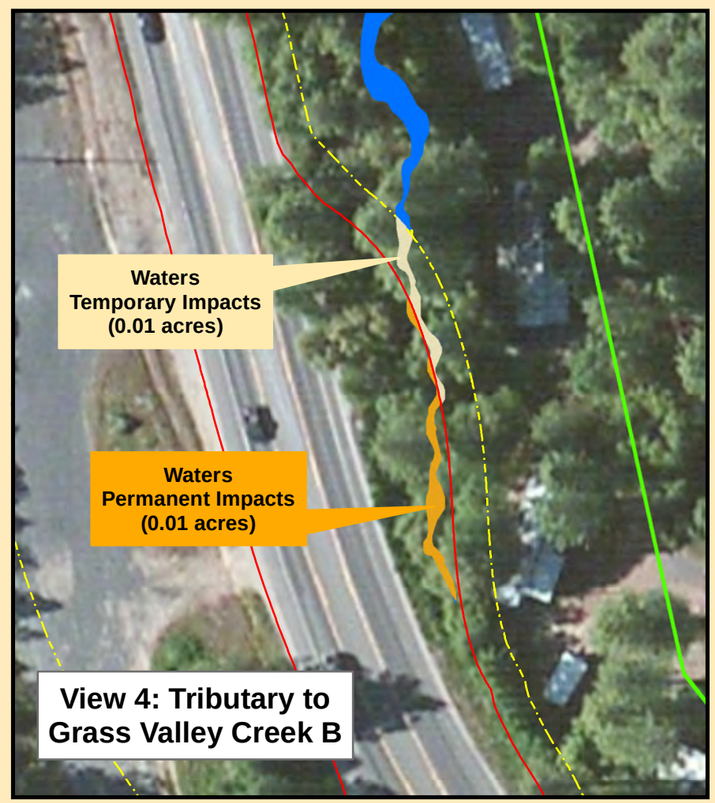
FIGURE 2.3.2-1
Impacts to Waters
Page 2 of 3
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; PM 21.6/24.6

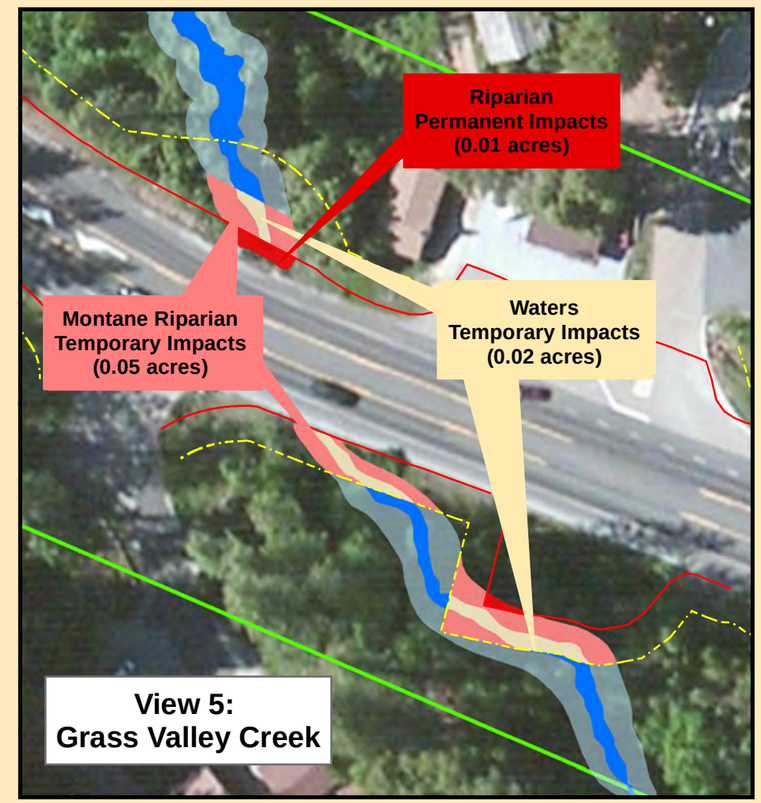
BSA
Waters of the U.S. and State
Montane Riparian (CDFW Jurisdiction)
Permanent Impact Limits
Proposed ESA Fencing/Staking

Permanent Impacts
Waters of the U.S. and State(0.02 acre)
Montane Riparian (0.05 acre)

Temporary Impacts
Waters of the U.S. and State(0.03 acre)
Montane Riparian (0.14 acre)







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Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 50 100 150 200 Feet

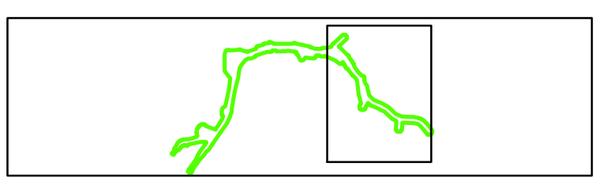


FIGURE 2.3.2-1
Impacts to Waters
Page 3 of 3
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; PM 21.6/24.6

No-Build Alternative

Under the No-Build Alternative, no impacts to waters of the U.S. or State are expected because no construction would occur. The existing condition of water features in the project study area would remain unchanged.

Avoidance, Minimization and/or Mitigation Measures

Before construction starts within the jurisdictions of waters of the U.S. or waters of the State, Caltrans will need to obtain all necessary regulatory permits. These permits are expected to include a Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board, a Section 402 National Pollutant Discharge Elimination System Compliance Permit from the State Water Resources Control Board, a Clean Water Act Section 404 Nationwide 14 Permit from the U.S. Army Corps of Engineers, and a Fish and Game Code Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife. Measures provided in these permits will need to be implemented before, during, and after construction.

Impacts to waters of the CDFW (montane riparian) are proposed to be mitigated by re-vegetating at a 1:1 ratio for temporary impacts and 2:1 for permanent impacts. Impacts to waters of the U.S. and State will be re-contoured to natural conditions for temporary impacts and mitigated at 2:1 for permanent impacts. Impacts will be mitigated at an on or offsite agency approved location or a combination of both. Exact mitigation ratios and locations will be determined during environmental permitting phase of the project.

The project has been designed to minimize temporary and permanent impacts to Jackson Creek, Grass Valley Creek, and their associated tributaries, as they have been identified as waters of the U.S. and State. Project measures and best management practices (BMPs) incorporated into the design would minimize the effects of construction activities on the channel. The project would comply with Measures BIO-1 through BIO-5 to avoid and minimize potential impacts to waters.

2.3.3 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the California Department of Fish and Wildlife 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 California Endangered Species Act or Federal Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.4 below.

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 1600–1603 of the Fish and Game Code
- Sections 4150 and 4152 of the Fish and Game Code

Affected Environment

This section is based on information from the *Natural Environment Study* prepared for the project in January 2014 and revised in September 2015. During March 21-22, June 19 and October 10, 2013, biologists surveyed the biological study area. The surveys included a focus on the foothill yellow-legged frog and western pond turtle. No special-status species was observed during the biological surveys, but potentially suitable habitat was determined to be present for the foothill yellow-legged frog and western pond turtle. Threatened and/or endangered animal species such as the California red-legged frog are discussed in Section 2.3.4, while all other common and special-status animal species are discussed below.

Western Pond Turtle

The western pond turtle is a California Department of Fish and Wildlife Species of Special Concern. The western pond turtle is a semi-aquatic turtle, inhabiting ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. The species requires suitable basking sites such as logs, rocks, and exposed banks and associated upland habitat consisting of sandy banks or grassy open fields for reproduction. The species is omnivorous and eats aquatic wildlife and vegetation. The western pond turtle hibernates underwater beneath a muddy bottom or buries itself on land. It reproduces from March to August.

Biological surveys on December 6-8, 2012, March 21-22 and October 10, 2013 found no sign of the western pond turtle within the biological study area. Although Jackson Creek and Grass Valley Creek have potential dispersal habitat for the species consisting of seasonal high-flowing water with minimal aquatic vegetation, neither Jackson Creek, Grass Valley Creek, or their respective tributaries possess deep pools for escape or sufficient aquatic vegetation. The nearest documented occurrence of the species is about 1.5 miles south of the project along the Grass Valley Creek; therefore, there is a low to moderate potential for the western pond turtle to occur within the project vicinity.

Foothill Yellow-legged Frog

The foothill yellow-legged frog is not a state or federally listed species, but is a California Department of Fish and Wildlife Species of Special Concern. Foothill yellow-legged frogs can be found in partly shaded shallow streams and rocky riffles in a variety of habitats including valley-foothill hardwood, valley-foothill riparian, mixed conifer, coastal scrub, and mixed chaparral. The species requires some cobble-sized substrate for egg laying and a water source persisting for at least 15 weeks for larval metamorphosis. The main predators of the foothill yellow-legged frog are garter snakes, bullfrogs, and centrarchid fish that were introduced into foothill streams. The foothill yellow-legged frog occurs from elevations near sea level to 6,370 feet and within 33 feet of a breeding water source.

During the focused Habitat Assessment for the California red-legged frog during December 6-8, 2012 and biological surveys conducted March 21-22, 2013, no sign of the foothill yellow-legged frog was observed within the biological study area. Both Jackson Creek and Grass Valley Creek

have the requisite 15-week water presence and contain the preferred cobble/rocky substrate for the foothill yellow-legged frog. There are documented occurrences of foothill yellow-legged frog about 1 mile northeast of the biological study area along Grass Valley Creek; therefore, there is a high potential for the foothill yellow-legged frog to occur within the project area.

Migratory Birds

Native birds, protected under the Migratory Bird Treaty Act and similar provisions under California Department of Fish and Wildlife code, currently nest or have the potential to nest within the biological study area and the project impact area. During the March 21-22, June 19 and October 10, 2013 biological surveys, habitat was determined to be favorable to birds that nest in the tree canopy, cavities and structures.

Environmental Consequences

Build Alternative

Western Pond Turtle

Although no sign of the western pond turtle was observed during surveys, the species could have been seasonally in hibernation (winter) at the time of survey. Considering the scale of the project, implementation of minimization and avoidance Measures BIO-6 through BIO-9, and use of best management practices, no impacts are anticipated. The project will not reduce the viability of the overall western pond turtle population.

Foothill Yellow-legged Frog

Direct Impacts
Although no foothill yellow-legged frog or sign of foothill yellow-legged frog was observed during the surveys March 21-22, 2013 and December 6-8, 2012, there is a potential for the foothill yellow-legged frog to occur in the project vicinity. Construction activities including vegetation disruption will have permanent and temporary impacts to Grass Valley Creek and Jackson Creek, both of which are potential foothill yellow-legged frog habitat (see Table 2.3.2-1 for acreages). Although the project will disturb potentially suitable breeding and dispersal habitat, the project is not expected to directly affect individual foothill yellow-legged frogs. Measures BIO-6 through BIO-12 and the use of best management practices during project construction will reduce the potential for negative direct impacts to foothill yellow-legged frogs.

Indirect Impacts
Construction may result in a potential increase in noise, light, and other human activities. The project occurs within an existing rural community along SR 88 that is already regularly exposed to human activities, noise, light and other disruptive human activities. Implementation of measures BIO-6 through BIO-12 will reduce the potential for negative indirect impacts to foothill yellow-legged frogs.

Migratory Birds

Native birds, protected under the Migratory Bird Treaty Act and similar provisions under the California Department of Fish and Wildlife code, currently nest or have the potential to nest within the biological study area and the project impact area. During the March 21-22, June 19 and October 10, 2013 biological surveys, habitat was determined to be favorable to birds that

nest in the tree canopy, cavities and structures. Measures BIO-13 and BIO-14 will be used to ensure protection of migratory nesting birds.

No-Build Alternative

Under the No-Build Alternative, no impacts to special-status animal species are anticipated because no construction would occur.

Avoidance, Minimization and/or Mitigation Measures

Western Pond Turtle
Implementation of measures **BIO-10, BIO-11** and **BIO-13**, along with **BIO-16** below, will avoid and minimize potential impacts to western pond turtle:

Measure BIO-16: If any sensitive species are found, construction will stop within the area of discovery and the Resident Engineer will notify the project biologist. The project biologist will contact the appropriate wildlife agency for further instruction.

Foothill Yellow-legged Frog
To minimize potential impacts to foothill yellow-legged frog, avoidance and minimization measures **BIO-6, BIO-7** and **BIO-9 through BIO-14** and the following measures were incorporated into the project design.

Measure BIO-15: The work area will be fenced with sediment fencing at the upstream and downstream limits of the project and away from Jackson Creek and Grass Valley Creek at least 100 ft. The fencing will be buried a minimum of six inches into the ground. The project limits will be flagged and/or signed to prevent the encroachment of construction personnel and equipment into any sensitive areas during project work. Animal exclusion fencing will be checked once per week by construction personnel trained by a USFWS-approved biologist. Construction personnel must identify weaknesses and repair and/or replace all compromised portions immediately. Animal exclusion fencing must be removed once the construction is completed.

Migratory Birds

Measure BIO-19: If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed.

Measure BIO-20: If vegetation removal is to take place during the breeding season (March 1st –September 1st), a pre-construction nesting bird survey must be conducted within 7 days prior to vegetation removal. Within 2 weeks of the nesting bird survey, all vegetation cleared by the biologist must be removed by the contractor.

A minimum 100 ft no-disturbance buffer will be established around any active nest to limit the impacts of construction activities. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged.

2.3.4 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 U.S. Code Section 1531, *et seq*. See also 50 Code of Federal Regulations Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service to ensure that they are not undertaking, funding, permitting or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a no-effect finding. Section 3 of the Federal Endangered Species Act defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code Section 2050, *et seq*. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by California Department of Fish and Wildlife. For species listed under both Federal Endangered Species Act and California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976 was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

This section is based on information from the *Natural Environment Study* completed January 2014 and revised in September 2015. Additional information was provided in the Letter of Concurrence from USFWS that was received March 2015. Table 2.3.5-1 shows all threatened or endangered species that could occur within the biological study area based on database

research and coordination with the U.S. Fish and Wildlife Service (see the U.S. Fish and Wildlife Service species letter/list in Appendix F). The table summarizes the conditions and habitat needed to support each species and provides a determination of presence or absence in the project biological study area. Based on the habitat and conditions identified in the biological surveys, only the California red-legged frog is expected to have a low/moderate potential to occur in the biological study area; all other species are presumed absent due to a lack of suitable habitat.

Table 2.3.5-1: Potential Occurance of Threatened or Endangered Species

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Plant Species					
Ione manzanita	*Arctostaphylos myrtifolia*	Fed: CA: CNPS:	T -- 1B.2	A native shrub inhabiting chaparral and foothill woodlands; occurs often on Ione clay soils. Flowers November-March (196–2,526 ft elevation).	**Presumed absent:** The biological study area contains a foothill woodland community, but the site lacks the requisite acidic Ione soils required for Ione manzanita. Habitat unsuitable for Ione manzanita.
Avian Species					
Tricolored blackbird	*Agelaius tricolor*	Fed: CA: DFW:	-- E SSC	Inhabits freshwater marsh, swamp and wetland communities that can support large colonies often in the Central Valley area. Requires protected dense nesting habitat, preferably in emergent wetland vegetation and foraging area with insect prey in close to the colony.	**Presumed absent:** The biological study area does not contain adequate wetland, marsh, or swamp communities; habitat unsuitable for tricolored blackbird.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Amphibian Species					
California red-legged frog	*Rana draytonii*	Fed: CA: DFW:	T -- SSC	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat. Occurs from elevations near sea level to 5,200 ft.	**Low/Moderate Potential:** The biological study area transects Grass Valley Creek and Jackson Creek, both permanent water sources with associated shrubby riparian vegetation. A California red-legged frog Habitat Assessment conducted December 6-8, 2012 concluded no possible breeding habitat within the vicinity of Grass Valley Creek or Jackson Creek, but dispersal habitat is present. The U.S. Fish and Wildlife Service concluded California red-legged frog has a low/moderate potential within the biological study area.
Mammal Species					
Townsend's big-eared bat	*Corynorhinus townsendii*	Fed: CA: DFW:	-- CT SSC	Species occurs throughout California in all habitats except subalpine and alpine communities. Requires caves, mines tunnels, buildings or human-made structures for day and night roosts. Rarely roots in tree cavities, limited to males and non-reproductive females. Young born May-June (0-6,561 feet elevation).	**Presumed absent:** The biological study area lacks the requisite caves, mines tunnels or other structures for day and night roosting; habitat unsuitable for Townsend's big-eared bat. The nearest California Natural Diversity Database occurrence was recorded in 1957 about 0.5 mile from the biological study area.

Common Name	Scientific Name	Status		General Habitat Description	Potential for Occurrence and Rationale
Invertebrate Species					
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Fed: CA: DFW:	T -- --	Species requires elderberry shrubs as host plants. Typically occurs in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. (Sea level-3,000 ft)	**Presumed absent:** Surveys conducted March 21-22, June 19, and October 10, 2013 did not detect elderberry host plants within the biological study area; habitat unsuitable for the valley elderberry longhorn beetle.
Fish Species					
Delta smelt	*Hypomesus transpacificus*	Fed: CA: DFW:	T E --	Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay. Most often occurs in partially saline waters.	**Presumed absent:** The biological study area transects Grass Valley Creek and Jackson Creek, outside the Sacramento-San Joaquin Delta; habitat unsuitable for Delta smelt.
Central Valley steelhead trout	*Oncorhynchus mykiss*	Fed: CA: DFW:	T -- --	Spawning occurs in small tributaries on coarse gravel beds in riffle areas. Central Valley steelhead trout are found in the Sacramento River system; the principal remaining wild populations spawn annually in Deer and Mill Creeks in Tehama County, in the lower Yuba River, a small population in the lower Stanislaus River and, though potentially extirpated, from the San Joaquin basin.	**Presumed absent:** The biological study area transects Grass Valley Creek and Jackson Creek, a perennial creek tributary to Sutter Creek. However, Grass Valley Creek and Jackson Creek have limited fish passage due to lack of connectivity to the Stanislaus River; habitat restricted for Central Valley steelhead trout.
Source: Natural Environment Study 2015, CalFlora 2013, Center for Biological Diversity 2012, CNDDB 2015, CNPS 2015, Gruver & Keinath 2006, Jepson 2012, USFS 2007, USFWS 2013b, USFWS 2013c, Zeiner 1988.					

California Red-legged Frog

The California red-legged frog is federally listed as threatened and is a State of California Species of Special Concern. Populations are known to exist in isolated spots in the Sierra

Nevada, north Coast, and northern Transverse Ranges from sea level to elevations of 5,200 feet. Historically, California red-legged frogs occurred from Point Reyes National Seashore on the coast, and inland from near Redding, Shasta County, south to northern Baja California, but the population has sustained a 70 percent reduction in its geographic range due to habitat loss, overexploitation, introduction of exotic predators, and a variety of other factors. Based on the 2010 revised Critical Habitat Amador County Map Unit, the project is outside of current California red-legged frog Critical Habitat.

Habitat for the California red-legged frog consists of aquatic and riparian components. California red-legged frogs live in permanent and semi-permanent aquatic habitats, such as creeks and coldwater ponds with emergent and submergent vegetation. Adult California red-legged frogs breed from November through April and use dense, shrubby, or emergent riparian vegetation near still or slow-moving water, including pools and backwaters within streams, creeks, ponds, marshes, springs, sag ponds, dune ponds, lagoons, and artificial impoundments. Upland areas next to riparian zones provide estivation and dispersal habitats. California red-legged frogs are typically found within 98 feet of a water source.

A comprehensive California red-legged frog Habitat Assessment was conducted December 6-8, 2012 to assess the site's suitability for California red-legged frogs within a 1-mile radius of the biological study area. The California red-legged frog Habitat Assessment followed the U.S. Fish and Wildlife Service Revised Guidance on Site Assessments and Field Surveys for the California red-legged frog and consisted of reconnaissance-level surveys and protocol-level Habitat Assessment field surveys.

Ground assessments and reconnaissance-level surveys were conducted based on aerial maps and identified Jackson and Grass Valley Creeks within the project footprint. Neither Jackson Creek or Grass Valley Creek, nor their respective tributaries contain suitable habitat for California red-legged frogs due to a lack of deep, large pools, emergent vegetation for cover and egg attachment, and sufficient flows to support breeding sites.

No adequate breeding habitat is found within the biological study area; however, potential breeding and dispersal habitats do occur within the vicinity of the biological study area. Therefore, there is a low/moderate potential for California red-legged frogs to occur within the project area.

Environmental Consequences

California Red-legged Frog

The formal California red-legged frog Habitat Assessment was used to prepare a Biological Assessment was prepared in 2014 to evaluate the project's potential for impacts to the California red-legged frog and its habitat caused by construction of the SR 88 Pine Grove Corridor Improvement Project. The Biological Assessment relied on the findings and conclusion of the Habitat Assessment prepared for the project as well as a concurrence email received from U.S. Fish and Wildlife Service biologist Casey Collins on March 11, 2013. This concurrence email concurred with the Habitat Assessment that protocol California red-legged frog surveys are unnecessary for the project and that specific conservation measures would adequately reduce the potential for adverse effects to the California red-legged frog. A copy of the email is provided in Appendix G.

Caltrans initiated informal Section 7 Consultation with the U.S. Fish and Wildlife Service on June 30, 2014, requesting concurrence that the proposed project may affect, but is not likely to adversely affect, the federally listed as threatened California red-legged frog, based on the following: the relatively small-scale scope of work, the absence of breeding habitat within close proximity to the action area, the minimal extent of permanent and temporary effects to dispersal habitat, the conservation measures proposed to minimize and avoid potential effects to the species, as well as there being no recent detection of the California red-legged frog within 10 miles of the action area. The U.S. Fish and Wildlife Service provided a Letter of Concurrence on March 6, 2015 that included 11 conservation measures that would minimize potential project impacts to the California red-legged frog. These measures are provided below, and the Letter of Concurrence is provided in Appendix G. Potential project-related impacts to the California red-legged frog are discussed below.

Direct Impact
Construction-related activities could potentially impair water quality, should hazardous chemicals (such as fuels and petroleum-based lubricants) or other construction materials enter Jackson Creek, Grass Valley Creek, or their respective tributaries. Should the California red-legged frog occur, construction-related chemical spills could potentially affect the frog or other aquatic resources by causing physiological stress, reducing biodiversity, altering primary and secondary production, and causing direct mortality. However, implementation of Measures BIO-3 through BIO-18 would minimize and avoid potential direct impact to California red-legged frog.

Indirect Impacts - Temporary Construction
Construction may result in a potential increase in noise, light, and other human activities. However, the project occurs within an existing rural community along SR 88 that is regularly exposed to noise, light and other disruptive human activities. Implementation of avoidance and minimization measures described in the section below would further reduce the potential for negative indirect effects to the California red-legged frog.

Avoidance, Minimization and/or Mitigation Measures

California Red-legged Frog

On March 6, 2015, Caltrans received a Letter of Concurrence from the U.S. Fish and Wildlife Service. The letter concurred with Caltrans' determination that the project "*may affect, but is not likely to adversely affect*" the California red-legged frog. The Letter of Concurrence also provided 11 conservation measures that would further minimize or avoid impacts to the California red-legged frog during construction. These measures include BIO-1, BIO-2, BIO-4, and BIO-5, as well as BIO-6 through BIO-14, which are provided below. A complete record of this consultation to date is provided in Appendix G.

Measures BIO-1, BIO-2, BIO-4, and BIO-5, and the following measures, BIO-6 through BIO-14 will also be implemented to ensure project impacts to the California red-legged frog are avoided and/or minimized to the greatest extent feasible.

Measure BIO-6: If California red-legged frogs are found at any time during project work, construction will stop and the U.S. Fish and Wildlife Service will be contacted immediately at (916) 414-6600 for further guidance.

Measure BIO-7: The project will administer BMPs to protect water quality and control erosion.

Measure BIO-8: The cooperating agency will submit the name and credentials of the project's biologist(s) to the Service for review and approval at least 15 days prior to the onset of construction activities.

Measure BIO-9: Prior to initial ground disturbance activities, environmental awareness training will be given to all construction personnel by a USFWS-approved biologist to brief them on how to recognize CRLF and foothill-yellow legged frog. Construction personnel will also be informed that if a CRLF is encountered in the work area, construction will cease in the work area and the USFWS will be called for guidance before any construction activities are resumed. Personnel will sign a form stating they attended environmental awareness training.

Measure BIO-10: Staging areas as well as fueling and maintenance activities must be a minimum of 100 ft from riparian or aquatic habitats. The project proponent will prepare a spill prevention and clean-up plan.

Measure BIO-11: Plastic monofilament netting (erosion control matting) or similar material containing netting shall not be used at the project area to prevent CRLF, foothill-yellow legged frog, or other small animals from becoming entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Measure BIO-12: No more than 20 working days prior to any ground disturbance, a Service approved biologist will conduct preconstruction surveys for the CRLF.

Measure BIO-13: All food and food-related trash items will be enclosed in sealed trash containers and removed from the site at the end of each day.

Measure BIO-14: The Resident Engineer or his or her designee will be responsible for implementing all avoidance and minimization measures previously stated.

2.3.5 Invasive Species

Regulatory Setting

On February 3, 1999, President Bill 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." The Federal Highway Administration guidance issued August 10, 1999 directs the use of the State's invasive species list currently maintained by the California Invasive Species Council to define which invasive species must be considered as part of the National Environmental Policy Act analysis for a proposed project.

Affected Environment

This section is based on information from the *Natural Environment Study* prepared for the project in January 2014 and revised in September 2015. Based on the California Invasive Plant Council Inventory Database (Cal-IPC 2013), the following invasive species (rated moderate to high) observed during biological surveys are listed in Table 2.3.6-1 below:

Table 2.3.6-1: NonNative Plant Species Observed in the Biological Study Area

Scientific Name	Common Name	Invasiveness Rating
Alianthus altissima	Tree of heaven	Moderate
Avena sp.	Oat sp.	Moderate
Cirsium sp.	Thistle sp.	Moderate
Cirsium vulgare	Bull thistle	Moderate
Geranium dissectum	Cutleaf geranium	Moderate
Hedera canariensis	Canary ivy	High
Hedera helix	English ivy	High
Ilex aquifolium	English holly	Moderate
Rubus armeniacus	Himalayan blackberry	High
Spartium junceum	Spanish broom	High
Vinca major	Bigleaf periwinkle	Moderate
Source: Natural Environment Study 2015		

Environmental Consequences

Construction activities and soil disturbance from the proposed project could result in the introduction and spread of noxious weeds and other invasive plants, as could inappropriate erosion control measures. Erosion control measures such as use of straw bales and seed can also result in the inadvertent introduction of invasive plants to the project area. The project area already is moderately affected by nonnative species, and no new invasive species would be introduced. Measures to avoid, minimize, and compensate for the introduction and spread of additional noxious weeds are discussed below.

Avoidance, Minimization and/or Mitigation Measures

To reduce the risk of spreading noxious weeds, the project would implement the following measures:

Measure BIO-17: Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds must be cleaned to reduce the spreading of noxious weeds.

Measure BIO-18: Should landscaping be installed within the project area, the project must not incorporate Cal-IPC invasive species. Any landscape treatments should incorporate native plant materials to the maximum extent feasible.

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 proposed 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.

CEQA Guidelines, Section 15130 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 California Environmental Quality Act can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations, Section 1508.7 of the CEQ Regulations.

Affected Environment

The cumulative impact analysis included in this section is based on known projects that are currently proposed, approved, or under construction within a 2-mile radius of the project area. Only one project is currently planned and is presented in Table 2.4-1.

Table 2.4-1: Planned and Future Development in the Project Vicinity

Name	Project Identification Number	Proposed Uses	Status
Pine Acres North	Tentative Subdivision Map #174	44-acre planned residential development	Approved May 25, 2010

Environmental Consequences

Transportation projects and other actions requiring federal approval are generally subject to laws and permit processes requiring consideration of and mitigation for impacts to special-status species and their habitats, wetlands/water of the U.S., water quality, cultural resources, and parklands. These laws and requirements assure that impacts of such undertakings would be fully mitigated. Minimization and mitigation for these projects ensure that they have no contribution to cumulative impacts.

As a result of the planned development and the SR 88 Pine Grove Corridor Improvement Project, there are several environmental resources that could be subject to cumulative impacts. Only environmental resources that have potential to incur project-specific impacts are discussed below.

Community Impacts

Resource Study Area

The resource study area for community impacts is intended to encompass an area where population and housing impacts due to the project could reasonably occur. Specifically, these are impacts to communities and businesses right next to the project area.

Direct Impacts to Resources of Concern

The Build Alternative would require minor amounts of property acquisitions, both from partial and full acquisitions, next to the existing project right-of-way. The project would result in minor increases in noise, minor changes to visual quality, improvement in traffic operations, and improvement in air quality.

Indirect Impacts to Resources of Concern

Construction of the project would occur concurrently with the other ongoing and planned project in the vicinity. The Build Alternative may result in reductions in traffic congestion and improved level of service in the project area as well as increased traffic safety. The proposed project would have no negative impacts to long-term additional employment, income, housing opportunities, and business opportunities in the region. The other projects in the resource study area would improve road conditions, which would contribute to improving the overall transportation network of the region.

Cumulative Impacts

All of the relevant projects planned for the project area are consistent with land use policies and designations for the Amador County General Plan. Planned development in the project vicinity, in conjunction with the Build Alternative, would not result in adverse cumulative community impacts. The Build Alternative would result in the displacement of one business that would require relocation; however, this does not constitute a cumulative impact when considering other projects in the area and the large numbers of available relocation opportunities. No other known projects in the study area are proposing to displace businesses. Consequently, available commercial property for any relocation associated with this project would be available.

The proposed project would not induce unplanned growth or have cumulative effects beyond those already envisioned and planned for in the Amador County General Plan. Therefore, no cumulative impacts are anticipated with respect to community impacts.

Utilities/Emergency Services

Resource Study Area

The resource study area for utilities/emergency services is intended to cover all areas that are being provided services by the utilities/emergency services used within the proposed project

area. For utilities, this consists of all water, telephone and cable, high-pressure gas, sewer, communication, manhole/water valve, and telecom facilities. For emergency services, this area consists of all fire, police, and ambulance services.

Direct Impacts to Resources of Concern

The proposed project would accommodate for all utilities to be relocated within the project area with minimal interruption of services to customers. Also, the proposed project would not result in a need for any additional water supplies, nor would it generate a substantial amount of wastewater. Adequate fire, police, and ambulance services are currently being provided in the resource study area. A result of this project would be improved response times for these emergency services due to improved levels of service in 2024 and beyond.

Indirect Impacts to Resources of Concern

Construction activities of one or more of the projects have the potential to result in temporary, localized, site-specific disruptions, including partial lane closures and detours. This could lead to an increase in delay times for emergency response vehicles during construction. The potential for disruption or obstruction of emergency services access in the project area to occur as a result of construction activities would be avoided with the preparation of a Transportation Management Plan. The plan would take into consideration other projects being constructed near the project area and in the Pine Grove transportation region. Cumulative indirect impacts are not anticipated. If they occur, they would be minor and temporary.

Cumulative Impacts

Continued development in the project area as envisioned by the County's General Plan would create additional demand for local utility and emergency services. The development review process in each jurisdiction requires that, prior to development approval, adequate utility service is provided to each project. In addition, each project is reviewed by emergency service providers to ensure that adequate services can be provided and, if not, appropriate mitigation is required. Due to the extensive review process, there are adequate utilities and emergency services to accommodate the proposed project and all other planned projects in the resource study area. There would not be a cumulative impact on these services.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Resource Study Area

The resource study area for traffic and transportation as well as pedestrian and bicycle facilities includes the routes within and next to the project area. This includes SR 88, Climax Road, Ridge Road, Irish Town Road, Volcano Road, Mt. Zion Road, Tabeaud Road, and connections to the greater transportation area network.

Direct Impacts to Resources of Concern

In recent years, Amador County has experienced an increase in growth. As a result, there are many planned improvements needed within the transportation network to accommodate the additional traffic. The traffic analysis for the proposed project is based on future traffic conditions in the year 2044 to account for future development in the project area. As a result, the analysis

contained in Section 2.1.5 constitutes the operational cumulative analysis for the proposed project.

Indirect Impacts to Resources of Concern

Construction activities of this project have the potential to result in temporary, localized, site-specific disruptions, including partial lane closures and detours. This could lead to an increase in delay times for vehicles during construction. No full road closures are expected for the proposed project. The potential for disruption or obstruction of access in the project area would be avoided with the preparation of a Transportation Management Plan that takes into consideration any other projects being constructed in the vicinity that could have the potential to contribute to cumulative construction impacts. When feasible, existing pedestrian facilities would be maintained to Americans with Disabilities Act standards during construction. As a result, construction of the proposed project would not contribute to any substantial impacts on pedestrian or bicycle transportation.

Cumulative Impacts

Permanent cumulative effects would be beneficial, as the project would improve levels of service on the transportation facilities in the project area. The Transportation Management Plan would minimize the potential for cumulative traffic impacts associated with construction activities. Cumulative impacts are not expected.

Visual Resources

The Build Alternative does not have the potential to substantially change visual resources in the project area. The project would necessitate the removal of some riparian and woodland habitat, but would not substantially degrade or change the visual character in the project area. As a result, there is no potential for cumulative impacts to visual resources.

Water Quality and Storm Water Runoff

Resource Study Area

The resource study area for water quality and storm water runoff is the Sutter Creek and Jackson Creek watersheds.

Direct Impacts to Resources of Concern

The proposed project, in combination with other roadway improvements and development in the area, would contribute to increased pollutants in storm water runoff that if not addressed could adversely affect local and regional surface water quality. Best management practices would be implemented in compliance with the National Pollutant Discharge Elimination System permit requirement to minimize the potential for impacts to water quality, including the violation of any water quality standard or waste discharge requirement. No measurable increase in the amount of waterborne pollutants on the proposed project site is expected with the implementation of the identified minimization measures; therefore, the potential for cumulative impacts would be minimal. It is further assumed that other large-scale projects would be required to comply with National Pollutant Discharge Elimination System regulations, reducing their potential for water quality impacts.

Indirect Impacts to Resources of Concern

Construction of the proposed project, in the context of simultaneous construction of other nearby projects, could have a temporary adverse additive cumulative impact on water quality. Strict adherence to permit conditions and storm water pollution prevention plans would be required. With implementation of the above avoidance, minimization, and mitigation measures in conjunction with acquisition of the necessary water quality permits (in particular, Section 402 of the Clean Water Act), no cumulatively considerable contribution to the degradation of surface waters within the region are expected from the proposed project.

Cumulative Impacts

The project would create additional impervious surfaces relative to natural soil, thereby increasing the velocity and volume of flow draining to the discharge channel and receiving waters. However, the project includes substantial storm water drainage improvements including construction of curb and gutter improvements through the town of Pine Grove and inclusion of bioswales for natural drainages in key locations throughout the project. These permanent improvements, combined with the preparation of a Storm Water Pollution Prevention Plan, consistent with Section 402 of the Clean Water Act, would ensure the project would not contribute to cumulative water quality impacts.

Hazardous Waste/Materials

Resource Study Area

The resource study area for hazardous waste/materials includes the project site and the properties immediately adjacent.

Direct Impacts to Resources of Concern

Historically, hazardous waste/materials were used during construction (lead and asbestos, specifically). Projects in the area that have demolished or modified structures built before 1978 (use of lead) or 1981 (use of asbestos) have potentially encountered hazardous materials. The proposed project, in combination with other projects in the area, has the potential to spread or release hazardous materials, which could affect nearby residents and businesses. However, this project would not contribute to any cumulative impacts because any potential effects would be addressed through testing and remediation required under California Environmental Quality Act, National Environmental Policy Act, and other regulatory agencies and implementation of standard minimization measures, including cleanup requirements for individual projects that may encounter contaminated soil or groundwater.

Indirect Impacts to Resources of Concern

Any contaminated material encountered during construction of the proposed project or any of the others in the vicinity would be handled, transported, and disposed of in accordance with all applicable laws, regulations, and agency oversight.

Cumulative Impacts

Any contaminated material encountered during the construction of the project or any of the others in the vicinity would be handled, transported, and disposed of in accordance with all

applicable laws, regulations, and agency oversight; cumulative adverse impacts are not expected.

Noise

Resource Study Area

The resource study area for project-related noise impacts includes the project site and properties immediately adjacent.

Direct Impacts to Resources of Concern

Noise in the resource study area is made up mostly of vehicle noise on SR 88 and the adjacent transportation network. Ambient noise levels from the surrounding area were monitored and included in the project's noise model. The operational noise impact analysis for the proposed project is predicated on future traffic projections. These future projections assume other projects in the vicinity to be in place and functioning as planned. No additional cumulative impacts are therefore expected, beyond those that are disclosed in the noise impact analysis. Noise from existing and proposed development and projects is incorporated into any decisions regarding noise abatement. Other planned development in the project area would also be required to include design features to mitigate or abate noise impacts.

Indirect Impacts to Resources of Concern

Noise from equipment required for constructing the proposed project could generate noise levels that would generally range from 80 to 85 dBA L_{eq} during peak periods at 50 feet from the center of construction activities. Construction of the proposed project in conjunction with other nearby projects could increase overall background noise levels; however, given the distance of the closest projects surrounding the project area and the measures to minimize construction noise required on projects, it is unlikely that the proposed project would result in a cumulative impact.

Cumulative Impacts

On a cumulative level, vehicle-generated noise tends to be less substantial because noise dissipation occurs over a relatively short distance from the subject roads, and impacts to sensitive receptors are limited to the project vicinity. No cumulative impacts are expected because the proposed project would not substantially change the current noise levels from the existing facilities.

Biological Environment

Resource Study Area

The resource study area for the biological environment consists of adjacent water resources and suitable habitat for the sensitive species that have the potential to occur within the project's biological study area. Historically, as development has increased in the surrounding area, suitable habitat for these species has decreased.

Natural Communities and Animal Species

Direct Impacts to Resources of Concern

Implementation of the project would result in a loss of Montaine Hardwood Conifer Forest habitat (woodland) and a minor loss of riparian habitat where SR 88 is next to Jackson Creek and Grass Valley Creek. Woodland habitat is expected to be replaced at a 1:1 ratio. Riparian habitat is currently expected to be replaced for this project at a 2:1 ratio. Additionally, implementation of the project would result in loss of both waters of the U.S. and State. Waters are expected to be replaced at a 2:1 ratio. By implementing planned habitat restoration, and restoration of waters, no cumulative impacts to natural communities, plant and animal species are expected to occur.

Indirect Impacts to Resources of Concern

Habitats within the project site are judged low quality for protected species because of their proximity to residential, commercial, and highway development; therefore, many plants and animals potentially present are either relatively tolerant of human presence or are already being negatively affected by current conditions. Construction activities would result in the disturbance of habitats and waters in the project area; however, activities would be confined by Environmental Sensitive Area fencing to as small of an area as possible. Trees would be trimmed, rather than removed, where possible. No sensitive habitats would be affected outside of the riparian habitat as discussed. Waters of the U.S. and State would be re-contoured to natural conditions. Construction would not have a cumulatively considerable contribution to the decline of sensitive habitats in the region. Other projects in the region would also be required (by U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and local jurisdictions) to avoid, minimize, and/or mitigate for construction impacts on habitats that are potentially suitable for protected species. So, there would be no cumulative impact on sensitive habitats.

Cumulative Impacts

The project proposes to mitigate for impacts to riparian habitat by restoring the habitat after completion of roadway construction and mitigation for impacts to waters of the U.S. and State by mitigating at a 2:1 ratio for permanent impacts and re-contouring the disturbed waters for temporary impacts. This habitat restoration would occur as part of the mitigation required by Caltrans and U.S. Fish and Wildlife Service as part of the Section 7 Consultation for the California red-legged frog. With this mitigation incorporated, no cumulative impacts are expected.

Threatened and Endangered Species

Direct Impacts to Resources of Concern

A Habitat Assessment for the California red-legged frog was prepared for the project in 2013. This assessment determined that there is suitable dispersal habitat for the California red-legged frog but no suitable breeding habitat in the project area. There is a low potential for encountering California red-legged frogs during construction. Caltrans received a Letter of Concurrence from the U.S. Fish and Wildlife Service on March 6, 2015, confirming that the project may affect, but is not likely to adversely affect, the California red-legged frog. The U.S. Fish and Wildlife Service provided conservation measures to ensure potential impacts to the

California red-legged frog and its habitat are minimized to the greatest extent feasible. By avoiding and minimizing direct impacts to the species, no cumulative direct impacts are expected to occur.

Indirect Impacts to Resources of Concern

Indirect impacts to the California red-legged frog could result from loss of habitat and construction-related disturbance. As stated in the Natural Communities section above, riparian and woodland habitats will be restored after completion of construction, which would minimize the effects of habitat loss. The measures proposed would also greatly lessen the potential for construction impacts to affect California red-legged frogs should they be present in the project vicinity.

Cumulative Impacts

Pursuant to the Federal Endangered Species Act, Section 7 Consultation between Caltrans (as the federal lead agency) and the U.S. Fish and Wildlife Service for California red-legged frog has been completed and determined that the project may affect, but is not likely to adversely affect, California red-legged frog with the implementation of conservation measures. No substantial cumulative impacts to the species are expected.

Invasive Species

Direct Impacts to Resources of Concern

Transportation corridors and construction activities provide opportunities for the spread of invasive species through the landscape. Nonnative seed can inadvertently be introduced into the project area on equipment during construction and through the use of imported soil or mulch materials.

Indirect Impacts to Resources of Concern

No indirect impacts as a result of invasive species are expected.

Cumulative Impacts

Erosion control and landscaping designs for the proposed project would not contain species on the California list of noxious weeds in the plant selections or the seed mixtures. To reduce impacts from invasive species, Section 2.3.6 includes a discussion of avoidance, minimization, and mitigation measures. These measures would reduce potential invasive species impacts and ensure the project does not contribute to cumulative impacts.

2.5 Climate Change (California Environmental Quality Act)

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are mostly concerned with the emissions of greenhouse gases generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of greenhouse gas emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source [second to electricity generation]) of greenhouse gas-emitting sources. The dominant greenhouse gas emitted is CO_2, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing greenhouse gas emissions to reduce or "mitigate" the impacts of climate change. "Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)[3].

There are four main strategies for reducing greenhouse gas emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower greenhouse gas-emitting fuels, and 4) improving vehicle technologies. To be most effective, all four strategies should be pursued collectively. [4]

Regulatory Setting

State

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

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

[3] http://climatechange.transportation.org/ghg_mitigation/
[4] http://www.fhwa.dot.gov/environment/climate_change/mitigation/

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

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

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

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

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

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

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

Federal

Although climate change and greenhouse gas reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing greenhouse gas emissions reductions and climate change at the project level. Neither the U.S. Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration has issued explicit guidance or methods to conduct project-level greenhouse gas analysis.[5] The Federal Highway Administration supports the approach that climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

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

The four strategies outlined by the Federal Highway Administration to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

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

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

The U.S. EPA's authority to regulate greenhouse gas emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that greenhouse gases meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the court's ruling, the U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of greenhouse gas emission standards for new cars and light-duty vehicles in April 2010.[6]

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

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce greenhouse gas emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, the U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the national program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards, this program is projected to save approximately four billion barrels of oil and two billion metric tons of greenhouse gas emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel

[6] http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq

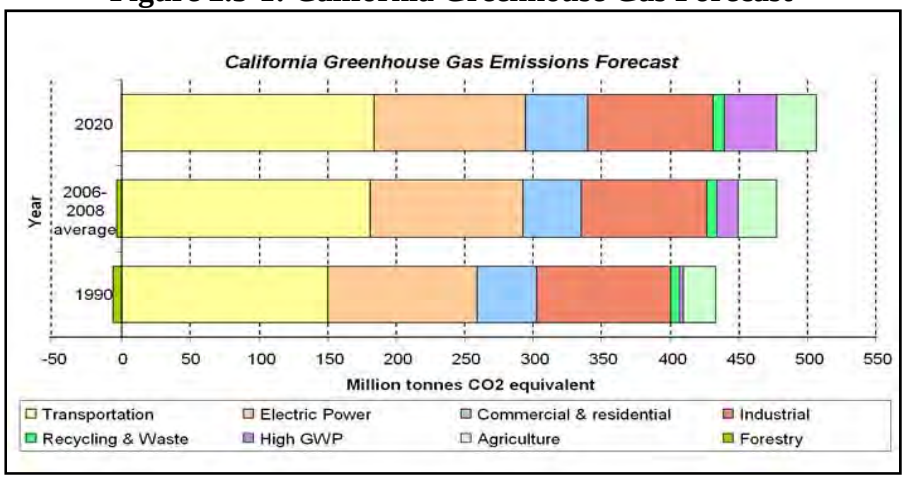
efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy-duty vehicles.

Project Analysis

An individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of greenhouse gas.[7] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible task.

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

Figure 2.5-1: California Greenhouse Gas Forecast



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

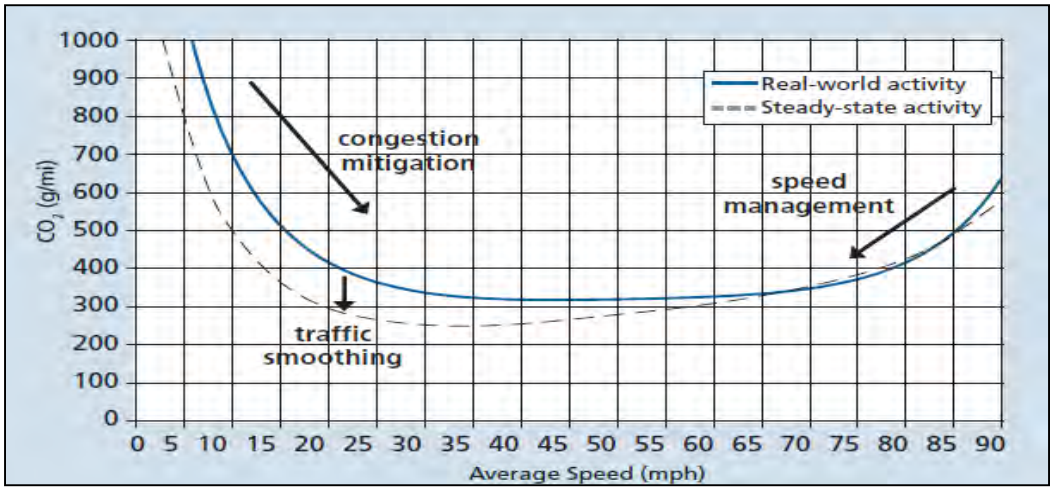
Caltrans and its parent agency, the State Transportation Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California's greenhouse gas emissions are from the burning of fossil fuels and 40

[7] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

percent of all human made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[8]

One of the main strategies in the Caltrans Climate Action Program to reduce greenhouse gas emissions is to make California's transportation system more efficient. The highest levels of CO_2 from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0-25 miles per hour (see Figure 2.5-2). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors, greenhouse gas emissions, particularly CO_2, may be reduced.

Figure 2.5-2: Possible Effect of Traffic Operation Strategies in Reducing On-Road CO2 Emissions[9]



The SR 88 Pine Grove Corridor Improvement Project has been designed, in part, to reduce congestion and vehicle time delays along SR 88 through the town of Pine Grove as well as on the larger transportation network in Amador County. The 2015 Traffic Study prepared for the project by Fehr and Peers identifies that the proposed project is expected to reduce vehicles miles traveled by 4 percent in 2024 and by 2 percent in 2044 and notes that a smaller percentage of this vehicle miles traveled occurs at speeds of less than 15 miles per hour. This is important because lower travel speeds are known to generate higher levels of greenhouse gas per mile driven. As a result, a qualitative analysis of the project yields improvements to greenhouse gas emissions when comparing the future build conditions to the future no-build conditions.

[8] Caltrans Climate Action Program is found at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

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

Quantitative Analysis

While level of service would become worse without the project, the proposed project traffic volumes are not expected to substantially change based on the Build versus No-Build Alternatives. The proposed project would not generate new trip sources or destinations but would only increase capacity and transportation efficiency along SR 88 and the surrounding roadway network. While a minor reduction in vehicle miles traveled would slightly improve greenhouse gas emissions, the No-Build Alternative and Build Alternative are expected to generate roughly the same total amount of vehicle trips as growth occurs between now and 2044.

With the CT-EMFAC model, CO_2 emissions were estimated comparing the existing condition and future conditions for the Build Alternative and No-Build Alternative. The existing average daily traffic count for this area is approximately 15,000; the 2024 construction year average daily traffic count for the area is approximately 18,500; and the design year average daily traffic count for the area is anticipated to be approximately 23,500 due to growth in the area. The CT-EMFAC model was used based on information from the Traffic Operations Analysis Report (2015); results are provided in Table 2.5-1 below. The model predicts that in the projected opening year (2024), the Build Alternative would result in 0.1650 ton per day of CO_2 and the No-Build Alternative would result in 0.1648 ton per day of CO_2, an insubstantial difference. In the 2044 design year, the Build Alternative is projected to result in 0.1141 ton per day of CO_2, while the No-Build Alternative would result in 0.1337 ton per day of CO_2. The Build Alternative improves the level of service, decreasing delay times, within the area, which results in a reduction in the amount of CO_2 emissions.

Also, the average travel speed along SR 88 decreases for the Build Alternative to enhance safety, which results in an increase in the amount of CO_2 emissions. This improved level of service and reduced average travel speeds would appear to cancel each other out and result in a negligible difference between the Build Alternative and No-Build Alternative in 2024. However, by 2044, the benefits of reduced congestion, which would contribute to CO_2 emissions, would outweigh the negatives of lower traffic speeds.

Table 2.5-1: Quantitative CO_2 Emissions

Scenario	Year	VMT*	CO_2 (metric tons per day)
Existing	2015	6,538	0.1805
2024 No-Build	2024	8,183	0.1648
2024 Build	2024	8,192	0.1650
2044 No-Build	2044	10,307	0.1337
2044 Build	2044	10759	0.1141

Notes: *Total Network Performance for Morning and Afternoon Peak Hours combined
Modeled using CT-EMFAC 5.0, and Pine Grove SR 88 Improvement Project Traffic Operations Analysis Report (2015)

These CO_2 emissions numbers are only useful for a comparison between alternatives. The numbers are not necessarily an accurate reflection of what the true CO_2 emissions would be because CO_2 emissions depend on other factors that are not part of the model such as the fuel mix (EMFAC model emission rates are only for direct engine-out CO_2 emissions not full fuel cycle; fuel cycle emission rates can vary dramatically depending on the amount of additives like ethanol and the source of the fuel components), rate of acceleration, and the aerodynamics and efficiency of the vehicles.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. To reduce construction emissions, the proposed project would incorporate Measures GHG-1 through GHG-4.

California Environmental Quality Act Conclusion

As discussed above, both the 2024 and 2044 with-project and future no-build scenarios show reductions in CO_2 emissions over the existing levels and generally the Build Alternative would result in lower CO_2 emissions when compared with the No-Build Alternative. There are also limitations with EMFAC and with assessing what a given CO_2 emissions increase means for climate change. Therefore, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

AB 32 Compliance

Caltrans continues to be actively involved on the Governor's Climate Action Team as the Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger's Strategic Growth Plan called for a $222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including $100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today's level and a corresponding reduction in greenhouse gas emissions. The Strategic Growth Plan proposes

to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in the Mobility Pyramid (see illustration below).

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans also assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light-and heavy-duty trucks; the department is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by the U.S. EPA and Air Resources Board.

Mobility Pyramid

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

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

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

Table 2.5-2 summarizes the Caltrans and statewide efforts that the department is implementing to reduce greenhouse gas emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

To the extent that it is applicable or feasible for the proposed project, through coordination with the Project Development Team, the following measures would also be included in the proposed project to reduce the greenhouse gas emissions and potential climate change impacts from projects. In addition to the following measures, the proposed project will comply with Measures BIO-1 and BIO-2, which concern revegetation and landscaping. These measures would help reduce surface warming and, through photosynthesis, decrease CO_2.

Measure GHG-1: Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. Intelligent Transportation Systems commonly consists of electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

Measure GHG-2: The Amador County Transportation Commission provides ridesharing services and park-and-ride facilities throughout the county to help manage the growth in demand for highway capacity.

Table 2.5-2: Climate Change/CO_2 Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Inter-governmental Review (IGR)	Caltrans	Local Govern-ments	Review and seek to mitigate development proposals	Not estimated	Not estimated
	Planning Grants	Caltrans	Local and regional agencies and other stake-holders	Competitive selection process	Not estimated	Not estimated
	Regional Plans and Blueprint Planning	Regional agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements and Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy and GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not estimated	Not estimated
Educational and Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, CARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not estimated	Not estimated
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy conservation opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and construction industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
Goods Movement	Office of Goods Movement	CalEPA, CARB, BT&H, MPOs		Goods Movement Action Plan	Not estimated	Not estimated
Total					**2.72**	**18.18**

Source: Department of Transportation Standard Environmental Reference, 2012

Measure GHG-3: Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. The project proposes planting trees and other vegetation in appropriate locations throughout the project. This revegetation will help offset future CO_2 emissions.

Measure GHG-4: The project would incorporate the use of energy-efficient lighting, such as LED traffic signals and street lights.

Adaptation Strategies

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

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

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

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

In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop the California Climate Adaptation Strategy (Dec 2009)[10], which summarizes the best-known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to Executive Order S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state

[10] http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

agencies were involved in the creation of the Adaptation Strategy document, including: the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: public health; biodiversity and habitat; ocean and coastal resources; water management; agriculture; forestry; and transportation and energy infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report[11] to recommend how California should plan for future sea level rise. The report was released in June 2012 and included the following:

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

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

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks from and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predictions of higher high-water levels, and storm surge and storm wave data.

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

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

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

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

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

CHAPTER 3 - COMMENTS AND COORDINATION

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

3.1 Scoping Process

Several alternatives were developed and considered by the SR 88 Pine Grove Corridor Improvement Project Development Team, which includes Amador County Transportation Commission, Caltrans District 10 and District 6 staff, and engineering and environmental planning consultants. These alternatives are discussed in Section 1.4.3. After public involvement, the Project Development Team selected the Build Alternative as the locally preferred alternative, which is discussed thoroughly in Chapter 1 of this environmental document.

Further, numerous alternatives were evaluated as potential transportation improvement solutions through the town of Pine Grove during the scoping phase. These alternatives included various bypass options, both to the north and south of the existing SR 88 through town. A widening of SR 88 through town to four lanes plus a center turn lane was also considered. Each of these alternatives was removed from further consideration due to a combination of factors that included some or all of the following: public controversy/dissent, environmental impacts, right-of-way impacts, and cost. Input from the public was obtained through a wide variety of public information meetings, solicitation of comments, and stakeholder working groups. This selection was made through an exhaustive stakeholder-based context sensitive alternative screening process. Alternatives that were considered but removed from further consideration are discussed in detail in Section 1.4.3 of this Initial Study/Environmental Assessment.

3.2 Agency Consultation and Coordination

During preparation of the technical studies for the project, extensive contacts were made with public agencies and local organizations with interests in the project.

3.2.1 Interagency Coordination

U.S. Fish and Wildlife Service

A record of coordination with the U.S. Fish and Wildlife Service and the Section 7 process is included in Appendices F and G.

September 18, 2011: A Federal Endangered and Threatened Species list is obtained from the U.S. Fish and Wildlife Service website.

February 21, 2013: Caltrans biologist Hanna Main sent a letter and the habitat assessment prepared for the proposed project to determine if California red-legged frog protocol surveys would be required for the project.

March 11, 2013: U.S. Fish and Wildlife Service biologist Casey Collins responded via email with the determination that California red-legged frog protocol surveys would not be necessary. Also provided were recommendations for avoidance and minimization measures to be required as environmental commitments, to help avoid and/or minimize impacts on California red-legged frog during construction.

June 3, 2014: An updated species list is obtained from the U.S. Fish and Wildlife Service website.

June 25, 2014: Caltrans sent a letter and the Biological Assessment for the California red-legged frog prepared for the project to the U.S. Fish and Wildlife Service requesting initiation of informal Section 7 Consultation. In the letter, Caltrans requested concurrence from the U.S. Fish and Wildlife Service that the project may affect, but is not likely to adversely affect, the federally listed as threatened California red-legged frog.

January 15, 2015: The U.S. Fish and Wildlife Service contacts Caltrans biologist Sarah Soliman requesting additional information about the project and a proposed updated project description tailored for use in the draft concurrence letter prepared by U.S. Fish and Wildlife Service.

February 6, 2015: Caltrans coordinated with the project team to revise the project description and provide the requested additional information to the U.S. Fish and Wildlife Service. All coordination was completed informally via email.

March 6, 2015: The U.S. Fish and Wildlife Service sends Caltrans the Informal Section 7 Consultation Concurrence Letter for the SR 88/Pine Grove Corridor Improvement Project. The letter includes conservation measures designed to ensure the California red-legged frog is adequately protected during construction. Receipt of this letter concludes the Section 7 Consultation process for this project.

April 30, 2015: An updated species list is obtained from the U.S. Fish and Wildlife Service website.

California State Historic Preservation Officer (SHPO)

A record of consultation with the SHPO is included in Appendix H.

June 26, 2014: Caltrans initiates consultation with the California State Historic Preservation Officer in a letter requesting concurrence with the determinations that there are no culturally sensitive properties in the Area of Potential Effect.

July 31, 2014: Caltrans receives a letter from the California State Historic Preservation Officer concurring with the determination that there are no culturally sensitive properties in the Area of Potential Effect, pursuant to the 2014 Programmatic Agreement between these two agencies. This concurrence letter completed the Section 106 Consultation process.

3.2.2 Native American Coordination

On December 7, 2012, a letter and map showing the project vicinity were sent to the Native American Heritage Commission requesting a list of individuals and organizations that may have knowledge of, or concerns regarding, cultural resources in the project area. On January 4, 2013, initial letters were sent to all Native American contacts provided on the list from the commission. The letter provided a summary of the project and requested comments or concerns the Native American community might have about the project. For those individuals and organizations that did not respond to the initial letter within 30 days, follow-up phone calls were placed to inquire if the letter had been received. Through this coordination effort, several parties requested additional information; however, no concerns with the proposed project were identified.

3.3 Public Participation

Public participation has been a key factor in the decision-making for the SR 88 Pine Grove Corridor Improvement Project. During the Preliminary Engineering and Environmental Document phase of the project, public information meetings were held at the Pine Grove Town Hall on December 12, 2012, June 26, 2013, and October 23, 2013. Stakeholders, residents, business owners, and commuters were notified via mail and bulletin of the public meetings. Public participation ranged from 10-50 people at these meetings. The concerns voiced by the public included design elements, right-of-way acquisition, traffic and questions on specific engineering alignments, changes to bicycle and pedestrian facilities, and impacts to emergency services.

In addition to the public meetings, Stakeholder Working Group meetings were held at the Pine Grove Town Hall on August 21, 2012, September 26, 2012, October 17, 2012, November 28, 2012, and April 10, 2013. These Stakeholder Working Group meetings were developed to involve key stakeholders, including Caltrans, Amador County, the town of Pine Grove, the Amador County Transportation Commission, and members of the public in the each of the local jurisdictions, in decision-making and design decisions beyond those made by the Project Development Team. Keeping these stakeholders involved throughout the preliminary design process has been critical to ensuring that local concerns have been addressed while continuing to meet the project purpose and need.

Pursuant to National Environmental Policy Act and California Environmental Quality Act requirements, this proposed Initial Study/Environmental Assessment will be circulated for 30 days and will solicit public review and comment. If requested, a public hearing will be held regarding the project. Any public comments received during public circulation of this environmental document will be included in the final document along with a response to the comment. Comments received during public circulation will receive consideration and the environmental document may be modified as a result.

CHAPTER 4 - LIST OF PREPARERS

The following Caltrans staff and consultants contributed to the preparation of this Initial Study/Environmental Assessment.

California Department of Transportation

Jennifer Lugo, Associate Environmental Planner. M.A., History, California State University, Fresno; B.A., History, Minor Political Science, California State University, Fresno; 9 years of environmental planning experience; 3 years of architectural history experience. Contribution: Oversight Environmental Coordinator.

Carrie Swanberg, Associate Environmental Planner (Natural Sciences). B.S., Biology, California State University, Fresno; 14 years of biology experience. Contribution: Oversight Environmental Coordinator.

Kirsten Helton, Senior Environmental Planner. B.A., Economics, California State University, Fresno; 21 years of environmental planning experience. Contribution: Oversight review Draft Initial Study/Environmental Assessment.

Scott Smith, Senior Environmental Planner. B.A., Economics, California State University, Fresno; 13 years of environmental planning experience. Contribution: Oversight Review Manager.

Sarah Soliman, Associate Environmental Planner, Biologist. B.A., Molecular and Cell Biology, University of California Berkeley; 6 years of environmental planning and biology experience. Contribution: Oversight review of Natural Environment Study and Biological Assessment.

Allam Alhabaly, Transportation Engineer. B.S., California State University, Fresno, School of Engineering; 15 years of environmental technical studies experience. Contribution: Oversight review Noise Study Report.

Clemens Goewert, Environmental Planner (Hazardous Waste Specialist). B.A., Geology, St. Louis University, St. Louis, Missouri; 40 years of combined experience in geology, engineering geology, environmental studies, and hazardous and nuclear waste management. Contribution: Oversight review of hazardous waste studies.

Philip Vallejo, Associate Environmental Planner. B.A., History, California State University, Fresno, 9 years of experience in architectural history field. Contribution: Oversight review of Historic Property Survey Report and Archaeological Survey Report.

Jon L. Brady, Associate Environmental Planner/Architectural Historian. B.A., Political Science and Anthropology; M.A., History, California State University, Fresno; over 30 years of experience as a consulting archaeologist and historian. Contribution: Oversight review of Historic Resources Evaluation Report.

Amador County Transportation Commission

Ryan Thompto, Local Project Delivery Specialist. Contribution: Amador County Transportation Commission Project Manager.

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Richard Liptak, P.E., Project Manager. Contribution: Consultant Engineering Project Manager.

Matt Atkinson, P.E., Project Engineer. Contribution: Consultant Project Engineer.

Tim Chamberlain, Senior Environmental Planner. Contribution: Consultant Environmental Coordinator, IS/EA Primary Author, Visual Impact Assessment, Section 4(f) Evaluation, Paleontological Memo.

Namat Hosseinion, Principal Environmental Planner. Contribution: Consultant Environmental Quality Assurance Manager, Historic Property Survey Report, Archaeological Survey Report.

Amy Dunay, Environmental Planner. Contribution: Historic Property Survey Report, Archaeological Survey Report.

Angela Scudiere, Environmental Planner. Contribution: Natural Environment Study, Biological Assessment.

Carlene Grecco, Environmental Planner. Contribution: Community Impact Assessment, Water Quality Assessment.

Lindsay Katt, P.E., Contribution: Hazardous Waste Initial Site Assessment.

Fehr and Peers

Fred Choa, Principal Traffic Planner. Contribution: Traffic Operations Analysis Report and Supplemental Traffic Operations Analysis Report.

Entech Consultation

Michelle Jones, Principal Planner. Contribution: Noise Study Report.

Galvin Preservation and Associates

Andrea Galvin, Principal Architectural Historian. Contribution: HRER.

Perennial LLC

Terry Strange, Senior Biologist. Contribution: California Red-legged Frog Habitat Assessment.

Geocon Consultants Inc.

Jeremy Zorne, P.E., G.E. Contribution: Limited Phase 2 Environmental Site Assessment.

CHAPTER 5 - DISTRIBUTION LIST

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P.O. Box 3044
Sacramento, CA 95812

Amador County Transportation Commission
Attn: Ryan Thompto
117 Valley View Way
Sutter Creek, CA 95685

California Department of Transportation
District 10
Attention: Jes Padda
1976 E. Dr. Martin Luther King Jr. Blvd
Stockton, CA 95205

California Department of Transportation
District 6
855 M Street, Suite 200
Fresno, CA 93721

Amador County
Public Works Department
810 Court Street
Jackson, CA 95642

U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
Attn: Casey Collins
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

U.S. Army Corps of Engineers
Regulatory Branch
1325 J Street
Sacramento, CA 95814

California Department of Fish and Wildlife Region 2
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

California State Historic Preservation Officer
P.O. Box 942896
Sacramento, CA 94296

California Highway Patrol
Office of Special Projects
2555 1st Avenue
Sacramento, CA 94298

AT&T
Re: Utility Relocation
951 S. Highway 49
Jackson, CA 95642

Pacific Gas and Electric
Re: Utility Relocation
4040 West Lane
Stockton, CA 95204

Volcano Communication Group
Re: Utility Relocation
P.O. Box 1070
Pine Grove, CA 95665

Amador Water Agency
Re: Utility Relocation
12800 Ridge Road
Sutter Creek, CA 95685

Comcast Cable
Re: Utility Relocation
6505 Tam O'Shanter Drive
Stockton, CA 95210

CAMGAS
Re: Utility Relocation
429 Main Street #1
West Point, CA 95255

KARPRO
Re: Utility Relocation
1915 Moffat Boulevard
Manteca, CA 95336

Pine Grove Community Services District
Re: Utility Relocation
P.O. Box 267
Pine Grove, CA 95665

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 and avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☐	☒
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
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) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒
X. 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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?	☐	☐	☐	☒
) 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?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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.)	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Appendix B Section 4(f) De Minimis Finding

SECTION 4(f) DE MINIMIS FINDING

STATE ROUTE 88 PINE GROVE CORRIDOR
IMPROVEMENT PROJECT

TOWN OF PINE GROVE, AMADOR COUNTY, CALIFORNIA

EA# 10-0G550

Prepared by:

Dokken Engineering
110 Blue Ravine Road, Suite 200
Folsom, California 95630

Prepared for:

California Department of Transportation District 10
1976 E. Dr. Martin Luther King Jr. Blvd.
Stockton, CA 95205

and

Amador County Transportation Commission
117 Valley View Way
Sutter Creek, CA 95685

Pursuant to 49 U.S.C. 303

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by the California Department of Transportation under its assumption of responsibility pursuant to 23 U.S.C. 327.

September 2015

INTRODUCTION

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

As part of the State Route 88 Pine Grove Corridor Improvement Project, California Department of Transportation (Caltrans) and the Amador County Transportation Commission (ACTC) propose to improve State Route 88 (SR-88) within and adjacent to the Town of Pine Grove. This project will require acquisition of a small portion of Pine Grove Community Park and include work near the Pine Gove Elementary School Playground, resulting in a de minimis impact to recreational activities in Pine Grove. The park and the playground are located along SR-88 in the Town of Pine Grove. The park and the playground are publicly owned recreation land and are subject to the provisions of Section 4(f) of the Department of Transportation Act.

LEAD AGENCY UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

In July 2012, President Barack Obama signed into law a federal transportation reauthorization bill called the Moving Ahead for Progress in the 21st Century Act (MAP-21). This law allows Caltrans to assume the Federal Highway Administration's responsibilities under the National Environmental Policy Act (NEPA) and other federal environmental laws. As a result Caltrans is the federal lead agency for the proposed project.

SECTION 4(f) DE MINIMIS DETERMINATION

Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only de minimis impacts on lands protected by Section 4(f). This revision provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. FHWA's final

rule on Section 4(f) de minimis findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

DESCRIPTION OF PROPOSED PROJECT

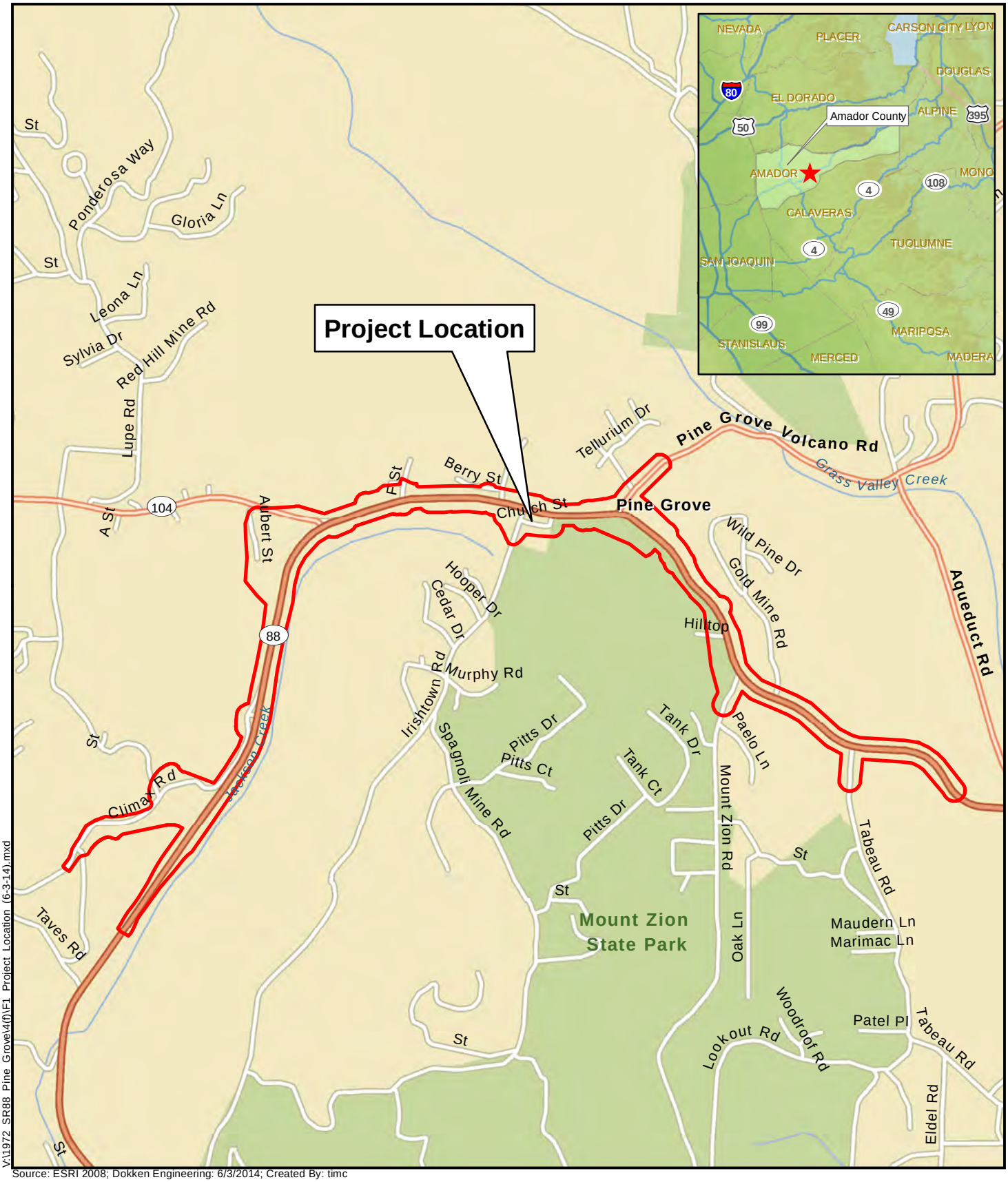
The California Department of Transportation (Caltrans) in coordination with Amador County Transportation Commission propose improvements to the segment of State Route 88 (SR 88) in Amador County from post mile (PM) 21.6 near Climax Road to PM 24.6 near Tabeaud Road. The total length of the project is approximately 3 miles. The existing roadway is a two-lane highway with minimal shoulders. Figure 1 shows the project location and Figure 2 shows the Build Alternative project features. The ACTC is a cooperating agency, while Caltrans is the environmental lead agency under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

Build Alternative

The Pine Grove Corridor Improvement Project runs along State Route 88 (SR 88) beginning a half mile west of the existing Climax Road intersection, moving east through the town of Pine Grove and ending 900 feet. east of Tabeaud Road. At both approaches into Pine Grove, the existing SR 88 is a two-lane highway with minimal shoulders. From Ridge Road to Tabeaud Road within the Pine Grove Corridor, a two-way left turn lane is introduced, minimal shoulders remain, existing parking is limited and there are some sidewalks near Pine Grove Elementary School. The major intersections that cross SR 88 through Pine Grove are Ridge Road, Irishtown Road and Volcano Road, both of which come into Ridge Road and Volcano Road intersect SR 88 at skewed angles due to the geometrics of the highway and only Ridge Road is signalized. Through the town of Pine Grove, the project is bounded on both sides with some residential, but mostly commercial properties. Formal driveway access existing along the highway; however, there are several properties that have informal driveway access to SR -88 where vehicles can enter or exit the highway in multiple locations along those properties. In select locations throughout Pine Grove, the highway is also bounded on one side by retaining walls and/or steep cut slopes/embankments. Retaining walls will be constructed where necessary when the embankment/cut slope of the roadway and sidewalks would otherwise encroach into areas that have constraints. Existing culverts will be extended where necessary to accommodate the standard shoulders throughout the project. This project proposes to improve access for non-motorized modes of transportation by making the SR -88 facility consistent with Caltrans and County roadway design standards, and to reduce congestion through improvement of operations of the highway facility. Safety will be enhanced by including standard shoulders, sidewalks, formalized driveways, squaring of intersections, improved clear recovery zone, the removal of a free right turn at SR 88/Ridge Road and the removal of nonstandard access at SR 88/Volcano Road intersection.

No-Build Alternative

The No-Build Alternative would result in no changes to the existing transportation facility within the project area. The No-Build Alternative is not consistent with regional planning, planned improvements, or the purpose and need of the project.

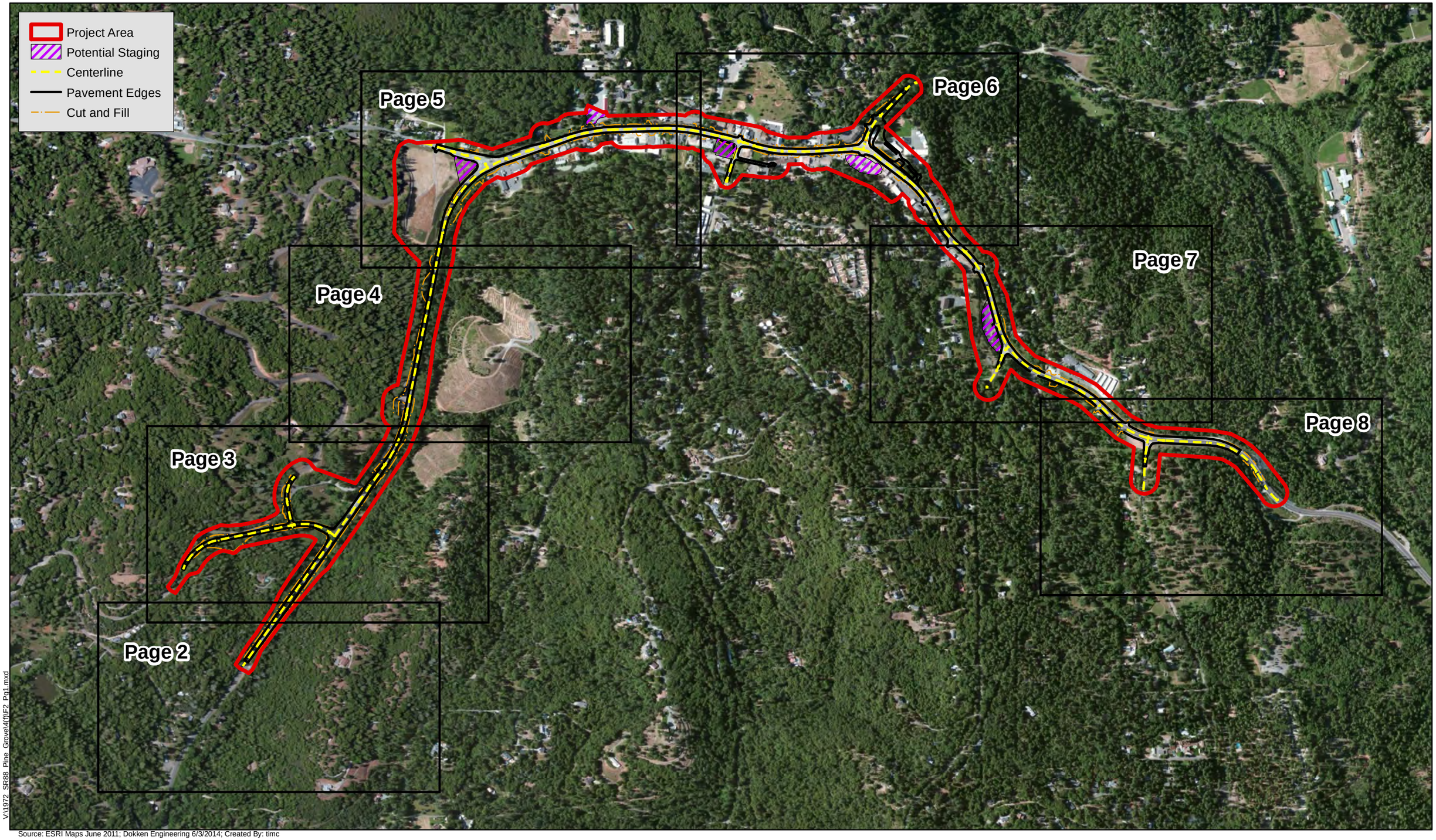


V:\1972_SR88_Pine_Grove\4(0)\F1_Project_Location_(6-3-14).mxd

Source: ESRI 2008; Dokken Engineering: 6/3/2014; Created By: timc

0 0.25 0.5 0.75 1 Miles

FIGURE 1
Project Location
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M. 21.6/24.6



V:\1972- SR88 Pine Grove\4(f)\F2. Pp1.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 0.25 0.5 0.75 1 Miles

FIGURE 2
Build Alternative Project Features
Page 1 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 3

V:\1972_SR88_Pine_Grove\4(f)\F2_Pg2.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 200 400 600 800 1,000 Feet

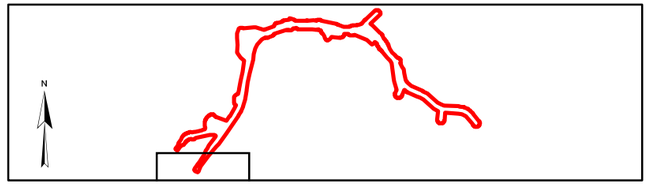
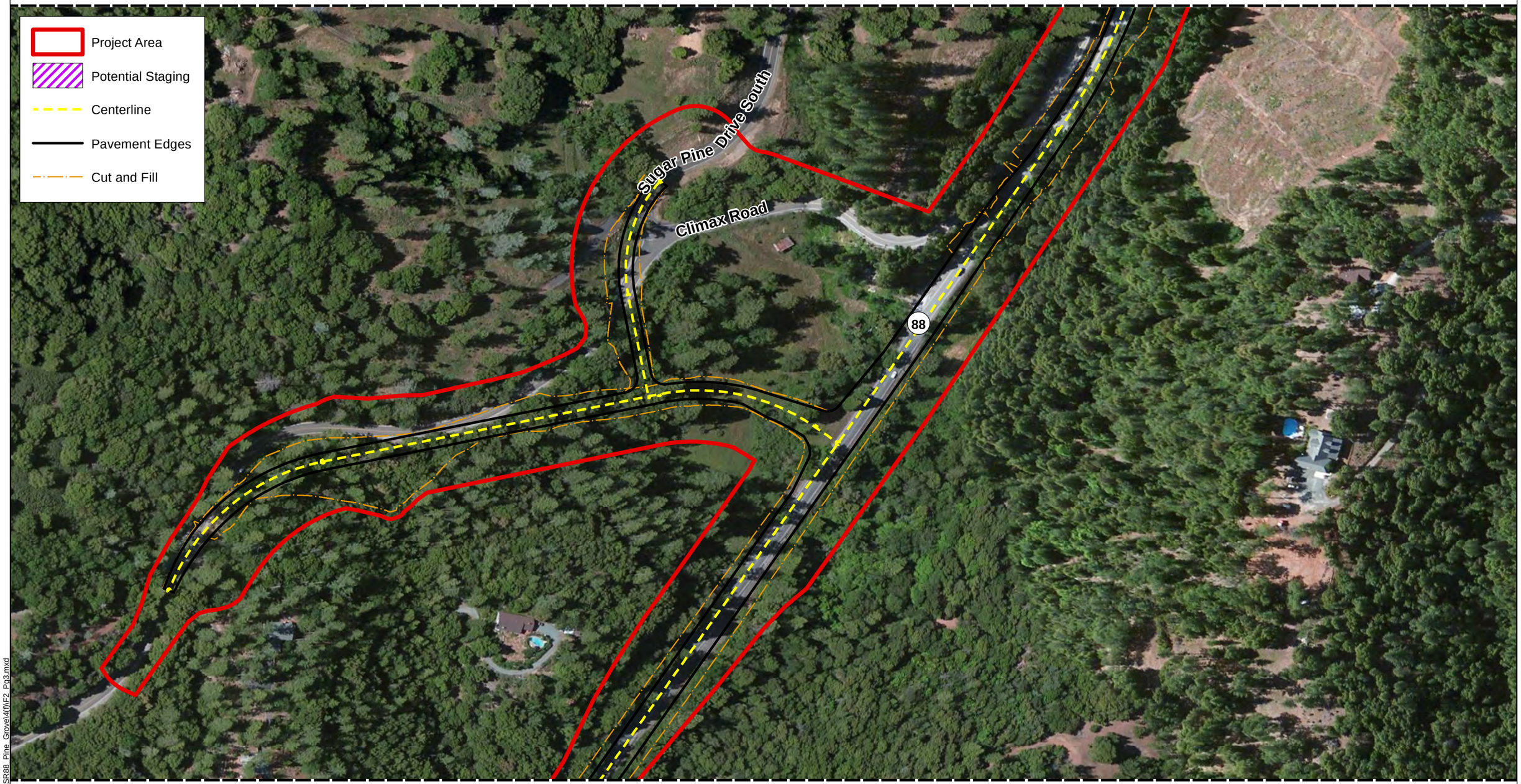


FIGURE 2
Build Alternative Project Features
Page 2 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 4



Match Line - See Page 2

V:\1972_SR88_Pine_Grove\4(f)\F2_Rp3.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 200 400 600 800 1,000 Feet

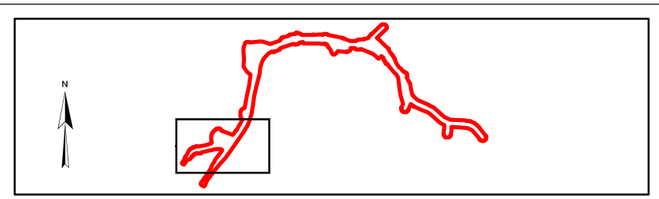


FIGURE 2
Build Alternative Project Features
Page 3 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 5

Match Line - See Page 3

V:\1972_SR88_Pine_Grove\4(f)\F2_Pg4.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 200 400 600 800 1,000 Feet

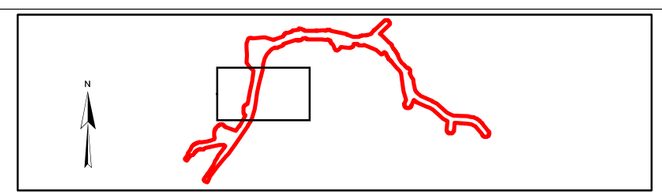


FIGURE 2
Build Alternative Project Features
Page 4 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Project Area
Potential Staging
Centerline
Pavement Edges
Cut and Fill

Ridge Road

88

88

Match Line - See Page 6

Match Line - See Page 4

V:\1972_SR88_Pine_Grove\4(h)\F1.4.1-1Pg5.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 200 400 600 800 1,000 Feet

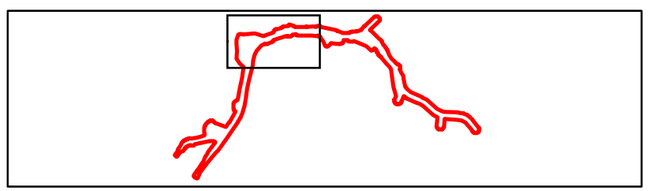
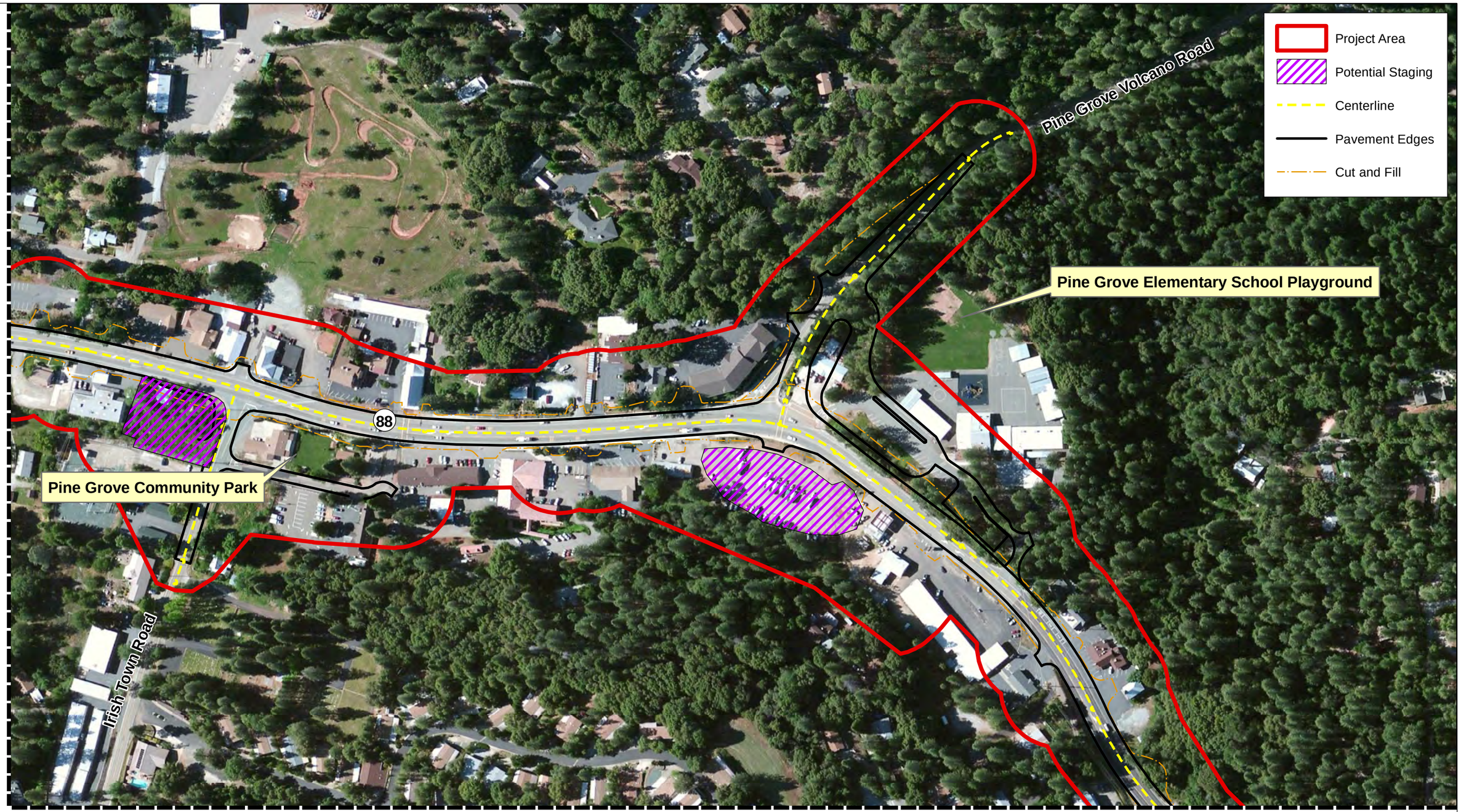


FIGURE 2
Build Alternative Project Features
Page 5 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 5



Match Line - See Page 7

V:\1972_SR88_Pine_Grove\4(f)\F2_Pg6.mxd

Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

0 200 400 600 800 1,000 Feet

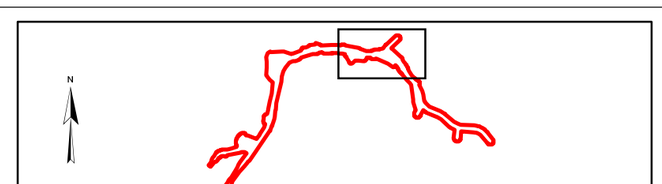
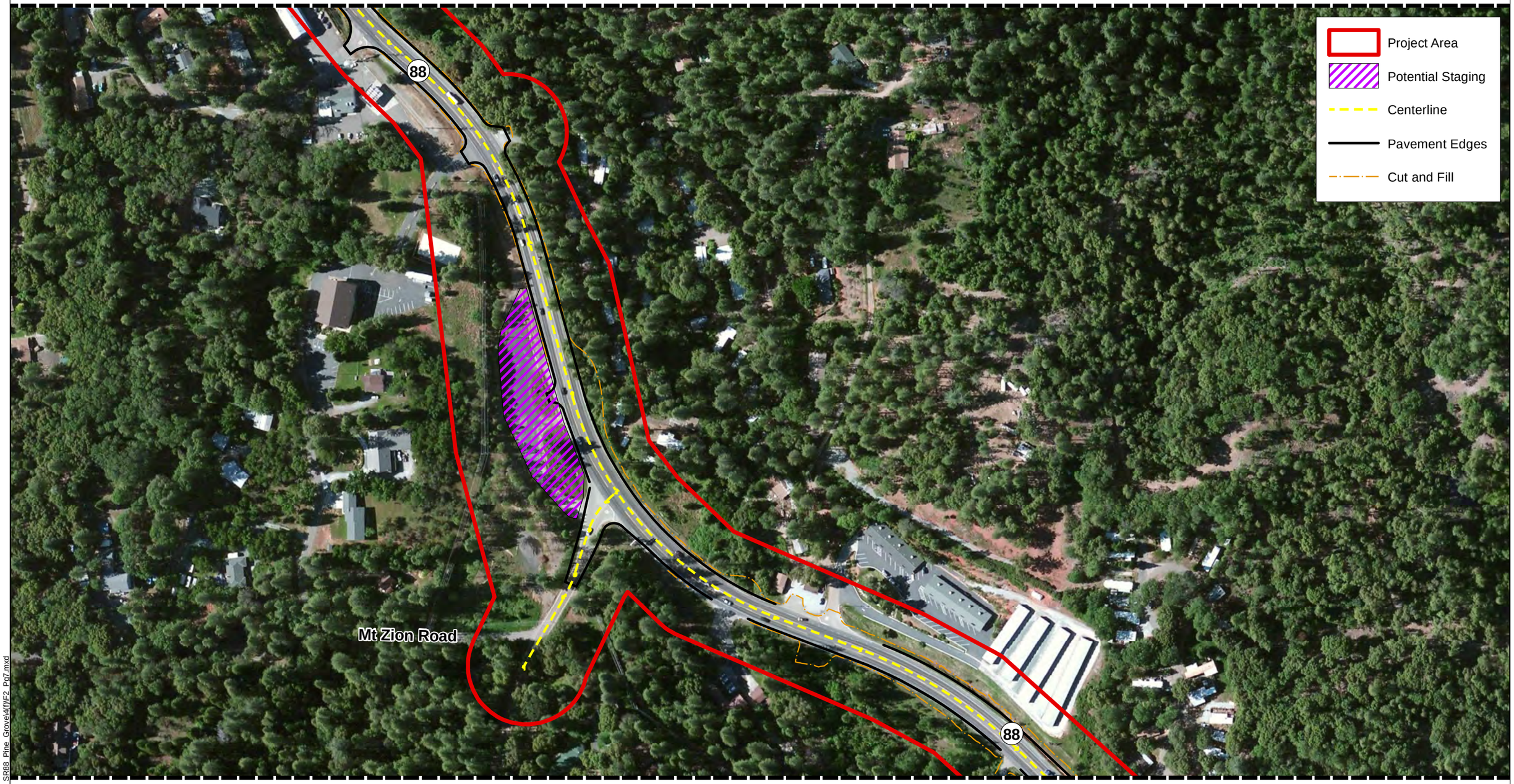


FIGURE 2
Build Alternative Project Features
Page 6 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 6



Match Line - See Page 8

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Source: ESRI Maps June 2011; Dokken Engineering 6/3/2014; Created By: timc

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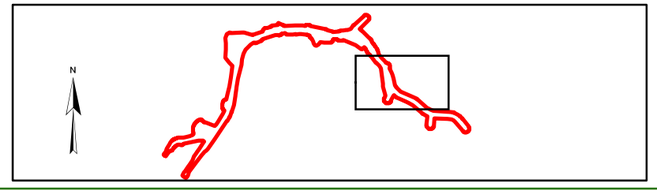
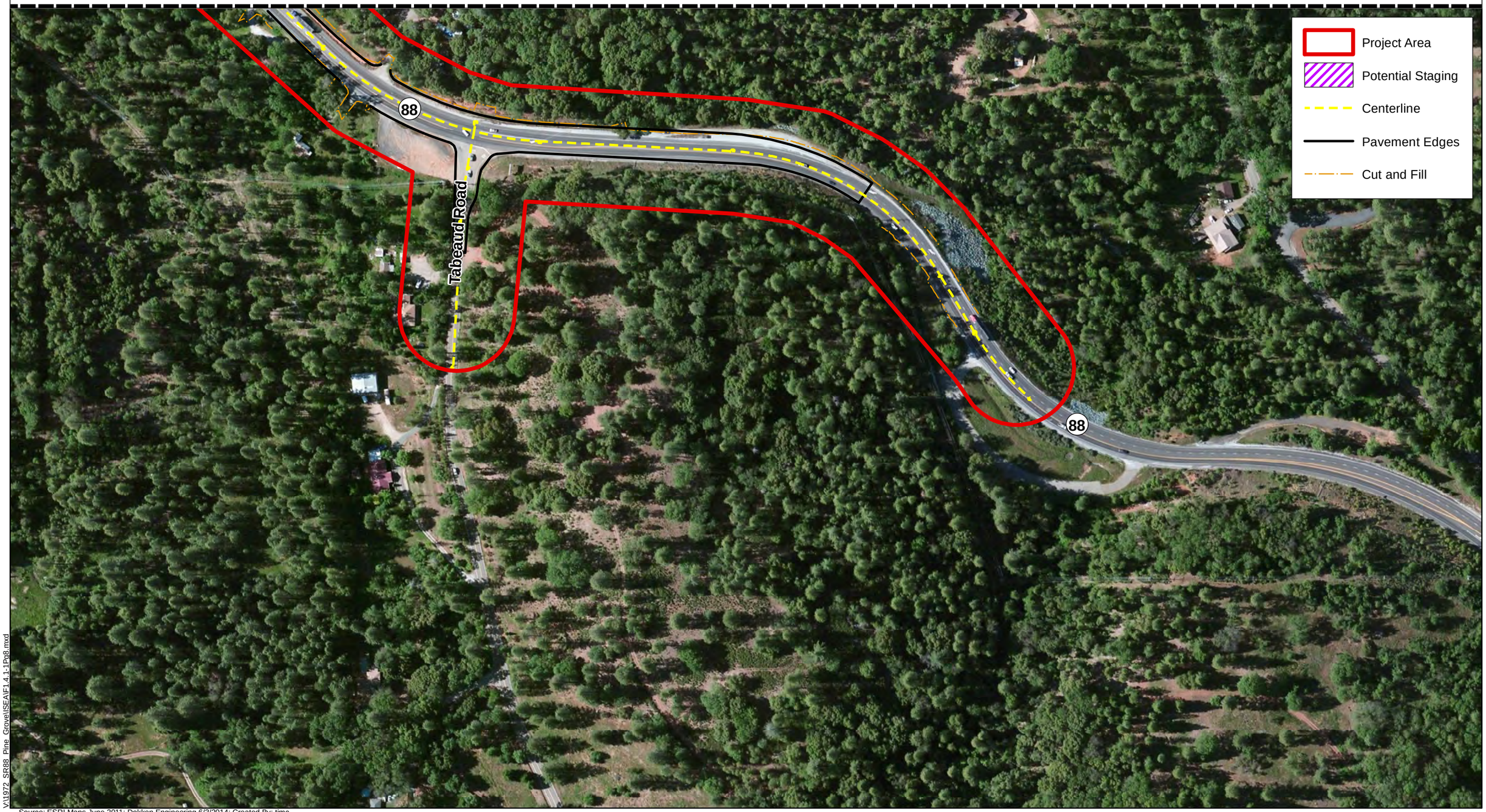


FIGURE 2
Build Alternative Project Features
Page 7 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

Match Line - See Page 7



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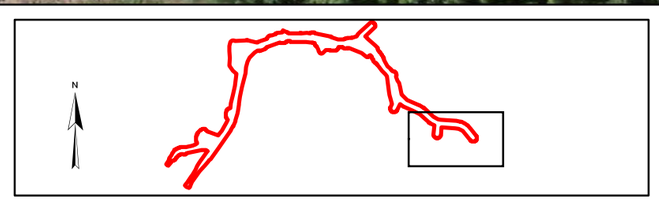

FIGURE 2
Build Alternative Project Features
Page 8 of 8
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M 21.6/24.6

The project will modify SR 88 by adding eight foot shoulders to the north and south side of the highway from 900 feet, west of the new Climax Road intersection to 900 feet, east of Tabeaud Road. Class III bicycle lanes will be provided in the widened and improved roadway shoulders. Six foot sidewalk will be added to the south side of the highway at the Ridge Road intersection for 600 feet, followed by a six foot minimum, ADA accessible, hot mix asphalt path to the beginning of sidewalk again 1000 feet. east of Ridge Road to Irishtown Road. Sidewalks will also be added on both the north and south side from Irishtown Road to the driveway entrance to Pine Grove Elementary School.

Climax Road will be realigned to eliminate the existing nonstandard intersection at SR 88. The new alignment will travel south directly to a new "T" intersection with stop control only from Climax Road. A westbound dedicated right turn lane will be provided to Climax Road. A second eastbound through lane will be added from the intersection and dropped just east of the intersection. Peterson Ranch Drive will also be realigned to tie into the realigned Climax Road. No widening or additional capacity is included with the realignment of either of these local roads. The existing alignment of Climax Road and the existing intersection at SR 88 will be abandoned and the existing pavement will be removed.

The geometrics of the SR 88/Ridge Road intersection will be expanded to include a second left turn lane from Ridge Road onto eastbound SR 88. A second through lane will also be added to eastbound SR 88 after the Ridge Road intersection and will terminate 500 feet. after the intersection.

Driveway approaches off of the highway will be standardized to provide a standard width and curb style for ease of traversing.

The intersection of SR 88 and Irishtown Road will become signalized and a parking lot will be constructed at the southwest corner to provide replacement parking for on-street parking spaces lost as a result of the roadway improvements. The eastern terminus of Church Street onto SR 88 will be modified to a right in, right out configuration.

The intersection of SR 88/Volcano Road will become signalized. The driveway exit of Pine Grove Elementary School will be relocated onto Volcano Road instead of SR 88 with an entrance at same location.

The intersection of Tabeaud Road/SR 88 will be signalized and the existing westbound climbing lane will be extended to Tabeaud Road and dropped just west of the intersection. Dedicated turn pockets will be added at various intersections, where needed for traffic demands, along the project limits and the two way left turn lane will be maintained from Ridge Road to Tabeaud Road.

Utility poles will need to be relocated and some trees removed due to the proposed improvements and to provide the proper clear recovery zone. Underground utilities will need to be relocated to accommodate the proposed storm drain system improvements. Storm drain related improvements include curb and gutter, additional or relocated drainage inlets, and construction of adequate drainage basins to divert surface water and prevent flooding on the roadway. In addition, sewer, water and electric/cable vaults and manholes will be adjusted to grade and/or relocated during construction of the proposed improvements.

DESCRIPTION OF SECTION 4(f) PROPERTIES

Parks and Recreation: Pine Grove Community Park

The Pine Grove Community Park is an approximately 0.38 acre park located east of the SR-88/Irishtown Road Intersection in the Town of Pine Grove. Recreational facilities found in the park include:

- Covered picnic areas
- Small fountain
- Playground
- Small grass lawn
- Parking

The Pine Grove Community Park is a free day-use facility surrounded by the Town of Pine Grove. The park offers recreational opportunities for picnics, playground for young children and other small community gatherings. As a recreational resource that is open to the public, Pine Grove Community Park is considered a Section 4(f) resource.

IMPACTS ON SECTION 4(f) PROPERTIES

Parks and Recreation: Pine Grove Community Park

Permanent impacts to the Pine Grove Community Park will have a negligible impact to the public who use the park, and will not be a detriment to any of the existing recreation facilities. The proposed project would acquire a very small portion of the park's right of way. The area to be acquired is currently part of the existing roadway shoulder that falls within the boundary of the park parcel. Figure 3 shows the proposed permanent impacts to the Pine Grove Community Park which include acquisition of approximately 0.01 acre (500 square feet). The area of acquisition has been minimized through the use of a small retaining wall; however these permanent impacts could not be entirely avoided. The proposed project would acquire approximately 3% of the 0.38 acre park. No existing recreational facilities would be permanently affected by construction.

Temporary construction impacts may occur and could include reduced parking and access to the park. Measures provided below would ensure that access to the park is maintained throughout construction to minimize the potential for temporary impacts. No biological, visual, or noise impacts are anticipated as a result of the proposed project (see Section 2.0 of the IS/EA). Construction noise and air quality may cause temporary nuisance type impacts; however, these impacts are minimized with the use of best management practices which are summarized in the Initial Study/Environmental Assessment. The parking lot east of the Pine Grove Community Park and access along Church Street may be temporarily closed during construction; however, all temporarily impacted recreational areas, as well as all supporting facilities such as parking and access would be restored prior to the conclusion of construction. Furthermore, as the agency with jurisdiction over the Section 4(f) resource, Amador County Parks will be consulted to ensure that potential impacts to the Pine Grove Community Park would not create a conflict with the existing facilities of the resource. This consultation is a requirement of the Section 4(f) process.

LEGEND:

- EXISTING RIGHT OF WAY
- PROPERTY LINE
- PROPOSED ROADWORK/STRIPING
- PROPOSED CENTERLINE (84 – 85)

RIGHT OF WAY NEEDS		500 SQFT
TEMPORARY CONSTRUCTION EASEMENT		25,500 SQFT

PROJECT IMPACTS

-WIDEN SHOULDERS ALONG SR88
-ADD SIDEWALK ALONG SR88
AND ALONG IRISHTOWN ROAD
-SIGNALIZE INTERSECTION OF
SR88 AND IRISHTOWN ROAD
AND ADD RIGHT TURN POCKET
TO NORTHBOUND IRISHTOWN.
-CLOSE ACCESS TO CHURCH STREET
FROM SR88 AND EXPAND PARKING LOT.

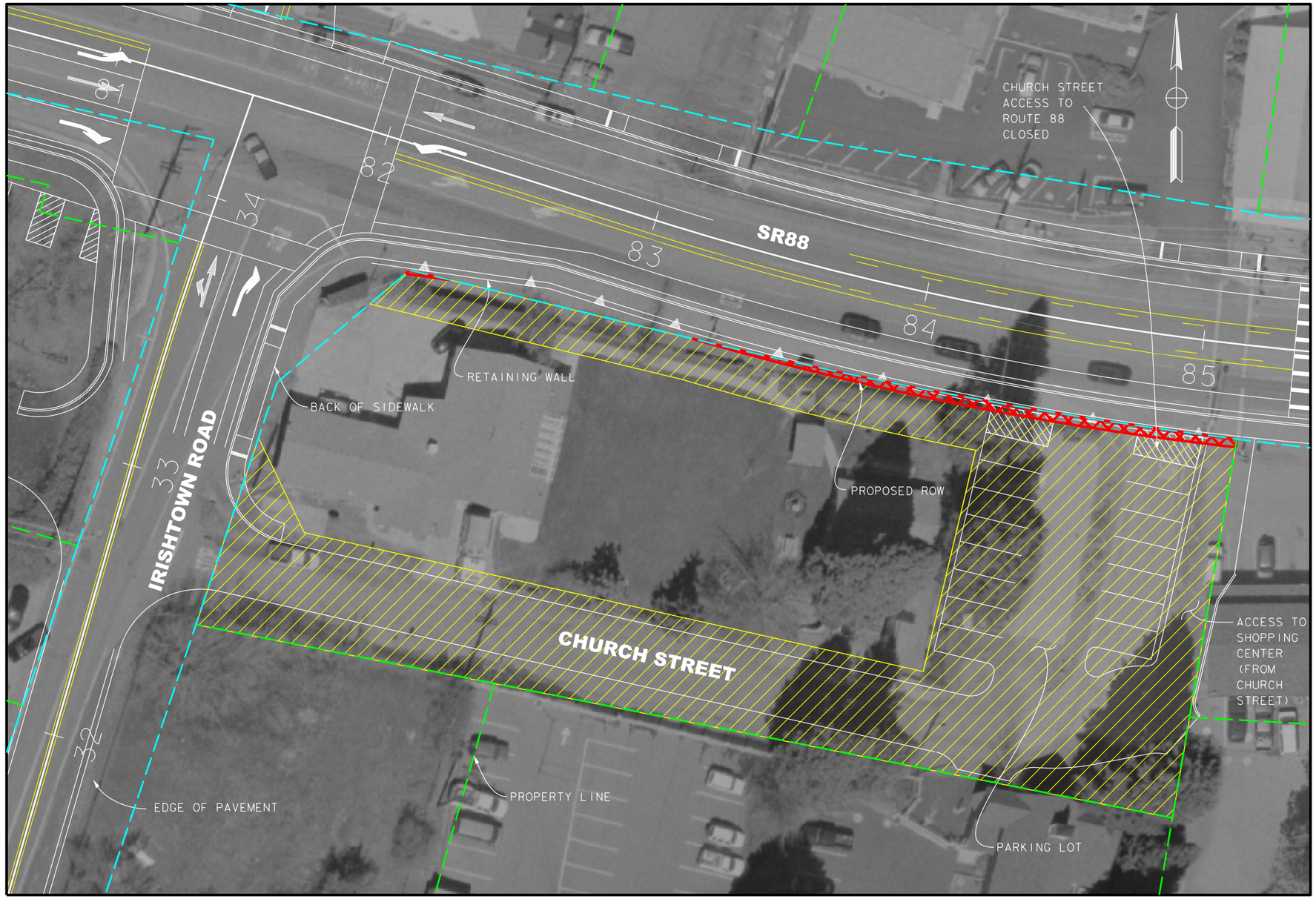

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Figure 3
Impacts to Pine Grove Community Park
SR 88 Pine Grove Corridor Improvement Project
Town of Pine Grove, Amador County, California
EA 10-0G550; P.M. 21.6/24.6

AVOIDANCE ALTERNATIVES

In 2009-2011, Caltrans and the Amador County Transportation Commission prepared a thorough evaluation of many alternatives to provide transportation improvements to SR 88 in and near the Pine Grove Corridor. This evaluation included preliminary engineering, cost estimates, and public outreach with members of the community and stakeholders. Numerous alternatives, including multiple versions of a Pine Grove bypass, were considered but ultimately eliminated from further consideration. These alternatives were rejected for a variety of reasons including excessive cost, substantial environmental impacts, access and geometric deficiencies, topographical and engineering concerns, and the need for a substantial amount of right-of-way.

This alternative evaluation was performed in coordination with a Stakeholder Working Group that was established for the SR 88 Pine Grove Corridor Improvement Project in fall 2009; the group has continued to meet periodically throughout the project development phase. In addition to input from the Stakeholder Work Group, numerous comments and feedback were received from the public during public meetings and workshops held between 2009 and 2012. Strong objections were raised over the alternatives, and the general local consensus was that a bypass alternative would not meet the local and regional goals of the community. As a result, the project was scoped down to corridor improvement work along the existing SR 88 alignment.

The proposed plan to improve the existing conditions of the corridor through Pine Grove was chosen because it has minimal impacts to right-of-way, minimal impacts to the character of the community and minimal cost compared to the more extensive alternatives.

MEASURES TO MINIMIZE HARM TO THE SECTION 4(f) PROPERTY

To minimize harm to the Pine Grove Community Park as a Section 4(f) property, the project will comply with the measures listed below, which are also included in the Initial Study/Environmental Assessment. Implementation of these measures will ensure that impacts to the Section 4(f) Resources in the project area are not substantial.

Measure PRF-1: Access to the Pine Grove Community Park shall remain open throughout construction of the proposed project. If lane closure is necessary in the immediate vicinity of the intersection, a flag person will be designated to direct traffic though construction zones. Construction will be coordinated to avoid peak recreation times in order to minimize impacts to recreational uses.

Measure PRF-2: Exclusionary fencing shall be utilized during construction activities to minimize areas of disturbance within the Pine Grove Community Park.

Measure PRF-3: Temporary impacts to land associated with the Pine Grove Community Park will be returned to its prior condition after associated construction activities are completed.

COORDINATION

Consistent with Section 4(f) requirements, this evaluation will be included with the Draft Initial Study/Environmental Assessment and provided to the public for review and comment. After the comment period has ended, Caltrans will coordinate with Amador County Parks since they are the owner of the park and have jurisdiction over the recreational facilities as a Section 4(f) resource. Caltrans, on behalf of FHWA, is proposing a de minimis determination under Section 4(f) for impacts to the Pine Grove Community Park and the Pine Grove Elementary School Playground. Impacts to the protected activities, features, and attributes of the Section 4(f) resources will be reduced to a de minimis level with implementation of the minimization measures detailed above.

RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(f)

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or next to the project area that do not trigger Section 4(f) protection because either: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

Pine Grove Elementary School Playground

The Pine Grove Elementary School Playground is approximately 1 acre, and is located north east of the SR-88/Volcano Road intersection. Recreational facilities found in the park include:

- Baseball diamond
- Playground
- Basketball court
- Grass Lawn
- Parking

Pine Grove Elementary School Playground is a part of a kindergarten through sixth grade elementary school, but is open to public use when school is not in session. The playground provides the community with several opportunities for sports. As a recreational resource that is open to the public, Pine Grove Elementary School Playground is considered a Section 4(f) resource.

There will be no direct or permanent impacts to the Pine Grove Elementary School as a result of the proposed project. Minor temporary and indirect impacts may occur such as reduced parking or access at the school during construction; however school access will be maintained at all times and construction work would comply with applicable best management practices to minimize temporary impacts. The project would realign the driveway exit of Pine Grove Elementary School onto Volcano Road instead of SR-88, but this change is not expected to effect the school playground in any way.

Appendix C Title VI Policy Statement

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
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SACRAMENTO, CA 94273-0001
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FAX (916) 654-6608
TTY 711
www.dot.ca.gov

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March 2013

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

MALCOLM DOUGHERTY
Director

Appendix D Summary of Relocation Benefits

DECLARATION OF POLICY

"The purpose of this title is to establish a ***uniform policy for fair and equitable treatment*** of persons displaced as a result of federal and federally assisted programs in order that such persons ***shall not suffer disproportionate injuries*** as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall…be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations (CFR) Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

FAIR HOUSING

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that

are “decent, safe and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe and sanitary” replacement dwelling, available on the market, is offered to them by Caltrans.

RESIDENTIAL RELOCATION PAYMENTS

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs
Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property in order to be eligible for relocation payments.

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

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum combination of these three supplemental payments that the owner-occupant can receive is $22,500. If the total entitlement (without the moving payments) is in excess of $22,500, the Last Resort Housing Program will be used (see the explanation of the Last Resort Housing Program below).

Rent Differential
Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable “decent, safe and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the *Down Payment* section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 180 days, in addition to moving expenses, is $5,250. If the total entitlement for rent supplement exceeds $5,250, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe and sanitary” replacement dwelling within one year from the date the Department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment
The down payment option has been designed to aid owner-occupants of less than 180 days and tenants in legal occupancy prior to Caltrans’ initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of $5,250. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

Last Resort Housing
Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the $22,500 and $5,250 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced.
- Specific arrangements needed to accommodate any family member(s) with special needs.
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family.
- Preferences in area of relocation.
- Location of employment or school.

NONRESIDENTIAL RELOCATION ASSISTANCE

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide

current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses
Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

Reestablishment Expenses
Reestablishment expenses related to the operation of the business at the new location, up to $10,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment
A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than $1,000 nor more than $20,000.

ADDITIONAL INFORMATION

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, *except* for any federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization that has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Your Rights and Benefits as a Displaced Business, Farm or Nonprofit Organization Under the Uniform Relocation Assistance Program

Introduction

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.

Displaced businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 As Amended "The Uniform Act"

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their business, farm or nonprofit organization, by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

> To ensure that persons displaced as a direct result of federal or federally-assisted projects 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.

While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.

Relocation Services

The California Department of Transportation has two programs to aid businesses, farms and nonprofit organizations which must relocate.

These are:

1. The Relocation Advisory Assistance Program, which is to aid you in locating a suitable replacement property, and

2. The Relocation Payments Program, which is to reimburse you for certain costs involved in relocating. These payments are classified as:

    - Moving and Related Expenses (costs to move personal property not acquired).

    - Reestablishment Expenses (expenses related to the replacement property).

    - In-Lieu Payment (a fixed payment in lieu of moving and related expenses, and reestablishment expenses).

NOTE: *Payment of loss of goodwill is considered an acquisition cost. California law and the federal regulations mandate that relocation payments cannot duplicate other payments such as goodwill. You will* **not** *be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. You will also receive at least 90 days' written notice before you must move.*

Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

Business: Any lawful activity, with the exception of a farm operation, conducted primarily for the purchase, sale, lease and rental of personal or real property, or for the manufacture, processing, and/or marketing of products, commodities, or any other personal property, or for the sale of services to the public, or solely for the purpose of this Act, and outdoor advertising display or displays, when the display(s) must be moved as a result of the project.

Displaced Person or Displacee: Any person who moves from real property or moves personal property from real property as a result of the acquisition of the real property, in whole or in part, or as the result of a written notice from the agency to vacate the real property needed for a transportation project. In the case of a partial acquisition, Caltrans shall determine if a person is displaced as a direct result of the acquisition.

Owners and tenants **not lawfully present** in the United States are not eligible to receive relocation payments and assistance.

Contributes Materially: A business or farm operation must have had average annual gross receipts of at least $5,000 **or** average annual net earnings of at least $1,000, or their income must have contributed at least 33 1/3 percent of the owner's or operator's average annual gross income form all sources, in order to qualify as a bona-fide operation.

Farm Operation: Any activity conducted solely or primarily for the production of one or more agricultural products or commodities, including timber, for sale and home use, and customarily producing such products or commodities in sufficient quantity to be capable of contributing materially to the operator's support.

Nonprofit Organization: A public or private entity that has established its nonprofit status under applicable law.

MOVING EXPENSES

If you qualify as a displaced business, farm or nonprofit organization, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. To qualify you must legally occupy the property as the owner or lessee/tenant when Caltrans initiates negotiations for the acquisition of the property **OR** at the time Caltrans acquires title or takes possession of the property. However, to assure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

You Can Choose Either:

Actual Reasonable Moving Costs – You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses, with limitations, ***may*** include:

- Transportation.
- Packing and unpacking of personal property.
- Disconnecting and reconnecting personal property related to the operation.
- Temporary storage of personal property.
- Insurance while property is in storage or transit, or the loss and damage of personal property if insurance is not reasonably available.
- Expenses in finding a replacement location.
- Professional services to plan and monitor the move of the personal property to the new location.
- Licenses, permits and fees required at the replacement location.

OR

Self-Move Agreement – You may be paid to move your own personal property based on the lower of two acceptable bids obtained by Caltrans.

Under this option, you will still be eligible for reimbursement of related expenses listed above that were not included in the bids.

OR

In-Lieu Payment – You can accept a fixed payment between $1,000 and $20,000, based on your annual earnings IN LIEU OF the moving cost, related expenses and reestablishment cost.

Actual Reasonable Moving Costs

You may be paid the actual reasonable and necessary costs of your move when a professional mover performs the move. All of your moving costs must be supported by paid receipts or other evidence of expenses incurred. In addition to the transportation costs of your personal property, certain other expenses may also be reimbursable, such as packing, crating, unpacking and uncrating, and the disconnecting, dismantling, removing, reassembling, and reinstalling relocated machinery, equipment, and other personal property.

Other expenses such as professional services necessary for planning and carrying out the move, temporary storage costs, and the cost of licenses, permits and certifications may also be reimbursable. This is not intended to be an all-inclusive list of moving related expenses. Your Relocation Agent can provide you with a complete explanation of reimbursable expenses.

Self-Move Agreement

If you agree to take full responsibility for all or part of the move of your business, farm, or nonprofit organization, the Department may approve a payment not to exceed the lower of two acceptable bids obtained by the Department from qualified moving firms or a qualified Department staff employee. A low-cost or uncomplicated move may be based on a single bid or estimate at the Department's discretion. The advantage of this moving option is the fact that it relieves the displaced business, farm or nonprofit organization operator from documenting all moving expenses. The Department may make the payment without additional documentation as long as the payment is limited to the amount of the lowest acceptable bid or estimate. Other expenses, such as professional services for planning, storage costs, and the cost of licenses, permits, and certifications may also be reimbursable if determined to be necessary. These latter expenses must be pre approved by the Relocation Agent.

Requirements:

Before you move, you must provide Caltrans with the:

- Certified inventory of all personal property to be moved.
- Date you intend to vacate the property.
- Address of the replacement property.
- Opportunity to monitor and inspect the move from the acquired property to the replacement property.

Related Expenses

1. **Searching Expenses for Replacement Property:** Displaced businesses, farms and nonprofit organizations are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property, not to exceed $2,500. Expenses may include transportation, meals, and lodging when away from home; the reasonable value of the time spent during the search; fees paid to the real estate agents, brokers or consultants; and other expenses determined to be reasonable and necessary by the Department.

2. **Direct Loss of Tangible Personal Property:** Displaced businesses, farms, and nonprofit organizations may be eligible for a payment for the actual direct loss of tangible personal property which is incurred as a result of the move or discontinuance of the operation. This payment will be based upon the lesser of:

    a. The fair market value of the item for continued use at the displacement site minus the proceeds from its sale.

    OR

    b. The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expense4s, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE:
You determine that the "document shredder" cannot be moved to the new location because of its condition, and you will not replace it at the new location.

Fair Market Value of the Document Shredder Based on its use at the current location	$ 1,500
Proceeds: Price received from selling the Document Shredder	- $ 500
Net Value	$ 1,000

OR

Estimated cost to move	$ 1,050

Based on the "lesser of", the amount of the "Loss of Tangible Personal Property" =	**$ 1,000**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

3. Purchase of Substitute Personal Property: If an item of personal property, which is used as part of the business, farm, or nonprofit organization, is not moved but is promptly replaced with a substitute item that performs a comparable function at the replacement site, the displacee is entitled to payment of the lesser of:

   a. The cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item;

   OR

   b. The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE A:

You determine that the copying machine cannot be moved to the new location because it is now obsolete and you will replace it.

Cost of a substitute copy machine Including installation costs at the replacement site		$ 3,000
Trade-in Allowance	-	$ 2,500
Net Value		$ 500

OR

Estimated cost to move	$ 550
Based on the "lesser of", the amount of the "Substitute Personal Property" =	**$ 500**

EXAMPLE B:

You determine that the chairs will not be used at the new location because they no longer match the décor and you will replace them.

Cost of substitute chairs		$ 1,000
Proceeds from selling the chairs	-	$ 100
Net Value		$ 900

OR

Estimated cost to move	$ 200
Based on the "lesser of", the amount of the "Substitute Personal Property" =	**$ 200**

Note: You are also entitled to all reasonable costs incurred in attempting to sell the copy machine and/or chairs.

4. **Disconnecting and Reinstallation:** You will be reimbursed for your actual and reasonable costs to disconnect, dismantle, remove, reassemble and reinstall any machinery, equipment or other personal property in relation to its move to the new location. This includes connection to utilities available nearby and any modifications to the

personalty that is necessary to adapt it to utilities at the replacement site.

5. **Physical changes at the new location:** You may be reimbursed for certain physical changes to the replacement property if the changes are necessary to permit the reinstallation of machinery or equipment necessary for the continue operation of the business. ***Note:*** *The changes cannot increase the value of the building for general purposes, nor can they increase the mechanical capability of the buildings beyond its normal requirements.*

6. The cost of installing utilities from the right of way line to the structure(s) or improvements on the replacement site.

7. Marketing studies, feasibility surveys and soil testing.

8. Professional real estate services needed for the purchase or lease of a replacement site.

9. One-time assessments or impact fees for anticipated heavy utility usage.

Reestablishment Expenses

A small business, farm or nonprofit organization may be eligible for a payment, not to exceed $10,000, for expenses actually incurred in relocating and reestablishing the enterprise at a replacement site.

Reestablishment expenses may include, but are not limited to, the following:

1. Repairs or improvements to the replacement real property required by Federal, State or local laws, codes or ordinances.

2. Modifications to the replacement real property to make the structure(s) suitable for the business operation.

3. Construction and installation of exterior signing to advertise the business.

4. Redecoration or replacement such as painting, wallpapering, paneling or carpeting when required by the condition of the replacement site or for aesthetic purposes.

5. Advertising the new business location.

6. The estimated increased costs of operation at the replacement site during the first two years, for items such as:

    a) Lease or rental charges
    b) Personal or real property taxes
    c) Insurance premiums, and
    d) Utility charges (excluding impact fees).

7. Other items that the Department considers essential for the reestablishment of the business or farm.

Note: *A nonprofit organization must substantiate that it cannot be relocated without a substantial loss of existing patronage (membership or clientele). The payment is based on the average of two years annual gross revenues less administrative expenses.*

In-Lieu Payment (Fixed)

Displaced businesses, farms and nonprofit organizations may be eligible for a fixed payment in lieu of (in place of) actual moving expenses, personal property losses, searching expense, and reestablishment expenses. The fixed payment may not be less than $1,000 or more than $20,000.

For a business to be eligible for a fixed payment, the Department must determine the following:

1. The business owns or rents personal property that must be moved due to the displacement.

2. The business cannot be relocated without a substantial loss of existing patronage.

3. The business is not part of a commercial enterprise having more than three other businesses engaged in the same or similar activity, which are under the same ownership and are not being displaced by the department.

4. The business contributed materially to the income of the displaced business operator during the two taxable years prior to displacement.

Any business operation that is engaged solely in the rental of space to others is not eligible for a fixed payment. This includes the rental of space for residential or business purposes.

Eligibility requirements for farms and nonprofit organizations are slightly different than business requirements. If you are being displaced from a farm or your represent a nonprofit organization and are interested in a fixed payment, please consult your relocation counselor for additional information.

The Computation of Your In-Lieu Payment:

The fixed payment for a displaced business or farm is based upon the average annual net earnings of the operation for the two taxable years immediately preceding the taxable year in which it is displaced. Caltrans can use a different two year period if it is determined that the last two taxable years do not accurately reflect the earnings of the operation.

EXAMPLE: Caltrans acquires your property and you move in 2005:

2003 Annual Net Earnings	$ 10,500
2004 Annual Net Earnings	$ 12,500
TOTAL	$ 23,000
Average over two years	**$ 11,500**

This would be the amount of your in-lieu payment. Remember – this is in-lieu of all other moving benefits, including reestablishment expenses. You must provide the Department with proof of net earnings to support your claim.

Proof of net earnings can be documented by income tax returns, certified financial statements, or other reasonable evidence of net earnings acceptable to the Department.

Note: The computation for nonprofit organizations differs in that the payment is computed on the basis of average annual gross revenues less administrative expenses for the two year period specified above.

Before You Move:

A. Request a determination of entitlement for in-lieu payment from your Relocation Agent.
B. Include a written statement of the reasons the business cannot be relocated without a substantial loss in net earnings.

C. Provide certified copies of tax returns for the two tax years immediately preceding the tax year in which you move. (If you move anytime in the year 2005, regardless of when negotiations began or the State took title to the property, the taxable years would be 2003 and 2004).
D. You will be notified of the amount you are entitled to after the application is received and approved.
E. You cannot receive the payment until after you vacate the property, AND submit a claim for the payment within 18 months of the date of your move.

Relocation Advisory Assistance

Any business, farm or nonprofit organization displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your needs and desires will be determined as well as your need for assistance.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Determine your needs and preferences.
- Explain the relocation benefits and eligibility requirements.
- Provide information on replacement properties for your consideration.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits
- Interest rates and terms
- Typical down payments
- Permits, fees and local planning
- SBA loan requirements
- Real property taxes.
- Consumer education literature

If you desire, your Relocation Agent will give you current listings of other available replacement property. Transportation will be provided to inspect available property, especially if you are elderly or handicapped. Though you may use the services of a real estate broker, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local programs offering assistance to displaced persons. If you have special needs, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans will establish a temporary Relocation Field Office on or near the project. Project relocation offices will be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions. And be sure you fully understand all of your rights and available benefits.

YOUR RIGHTS AS A DISPLACEE

It is important to remember that your relocation benefits will not have an adverse affect on your:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you always have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible agency if that

person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

Appendix E **Environmental Commitment Record**

Caltrans, as the lead agency under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), has developed an Environmental Commitment Record for the SR 88 Pine Grove Corridor Improvement Project. This list is designed to ensure that the avoidance, minimization, and/or mitigation measures identified in the project's Initial Study/Environmental Assessment are implemented before, during, and after completion of construction.

The following table contains a list of the avoidance, minimization, and/or mitigation measures. For each measure, the table identifies timing of implementation, party responsible for implementation, completion check box, and space for initials.

Caltrans is responsible for ensuring that these environmental commitments are carried out before, during, and after construction.

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Parks and Recreational Facilities					
Measure PRF-1: Access to the Pine Grove Park shall remain open throughout construction of the proposed project. If lane closure is necessary in the immediate vicinity of the intersection, a flag person will be designated to direct traffic though construction zones and ensure users can continue to access the recreational opportunities provided.	During construction	Resident Engineer	☐	_____	
Measure PRF-2: Exclusionary fencing shall be utilized during construction activities to minimize areas of disturbance, by limiting protecting against the possible inadvertent destruction of the Pine Grove Community Park. The exclusionary fencing will also limit the movements of heavy equipment and construction activities.	During construction	Resident Engineer	☐	_____	
Measure PRF-3: Temporary impacts to land associated with the Pine Grove Community Park will be returned to its prior condition after associated construction activities are completed.	During construction	Resident Engineer	☐	_____	
Relocation					
Measure RLC-1: Property owners shall be compensated in accordance with fair market values based on appraisals. Standard Relocation Assistance Programs will provide relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of acquisition of real property for public use.	Prior to construction	Caltrans / ACTC	☐	_____	
Measure RLC-2: All efforts would be made to identify relocation opportunities for affected businesses. Wherever feasible, assistance would be made available in identifying suitable relocation sites within the service area of existing businesses	Prior to construction	Caltrans / ACTC	☐	_____	
Utilities/Emergency Services					
Measure UTL/ES-1: To minimize interruptions of service to utility customers, a series of coordination letters shall be sent to all impacted utility companies to identify utilities within the proposed project. Letters will indicate where utility relocations are to be performed and the required time to relocate them. Design plans will be sent to involved utility owners during the project development phase. Meetings will be arranged with utility companies as necessary to discuss impacts and relocation plans.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measure UTL/ES-2: A Transportation Management Plan (TMP) shall be prepared. The plan should identify the construction schedule and any lane closures. It will be ensured that there is appropriately designed access for emergency services onto all roads involved in the proposed project. The transportation coordination plan will be provided to emergency services. If necessary, the plan will include a public awareness campaign to ensure that the public is aware of where and when any traffic closures, detours, or utility disruptions, if any, will occur.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Measure UTL/ES-3: Emergency services, local law enforcement agencies, and local businesses will be notified of the proposed project prior to the start of construction. Notification of specific lane closures shall be provided by the contractor 48 hours before the closure occurs.	Prior to construction	Caltrans / ACTC	☐	_____	
Traffic and Transportation/Pedestrian and Bicycle Facilities					
Measure TRAF-1: All existing non-motorized facilities shall be maintained to ADA standards.	During construction	Resident Engineer	☐	_____	
Measure TRAF-2: To minimize the temporary effects to travelers, a Traffic Management Plan will be prepared. Such strategies might include public information campaigns, motorist information, incident management, and inclusion of night work for construction activities.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Visual Resources					
Measure VR-1: Any riparian and/or upland vegetation removal necessary in order to provide space for construction activities will be replaced through a revegetation plan developed in coordination between the Amador County Transportation Commission and Caltrans. The revegetation plan shall be developed to address the loss of vegetation resulting from construction.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Measure VR-2: Projects shall be subject to the requirements of all relevant guidelines as identified in the County of Amador's General Plans and all other applicable standards, policies, guidelines, and/or regulations pertaining to scenic vistas/aesthetic resources.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Measure VR-3: A lighting plan shall be developed that requires project lighting to be appropriately shielded. The project's lighting design shall be consistent with the Amador County lighting guidelines and standards.	Prior to construction	Caltrans / ACTC	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measure VR-4: Architectural features, developed in coordination with the Amador County Transportation Commission, shall be considered, as appropriate, to meet the desired goals of the community. These features may include hardscape, street lights, retaining wall aesthetics, or other aesthetic design features.	Prior to construction	Caltrans / ACTC	☐	_____	
Water Quality and Storm Water Runoff					
Measure SWR-1: For project construction exceeding one acre, NPDES guidelines necessitate the development of a Storm Water Pollution Prevention Plan (SWPPP) by the contractor prior to construction to establish project-specific permanent and temporary BMPs. During the design phase, a SWPPP will be prepared to determine the minimum control requirements to be included in the project. A Notice of Intent or Notice of Construction will be submitted to the SWRCB along with the completed SWPPP.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Measure SWR-2: BMPs include any facilities and methods used to remove, reduce, or prevent storm water runoff pollutants from entering receiving waters. Erosion control methods, temporary and permanent BMPs, and improvement of drainage facilities along the roadway would minimize impacts from storm water runoff. The SWPPP and NPDES compliance measures would ensure no adverse impacts would occur to water quality associated with the Build Alternative. A list of BMPs which will be incorporated into the Plans and Specifications are included in the Water Quality Assessment prepared for this project.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Hazardous Waste or Materials					
Measure HW-1: Prior to the start of construction, asbestos surveys utilizing a certified professional shall be conducted to identify presence of asbestos containing materials within any structures that may be altered or demolished to accommodate the planned construction.	Prior to construction	Caltrans / ACTC	☐	_____	
Measure HW-2: Prior to the start of construction, lead-based paint surveys utilizing a certified consultant shall be conducted to identify the presence of lead based paint within any structures that may be altered or demolished to accommodate the planned construction.	Prior to construction	Caltrans / ACTC	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measure HW-3: Removal of yellow striping and pavement marking materials would be performed in accordance with Caltrans Standard Special Provision 14-11.07 Remove Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue.	During construction	Resident Engineer	☐	_____	
Measure HW-4: Any leaking transformers observed during the course of the project should be considered a potential polychlorinated biphenyl (PCB) hazard. Should leaks from electrical transformers (that will either remain within the construction limits or will require removal and/or relocation) be encountered during construction, the transformer fluid should be sampled and analyzed by qualified personnel for detectable levels of PCBs. Should PCBs be detected, the transformer should be removed and disposed of in accordance with the appropriate regulatory agency. Any stained soil encountered below electrical transformers with detectable levels of PCBs should also be handled and disposed of in accordance with the appropriate regulatory agency.	During construction	Resident Engineer	☐	_____	
Measure HW-5: As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from former underground storage tanks or potential explosive threat if a natural gas transmission pipeline is ruptured during construction). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in the Caltrans Hazards Procedures for Construction shall be followed.	During construction	Resident Engineer	☐	_____	
Measure HW-6: Sign posts, guardrail posts, or any other wood materials that have been treated with wood preserving chemicals that are removed during project construction will require disposal in landfills or other disposal facility that accepts treated wood.	During construction	Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Noise					
Measure NOI-1: The construction contractor shall comply with Caltrans Standard Specifications Section 14-8.02, "Noise Control". Section 14-8.02 provides information that can be considered in determining whether construction would result in adverse noise impacts. The specification states: • The noise level from the Contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m. shall not exceed 86 dBA L_{eq} at 50 feet from the job site. • All internal combustion engines shall be equipped with the manufacturer recommended muffler. Internal combustion engines shall not be operated on the construction site without the appropriate muffler.	During construction	Resident Engineer	☐	_____	
Measure NOI-2: As directed by Caltrans in coordination with the ACTC, the contractor will implement appropriate noise mitigation measures which may include: changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.	During construction	Resident Engineer	☐	_____	
Biological Environment					
Natural Communities					
Measures BIO-1: The project limits in proximity to Jackson Creek, Tributary to Jackson Creek, Grass Valley Creek, Tributary A and B to Grass Valley Creek and montane riparian habitat will be marked with high visibility Environmentally Sensitive Area (ESA) fencing or staking to ensure construction will not further encroach into channels.	During construction	Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measures BIO-2: Erosion Control Measures will be implemented during construction. To minimize the mobilization of sediment to adjacent water bodies, the following erosion-control and sediment-control measures will be included in the Storm Water Pollution Protection Plan (SWPPP) and the construction specifications and are based on standard Caltrans measures and standard dust-reduction measures. Soil exposure must be minimized through the use of temporary BMPs, groundcover, and stabilization measures; the contractor must conduct periodic maintenance of erosion- and sediment-control measures.	During construction	Resident Engineer	☐	_____	
Measures BIO-3: To conform to water quality requirements, the SWPPP must include the following: • Vehicle maintenance and staging and storing of equipment, materials, fuels, lubricants, solvents, and other possible contaminants shall be a minimum of 100 feet from riparian or aquatic habitats. Any necessary equipment washing must occur where the water cannot flow into waters of the U.S. and State. The cooperating agency will prepare a spill prevention and clean-up plan that establishes a prompt and effective response to spills; • Construction equipment will not be operated in flowing water; • Construction work must be conducted according to site-specific construction plans that minimize the potential for sediment input to waters of the U.S. and State; • Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering waters of the U.S. and State; • Equipment used in and around waters must be in good working order and free of dripping or leaking engine fluids; and • Any surplus concrete rubble, asphalt, or other debris from construction must be taken to an approved disposal site.	During construction	Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measure BIO-4: Vegetation clearing will only occur within the delineated project boundaries. An ESA fence will be provided on the final plans to delineate which trees can be saved and which will be removed. Where possible, trees will be trimmed rather than removed fully with the guidance of a qualified biologist. In areas that will be subject to re-vegetation, plants will only be cleared where necessary and when feasible will be cut above soil level.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Measure BIO-5: At construction completion the ACTC will re-vegetate temporarily disturbed sensitive natural habitat areas using a combination of hydroseed and plant materials. All plant materials to be planted and seeded onsite must be consistent with the native local montane hardwood-conifer forest and montane riparian communities. Species selected for the re-vegetation must be approved by the project biologist and will be selected from reference sites located within Amador County.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Animal Species					
Measure BIO-16: If any sensitive species are found, construction will stop within the area of discovery and the Resident Engineer will notify the project biologist. The project biologist will contact the appropriate wildlife agency for further instruction.	During construction	Resident Engineer	☐	_____	
Measure BIO-15: The work area will be fenced with sediment fencing at the upstream and downstream limits of the project, at least 100 feet away from Jackson Creek and Grass Valley Creek. The fencing will be buried a minimum of six inches into the ground. The project limits will be flagged and/or signed to prevent the encroachment of construction personnel and equipment into any sensitive areas during project work. Animal exclusion fencing will be checked once per week by construction personnel trained by a USFWS-approved biologist. Construction personnel must identify weaknesses and repair and/or replace all compromised portions immediately. Animal exclusion fencing must be removed once the construction is completed.	During construction	Resident Engineer	☐	_____	
Measure BIO-19: If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed.	During construction	Resident Engineer	☐	_____	
Measure BIO-20: If vegetation removal is to take place during the breeding season (March 1st–September 1st), a pre-construction nesting	During construction	Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
bird survey must be conducted within 7 days prior to vegetation removal. Within 2 weeks of the nesting bird survey, all vegetation cleared by the biologist must be removed by the contractor. A minimum 100 feet no-disturbance buffer will be established around any active nest to limit the impacts of construction activities. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged.					
Threatened or Endangered Species					
Measure BIO-6: If California red-legged frogs are found at any time during project work, construction will stop and Service will be contacted immediately at (916) 414-6600 for further guidance.	During construction	*Resident Engineer*	☐	_____	
Measure BIO-7: The project will administer BMPs to protect water quality and control erosion.	During construction	Resident Engineer	☐	_____	
Measure BIO-8: The cooperating agency will submit the name and credentials of the project's biologist(s) to the Service for review and approval at least 15 days prior to the onset of construction activities.	Prior to construction	Caltrans / ACTC	☐	_____	
Measure BIO-9: Prior to initial ground disturbing activities, environmental awareness training will be given to construction personnel by a USFWS-approved biologist to brief them on how to recognize CRLF and foothill yellow-legged frog. Construction personnel will also be informed that if a CRLF is encountered in the work area, construction will cease in work area and the USFWS will be called for guidance before any construction activities are resumed. Personnel will sign a form stating they attended the environmental awareness training.	Prior to construction	Caltrans / ACTC	☐	_____	
Measure BIO-10: Staging areas as well as fueling and maintenance activities must be a minimum of 100 feet from riparian or aquatic habitats. The cooperating agency will prepare a spill prevention and clean-up plan.	During construction	Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measure BIO-11: Plastic mono-filament netting (erosion control matting) or similar material containing netting must not be used at the project area because the CRLF, foothill yellow-legged frog or other small animals may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.	During construction	Resident Engineer	☐	_____	
Measure BIO-12: No more than 20 working days prior to any ground disturbance, a Service approved biologist will conduct preconstruction surveys for the California red-legged frog.	Prior to construction	*Resident Engineer*	☐	_____	
Measure BIO-13: All food and food-related trash items will be enclosed in sealed trash containers and removed from the site at the end of each day.	During construction	*Resident Engineer*	☐	_____	
Measure BIO-14: The Resident Engineer or his or her designee will be responsible for implementing all avoidance and minimization measure previously stated.	Prior to and during construction	*Resident Engineer*	☐	_____	
Invasive Species					
Measure BIO-17: Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds must be cleaned to reduce the spreading of noxious weeds.	During construction	Resident Engineer	☐	_____	
Measure BIO-18: Should landscaping be installed within the project area, the project must not incorporate Cal-IPC invasive species. Any landscape treatments should incorporate native plant materials to the maximum extent feasible.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Climate Change under the California Environmental Quality Act					
Measure GHG-1: Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS commonly consists of electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.	During construction	Resident Engineer	☐	_____	
Measure GHG-2: The ACTC provides ridesharing services and park-and-ride facilities throughout the County to help manage the growth in demand for highway capacity.	During construction	Resident Engineer	☐	_____	

Task and Brief Description	Timing	Responsible Party	Completed	Initials	Notes (optional)
Measure GHG-3: Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. The project proposes planting trees and other vegetation in appropriate locations throughout the project. This revegetation will help offset future CO_2 emissions.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	
Measure GHG-4: The project would incorporate the use of energy-efficient lighting, such as LED traffic signals and street lights.	Prior to construction (prepare) / During construction (implement)	Caltrans / ACTC / Resident Engineer	☐	_____	

Appendix F U.S. Fish and Wildlife Service Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
FEDERAL BUILDING, 2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
PHONE: (916)414-6600 FAX: (916)414-6713

Consultation Code: 08ESMF00-2015-SLI-0418 April 30, 2015
Event Code: 08ESMF00-2015-E-01876
Project Name: SR-88 Pine Grove Corridor Improvement Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2)

of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead. Please visit our office's website (http://www.fws.gov/sacramento) to view a map of office jurisdictions.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*
Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO

El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)

Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO

San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO
San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO

Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
	Shasta Trinity National Forest		

Tehama	except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO
***Office Leads:**			
AFWO=Arcata Fish and Wildlife Office			
BDFWO=Bay Delta Fish and Wildlife Office			
KFWO=Klamath Falls Fish and Wildlife Office			
RFWO=Reno Fish and Wildlife Office			
YFWO=Yreka Fish and Wildlife Office			

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: SR-88 Pine Grove Corridor Improvement Project

Official Species List

Provided by:

Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2015-SLI-0418
Event Code: 08ESMF00-2015-E-01876

Project Type: Transportation

Project Name: SR-88 Pine Grove Corridor Improvement Project
Project Description: Proposed improvements to SR-88 in Amador County from post mile (PM) 21.6 near Climax Road to PM 24.6 near Tabeaud Road. The total length of the project is approximately 3 miles. The project will improve SR-88 by adding shoulders, Class III bicycle lanes, sidewalks and intersection improvements throughout the corridor.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-120.6783244 38.4018057, -120.6781925 38.4021421, -120.6778609 38.402212, -120.6770026 38.4034059, -120.6765091 38.4035245, -120.6756293 38.4035413, -120.6748139 38.4037086, -120.6742131 38.4042972, -120.6742346 38.4045494, -120.6740629 38.4049193, -120.6735381 38.4052339, -120.6725609 38.4049563, -120.6716167 38.4048218, -120.6707584 38.40613, -120.6708013 38.4071069, -120.6701576 38.4077795, -120.6694709 38.4098292, -120.6691285 38.4115609, -120.6697293 38.4126397, -120.6694289 38.4134787, -120.6685277 38.413514, -120.6673261 38.4133459, -120.6663819 38.4133459, -120.6633349 38.414015, -120.6613179 38.414015, -120.6600734 38.4139141, -120.6575414 38.4134098, -120.6558677 38.4133425, -120.6553527 38.4135443, -120.6549664 38.4141176, -120.6544085 38.4144538, -120.6539794 38.4146203, -120.6533357 38.414284, -120.654136 38.4137796, -120.6546653 38.4132095, -120.6531633 38.412537, -120.652262 38.411629, -120.6517041 38.4108892, -120.6506313 38.4098468, -120.650245 38.4089052, -120.6496871 38.40793, -120.6488288 38.4074255, -120.6475843 38.4069884, -120.6455673 38.4059122, -120.6434072 38.4057542, -120.6422635 38.4052396, -120.641491 38.4043652, -

120.6411906 38.4040962, -120.6412764 38.4037935, -120.6418765 38.403591, -120.6427198 38.4042182, -120.6432069 38.4049026, -120.644151 38.4051043, -120.6452432 38.4051296, -120.6455093 38.404193, -120.6460286 38.4041022, -120.6466873 38.4043897, -120.6465951 38.4052271, -120.6480563 38.406046, -120.6502043 38.4071743, -120.6504708 38.4069979, -120.6506693 38.4066868, -120.6508957 38.4065077, -120.651239 38.4066288, -120.6514021 38.4068188, -120.6515212 38.406881, -120.6513388 38.4072165, -120.6511972 38.4073434, -120.6512358 38.407546, -120.6514896 38.4081983, -120.6514987 38.4092905, -120.65352 38.4116344, -120.6551827 38.4126544, -120.6579593 38.4126822, -120.6588526 38.4124734, -120.6596465 38.4126508, -120.6598171 38.4130778, -120.6608739 38.4133763, -120.6624972 38.4135116, -120.6646086 38.4132577, -120.6670549 38.4125083, -120.6682072 38.4116306, -120.6689486 38.4096541, -120.6698567 38.4057606, -120.6729621 38.4022774, -120.6763294 38.398818, -120.6768164 38.3989349, -120.6768229 38.3993813, -120.6734686 38.4031729, -120.6764169 38.4027861, -120.6776475 38.4017763, -120.6780004 38.4016384, -120.6783244 38.4018057)))

Project Counties: Amador, CA

Endangered Species Act Species List

There are a total of 4 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	**Status**	**Has Critical Habitat**	**Condition(s)**
California red-legged frog *(Rana draytonii)* Population: Entire	Threatened	Final designated	
Fishes			
Delta smelt *(Hypomesus transpacificus)* Population: Entire	Threatened	Final designated	
steelhead *(Oncorhynchus (=salmo) mykiss)* Population: Northern California DPS	Threatened	Final designated	
Insects			
Valley Elderberry Longhorn beetle *(Desmocerus californicus dimorphus)* Population: Entire	Threatened	Final designated	

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Appendix G U.S. Fish and Wildlife Service Section 7 Consultation

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

In Reply Refer to:
08ESMF00-
2014-I-0674

MAR 06 2015

Ms. Dena Gonzalez
Biology Branch Chief
California Department of Transportation
855 M Street, Suite 200
Fresno, California 93721

Subject: Informal Consultation for the State Route 88 Pine Grove Corridor Improvement Project (EA 10-0G550)

Dear Ms. Gonzalez:

This letter is in response to the California Department of Transportation's (Caltrans) June 25, 2014, request for informal consultation with the U.S. Fish and Wildlife Service's (Service) on the proposed State Route 88 (SR88) Pine Grove Corridor Improvement Project (project) in Amador County, California. Under the provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21) that was signed into law on July 16, 2012, Caltrans was approved to assume responsibilities under the National Environmental Policy Act as well as Federal Highway Authority's consultation and coordination responsibilities under Federal environmental laws for the majority of transportation projects in California.

Your letter dated June 25, 2014, and received via hardcopy in our office on June 30, 2014, requested concurrence that the proposed project may affect, but is not likely to adversely affect the federally-listed as threatened California red-legged frog (*Rana draytonii*). The project does not occur within the boundaries of designated critical habitat for the California red-legged frog. This document has been prepared in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*)(Act).

The proposed project site is located in the community of Pine Grove at the headwaters of Jackson Creek and Grass Valley Creek. Small tributaries to these two streams flow through culverts under the roads within the project footprint. Jackson Creek flows through montane forest immediately adjacent to and to the east of SR88. Grass Valley Creek flows through montane forest northwest and away from the proposed project.

The California red-legged frog has not been observed in Amador County in recent history and was not found during general surveys within a 1-mile radius of the proposed project. The nearest recorded observation occurs greater than 10 miles from the action area in Young's Creek where three adults were observed on October 21, 2003. The area within a 1-mile radius surrounding the

proposed project includes breeding habitat, dispersal habitat and upland habitat with known predators present. Caltrans, in cooperation with the Amador County Transportation Commission (ACTC), propose improvements to the segment of SR 88 in Amador County from post mile (PM) 21.6 near Climax Road to PM 24.6 near Tabeaud Road. The total length of the project is approximately 3 miles. The existing roadway is a two-lane highway with minimal shoulders.

The Pine Grove Corridor Improvement Project runs along SR88 beginning a half-mile west of the existing Climax Road intersection, moving east through the town of Pine Grove and ending 900 feet east of Tabeaud Road. At both approaches into Pine Grove, the existing SR88 is a two-lane highway with minimal shoulders. From Ridge Road to Tabeaud Road within the Pine Grove Corridor, a two-way left turn lane is introduced, minimal shoulders remain, existing parking is limited and there are some sidewalks near Pine Grove Elementary School. The major intersections that cross SR88 through Pine Grove are Ridge Road and Volcano Road, both of which come into SR 88 at skewed angles due to the geometrics of the highway and only Ridge Road is signalized. Through the town of Pine Grove, the project is bounded on both sides with some residential, but mostly commercial properties. Formal and informal driveway access exists along the highway. In select locations throughout Pine Grove, the highway is also bounded on one side by retaining walls and/or steep cut slopes/embankments. This project proposes to improve access for non-motorized modes of transportation across SR88, to reduce congestion through improvement of operations of the highway facility, and to enhance safety along the corridor.

The project will modify SR88 by adding eight-foot shoulders to the north and south side of the highway from 900 feet west of the new Climax Road intersection to 900 feet east of Tabeaud Road. Class III bicycle lanes will be provided in the widened and improved roadway shoulders. Six-foot sidewalks will be added to the south side of the highway at the Ridge Road intersection and beginning again 1000 feet east of Ridge Road to Irishtown Road and on both the north and south side from Irishtown Road to the driveway entrance to Pine Grove Elementary School. The geometrics of the SR88/Ridge Road intersection will be expanded to include a second left turn lane from Ridge Road onto eastbound SR88. A second through lane will also be added to eastbound SR88 after the Ridge Road intersection and will terminate 500 feet after the intersection. Driveway approaches off of the highway will be standardized to provide a standard width and curb style for ease of traversing.

The eastern terminus of Church Street onto SR88 will be modified to a right in, right out configuration. The intersection of SR88 and Irishtown Road will become signalized and a parking lot will be constructed at the southwest corner to provide replacement parking for on-street parking spaces lost as a result of the roadway improvements. The intersection of SR88/Volcano Road will become signalized. The driveway exit of Pine Grove Elementary School will be relocated onto Volcano Road instead of SR88 with an entrance at the same location. Retaining walls will be constructed where necessary when the embankment/cut slope of the roadway and sidewalks would otherwise encroach into areas that have constraints. Existing culverts will be extended where necessary to accommodate the standard shoulders throughout the project.

Climax Road will be realigned to eliminate the existing nonstandard intersection at SR88. The new alignment will travel south directly to a new "T" intersection with stop control only from Climax Road. A westbound dedicated right turn lane will be provided to Climax Road. A second eastbound through lane will be added from the intersection and dropped just east of the intersection. Peterson Ranch Drive will also be realigned to tie into the realigned Climax Road. No widening or additional capacity is included with the realignment of either of these local roads. The

existing alignment of Climax Road and the existing intersection at SR88 will be abandoned and the existing pavement will be removed.

The intersection of Tabeaud Road/SR88 will be signalized and the existing westbound climbing lane will be extended to Tabeaud Road and dropped just west of the intersection. Dedicated turn pockets will be added at various intersections, where needed for traffic demands, along the project limits and the two way left turn lane will be maintained from Ridge Road to Tabeaud Road.

The project will place a 2:1 slope fill adjacent to Jackson Creek and will install retaining walls parallel to Jackson Creek. The project will widen the highway with 8-foot shoulders and an additional 10-30 feet depending on topography to accommodate for the 2:1 slope near Jackson Creek. Impacts to Jackson Creek and the associated Montane Riparian are primarily temporary and associated with the installation of retaining walls. No permanent impacts to the Jackson Creek channel will occur and approximately 0.01 acres of permanent impacts to associated Montane Riparian are anticipated (approximately 40 feet of fill towards the Montane Riparian habitat from the existing roadway).

The culverts located at Grass Valley Creek and Tributary to Grass Valley Creek A will be extended to accommodate for the widening of the highway. Construction will include the extension of the existing culverts and/or adding headwalls on the north side of the highway and adding a new retaining wall on the south side of Tributary to Grass Valley A. Tributary to Grass Valley A will also include a complete reconstruction of the existing culvert.

Utility poles will be relocated due to the proposed improvements. Underground utilities will need to be relocated to accommodate the proposed storm drain system improvements. Storm drain related improvements include curb and gutter, additional or relocated drainage inlets, and construction of adequate drainage basins to divert surface water and prevent flooding on the roadway. In addition, sewer, water and electric/cable vaults and manholes will be adjusted to grade during construction of the proposed improvements.

Conservation Measures

Caltrans and the ACTC will implement the following measures into the project design to minimize and avoid potential effects to California red-legged frog.

1. The project limits in proximity to Jackson Creek, tributary to Jackson Creek, Grass Valley Creek, tributaries A and B to Grass Valley Creek and associated montane riparian upland habitat will be marked prior to any ground disturbance activities with high visibility environmentally sensitive area (ESA) fencing or staking to ensure construction will not further encroach into channels.

2. Erosion Control Measures will be implemented during construction. To minimize the mobilization of sediment to adjacent water bodies, the following erosion-control and sediment-control measures will be included in the Storm Water Pollution Protection Plan (SWPPPP) and the construction specifications and are based on standard Caltrans measures and standard dust-reduction measures. Soil exposure must be minimized through the use of temporary best management practices (BMPs), groundcover, and stabilization measures; the contractor must conduct periodic maintenance of erosion- and sediment-control measures.

3. Vegetation clearing will only occur within the delineated project boundaries. An ESA fence will be provided on the final plans to delineate the trees to be saved and which will be removed. Where possible, trees will be trimmed rather than removed fully with the guidance

of a qualified biologist. In areas that will be subject to re-vegetation, plants will only be cleared where necessary and when feasible will be cut above soil level.

4. At construction completion the ACTC will re-vegetate temporarily disturbed sensitive natural habitat areas using a combination of hydroseed and plant materials. All plant materials to be planted and seeded onsite will be consistent with the native local montane hardwood-conifer forest and montane riparian communities. Species selected for the revegetation will be approved by the project biologist and will be selected from reference sites located within Amador County.

5. If California red-legged frogs are found at any time during project work, construction will stop and the Service will be contacted immediately at (916) 414-6600 for further guidance.

6. The project proponent will submit the name and credentials of the project biologist(s) to the Service for review and approval at least 15 days prior to the onset of construction activities.

7. Prior to initial ground disturbance activities, environmental awareness training will be given to all construction personnel by a Service-approved biologist to brief them on how to recognize California red-legged frogs. Construction personnel will also be informed that if a California red-legged frog is encountered in the work area, construction will cease in the work area and the Service will be called for guidance before any construction activities are resumed. Personnel will sign a form stating they attended environmental awareness training.

8. Plastic monofilament netting (erosion control matting) or similar material containing netting shall not be used at the project area to prevent California red-legged frogs or other small animals from becoming entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

9. No more than 20 working days prior to any ground disturbance, a Service approved biologist will conduct preconstruction surveys for the California red-legged frog.

10. All food and food-related trash items will be enclosed in sealed trash containers and removed from the site at the end of each day.

11. The Resident Engineer or his or her designee will be responsible for implementing all avoidance and minimization measures previously stated.

The Service has determined that, with the implementation of the conservation measures listed above, that the proposed project is not likely to adversely affect the California red-legged frog based on the following: the relatively small-scale scope of work, the absence of breeding habitat within close proximity to the action area, the minimal extent of permanent and temporary effects to dispersal habitat, the conservation measures proposed to minimize and avoid potential effects to the species, as well as there being no recent detections of the California red-legged frog within 10 miles of the action area.

Therefore, unless new information reveals effects of the proposed project that may affect listed species in a manner or to an extent not considered, or a new species is listed, no further action

pursuant to the Act is necessary for the proposed project. If you have questions regarding this project, please contact John DiGregoria, Transportation Liaison, or Ryan Olah, Chief, Coast Bay Division at (916) 414-6600.

Sincerely,

for Eric Tatersall
Deputy Assistant Field Supervisor

cc:
Craig Bailey, California Department of Fish and Wildlife, Fresno, CA

Tim Chamberlain

From: Carrie Swanberg <carrie.swanberg@dot.ca.gov>
Sent: Monday, March 11, 2013 10:57 AM
To: Tim Chamberlain
Cc: Hanna K Main
Subject: Fw: SR 88 Improvement Project

Tim,

Please see response from the USFWS below. Let Hanna and I know if you have any questions.

Carrie Swanberg
Associate Environmental Planner/Biologist
855 M Street, Suite 200
Fresno, CA 93721

559/445-6464

----- Forwarded by Carrie Swanberg/D06/Caltrans/CAGov on 03/11/2013 10:54 AM -----

Hanna K Main/D06/Caltrans/CAGov
03/11/2013 10:38 AM

To: Carrie Swanberg/D06/Caltrans/CAGov@DOT
cc: Frank Meraz/D06/Caltrans/CAGov@DOT
Subject: Fw: SR 88 Improvement Project

----- Forwarded by Hanna K Main/D06/Caltrans/CAGov on 03/11/2013 10:39 AM -----

"Collins, Casey" <casey_collins@fws.gov>
03/11/2013 10:36 AM

To: <Hanna_K_Main@dot.ca.gov>
cc:
Subject: SR 88 Improvement Project

Good Morning Hanna,

After review of the California red-legged frog habitat assessment for the SR 88 Pine Grove Corridor Improvement Project (Project), the U.S. Fish and Wildlife Service has determined that protocol California red-legged frog surveys are unnecessary for the Project. The Service usually recommends specific conservation measures that reduce the potential for adverse effects to this species. We would recommend that Project construction be completed in the dry season. The following is a list of measures that we typically recommend for projects in the Sierra Nevada Foothills:

1. If California red-legged frogs are found at any time during project work, construction will stop and the Service will be contacted immediately for further guidance.

2. The project will administer Best Management Practices to protect water quality and control erosion.

3. The project proponent shall submit the name and credentials of the project's biologist(s) to the Service for review and approval at least 15 days prior to the onset of construction activities.

4. Environmental awareness training will be given to construction personnel by a Service-approved biologist to brief them on how to recognize California red-legged frogs. Construction personnel will also be informed that if a California red-legged frog is encountered in the work area, construction will cease and the Service will be called for guidance before any construction activities are resumed.

5. Construction should be conducted during the dry season. The dry season is generally between April 15th and the first qualifying rain event on or after October 15th, defined as precipitation of more than one half of an inch for 24 hours.

6. Staging areas as well as fueling and maintenance activities shall be a minimum of 100 feet from riparian or aquatic habitats. The project proponent will prepare a spill prevention and clean-up plan.

7. Plastic mono-filament netting (erosion control matting) or similar material containing netting shall not be used at the project area because the California red-legged frog or other small animals may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Thank you,

Casey

Casey Collins
Fish and Wildlife Biologist
US Fish and Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825
Phone: (916) 414-6600
Fax: (916) 414-6713
Email: casey_collins@fws.gov

Appendix H **SHPO Consultation**

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov

July 31, 2014 Reply To: FHWA_2014_0702_001

Jeanne Day Binning, Ph.D., Chief
Central California Cultural Resources Branch
Caltrans District 6
855 M Street
Fresno, CA 93721

Re: Determinations of Eligibility for the Proposed State Route 88/Pine Grove Road Improvement Project, Amador County, CA

Dear Ms. Binning:

Thank you for consulting with me about the subject undertaking in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (PA).

Caltrans has determined that the following properties are not eligible for the National Register of Historic Places:

- 19775 State Highway 88
- 19790 State Highway 88
- 19805 State Highway 88
- 19809 State Highway 88
- 19845 State Highway 88, Building 1
- 19845 State Highway 88, Building 2
- 19845 State Highway 88, Building 3
- 19881 State Highway 88
- 19889 State Highway 88
- 19895 State Highway 88
- 19955 State Highway 88
- 19999 State Highway 88
- 20022 State Highway 88
- 20051 State Highway 88, Building 1
- 20051 State Highway 88, Building 2
- 20104 State Highway 88
- 20153 State Highway 88
- 13954 Hilltop Street
- P-3-1183/Climax Road Mining
- P-3-1882/Basement Foundation
- P-3-1881/Volcano Road Mining

Based on my review of the submitted documentation I concur.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 or email at natalie.lindquist@parks.ca.gov .

Sincerely,

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

DEPARTMENT OF TRANSPORTATION
DISTRICT 6
855 M Street
Fresno, CA 93721
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Serious drought.
Help save water!

June 26, 2014

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

10-AMA-88/Pine Grove Road
PM 21.6/24.6
EA 10-0G550

Re: Determination of Eligibility and Notification of No Historic Properties affected for the State Route 88 (SR 88)/Pine Grove Road Improvement Project, Amador County; 10-0G550, PM 21.6/24.6.

Dear Dr. Roland-Nawi:

The California Department of Transportation (Caltrans) is initiating consultation with you regarding the proposed State Route 88 (SR 88)/Pine Grove Road Improvement Project, Amador County. This consultation is undertaken in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it pertains to the administration of the Federal-Aid Highway Program in California (PA).*

The Amador County Transportation Commission (ACTC), in conjunction with Caltrans, is proposing improvements to the segment of SR 88 in Amador County from Post Mile (PM) 21.6 near Climax Road to PM 24.6 near Tabeaud Road. This segment is currently experiencing congestion due to increased traffic volumes on Climax Road, Ridge Road, and Volcano Road. The proposed project would improve traffic circulation, address safety concerns, and provide a transportation facility consistent with Caltrans Standards. A full project description and depiction of the Area of Potential Effects (APE) can be found on pages one through two and Figure 3 of the HPSR.

Under the PA, Caltrans is responsible for ensuring the appropriateness of the APE (Stipulation VIII.A) and the adequacy of historic property identification efforts (Stipulation VIII.B). We are consulting with you at the present time under Stipulation VIII.C.6 of the PA, which requires that we seek concurrence on Caltrans' determinations of eligibility.

Consultation and identification efforts for this project (summarized on pages two through nine of the HPSR) resulted in the identification of 42 cultural resources within the APE for the

proposed project. Of those resources, P-03-1162/CA-AMA-775H Petersen Ranch and P-03-1806 and P-03-1806 Pine Grove School have been previously determined ***ineligible*** for listing in the National Register of Historic Places (NRHP). Evaluations of the remaining 40 resources are detailed on pages 20-24 (for the three historic-period archaeological resources) and in Appendix A (for the 37 historic-period built environment resources) of the Historical Resources Evaluation Report, which is included as Attachment 2 of the HPSR.

Pursuant to Stipulation VIII.C.6 of the PA, Caltrans is requesting your concurrence that the 40 properties listed in the following two tables are not eligible for listing in the NRHP:

Built Environment Resources:				
Map Ref. #	**Legal Address**	**APN**	**Year Built**	**Description**
1	19333 Ridge Road	030-154-001	1950	Single-family residence
2	19345 Ridge Road	030-154-002	1948	Single-family residence
3	19479 Ridge Road	030-154-005	1948	Single-family residence
4	19444 State Hwy 88	030-170-028	1961	Commercial building
5	19474 State Hwy 88	030-170-029	1948	Single-family residence with commercial frontage
6	19518 State Hwy 88, Building 1	030-170-014	c. 1950	Single-family residence
7	19518 State Hwy 88, Building 2	030-170-014	c. 1950	Single-family residence
8	19518 State Hwy 88, Building 3	030-170-014	c. 1960	Commercial building
9	19518 State Hwy 88, Building 4	030-170-014	c. 1950	Commercial building
10	19551 State Hwy 88	030-160-028	1930	Single-family residence
11	19558 State Hwy 88	030 -180-031	1950	Single-family residence
12	19594 State Hwy 88	030-180-005	1938	Single-family residence with commercial frontage
13	19673 State Hwy 88	030-160-016	1910	Single-family residence
14	19724 State Hwy 88	030-180-011	1950	Commercial building
15	19751 State Hwy 88, Building 1	030-160-033	c. 1920	Single-family residence
16	19751 State Hwy 88, Building 2	030-160-033	c. 1920	Single-family residence
17	19751 State Hwy 88, Building 3	030-160-033	c. 1920	Single-family residence
18	19751 State Hwy 88, Building 4	030-160-033	c. 1920	Single-family residence
19	19766 State Hwy 88	030-192-001	c. 1900	Single-family residence

20	19775 State Hwy 88	030-191-001	1935	Single-family residence
21	19790 State Hwy 88	030-192-003	1910	Single-family residence
22	19805 State Hwy 88	030-191-012	1925	Single-family residence
23	19809 State Hwy 88	030-191-006	1910	Single-family residence
24	19845 State Hwy 88, Building 1	030-191-009	c. 1920	Commercial building
25	19845 State Hwy 88, Building 2	030-191-009	1900-1901	Commercial building
26	19845 State Hwy 88, Building 3	030-191-009	c. 1930	Commercial building
27	19881 State Hwy 88	030-191-007	c. 1960	Single-family residence
28	19889 State Hwy 88	030-191-008	1897	Pine Grove Town Hall
29	19895 State Hwy 88	030-200-012	1965	Single-family residence
30	19955 State Hwy 88	030-200-013	c. 1900	Single-family residence
31	19999 State Hwy 88	030-200-015	1925	Single-family residence
32	20022 State Hwy 88	030-200-077	c. 1950	Quonset hut
33	20051 State Hwy 88, Building 1	030-200-028	1965	Commercial building
34	20051 State Hwy 88, Building 2	030-200-028	c. 1900	Single-family residence
35	20104 State Hwy 88	030-730-001	c. 1930	Auto service station
36	20153 State Hwy 88	030-200-042	1953	Commercial building
37	13954 Hilltop Street	030-730-010	c. 1950	Commercial building

Historic-Period Archaeological Resources				
Map Ref. #	**Primary/Trinomial/Field Designation**	**APN**	**Period**	**Description**
40	P-3-1183/Climax Road Mining	038-010-142	1930s-1960s	Placer Mining – prospect pits
41	P-3-1882/Basement Foundation	038-010-142	unknown	Basement/Structure Foundation
42	P-3-1881/Volcano Road Mining	030-140-009	Possibly 1915-1930s	Lode Mining (Surface Vein)

We look forward to receiving your response within 30 days of receipt of this submittal in accordance with Stipulation VIII.C.6.a of the PA. This letter and the attached documentation also serves as notification that Caltrans' finding for the Undertaking, pursuant to IX.A.2 of the PA, is No Historic Properties Affected due to the absence of any identified historic properties

within the APE. This letter and attached documentation are being retained in Caltrans files (pursuant to Stipulation XVIII.C of the Section 106 PA).

In partial compliance with 36 CFR Part 800.11, we are concurrently providing copies of the attached supplemental HPSR to the other consulting parties and members of the interested public. These entities include the County of Kern Planning Commission, local Native American tribes, and unrecognized Native American groups and individuals who have ties to the area.

If you require any additional information, please do not hesitate to contact me at 559.445.5793 or Jeanne.Binning@dot.ca.gov, or Caltrans archaeologist, Jon L. Brady at 559.445.5798 or Jon.Brady@dot.ca.gov. Thank you for your assistance with this undertaking.

Sincerely,

Jeanne Day Binning, Ph.D., Chief
for Central California Cultural Resources Branch

cc. Neil Peacock, Amador County Transportation Commission
Kelly Hobbs, Section 106 Coordinator, Office of Cultural and Community Studies, Caltrans

Enclosure: *Historic Property Survey Report for the State Route 88 Improvement Project, Pine Grove, Amador County, California.*

List of Technical Studies Bound Separately

- Air Quality Memorandum
- Community Impact Assessment
- Floodplain Evaluation Memorandum
- Hazardous Waste Initial Site Assessment
- Limited Phase 2 Environmental Site Assessment
- Historic Property Survey Report
- Natural Environment Study
- Noise Study Report
- Preliminary Drainage Report
- Traffic Operations Analysis Report
- Supplemental Traffic Operations Analysis Report
- Visual Impacts Assessment
- Water Quality Assessment