

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans)—in cooperation with the Placer County Transportation Planning Agency (PCTPA); Placer County; and the Cities of Roseville, Rocklin, and Lincoln—proposes to improve the Interstate 80/State Route 65 (I-80/SR 65) interchange in Placer County, California, to reduce future traffic congestion, improve operations and safety, and comply with current Caltrans and local agency design standards.

The project is subject to state and federal environmental review requirements because the use of federal funds from the Federal Highway Administration (FHWA) is proposed. Accordingly, project documentation is being prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under CEQA and NEPA. This project is included in the Placer County *2035 Regional Transportation Plan (RTP)* and the Sacramento Area Council of Governments (SACOG) *2035 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)*. Phase 1 of the project is programmed in the SACOG 2015/2018 Metropolitan Transportation Improvement Program (MTIP). The complete project (i.e., Phases 1 through 4) will be included in the upcoming 2036 MTP/SCS.

1.1.1 Project Location

The project is located in Placer County in the cities of Roseville and Rocklin at the I-80/SR 65 interchange (Figure 1-1). The project limits consist of I-80 from the Douglas Boulevard interchange to the Rocklin Road interchange (post miles 1.9–6.1) and SR 65 from the I-80 separation to the Pleasant Grove Boulevard interchange (post miles R4.8–R7.3). The total length of the project is 2.5 miles along SR 65 and 4.2 miles along I-80. The project area also includes various local roads—specifically, portions of Galleria Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, Eureka Road/Atlantic Street, East Roseville Parkway, and Taylor Road.

1.1.2 Project Background

Constructed in 1985, the existing I-80/SR 65 interchange is a type F-6¹ freeway-to-freeway interchange (see shape shown in Figure 1-1). It includes a loop connector, a flyover connector, and two slip ramp connectors. The following sections describe I-80 and SR 65 in further detail and explain the most recent Caltrans proposal to improve the freeway interchange.

¹ A Type F-6 interchange is a designation Caltrans uses in its [Highway Design Manual](#). It is also commonly called a “trumpet configuration.”

1.1.2.1 Interstate 80

I-80 is the principal east–west route in northern and central California, providing all-weather access across the Sierra Nevada for major goods movement into the Sacramento and San Francisco Bay areas. The interstate accommodates high commute, interregional, and recreational traffic volumes, as well as high levels of truck freight traffic within the greater Sacramento region.

Within Placer County, I-80 begins at the Sacramento County/Placer County line in Roseville as a ten-lane freeway—including two carpool/high-occupancy vehicle (HOV) lanes, one in each direction. It extends east through the Riverside Boulevard interchange, where it changes to nine lanes (five eastbound and four westbound). At the Douglas Boulevard interchange, I-80 returns to a ten-lane freeway and remains this size through the Lead Hill Boulevard overcrossing, the Atlantic Street/Eureka Road interchange, the Roseville Parkway overcrossing, the Taylor Road interchange, and the separation with SR 65.

East of the SR 65 separation, I-80 changes to six lanes, the HOV lanes end, and the highway extends into the city of Rocklin past the Rocklin Road interchange.

1.1.2.2 State Route 65

SR 65 is an important interregional route that serves local and regional traffic. The route serves as a major connector for both automobile and truck traffic originating from the I-80 corridor in the Roseville/Rocklin area to the SR 70/99 corridor in the Marysville/Yuba City area. SR 65 is a vital economic link from residential areas to shopping and employment centers in southern Placer County. It is also an important route for transporting aggregate, lumber, and other commodities.

In the northbound direction, SR 65 begins at the I-80 separation as a three-lane facility that joins the two eastbound I-80 to northbound SR 65 connector ramp lanes with the single-lane westbound I-80 to northbound SR 65 connector ramp. The outside lane immediately ends along the East Roseville Viaduct (bridge number 19 00152L/R, P.M. 5.06) and continues with two lanes through the Galleria Boulevard/Stanford Ranch Road interchange. An auxiliary lane begins prior to the Pleasant Grove Boulevard interchange and ends at the off-ramp. Northbound SR 65 continues as a two-lane facility with occasional auxiliary lanes past the Pleasant Grove Boulevard interchange toward Lincoln.

In the southbound direction, SR 65 has two lanes and occasional auxiliary lanes from Lincoln through the Pleasant Grove Boulevard interchange. A third southbound lane develops under the Galleria Boulevard/Stanford Ranch Road interchange prior to the southbound Galleria Boulevard on-ramp. The three lanes continue across the East Roseville Viaduct and split into four lanes, two serving the southbound SR 65 to westbound I-80 connector ramp, and two serving the southbound SR 65 to eastbound I-80 connector ramp.

1.1.2.3 I-80/SR 65 Interchange Project Study Report

In 2009, Caltrans completed a project study report (PSR) for upgrading the interchange to remedy operational problems caused by high peak-period traffic volumes and inefficient geometry. The PSR identified three build alternatives that would add a bi-directional HOV direct connector ramp, replace the existing loop connector, widen the East Roseville Viaduct, replace the Taylor Road overcrossing, and increase capacity on the connector ramps. Other interchanges and local roads within the project area also would be affected to accommodate the proposed upgrades identified in the PSR.

1.2 Purpose and Need

The proposed project would improve the I-80/SR 65 interchange in Placer County, California, in order to reduce future traffic congestion, improve operations and safety, and comply with current Caltrans and local agency design standards. Construction of the proposed improvements has independent utility. The project is not dependent on other projects or improvements to meet the purpose and need.

Termini (i.e., limits) for the project were developed through an iterative process involving engineering design and traffic operations analysis. Preliminary design concepts were tested with the traffic operations analysis model to evaluate how lane transitions and vehicle weaving influenced peak-hour conditions. Refinements were made to ensure that mainline lane balance was logical and that transitions did not cause unacceptable traffic operations such as extensive queuing or reduced speeds.

1.2.1 Purpose

The purpose and objectives of the project are listed below.

- Upgrade the I-80/SR 65 interchange and adjacent transportation facilities to reduce no-build traffic congestion.
- Upgrade the I-80/SR 65 interchange and adjacent transportation facilities to comply with current Caltrans and local agency design standards for safer and more efficient traffic operations while maintaining and, if feasible, improving the current level of community access, at a minimum.
- Consider all travel modes and users in developing project alternatives.

1.2.2 Need

The project is needed for the following reasons.

- Recurring morning and evening peak-period demand exceeds the current design capacity of the I-80/SR 65 interchange and adjacent transportation facilities, creating traffic operations and safety issues. These issues result in high delays, wasted fuel, and excessive air pollution

and greenhouse gas emissions, all of which will be exacerbated by traffic from future population and employment growth.

- Interchange design features do not comply with current Caltrans design standards for safe and efficient traffic operations and limit the existing community access to nearby land uses.
- Travel choices are limited in the project area because the transportation network does not include facilities for all modes and users consistent with the complete streets policies of Caltrans and local agencies.

1.2.2.1 Traffic Operations

The roadway system in the project area currently experiences peak-period congestion, which will worsen in the future according to the traffic volume forecasts summarized in the *Transportation Analysis Report – I-80/SR 65 Interchange Improvements* prepared in August 2014 (Fehr & Peers 2014). Increased capacity at the system interchange and several local roads (Eureka Road/ Atlantic Street, Taylor Road, East Roseville Parkway, and Galleria Boulevard/Stanford Ranch Road) is needed in order to reduce forecasted congestion.

Freeway Operations

Table 1-1 shows average annual daily traffic volumes on the freeway network for existing (2012) and design year (2040) no-build conditions.

Table 1-1. Average Annual Daily Traffic Volume

Freeway	Segment	Existing Conditions (2012)		Design Year No-Build Conditions (2040)	
		Total	Trucks	Total	Trucks
I-80	Douglas Boulevard to Eureka Road	155,000	9,000	197,400	14,200
	Eureka Road to Taylor Road	158,700	9,600	203,800	14,400
	Taylor Road to SR 65	150,000	8,700	194,200	13,900
	SR 65 to Rocklin Road	109,600	6,400	139,500	9,900
SR 65	I-80 to Galleria Boulevard	106,100	3,500	151,500	6,000
	Galleria Boulevard to Pleasant Grove Boulevard	104,400	3,500	159,100	6,600

Source: Fehr & Peers 2014, Table 16.

Table 1-2 summarizes the existing (2012) and design year (2040) no-build freeway operations in the a.m. and p.m. peak hours by listing selected freeway segments representative of the overall conditions. Bold and underlined font indicate level of service (LOS) F (unacceptable) conditions. Conditions at the Eureka Road, Taylor Road, and Galleria Boulevard ramps worsen, as well as conditions at the SR 65 and I-80 merge and diverge ramps. A description of the various LOS for freeways is shown on Figure 1-2.

Local Intersection Operations

Table 1-3 summarizes existing (2012) and design year (2040) no-build conditions of key local intersection operations in the a.m. and p.m. peak hours. The majority of local intersections will

operate at an equal or higher (worse) LOS by the design year. The unacceptable conditions highlighted in the table are based on LOS policies in local General Plans: LOS C for signalized intersections in the City of Roseville (adopted May 2010), the City of Rocklin (adopted October 2012), and the City of Lincoln, and LOS D for SR 65 in the City of Lincoln (adopted March 2008).

Table 1-2. Selected Freeway Operations Results

Freeway	Location	Existing Conditions (2012) (LOS/average density)		Design Year No-Build Conditions (2040) (LOS/average density)	
		A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
EB I-80	Eureka Road off-ramp	C / 26	<u>F / 46</u>	<u>F / 114</u>	<u>F / 149</u>
	Eureka Road off- to on-ramp	C / 21	C / 23	<u>F / 138</u>	<u>F / 141</u>
	Eureka Road eastbound on-ramp	B / 19	B / 20	<u>F / 132</u>	<u>F / 96</u>
	Eureka Road to Taylor Road	C / 23	E / 42	<u>F / 131</u>	<u>F / 142</u>
	Taylor Road to SR 65	D / 28	E / 42	<u>F / 123</u>	<u>F / 133</u>
	SR 65 off-ramp	C / 28	<u>F / 52</u>	<u>F / 86</u>	<u>F / 65</u>
WB I-80	SR 65 off-ramp	B / 19	E / 35	C / 27	<u>F / 114</u>
	Douglas Boulevard off-ramp	D / 32	C / 26	C / 21	<u>F / 108</u>
	Douglas Boulevard westbound on-ramp	E / 36	D / 34	C / 25	C / 20
	Douglas Boulevard eastbound on-ramp	E / 42	E / 37	C / 23	B / 15
	Douglas Boulevard to Riverside Avenue	D / 33	D / 31	D / 28	C / 21
	Riverside Avenue off-ramp	E / 40	E / 36	C / 20	B / 16
NB SR 65	I-80 westbound on-ramp	<u>F / 53</u>	<u>F / 95</u>	<u>F / 57</u>	<u>F / 84</u>
	I-80 to Stanford Ranch Road	D / 32	<u>F / 77</u>	D / 35	E / 36
	Stanford Ranch Road off-ramp	D / 33	<u>F / 62</u>	D / 31	D / 32
SB SR 65	Blue Oaks Boulevard westbound on-ramp	<u>F / 60</u>	B / 20	D / 34	C / 28
	Blue Oaks Boulevard to Pleasant Grove Boulevard	<u>F / 75</u>	C / 21	D / 29	C / 26
	Pleasant Grove Boulevard off- to on-ramp	<u>F / 89</u>	C / 25	D / 32	D / 29
	Pleasant Grove Boulevard westbound on-ramp	<u>F / 72</u>	D / 31	C / 28	C / 22
	Pleasant Grove Boulevard eastbound on-ramp	<u>F / 53</u>	E / 39	E / 44	D / 29
	Pleasant Grove Boulevard to Galleria Boulevard	E / 36	D / 32	<u>F / 49</u>	D / 32
	Galleria Boulevard off-ramp	E / 35	D / 32	<u>F / 55</u>	D / 33
	Galleria Boulevard on-ramp	D / 30	C / 24	<u>F / 77</u>	E / 39
I-80 off-ramp	C / 24	C / 22	D / 33	D / 31	

Note: **Bold** and underline font indicate LOS F (unacceptable) conditions. LOS and average vehicle density for the study segment are reported. Average vehicle density is the average number of vehicles observed in the studied segment during the peak period.

The improved performance of the No Build Alternative at some of the freeway segment locations is caused in part by different forecast assumptions used for the Build versus No Build Alternatives in the *Transportation Analysis Report*, and in part by upstream congestion that affects downstream operations.

Source: Fehr & Peers 2014, Technical Appendix Part 1.

Table 1-3. Local Intersection Operations

Intersection	Existing Conditions (2012) (LOS/average delay)		Design Year No-Build Conditions (2040) (LOS/average delay)	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Blue Oaks Boulevard / Washington Boulevard	<u>D / 43</u>	C / 33	<u>F / 136</u>	<u>F / >240</u>
Blue Oaks Boulevard / SR 65 northbound ramps	C / 24	C / 23	<u>F / 116</u>	<u>F / 115</u>
Stanford Ranch Road / Five Star Boulevard	B / 19	C / 32	<u>F / 151</u>	<u>D / 36</u>
Stanford Ranch Road / SR 65 northbound ramps	A / 9	B / 15	<u>F / 127</u>	D / 36
Galleria Boulevard / SR 65 southbound ramps	B / 13	B / 19	D / 38	C / 29
Galleria Boulevard / Roseville Parkway	C / 30	D / 36	D / 39	<u>F / 213</u>
Roseville Parkway / Creekside Ridge Drive	A / 6	B / 17	B / 10	C / 24
Roseville Parkway / Taylor Road	C / 30	C / 28	<u>F / 98</u>	D / 48
Atlantic Street / I-80 westbound ramps	A / 7	B / 11	B / 12	<u>D / 51</u>
Eureka Road / Taylor Road / I-80 eastbound ramps	C / 26	E / 61	E / 55	<u>F / 92</u>
Eureka Road / Sunrise Avenue	C / 24	C / 30	C / 29	<u>F / 184</u>
Douglas Boulevard/ Harding Boulevard	B / 19	C / 28	C / 25	<u>F / >240</u>
Douglas Boulevard / Sunrise Avenue	C / 26	D / 35	C / 35	<u>F / >240</u>
Rocklin Road / Granite Drive	B / 15	D / 37	D / 29	<u>F / >240</u>

Note: **Bold** and underline font indicate unacceptable conditions. LOS and average vehicle delay in seconds per vehicle are reported.

Source: Fehr & Peers 2014, Technical Appendix Part 1.

Accident Data

Caltrans Traffic Accident Surveillance and Analysis System (TASAS) traffic collision data for mainline I-80 and SR 65, and the ramp connections were compiled for a 3-year period from April 1, 2009, to March 31, 2012. The data are summarized in Tables 1-4 and 1-5. The data show that the collision rates, as well as the fatality and injury rates, at the majority of intersections within the project area are higher than statewide averages.

Table 1-4. Mainline Accident History (April 1, 2009 – March 31, 2012)

Location/Section	Total Accidents	Total Fatalities	Actual Collision Rate ^a			Average Statewide Collision Rate ^a		
			F	F&I	Total	F	F&I	Total
Eastbound I-80 (PM 2.2 to 4.2): Douglas Boulevard on-ramp to SR 65 off-ramp	256	2	<u>0.012</u>	<u>0.56</u>	<u>1.52</u>	0.004	0.28	0.90
Eastbound I-80 (PM 4.2 to 5.9): SR 65 off-ramp to Rocklin Road off-ramp	52	0	0.000	0.15	0.48	0.004	0.27	0.87
Westbound I-80 (PM 4.3 to 5.9): Rocklin Road on-ramp to SR 65 off-ramp	81	1	<u>0.010</u>	<u>0.34</u>	0.81	0.004	0.27	0.87
Westbound I-80 (PM 2.2 to 4.3): SR 65 off-ramp to Douglas Boulevard off-ramp	189	1	<u>0.006</u>	<u>0.31</u>	<u>1.08</u>	0.004	0.28	0.90
Northbound SR 65 (PM R4.9 to 6.9): I-80 on-ramp to Pleasant Grove Boulevard off-ramp	55	1	<u>0.009</u>	0.15	0.5	0.006	0.33	1.02
Southbound SR 65 (PM R4.9 to 7.1): Pleasant Grove Boulevard westbound on-ramp to I-80 off-ramp	95	0	0.000	0.29	0.77	0.006	0.34	1.04

Notes: The post mile (PM) limits are provided in the first column. **Bold** and underline font indicate actual accident rates that are higher than the statewide average for similar facilities.

^a The accident rate is accidents per million vehicle-miles. "F" refers to the fatality rate, and "F&I" refers to the fatality and injury rate. "Total" includes non-injury accidents, which are not listed separately.

Source: Fehr & Peers 2014, Table 9.

Table 1-5. Ramp Accident History (April 1, 2009 – March 31, 2012)

Location/Section	Total Accidents	Total Fatalities	Actual Collision Rate ^a			Average Collision Rate ^a		
			F	F&I	Total	F	F&I	Total
Eastbound I-80 off-ramp to Eureka Road (PM 2.9)	13	0	0.000	0.16	1.01	0.003	0.34	1.01
Eastbound I-80 on-ramp from eastbound Eureka Road (PM 3.0)	3	0	0.000	<u>0.37</u>	<u>1.10</u>	0.002	0.21	0.73
Eastbound I-80 on-ramp from westbound Eureka Road (PM 3.2)	6	0	0.000	<u>0.25</u>	0.51	0.003	0.18	0.57
Eastbound I-80 off-ramp to Taylor Road (PM 3.6)	7	0	0.000	<u>0.62</u>	<u>1.44</u>	0.003	0.30	1.03
Eastbound I-80 off-ramp to SR 65 (PM 4.2)	31	0	0.000	<u>0.29</u>	<u>0.98</u>	0.004	0.20	0.68
Eastbound I-80 on-ramp from SR 65 (PM 4.5)	2	0	0.000	<u>0.17</u>	0.17	0.003	0.14	0.41
Westbound I-80 off-ramp to SR 65 (PM 4.3)	9	1	<u>0.070</u>	<u>0.42</u>	<u>0.63</u>	0.005	0.13	0.38
Westbound I-80 on-ramp from SR 65 (PM 4.0)	21	0	0.000	<u>0.18</u>	<u>0.75</u>	0.003	0.11	0.32
Westbound I-80 on-ramp from Taylor Road (PM 3.6)	3	0	0.000	0.00	0.54	0.003	0.18	0.57
Westbound I-80 off-ramp to westbound Atlantic Street (PM 3.2)	2	0	0.000	0.23	0.46	0.004	0.24	0.75
Westbound I-80 off-ramp to eastbound Atlantic Street (PM 3.0)	0	0	0.000	0.00	0.00	0.003	0.30	1.06
Westbound I-80 on-ramp from Atlantic Street (PM 2.8)	9	0	0.000	<u>0.32</u>	<u>0.71</u>	0.002	0.22	0.63
Northbound SR 65 off-ramp to Stanford Ranch Road (PM R5.7)	2	0	0.000	0.06	0.11	0.002	0.08	0.25
Northbound SR 65 on-ramp from Stanford Ranch Road (PM R6.2)	22	0	0.000	<u>0.88</u>	<u>2.15</u>	0.002	0.22	0.63
Southbound SR 65 off-ramp to Galleria Boulevard (PM R6.2)	2	0	0.000	0.09	0.18	0.002	0.08	0.25
Southbound SR 65 on-ramp from Galleria Boulevard (PM R5.7)	16	0	0.000	<u>0.45</u>	<u>0.90</u>	0.002	0.22	0.63

Notes: The post mile (PM) limits are provided in the first column. **Bold** and underline font indicate actual accident rates that are higher than the statewide average for similar facilities.

^a The accident rate is accidents per million vehicle-miles. "F" refers to the fatality rate, and "F&I" refers to the fatality and injury rate. "Total" includes non-injury accidents, which are not listed separately.

Source: Fehr & Peers 2014, Table 11.

1.2.2.2 Caltrans Design Standards

The I-80/SR 65 interchange currently does not have standard interchange spacing between the Eureka Road/Atlantic Street and Taylor Road interchanges. The current interchange spacing provides a short weave distance for vehicles entering and exiting I-80, which increases the potential for accidents (see data in Table 1-4). Increasing the interchange spacing would improve weave movements and operations at the ramps.

The existing merge between the westbound I-80 to northbound SR 65 and eastbound I-80 to northbound SR 65 freeway ramp connectors do not have adequate capacity, resulting in a

bottleneck and causing traffic to queue back onto the east-to-north loop connector and eastbound I-80.

The existing eastbound I-80 to northbound SR 65 loop connector currently has a posted speed of 25 mph, which causes traffic to slow as they approach the loop. A higher speed connection in this direction of travel is needed to improve operations at the connector and minimize queuing on eastbound I-80.

1.2.2.3 Transportation Network Modes

Currently, a significant portion of Taylor Road within the project limits has no sidewalks or bicycle facilities. There is a gap in the non-motorized network between Roseville Parkway and Plumber Way. Filling in the gap, consistent with the *City of Roseville Bicycle Master Plan*, would provide improved bicycle and pedestrian connections between Roseville and Rocklin, as well as improved access to the Class I trails along Secret Ravine, Miners Ravine, and Antelope Creek.

1.3 Project Description

This section describes the proposed project and the design alternatives. The proposed project is located in Placer County in the cities of Roseville and Rocklin at the I-80/SR 65 interchange. The project limits consist of I-80 from the Douglas Boulevard interchange to the Rocklin Road interchange (post miles 1.9–6.1) and SR 65 from the I-80 separation to the Pleasant Grove Boulevard interchange (post miles R4.8–R7.3). The existing I-80/SR 65 interchange is a type F-6 freeway-to-freeway interchange. The purpose of the project is to reduce future traffic congestion, improve operations and safety, and comply with current Caltrans and local agency design standards. The proposed build and no-build (no-project) alternatives are described below. The purpose of the alternatives analysis is to facilitate meaningful public participation through an informed decision-making process.

1.3.1 Build Alternatives

Three build alternatives are under consideration in this Environmental Impact Report/Environmental Assessment (EIR/EA) and were designed to satisfy the purpose and need identified above, while avoiding or minimizing environmental impacts.

- Alternative 1—Taylor Road Full Access Interchange
- Alternative 2—Collector–Distributor (C-D) System Ramps
- Alternative 3—Taylor Road Interchange Eliminated

Alternatives 1–3 propose to add capacity, a bi-directional HOV system, and high-speed connector ramps. Local and regional circulation and access would be improved, as would vehicle lane-weaving conditions along I-80 between Eureka Road/Atlantic Street and Taylor Road and along SR 65 between the I-80/SR 65 interchange and Galleria Boulevard/Stanford Ranch Road.

Other improvements would include widening the East Roseville Viaduct, replacing the Taylor Road overcrossing, and realigning the existing eastbound I-80 to northbound SR 65 loop connector. All of the build alternatives involve the same or similar improvements on I-80 and SR 65, except for how access to the existing Taylor Road interchange is addressed. The alternatives will be compared by how well they serve as solutions to the project's purpose and need and how they balance competing demands of design, environmental impact, cost and function.

Figures depicting each build alternative appear at the end of this chapter (Figures 1-3, 1-4, and 1-5). Figures depicting temporary crossings (e.g., Bailey Bridges) and access over Secret Ravine, Miners Ravine, and Antelope Creek are at the end of this chapter (Figures 1-6, 1-7, and 1-8). More detailed engineering figures and detailed maps showing the locations of proposed right-of-way acquisitions are included in Appendix D and Appendix K, respectively, of the *Draft Project Report to Authorize Release of the Draft Environmental Document* prepared for the proposed project (CH2M HILL 2015). The report and its attachments are available on the project website at <http://8065interchange.org/>.

1.3.1.1 Common Design Features of the Build Alternatives

The build alternatives—Alternatives 1, 2, and 3—include common design features and have similar phasing approaches, staging, storage, and site access. Common design features of the build alternatives are listed below. For alignment and other improvement features that differ between alternative, see the individual alternative descriptions in Section 1.3.1.2, “Unique Features of the Build Alternatives.”

- I-80 would be widened from post mile 1.9 to 6.1 to add one or two mixed-flow lanes and one or two auxiliary lanes in each direction of travel, depending on the location within the project limits. A retaining wall would be constructed in the eastbound direction between the Eureka Road interchange and the Roseville Parkway overcrossing (height and length varies by alternative). A tie-back wall² (approximately 80 feet long and 15 feet high) would be constructed in the eastbound direction under the Roseville Parkway overcrossing.
- SR 65 would be widened from post mile R4.8 to 7.3 to include one HOV lane, one additional mixed-flow lane, and one or two auxiliary lanes in each direction of travel, depending on the location within the project limits. Widening along SR 65 would occur on both the inside and outside of the existing pavement in both the northbound and southbound directions. The median would be fully paved and would include a concrete barrier. An additional concrete barrier would be added in the northbound direction between the HOV and general purpose lanes to prevent vehicle lane weaving between I-80 and the Galleria Boulevard/Stanford Ranch Road interchange. In the southbound direction, a 4-foot-wide pavement delineation soft barrier would separate the HOV and general purpose lanes to prohibit vehicle lane weaving between the Galleria Boulevard/Stanford Ranch Road on-ramp and the HOV direct connector ramp.

² A tie-back wall is used to retain a slope. It is similar to a retaining wall but is anchored into the slope to “tie” the wall to the slope.

- The SR 65 mainline widening would require reconstruction of the ramp connections for all of the Galleria Boulevard/Stanford Ranch Road interchange ramps. The northbound Stanford Ranch Road slip off-ramp would be widened to two lanes. The southbound Galleria Boulevard/Stanford Ranch Road on-ramp would be reconstructed to a two-lane ramp plus HOV preferential lane. The southbound Pleasant Grove Boulevard on-ramp also would be adjusted to accommodate the mainline widening. The existing wetland near the Pleasant Grove Boulevard on-ramp would not be affected and would be protected as an environmentally sensitive area (ESA) during construction. Please refer to Section 2.17, “Wetlands and Other Waters,” for more information regarding ESAs and wetlands. The widening along SR 65 would occur within the existing right-of-way.
- The East Roseville Viaduct would be widened in the northbound and southbound directions, from post mile R5.0 to R5.5, spanning Antelope Creek, Union Pacific Railroad (UPRR) tracks, and Taylor Road. The existing parallel structures would be widened on both sides and would require additional columns to support the widened structures. Caltrans’ bridge design standards require that the widened portion of structures be configured similarly to the existing structure in order to provide consistent performance in regard to structure stiffness, deflection control, and seismic performance. Therefore, the additional columns would be placed parallel to the existing columns along the entire length of the viaduct. The viaduct widening in the northbound direction would shift the edge of deck approximately 33 feet closer to the Hearthstone apartment complex, and the widening in the southbound direction would shift the edge of deck approximately 10 feet closer to the Preserve at Creekside apartment complex.
- All proposed permanent columns, footings, and foundations for the East Roseville Viaduct would be located outside the ordinary high water mark of Antelope Creek, except at two locations. The two locations in Antelope Creek are on the upstream side of the northbound SR 65 widening. Structural stability of the bridge does not allow relocation of the columns.
- Although the viaduct structure is conventional, it is a large structure that will require a full construction season to construct. The proposed design of the structure is configured into smaller portions, or frames, to allow it to be constructed in segments. Building the viaduct in segments allows the contractor to break up the work such that operations can be focused in smaller areas. For instance, the two columns in Antelope Creek can be constructed separately from other elements of the bridge to meet seasonal in-water restrictions and construction windows. With appropriate construction staging, the portion of the viaduct over Antelope Creek would be constructed in approximately 4 months.
- Construction of the column foundations of the East Roseville Viaduct would use large-diameter (8- to 10-foot) steel-cased drilled shafts. The drilled shafts would minimize acoustic disturbance compared to a driven pile foundation. For the two columns affecting Antelope Creek, the steel casing would provide a construction zone similar to a cofferdam, but with less impact on the streambed because all construction activities can be confined inside of the 8- to 10-foot steel casing. The proposed column construction includes the following order of work.
 - Drill the shaft to the desired depth.

- Auger out the material inside the steel casing and dispose of the materials per best management practices (BMPs).
 - Install reinforcing bar cage inside the casing, and pour the foundation and column. The foundation elevation would remain below the bottom elevation of the creek channel. Therefore, permanent impacts on the creek would consist of the viaduct column, which is smaller (approximately 5 by 8 feet) than the foundation diameter.
 - Remove the steel casing after foundation construction is complete, or leave it in place and cut-off below the mud line of Antelope Creek.
- The existing eastbound I-80 to northbound SR 65 loop connector would be removed and replaced with a high-speed three-lane flyover. The existing eastbound to northbound and southbound to eastbound connector structures over I-80 would be removed and replaced, including removal of the existing piers and abutments. Approach roadways would be removed, and the areas would be regraded.
 - One lane of capacity would be added to each connector ramp by realigning the existing ramps. The westbound to northbound connector ramp would be constructed on fill, with a retaining wall (approximately 1,650 feet long and 20 feet high) along a portion of the outside shoulder; the southbound to eastbound, southbound to westbound and eastbound to northbound connector ramps would consist of a combination of fill, retaining walls, and structures.
 - A direct connecting HOV ramp would be added to serve eastbound I-80 to northbound SR 65 and southbound SR 65 to westbound I-80. The HOV connector would be located in the I-80 median and would be retained by mechanically stabilized earth (soil with artificial reinforcement, such as mesh, added for stability) walls before transitioning to a structure over westbound I-80 and other local and/or connector ramps. The HOV connector would transition back to fill with a cast-in-place retaining wall (measuring approximately 150 feet long and 15 feet high) along the shoulder before conforming to the East Roseville Viaduct.
 - The existing I-80/Taylor Road ramp connections (eastbound off-ramp and westbound on-ramp) would be modified. The existing access from I-80 to the eastbound Taylor Road off-ramp would be removed and either relocated or reconfigured, depending on the alternative.
 - Taylor Road within the project limits would be improved, including replacement of the Taylor Road overcrossing. The structure would be replaced to accommodate the I-80 widening, with a profile correction until conforming to the existing road grade. Taylor Road would be widened to accommodate anticipated traffic volumes, but the number of lanes would vary by alternative. Curb, gutter, and sidewalk would be constructed along the south side of Taylor Road. Driveways also would be modified to conform to the roadway widening.
 - Other ramps and intersections of the I-80/Eureka Road/Atlantic Street interchange, the SR 65/Galleria Boulevard/Stanford Ranch Road interchange, and the SR 65/Pleasant Grove Boulevard interchange would be improved.
 - The southbound SR 65 to eastbound I-80 connector would be realigned and widened to two lanes; it would begin on fill before transitioning to structure in order to span various

roadways and a portion of Secret Ravine. An approximately 400-foot-long by 25-foot high retaining wall would be required along the outside shoulder, prior to the structure, to separate the southbound SR 65 to eastbound I-80 connector from the southbound SR 65 to westbound I-80 connector. The southbound SR 65 to eastbound I-80 connector would be the top level of the interchange structures, reaching a maximum elevation of approximately 80 feet above the I-80 mainline, decreasing in elevation as it transitions to eastbound I-80. Structure columns would be placed such that they avoid the Secret Ravine floodway but they may be located within the designated 100-year floodplain. Once back within the existing right-of-way (approximately station 139+00), the southbound SR 65 to eastbound I-80 connector would be constructed in a combination of cut and fill, requiring a retaining wall (approximately 2,000 feet long by 10 feet high) along the outside shoulder before merging with eastbound I-80.

- The southbound SR 65 to eastbound I-80 connector is proposed to be constructed with cast-in-place concrete; this will require the use of temporary falsework and supports approximately every 60 feet, which would create both permanent and temporary disturbance areas in the Olympus Pointe Open Space Preserve.
- Although all three build alternatives do not directly affect the Edwin Purdy House, a stonehouse on parcel 015-162-007, the entire parcel may be acquired due to the large percentage of the parcel that would be disturbed under each alternative. See Section 2.7, “Cultural Resources,” for more discussion of the Edwin Purdy House. Additionally, the build alternatives would affect the Cattlemens restaurant parking lot. The area of impact varies by alternative.
- Construction is expected to require the use of earthmovers, bulldozers, paving machines, water trucks, dump trucks, concrete trucks, rollers, and pickup trucks.
- To avoid potential impacts on fish, pile driving would not be used as a construction method in or immediately adjacent to Secret Ravine, Miners Ravine, or Antelope Creek. No columns or other project elements would be permanently constructed in Secret Ravine or Miners Ravine. Up to two temporary crossings (e.g., Bailey bridges) of Secret Ravine, above the ordinary high water mark, and one temporary crossing of Antelope Creek may be necessary during construction.
- Temporary falsework platforms are required to construct the cast-in-place structures at Miners Ravine, Secret Ravine, and Antelope Creek. The platforms would be constructed outside the limits of the ordinary high water.
- Transportation system management (TSM) features would be incorporated into the build alternatives. (See Section 1.3.4.1, “Alternative 4—Transportation System Management.”) The following TSM features are common to each build alternative.
 - Freeway auxiliary lanes in both direction on SR 65 between I-80 and the Galleria Boulevard/Stanford Ranch Road interchange.
 - Ramp widening for storage and HOV bypass lane on the southbound Galleria Boulevard on-ramp.

Project Phasing

For constructability purposes and to ease maintenance of traffic during construction, the following phasing approach is proposed for the project and would be similar for all three build alternatives. Under current funding assumptions, project construction would begin in 2020 and would be divided into four major phases with eight subphases, ending in the year 2036. Phases are assumed to occur consecutively. Individual phases would consist of new road construction, road widening, and/or bridge/overpass construction. The phases below are preliminary and may change based on available funding, transportation improvement needs, and other considerations. The project may be built in more or less phases or all at one time.

Phase 1—SR 65

- Construct the inside widening of the East Roseville Viaduct and shift northbound traffic to the inside.
- Realign and widen the westbound I-80 to northbound SR 65 connector and widen westbound I-80 near the connector approach. Widen the outside northbound East Roseville Viaduct and perform northbound SR 65 widening. Modify the northbound Galleria Boulevard/Stanford Ranch Road ramps to accommodate the mainline widening. Shift northbound traffic to the outside portion of the East Roseville Viaduct.
- Shift southbound traffic to the inside of the East Roseville Viaduct. Widen the outside southbound East Roseville Viaduct and perform southbound SR 65 mainline widening. Modify the southbound Galleria Boulevard/Stanford Ranch Road interchange ramps and southbound Pleasant Grove Boulevard on-ramp to accommodate the mainline widening.

Phase 2—Southbound to Eastbound and Eastbound to Northbound Connector Ramps

- Construct the southbound SR 65 to eastbound I-80 connector ramp. Shift traffic onto the new connector to allow removal of the existing southbound SR 65 to eastbound I-80 connector, including existing abutments, piers, and roadway approaches.
- Construct the eastbound I-80 to northbound SR 65 connector ramp with temporary conforms to eastbound I-80. Shift traffic onto the new flyover structure to allow removal or reconfiguration of the existing eastbound I-80 to northbound SR 65 loop connector. Remove the existing eastbound I-80 to northbound SR 65 structure, including existing abutments, columns, and roadway approaches.

Phase 3—I-80 Mainline

- Construct the western portion of the new Taylor Road overcrossing and temporary conforms along Taylor Road at each approach roadway, as well as ramps to maintain traffic at all times on Taylor Road. Shift traffic onto the new portion of the bridge and remove the existing overcrossing. Construct the remaining portion of the Taylor Road overcrossing and open the entire bridge to traffic.
- Perform I-80 mainline widening and associated retaining walls. Realign and widen the southbound SR 65 to westbound I-80 connector ramp and modify the Eureka Road/Atlantic Street interchange ramps to accommodate mainline widening. Perform Taylor Road roadway improvements and modify Taylor Road ramps according to each particular alternative. Remove any existing pavement not used for the realignment and regrade the area.

Phase 4—HOV Connector

- Construct the HOV direct connector ramp and conform to future SR 65 Capacity and Operational Improvements Project.

Staging, Storage, and Proposed Access during Construction

The following staging, storage, and access are proposed for the project and would be similar for all three build alternatives.

Phase 1—SR 65

- During construction of Phase 1, areas along SR 65 within the Caltrans right-of-way would be used for staging and access.
- The East Roseville Viaduct widening is proposed to be constructed with cast-in-place concrete; this will require the use of temporary falsework. To minimize impacts on the streambed, temporary falsework construction platforms will be necessary. These platforms, which are spaced approximately every 60 feet, would be constructed to span across Antelope Creek so that construction can take place without any temporary construction features encroaching within the limits of ordinary high water. The platforms would remain in place until the portion of the viaduct construction being supported by each platform is complete and stable. When viaduct work is complete the entire falsework system, including platforms, would be removed.
- For the northbound viaduct widening, construction access is proposed from the Preserve at Creekside apartment complex at the terminus of Antelope Creek Drive, within a 50-foot-wide swath behind the apartment complex fence line, along the southbound East Roseville Viaduct, and from the Galleria Boulevard/Stanford Ranch Road interchange. To minimize impacts on undeveloped land, construction vehicles would use an approximately four hundred foot section of the existing bike path adjacent to Antelope Creek. Where access is required across Antelope Creek to construct the temporary falsework and permanent columns, a temporary bridge (e.g., a Bailey bridge) is proposed. As with the falsework platforms, the temporary bridge crossing has been sited to occur outside the limits of ordinary high water.
- For the southbound viaduct widening, temporary construction access is proposed from two directions: the Preserve at Creekside apartment complex from the south, and Caltrans right-of-way adjacent to SR 65 from the north. This will enable construction of the southbound viaduct without requiring a temporary crossing of Antelope Creek.
- Netting or other containment devices would be used to contain construction debris within the limits of the falsework and to prevent debris from falling into the ravine or onto the bike path.
- One of the proposed northbound viaduct columns would permanently impact a portion of the existing bike path. The extent of encroachment will require a permanent shift in the trail's alignment to avoid the column and meet current standards. Access to the bike path located under the viaduct would be maintained during construction of Phase 1. Only brief closures are anticipated to erect falsework and to shift the affected portion of trail. Falsework construction and trail closures would be scheduled to occur during times (e.g., weekdays) that would minimize impacts on trail users, or temporary rerouting of the trail around the

construction area would be provided. Appropriate traffic control measures (signs and flaggers) would be used as necessary to maintain the safety and flow of travel on the trail.

- For construction of the westbound I-80 to northbound SR 65 connector, the area would be accessed from the north side of I-80 (i.e., from the westbound outside shoulder or from Taylor Road and the interior footprint of the system interchange).

Phase 2—Southbound to Eastbound and Eastbound to Northbound Connector Ramps

- During construction of Phase 2, areas along SR 65, within the Caltrans right-of-way, would be used for staging and access.
- For viaduct construction, crews would be able to access the area via the Preserve at Creekside apartment complex at the terminus of Antelope Creek Drive.
- Access and staging for the southbound SR 65 to eastbound I-80 connector ramp would use the infield of the system interchange, accessed from both directions on I-80 or Taylor Road. Temporary access roads from the existing system ramps and under the structures may be required for construction of the bridge columns.
- Construction of the eastbound I-80 to northbound SR 65 connector ramp can be accessed from the existing eastbound Taylor Road loop off-ramp. The interior of the loop can be used for staging. The contractor may construct up to two temporary access bridges (e.g., Bailey bridges) across Secret Ravine, above the limits of ordinary high water, during construction of the bridge columns. Westbound I-80 and Taylor Road may be used to construct the portion of the eastbound I-80 to northbound SR 65 connector ramp located north of I-80.

Phase 3—I-80 Mainline

- During construction of Phase 3, the areas along SR 65 within the Caltrans right-of-way would be used for staging and access.
- Crews would be able to access the area adjacent to the Preserve at Creekside apartment complex at the terminus of Antelope Creek Drive.
- Construction of the I-80 mainline widening would use non-roadway areas within the highway limits for staging and would be accessed from the I-80 mainline or Taylor Road.

Phase 4—HOV Connector

- Construction of the HOV direct connector ramp would use the infield areas for staging and would be accessed from the I-80 mainline or Taylor Road.

Utility Relocations

Potential utility relocations are common to all three of the build alternatives. Utility impacts and relocations unique to each build alternative are described in Section 1.4.1.2, “Unique Features of the Build Alternatives” and in Section 2.4 “Utilities/Emergency Service.”

Consolidated Communications (Formerly Surewest)

A Consolidated Communications line is located within the existing Taylor Road overcrossing. This facility would need to be relocated and replaced along the proposed Taylor Road alignment.

A Consolidated Communications line east of the I-80/SR 65 interchange also may be affected by the mainline widening.

Placer County Water Agency

Placer County Water Agency underground water lines run along the existing Taylor Road. Depending on the depth of improvements on Taylor Road, underground water facilities may be avoided, may be protected in place, or may require relocation.

Pacific Gas and Electric

Pacific Gas and Electric Company (PG&E) underground gas lines run along existing Taylor Road. Depending on the depth of improvements on Taylor Road, underground gas facilities may be avoided, may be protected in place, or may require relocation.

Sacramento Municipal Utilities District and Western Area Power Administration

In addition to PG&E, the Sacramento Municipal Utilities District (SMUD) and Western Area Power Administration (WAPA) own and operate electric overhead utilities across I-80 that would require protection from equipment during construction.

1.3.1.2 Unique Features of the Build Alternatives

Figures depicting each build alternative appear at the end of this chapter (Figures 1-3, 1-4, and 1-5). More detailed engineering figures and detailed maps showing the locations of proposed right-of-way acquisitions are included in Appendix D and Appendix K, respectively, of the *Draft Project Report to Authorize Release of the Draft Environmental Document* prepared for the proposed project (CH2M HILL 2015). The report and its attachments are available on the project website at <http://8065interchange.org/>. Property acquisitions are discussed in more detail in Section 2.3.2, “Relocations and Real Property Acquisitions.”

Alternative 1—Taylor Road Full Access Interchange

Alternative 1 would improve spacing and vehicle lane-weaving movements between interchanges on I-80. The two existing Taylor Road interchange ramps would be relocated to the east and reconstructed in a compact diamond/trumpet configuration (Type L-1/L-12 interchange), providing two additional ramp connections and improving access between the existing local streets and freeway system. The interchange would be positioned within the current I-80/SR 65 interchange footprint and would use portions of the existing eastbound I-80 to northbound SR 65 loop connector and the existing southbound SR 65 to eastbound I-80 connector. The existing Taylor Road interchange ramps would be removed, and the area would be regraded.

Roadway Improvements

I-80 Mainline Improvements

Alternative 1 includes a 2-foot-wide pavement delineation soft barrier between the HOV lanes and general purpose lanes to prohibit vehicles from weaving between the HOV lanes and the Eureka Road/Atlantic Street interchange. This soft barrier is proposed in both the eastbound and westbound directions for Alternative 1. The widening and retaining wall improvements along

I-80 would not affect parcels 015-450-059 (Hilton Garden Inn). The retaining wall would be approximately 1,700 feet long and 20 feet high.

Eastbound I-80 to Northbound SR 65 Connector

The eastbound I-80 to northbound SR 65 connector would be realigned into a flyover and widened to three lanes for each alternative. Alternative 1 would consist of a three-lane diverge from eastbound I-80, and approximately 750-foot-long by 25-foot-high retaining walls would be constructed on each side of the connector to minimize right-of-way acquisitions and impacts on Secret Ravine. The eastbound I-80 to northbound SR 65 connector would transition from fill to a structure that would span a parallel portion of Secret Ravine and various roadways before transitioning back to fill and conforming to the westbound I-80 to northbound SR 65 connector and East Roseville Viaduct. The proposed structures along Secret Ravine are configured and designed (i.e., the use of outrigger options) so that all permanent features (columns, footings, and foundations) would be located outside the limits of ordinary high water. Some of the proposed foundations are large-diameter drilled shaft foundations; these foundations would be located such that the spoils from the drilling operations would not affect the streambed. The use of drilled shafts would minimize acoustic disturbance compared to a driven pile foundation.

The footprint of Alternative 1 would require right-of-way acquisition on parcel 456-010-028 (Olympus Pointe Open Space Preserve).

Westbound I-80 to Northbound SR 65 Connector

With the exception of the location of the ramp diverge, the westbound I-80 to northbound SR 65 connector is the same across the three build alternatives and would be widened to two lanes. Alternative 1 exits westbound I-80 earlier due to its proximity to the westbound Taylor Road off-ramp.

Southbound SR 65 to Eastbound I-80 Connector

In all three build alternatives, the southbound SR 65 to eastbound I-80 connector would be realigned and widened to two lanes and would begin on fill before transitioning to a structure that would span various roadways and Secret Ravine. An approximately 400-foot-long by 25-foot-high retaining wall would be required along the outside shoulder, prior to the structure, to separate the roadway from the southbound SR 65 to westbound I-80 connector. This connector would be the top (fourth) level of the interchange structures, reaching an elevation of approximately 80 feet above the I-80 mainline (see visual simulations in Section 2.6 “Visual/Aesthetics”). Structure columns would be placed such that they avoid the Secret Ravine floodway but may be located within the designated 100-year floodplain. Once back within the existing right-of-way (approximately station 139+00), the southbound SR 65 to eastbound I-80 connector would be constructed in a combination of cut and fill, requiring an approximately 2,000-foot-long by 10-foot-high retaining wall along the outside shoulder. Roadway geometrics for Alternative 1 require several hundred feet of the southbound SR 65 to eastbound I-80 merge ramp to fall permanently below the ordinary high water mark of Secret Ravine.

The footprint of Alternative 1 would require right-of-way acquisition on parcel 046-020-070 (Secret Ravine).

Southbound SR 65 to Westbound I-80 Connector

In all three build alternatives, the southbound SR 65 to westbound I-80 connector would be realigned and widened to three lanes. For Alternative 1, the southbound SR 65 to westbound I-80 connector would have the largest footprint compared to the other two build alternatives due to the location of the westbound Taylor Road on-ramp. This footprint would result in a larger impact on the parking lots of adjacent businesses on parcel 015-162-002 (Cattlemens restaurant) and parcel 015-162-006 (Seventh Day Adventist Church). Up to 79 parking spaces would be affected on parcel 015-162-002 and up to 25 spaces on parcel 015-162-006. A bridge along the southbound SR 65 to westbound I-80 connector would be required to span the proposed ramp roadway below that would connect the relocated Taylor Road interchange ramps to the existing Taylor Road. The rest of the southbound SR 65 to westbound I-80 connector would be constructed on fill, with retaining walls (approximately 2,000 feet long and 25 feet high) along portions of the outside shoulder.

Taylor Road

The ramp connections to the relocated Taylor Road interchange would descend from the I-80 mainline and would be constructed in cut. Retaining walls (approximately 700 feet long and 10 feet high) would be required on portions of the westbound Taylor Road off-ramp due to its proximity to the westbound I-80 to northbound SR 65 connector ramp. A new ramp roadway would be constructed to connect the Taylor Road interchange ramps to the existing Taylor Road on the west side of the East Roseville Viaduct. This connection would cross under I-80, requiring two bridges along I-80—one in each direction.

The proposed eastbound Taylor Road on-ramp and off-ramp would use portions of the existing eastbound I-80 to northbound SR 65 and southbound SR 65 to eastbound I-80 connector ramps. Portions of the existing ramps not used by the proposed Taylor Road ramps would be removed, and the area would be regraded.

The four Taylor Road ramps would intersect at a new stop-controlled intersection on the north side of I-80. The ramp roadway would intersect with the existing Taylor Road at a new signalized intersection. Due to the location of this proposed signalized intersection, the adjacent existing driveway on Stonehouse Court would need to be reconfigured and shifted west only in Alternative 1. Taylor Road would be widened to include two turn pockets required at the signalized intersection.

The Taylor Road overcrossing would consist of four lanes and have a longer span than the current overcrossing due to the proposed location of the southbound SR 65 to westbound I-80 connector along westbound I-80. Because the Taylor Road ramps would be relocated in Alternative 1, ramps would no longer connect to the Taylor Road overcrossing. The existing ramps would be removed, and the area would be regraded.

Eureka Road/Atlantic Street Interchange Ramps

The Eureka Road/Atlantic Street interchange ramps would remain in the same location and would be adjusted to accommodate widening of the I-80 mainline. The eastbound Eureka Road loop ramp would be shifted closer to Miners Ravine. An approximately 350-foot-long by 20-foot-high retaining wall would be added to the outside shoulder to minimize additional impacts

on the floodplain. Existing pavement not used by the reconfiguration would be removed, and the area would be regraded.

Because the Taylor Road full access interchange is proposed in Alternative 1, the traffic volumes along the eastbound Eureka Road off-ramp do not warrant improvements or an auxiliary lane between the eastbound Douglas Boulevard on-ramp and eastbound Eureka Road off-ramp, allowing Alternative 1 improvements to begin just after the Miners Ravine bridge on I-80.

Local Roads

Alternative 1 does not warrant improvements to the Eureka Road/Atlantic Street/Taylor Road intersection or the Taylor Road/East Roseville Parkway intersection.

TSM Features

The following TSM features are unique to Alternative 1.

- Ramp widening for storage and HOV bypass lane on the westbound Taylor Road on-ramp.
- Ramp widening for storage and HOV bypass lane on the eastbound Taylor Road on-ramp.

Staging, Storage, and Proposed Access during Construction

The construction of the bridges along I-80 over the Taylor Road ramp roadway would require a mainline crossover detour and increased traffic management during construction.

The eastbound I-80 to northbound SR 65 connector structures are proposed to be constructed with cast-in-place concrete; this will require the use of temporary falsework. To minimize impacts on Secret Ravine, temporary falsework construction platforms will be necessary. These platforms would be constructed to span across the ravine, above the ordinary high water mark. In addition, temporary construction access has been planned to allow construction equipment access to the site. This access is proposed to occur along the existing right-of-way, parallel to the I-80 mainline, as well as along a temporary route across Secret Ravine to access the eastbound I-80 to northbound SR 65 connector from the south. Where access is required across Secret Ravine, temporary bridges are proposed. These temporary bridges have been sited to occur outside of the sensitive areas of the streambed. Construction debris would be contained within the limits of the falsework configuration to prevent impacts on the stream.

Although the proposed structures along Secret Ravine are conventional, they are large structures that will require more than a single construction season to construct. The bridges have been configured into smaller portions, or frames, to allow the bridge to be constructed in segments. Building the bridge in segments allows the contractor to break up the work so that operations can be focused in smaller areas. For instance, one frame is over Secret Ravine and another frame is over I-80 mainline traffic. The frame over Secret Ravine would be constructed in approximately 4 months.

Utility Relocations

PG&E and SMUD each own two parallel overhead electric transmission lines that run perpendicular across I-80 just south of the Roseville Parkway overcrossing. Two steel towers carry the 60 and 220 kilovolt (kV) electric lines over I-80 at the north corner of the Roseville

Golfland Sunsplash parking lot. Alternative 1 avoids the steel transmission towers, as the eastbound improvements would occur within the existing Caltrans right-of-way in this location.

Project Phasing

The four major phases are generally the same across the three build alternatives. However, in Alternative 1, Phase 3 would include construction of Taylor Road ramps that are not proposed in the other alternatives.

Alternative 2—Collector-Distributor (C-D) System Ramps

Alternative 2 would provide eastbound access to Taylor Road at the Atlantic Street/Eureka Road interchange via a C-D ramp system and would restrict local traffic from leaving or entering I-80 mainline until after the critical weave area between Eureka Road and the I-80/SR 65 interchange. The two existing Taylor Road interchange ramps would remain in their current location but would be reconfigured to accommodate the surrounding improvements.

Roadway Improvements

I-80 Mainline Improvements

Alternative 2 would not include the 2-foot-wide pavement delineation soft barrier between the HOV and general purpose lanes in the eastbound direction due to the proposed barrier between the I-80 mainline and the C-D ramp system. A 2-foot-wide pavement delineation soft barrier is proposed in the westbound direction, similar to Alternative 1.

Eastbound I-80 to Northbound SR 65 Connector

The eastbound I-80 to northbound SR 65 connector would be realigned into a flyover and would diverge from I-80 as a two-lane connector ramp. A third lane would be added by the C-D ramp system discussed below. At the diverge from eastbound I-80, retaining walls (approximately 900 feet long and 25 feet high) on each side of the ramp would minimize fill impacts on Secret Ravine. The eastbound I-80 to northbound SR 65 connector would transition to a structure that would span a parallel portion of Secret Ravine and other roadways before transitioning back to fill and conforming to the westbound I-80 to northbound SR 65 connector and East Roseville Viaduct. Compared to Alternative 1, the eastbound I-80 to northbound SR 65 connector is spaced closer to I-80 to accommodate the C-D ramp located immediately south and parallel to the eastbound I-80 to northbound SR 65 connector. The proposed structures along Secret Ravine are configured and designed (i.e., the use of outrigger options that span the area below and support the connector on the outer edges of the structure) so that all permanent features (columns, footings, and foundations) would be located above the ordinary high water mark. Some of the proposed foundations are large-diameter drilled shaft foundations; these foundations would be located such that the spoils from the drilling operations would not affect the streambed. The use of drilled shafts would minimize acoustic disturbance compared to a driven pile foundation.

Alternative 2 would require right-of-way acquisition on parcel 456-010-028 (Olympus Pointe Open Space Preserve).

Westbound I-80 to Northbound SR 65 Connector

With the exception of the location of the ramp diverge, the westbound I-80 to northbound SR 65 connector is the same across the three build alternatives, and would be widened to two lanes.

Alternative 2 exits westbound I-80 farther west and is located in the same general location as the existing westbound I-80 to northbound SR 65 connector ramp.

Southbound SR 65 to Eastbound I-80 Connector

In all three build alternatives, the southbound SR 65 to eastbound I-80 connector would be realigned and widened to two lanes. The connector would begin on fill before transitioning to a structure that would span various roadways and Secret Ravine. An approximately 80-foot-long by 15-foot-high retaining wall would be required along the outside shoulder, prior to the structure, to separate the roadway from the southbound SR 65 to westbound I-80 connector. This connector would be the top level of the interchange structures, reaching an elevation of approximately 80 feet above mainline I-80. Structure columns would be placed such that they avoid the Secret Ravine floodway but may be located within the designated 100-year floodplain. Once back within the existing right-of-way (approximately station 139+00), the southbound SR 65 to eastbound I-80 connector would be constructed in a combination of cut and fill, requiring an approximately 2,000-foot-long by 10-foot-high retaining wall along the outside shoulder to avoid impacts on Secret Ravine before merging with eastbound I-80.

Southbound SR 65 to Westbound I-80 Connector

In all three build alternatives, the southbound SR 65 to westbound I-80 connector would be realigned and widened to three lanes. The southbound SR 65 to westbound I-80 connector for Alternative 2 has a smaller footprint compared to Alternative 1 because surrounding geometrics allow the ramp to merge with westbound I-80 farther east than Alternative 1. Impacts would occur at the parking lots of the adjacent businesses on parcel 015-162-002 (Cattlemens restaurant) and parcel 015-162-004 (Flooring Liquidators). Up to 39 parking spaces would be affected on parcel 015-162-002, and the rear paved area of parcel 015-162-004 would be reduced. Retaining walls (approximately 2,000 feet long and 25 feet high) are proposed along portions of the southbound SR 65 to westbound I-80 connector outside shoulder to minimize impacts on adjacent parcels. The southbound SR 65 to westbound I-80 connector would be constructed on fill and would not require a bridge because Alternative 2 does not propose a local road below the connector ramp.

Taylor Road

Alternative 2 does not require a new signalized intersection or turn pockets along Taylor Road. It also does not require the driveway relocation included in Alternative 1. The Taylor Road overcrossing span length would be shorter than the current overcrossing due to the proposed location of the southbound SR 65 to westbound I-80 connector ramp conform on westbound I-80. The Taylor Road overcrossing would consist of five lanes, two in the southbound direction and three in the northbound direction. The third northbound lane on the bridge would be added by the eastbound Taylor loop off-ramp and would become a local roadway auxiliary lane that would serve as the turn pocket for the Cattlemens restaurant parking lot. To minimize bicycle traffic conflicts with the loop ramp traffic, per City of Roseville design standards, a bicycle lane would be located between the second and third northbound lanes.

The eastbound Taylor loop off-ramp would be constructed with a reduced radius at the terminus to provide an improved pedestrian crossing. A retaining wall (approximately 450 feet long and 15 feet high) would be required along a portion of the outside shoulder to maintain standard

horizontal clearance from the existing right-of-way. The existing loop ramp would be removed, and the area would be regraded to accommodate the new geometry.

The westbound Taylor on-ramp would be reconfigured to accommodate the westbound I-80 mainline widening but would remain in the same location.

Eureka Road/Atlantic Street Interchange Ramps

The westbound Eureka Road/Atlantic Street interchange ramps would remain in the same location and would be adjusted to accommodate the westbound I-80 mainline widening. The eastbound Eureka Road ramps would be reconfigured to tie-in to the C-D ramp system instead of the I-80 mainline. The existing eastbound Eureka Road off-ramp structure over Miners Ravine would be widened by approximately 6 feet to accommodate the interchange reconfiguration but would remain a single-lane off-ramp. Columns would be placed in line with existing columns, avoiding the Miners Ravine floodway but potentially located within the designated 100-year floodplain. No structures would be placed below the ordinary high water mark of Miners Ravine. The structure widening would require lowering the profile of the existing bike path below the ramp to maintain the minimum vertical clearance requirements. The bike path would remain open during construction via a temporary detour. Existing pavement not used by the ramp reconfigurations would be removed, and the area would be regraded.

Collector-Distributor (C-D) System Ramps

The new ramp would diverge from the existing eastbound Eureka Road off-ramp and would require new structures over Miners Ravine and Secret Ravine.

The proposed C-D ramp system is formed by combining the eastbound Eureka Road and eastbound Taylor Road off-ramps at the existing Eureka Road off-ramp location. After the ramp separates from I-80, the Eureka Road off-ramp continues on its existing alignment. The Taylor Road off-ramp traffic diverges, proceeding east across Miners Ravine, requiring a new bridge over Miners Ravine, then combines with the eastbound Eureka Road loop on-ramp. The combined ramps then pass under Eureka Road and the Eureka Road slip on-ramp. The three ramps merge into two lanes and run parallel and adjacent to eastbound I-80, separated from mainline traffic by a combination of concrete barriers and retaining walls. An additional retaining wall (approximately 1,500 feet long and 20 feet high) would be required along the outside shoulder of the C-D ramp system to minimize impacts on the adjacent parcels.

The proposed C-D ramp structures along Miners Ravine and Secret Ravine have been configured such that all permanent features (columns, footings, and foundations) are located above the ordinary high water mark in the vicinity of the ravines.

The C-D ramp system continues east, where it combines with the Eureka Road slip on-ramp and then passes under Taylor Road. Access to Taylor Road would be provided by the connection to the reconstructed Taylor Road loop ramp located along the C-D system. At this point, the Taylor Road off-ramp traffic diverges to the reconstructed Taylor Road loop off-ramp, and the Eureka Road on-ramp traffic continues east. The C-D system then splits into two on-ramps, one to the eastbound I-80 to northbound SR 65 connector and the other to eastbound I-80. These roadways would be on a structure spanning Secret Ravine. Column placement would affect both the floodway and floodplain due to roadway geometrics and bridge span requirements. No pile

driving would be used, and no structures would be placed below the ordinary high water mark of Secret Ravine or Miners Ravine. This alternative would result in sliver right-of-way acquisitions on parcel 015-450-059 (Hilton Garden Inn), parcel 015-450-058 (Larkspur Landing), and parcel 015-450-079 (Golfland Sunsplash), in addition to utility impacts described in more detail below under “Utility Relocations.”

The new C-D ramp crossing under Eureka Road and the Eureka Road slip on-ramp would require two new bridge crossings. The bridge on Eureka Road would be constructed for the new C-D ramp and eastbound Eureka Road loop ramp. The eastbound Eureka Road slip on-ramp would be shifted west and braided over the new C-D and eastbound Eureka Road loop ramps on the other structure. The existing slip ramp pavement would be removed, and the area would be regraded. See the exhibits in Appendix D of the *Draft Project Report to Authorize Release of the Draft Environmental Document* prepared for the proposed project (CH2M HILL 2015). The report and its attachments are available on the project website at <http://8065interchange.org/>.

Local Roads

Alternative 2 does not warrant improvements to the Eureka Road/Atlantic Street/Taylor Road intersection or the Taylor Road/East Roseville Parkway intersection.

TSM Features

The following TSM feature is unique to Alternative 2.

- Eastbound auxiliary lane between Douglas Boulevard interchange and Eureka Road interchange.

Staging, Storage, and Proposed Access during Construction

Access to the Taylor Road interchange would be maintained during construction. Because the Taylor Road ramps are remaining in relatively the same location, temporary pavement may be required to shift traffic between the existing and proposed ramps during construction.

The C-D ramp structures are proposed to be constructed with cast-in-place concrete; this will require the use of temporary falsework. To minimize impacts on Miners Ravine and Secret Ravine, temporary falsework construction platforms will be necessary. These platforms would be constructed to span across the streambed (above the ordinary high water mark), such that construction can take place above the streambed without any temporary features encroaching on the streambed. Construction debris would be contained within the falsework configuration to prevent it from falling into the stream. Temporary construction access would allow construction equipment access to the site within the existing right-of-way, parallel to the I-80 mainline, as well as along a temporary route across Secret Ravine to access the eastbound I-80 to northbound SR 65 connector and C-D system ramp from the south. Where access is required across Secret Ravine, temporary bridges (e.g., Bailey bridges) are proposed. These temporary bridges would be sited to occur outside the sensitive areas of the streambed.

The proposed structures along Miners Ravine and Secret Ravine are conventional structures; it is assumed that the structures would be constructed within a single construction season. With appropriate construction staging, the falsework over the streambed would be in place for approximately 4 months.

Utility Relocations

In addition to the facility impacts that are consistent with Alternative 1, Alternative 2 would require avoiding or relocating the existing Comcast line across I-80 near the eastbound auxiliary lane between Douglas Boulevard and Eureka Road.

The proposed eastbound widening and retaining wall between the Eureka Road interchange and the Roseville Parkway overcrossing would require relocation of the 230 kV SMUD and PG&E overhead transmission towers. Relocation of the steel towers would require the Golfland Sunsplash parking lot to be reconfigured and would affect up to 18 parking spaces.

The eastbound lanes and retaining wall for Alternative 2 would affect the existing electronic billboard located in the Golfland Sunsplash parking lot. Potential relocation of this structure may require the lot to be reconfigured, affecting up to 8 parking spaces.

Project Phasing

The four major phases are generally the same across the three build alternatives. However, under Alternative 2, Phase 3 would include reconfiguration of the Taylor Road ramps and construction of the C-D facility.

Alternative 3—Taylor Road Interchange Eliminated

Similar to Alternative 2, Alternative 3 would improve spacing and vehicle lane-weaving movements between interchanges on I-80 by collecting eastbound Eureka Road on-ramp traffic. Vehicle lane weaving on I-80 would be significantly improved because ramp traffic would be redirected to a C-D ramp system and restricted from entering and exiting the I-80 mainline until after the critical weave area between Eureka Road and the I-80/SR 65 interchange. Unique to Alternative 3, the two existing Taylor Road interchange ramps would be eliminated, and access to the Taylor Road area would be accommodated by the adjacent local interchanges at the Atlantic Street/Eureka Road, Rocklin Road, and Galleria Boulevard/Stanford Ranch Road interchanges. The connector ramps serving I-80 and SR 65 and their proposed staging and construction access are the same for Alternatives 2 and 3. Under Alternative 3, however, up to 42 parking spaces on parcel 015-162-002 (Cattlemens restaurant) would be affected by realignment of the southbound SR 65 to westbound I-80 connector ramp.

Roadway Improvements

I-80 Mainline Improvements

Alternative 3 does not include the 2-foot-wide pavement delineation soft barrier between the HOV and general purpose lanes in the eastbound direction due to the proposed barrier between the I-80 mainline and the ramp system. A 2-foot-wide soft barrier is proposed in the westbound direction, similar to Alternatives 1 and 2.

Taylor Road

Alternative 3 does not require a new intersection or turn pockets along Taylor Road. It also does not require the driveway relocation required in Alternative 1. The Taylor Road overcrossing is shorter compared to Alternative 1 because of the proposed location of the southbound SR 65 to westbound I-80 connector ramp conform on westbound I-80. The Taylor Road overcrossing

would consist of four lanes because the eastbound Taylor loop ramp would be eliminated in this alternative.

Eureka Road/Atlantic Street Interchange Ramps

The westbound Eureka Road/Atlantic Street interchange ramps would remain in the same location and would be adjusted to accommodate the mainline I-80 widening. The existing eastbound Eureka Road ramps would remain in the same location but would tie-in to a ramp system instead of merging with the I-80 mainline.

The proposed ramp system is formed by combining the eastbound Eureka Road loop on-ramp and the eastbound Eureka Road slip on-ramp after the Eureka Road loop on-ramp passes under the existing Eureka Road/Atlantic Street interchange overcrossing. The two ramps merge into two lanes and run parallel and adjacent to eastbound I-80, separated from mainline traffic by a combination of concrete barriers and retaining walls. An additional retaining wall (approximately 2,000 feet long and 20 feet high) would be required along the outside shoulder of the ramp system to minimize impacts on the adjacent parcels.

Similar to Alternative 2, the eastbound Eureka Road/Atlantic Street interchange ramps would be located adjacent and parallel to eastbound I-80. The ramp system would be separated from eastbound I-80 traffic by a combination of concrete barriers and retaining walls measuring approximately 800 feet long and 8 feet high. A retaining wall would be required along the outside shoulder of the ramps to minimize impacts on adjacent parcels. This alternative would result in sliver right-of-way acquisitions on parcel 015-450-059 (Hilton Garden Inn), parcel 015-450-058 (Larkspur Landing), and parcel 015-450-079 (Golfland Sunsplash), in addition to utility impacts described in more detail below under “Utility Relocations.”

Access to Taylor Road would not be provided in Alternative 3; the existing ramps would be removed, and the area would be regraded. The C-D ramp system then splits into two on-ramps: one to the eastbound I-80 to northbound SR 65 connector and the other to eastbound I-80. Similar to Alternative 2, these roadways would be on a structure spanning Secret Ravine. Column placement would affect both the floodway and floodplain due to roadway geometrics and bridge span requirements. No pile driving would be used, and no structures would be placed below the ordinary high water mark of Secret Ravine.

Eliminating the existing Taylor Road ramps would require widening the eastbound Eureka Road off-ramp to a two-lane ramp, as well as adding an auxiliary lane along eastbound I-80 between the Douglas Boulevard and Eureka Road interchanges. Widening the eastbound Eureka Road off-ramp to the outside requires widening the existing structure over Miners Ravine. New columns would be constructed in line with existing columns, avoiding the Miners Ravine floodway but potentially located within the designated 100-year floodplain. The structure widening would require lowering the profile of the existing bike path below the ramp to maintain the minimum vertical clearance requirements. The bike path would remain open during construction via a temporary detour.

Local Roads

Alternative 3 would include improvements to the Eureka Road/Atlantic Street/Taylor Road intersection and the Taylor Road/East Roseville Parkway intersection. Additional turn lanes are required to meet intersection LOS requirements.

TSM Features

The following TSM features are unique to Alternative 3.

- Eastbound auxiliary lane between Douglas Boulevard interchange and Eureka Road interchange.
- Ramp widening for storage at Eureka Road/Taylor Road intersection.

Staging, Storage, and Proposed Access during Construction

Additional traffic management during construction would be required at the Eureka Road/Atlantic Street/Taylor Road intersection as well as the Taylor Road/East Roseville Parkway intersection due to the added turn pockets under Alternative 3.

Utility Relocations

In addition to the facility impacts that are consistent with Alternative 1, Alternative 3 would require avoiding or relocating the existing Comcast line across I-80 near the eastbound auxiliary lane between Douglas Boulevard and Eureka Road.

The proposed eastbound widening and retaining wall between the Eureka Road interchange and the Roseville Parkway overcrossing would require relocation of the 230 kV SMUD and PG&E overhead transmission towers. Relocation of the steel towers would require the Golfland Sunsplash parking lot to be reconfigured and would affect up to 18 parking spaces.

Alternative 3 would affect the existing electronic billboard located in the Golfland Sunsplash parking lot. Potential relocation of this structure may require the lot to be reconfigured.

Project Phasing

The four major phases are generally the same across the three build alternatives. However, under Alternative 3, Phase 3 would include reconfiguration of the Eureka Road/Atlantic Street interchange ramps and construction of the C-D facility.

1.3.2 No Build Alternative (No-Project)

The No Build Alternative would not make any improvements to the I-80/SR 65 interchange or adjacent transportation facilities to satisfy the purpose and need identified in Section 1.2, “Purpose and Need.” Unrelated planned projects, such as the HOV and auxiliary lanes proposed on SR 65 north of the Galleria Boulevard/Stanford Ranch Road intersection, and other local improvements separately proposed and identified in the MTP/SCS, would be implemented according to their proposed schedules.

1.3.3 Comparison of Alternatives

After extensive engineering and traffic analysis efforts and review and screening of 22 design concepts, three build alternatives surfaced for consideration and analysis that would meet the project's purpose and need. All of the alternatives studied involve the same or similar improvements on I-80 and SR 65, except for how access to the existing Taylor Road interchange is addressed. See Table 1-6 for a list of all 22 design concepts.

Alternative 1 (Taylor Road Full Access Interchange) provides for an improved Taylor Road interchange access but has less than desirable effects on I-80 and the system interchange. Alternative 1 is not acceptable to FHWA and Caltrans because it still allows weaving conditions between the Eureka Road/Atlantic Street, Taylor Road, and SR 65 interchanges that result in increased congestion and reduced safety on I-80 eastbound. Alternative 2 would solve this issue by separating the Eureka Road/Atlantic Street and Taylor Road weaving movements from the I-80 freeway, while still maintaining the existing access to Taylor Road.

Alternative 2 (Collector-Distributor [C-D] System Ramps) was found to meet all aspects of the need and purpose, over and above Alternatives 1 and 3, by providing a separation of the ramp and freeway movements on I-80 eastbound, which will reduce traffic congestion compared to Alternative 1, and maintain the existing Taylor Road ramps, access that would be eliminated under Alternative 3.

Alternative 3 (Taylor Road Interchange Eliminated) would eliminate the Taylor Road interchange, transferring the local access to the adjacent Eureka Road/Atlantic Street, Galleria Boulevard/Stanford Ranch Road, and Rocklin Road interchanges. Construction of the original I-80/SR 65 interchange and adjacent interchanges has reduced local access to Taylor Road, resulting in a strain on the local roadways, especially Eureka Road/Atlantic Street. Alternative 3 would result in negative impacts to businesses with significant out-of-direction travel that is unacceptable to local agencies. Alternative 2 would solve this issue by maintaining the existing access to Taylor Road.

Substantial contributions from many different disciplines at FHWA and Caltrans assisted the Project Development Team (PDT) in developing the three build alternatives under consideration. As a result of this collaboration, PCTPA and Caltrans have identified a preferred alternative subject to selection after public review and comment, Alternative 2 (Collector-Distributor [C-D] System Ramps). Because the engineering design is limited by the available area in and adjacent to the interchange, the impact footprint of the three build alternatives are not substantially different from each other. Further, Alternative 2 is a solution to the need for the project that is acceptable to the local agencies, Caltrans, and FHWA.

Final identification of a preferred alternative will occur after the public review and comment period. After the public circulation period, all comments will be considered, the project partners will select a preferred alternative, and Caltrans will make the final determination of the project's effect on the environment. In accordance with CEQA, Caltrans will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered

prior to project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans—as assigned by the FHWA—determines that the proposed action does not significantly affect the environment in accordance with NEPA, Caltrans will issue a Finding of No Significant Impact (FONSI).

1.3.4 Alternatives Considered but Eliminated from Further Discussion

1.3.4.1 Alternatives Screening Process

To identify the alternatives to carry forward for analysis in this EIR/EA, PCTPA established a Technical Working Group (TWG) to perform the pre-screening process of the concepts presented in the PSR prepared in 2009 by Caltrans as well as those gathered during PCTPA’s consultant selection process. The TWG consisted of representatives from the Cities of Rocklin and Roseville, Placer County, Caltrans, FHWA, PCTPA, and project consultants. The representatives provided input regarding the interests of their respective stakeholders. A process was developed to identify which alternatives would be carried forward for analysis in the environmental document. To move forward in the process, the concept needed to be representative of the purpose and need statement developed by the PDT. While reviewing each concept, the three following questions also were considered.

1. Does the concept alternative solve the “transportation problem” (congestion, operations, safety, access)?
2. Is the concept alternative likely to fail under local/state/federal standards or regulatory requirements?
3. Are there engineering/environmental factors (such as geometrics, constructability, Section 4f resources, and biological resources) that will make the concept alternative infeasible?

A TSM working group consisting of representatives from PCTPA, Placer County, the Cities of Roseville, Rocklin and Lincoln, Caltrans District 3 project management and traffic operations, and project consultants was created to identify potential TSM options for the project. A meeting was held on March 20, 2012, to discuss potential solutions that could be incorporated into the TSM concept alternative.

Twenty-two concepts were developed and screened by the PDT (Table 1-6). Four TWG meetings were held to screen the concepts in order to balance the competing demands of design, environmental impact, cost, and function using the following ranking criteria.

- Improve Freeway Operations
- Reduce Congestion
- Enhance Safety
- Preserve Access
- Consider Alternative Modes

- Maintain Consistency with Regional and Local Plans (including phasing and funding)
- Minimize Community Impacts
- Minimize Adverse Environmental Impacts
- Maximize Cost Effectiveness

The initial screening process resulted in identification of a TSM alternative, a No Build Alternative and three build alternatives: (1) Full Access Taylor Interchange – Diamond Shaped; (2) Full Access Taylor Interchange – Trumpet Shaped; and (3) Taylor Road Interchange Eliminated. After identification of these alternatives, concerns with weaving distance and interchange spacing triggered several design focus meetings throughout 2013 with Caltrans, FHWA, local agencies, and the design team. Through discussions with the PDT and feedback provided by Caltrans and FHWA, build alternatives were modified to provide more acceptable design features, resulting in design revisions to the build alternatives as well as development of a new alternative proposing a collector-distributor system in the eastbound direction. Features from Alternatives (1) and (2) were combined to maximize the available weaving distance. On December 4, 2013, the PCTPA board approved moving forward with the five alternatives listed below.

1. Taylor Road Full Access Interchange
2. Collector-Distributor System Ramps
3. Taylor Road Interchange Eliminated
4. Transportation System Management (TSM)
5. No Build Alternative

1.3.4.2 Alternatives Considered but Eliminated

Alternative 4—Transportation System Management

Alternative 4 could include ramp metering, HOV bypass lanes, traffic signal coordination, transit options, and bicycle and pedestrian facilities in order to improve the transportation system at the I-80/SR 65 interchange. The TSM features identified by the working group as feasible options are shown in Figure 1-9. Alternative 4 would attempt to manage the design year traffic volumes without increasing capacity or modifying the current interchange configuration and surrounding transportation facilities within the project area. The project footprint impacts would be significantly lower than with the build alternatives, though Alternative 4 cannot provide the improvements needed to address forecasted traffic operations and reduce no-build traffic congestion. Although TSM measures alone could not satisfy the purpose and need of the project, the following TSM features have been incorporated into the build alternatives for this project.

Common to all build alternatives:

- Freeway auxiliary lanes in both direction on SR 65 between I-80 and the Galleria Boulevard/Stanford Ranch Road interchange.

- Ramp widening for storage and HOV bypass lane on the southbound Galleria Boulevard on-ramp.

Alternative 1:

- Ramp widening for storage and HOV bypass lane on the westbound Taylor Road on-ramp.
- Ramp widening for storage and HOV bypass lane on the eastbound Taylor Road on-ramp.

Alternative 2:

- Eastbound auxiliary lane between the Douglas Boulevard interchange and Eureka Road interchange.

Alternative 3:

- Eastbound auxiliary lane between the Douglas Boulevard interchange and Eureka Road interchange.
- Ramp widening for storage at the Eureka Road/Taylor Road intersection.

Other Alternatives Considered but Eliminated

The following concepts also were considered but eliminated from further discussion or carried forward in a modified configuration (Table 1-6).

Table 1-6. Other Alternatives Considered but Eliminated or Modified

Concept No.	Description	Reason for Elimination
C1	PSR Alternative #1 – HOV Direct Connector, Connector Widening and Auxiliary Lanes <ul style="list-style-type: none"> • Maintained the existing 2-lane eastbound I-80 to northbound SR 65 loop connector. 	<ul style="list-style-type: none"> • Did not address the I-80 weave by leaving Taylor Road interchange in its existing location. • Did not improve the eastbound I-80 to northbound SR 65 connector ramp.
C2	PSR Alternative #2 – Mixed Flow Flyover, Connector Widening and Auxiliary Lanes <ul style="list-style-type: none"> • Replaced the eastbound I-80 to northbound SR 65 loop connector with a 3-lane flyover. 	<ul style="list-style-type: none"> • Did not address the I-80 weave by leaving Taylor Road interchange in its existing location. • Did not provide the HOV system continuity by not providing the HOV direct connector to SR 65.
C3	PSR Alternative #3 – Ultimate Build <ul style="list-style-type: none"> • Included a combination of Concept C1 and C2 with Taylor Road maintained in its existing location. 	<ul style="list-style-type: none"> • This concept was modified to address the weaving conditions due to the location of Taylor Road interchange. The two existing ramps were relocated to be combined with the I-80/SR 65 interchange, outside the weaving area, similar to Concept C7. The concept was renamed Concept 3B • This concept was further refined to a new Concept 3A that included removal of the Taylor Road Interchange, relying on the surrounding existing local interchanges for access. • As the Taylor Road Interchange Eliminated alternative, it was carried forward for evaluation.

Concept No.	Description	Reason for Elimination
C4	<p>PSR Alternative #3 + Relocated L-1 Configuration Taylor Road interchange</p> <ul style="list-style-type: none"> Included a combination of Concept C3 with the Taylor Road interchange relocated as part of the new I-80/SR 65 interchange in a diamond configuration. 	<ul style="list-style-type: none"> Dismissed because its best features were combined with Concept C7 to create the Taylor Road Full Access Interchange (Alternative 1)
C5	<p>General Purpose and HOV Direct Connector Flyover</p> <ul style="list-style-type: none"> PSR Alternative #3 Modified to provide left exit to SR 65 Accommodates dominant movement + partial Taylor Road interchange 	<ul style="list-style-type: none"> Concept determined to be redundant. Did not maintain the I-80 Interstate continuity by converting I-80 to right hand branch connections from SR 65. Reduced access by removing Taylor Road interchange and restricting ramp access at Eureka Road interchange. Concept did not conform to Caltrans and FHWA criteria (see criteria listed in Section 1.3.4.1).
C6	<p>General Purpose and HOV Direct Connector + L-1 Taylor Road interchange</p> <ul style="list-style-type: none"> Included a combination of Concept C5 and a new Taylor Road interchange 	<ul style="list-style-type: none"> Concept was carried forward for traffic operations analysis and then removed from consideration in subsequent screening. Did not maintain the I-80 interstate continuity by converting I-80 to right-hand branch connections from SR 65. Reduced access by removing Taylor Road interchange and restricting ramp access at Eureka Road interchange. Concept did not conform to Caltrans and FHWA criteria (see criteria listed in Section 1.3.4.1).
C7	<p>PSR Alternative #3 + Relocated Taylor Road interchange</p> <ul style="list-style-type: none"> Included a combination of Concept C3 with the Taylor Road interchange relocated as part of the new I-80/SR 65 interchange in a trumpet configuration. This concept was further refined to a new Concept 7A that included the Antelope Creek Extension from Concept C20. Carried forward to the concept screening evaluation as the Full Access Taylor Interchange – Trumpet-Shaped alternative 	<ul style="list-style-type: none"> Dismissed because its best features were combined with Concept C4 to create the Taylor Road Full Access Interchange (Alternative 1).
C8	<p>PSR Alternative #3 + Elevated Collector-Distributor (C-D) Roads</p> <ul style="list-style-type: none"> Widened I-80 to the east to provide an eastbound I-80 collector-distributor (C-D) ramp system, requiring right-of-way from the Golfland Sunsplash commercial area, replacement of the Roseville Parkway structure, and relocation of power transmission facilities. 	<ul style="list-style-type: none"> Did not address the WB 80 weave, Eureka Road to Taylor Road. Concept determined to have excessive right-of-way impacts and associated construction costs, and poor operations on westbound I-80.
C9	<p>PSR Alternative #3 + Relocated Taylor Road interchange</p>	<ul style="list-style-type: none"> Concept determined to be redundant.
C10	<p>PSR Alternative #3 + C-D Roads + Relocated Taylor Road interchange</p> <ul style="list-style-type: none"> Widened I-80 to the north to provide a WB 80 C-D ramp system, requiring relocation of the Union Pacific Railroad right of way and utilities into the existing landfill. 	<ul style="list-style-type: none"> Concept determined to have excessive right-of-way impacts and associated construction costs.

Concept No.	Description	Reason for Elimination
C11	PSR Alternative #3 + C-D Roads + Relocated Taylor Road interchange <ul style="list-style-type: none"> • Widened I-80 to the north to provide a westbound 80 C-D ramp system, requiring relocation of the Union Pacific Railroad right-of-way and utilities into the existing landfill. Widened I-80 to the east to provide an eastbound I-80 C-D ramp system, requiring right-of-way from the Golfland Sunsplash commercial area, replacement of the Roseville Parkway structure, and relocation of power transmission facilities 	<ul style="list-style-type: none"> • Concept determined to have excessive right-of-way impacts and associated construction costs.
C12	Maintain Loop Connector + HOV Direct Connector	<ul style="list-style-type: none"> • Concept determined to be redundant.
C13	PSR Alternative #3 + Taylor Connection	<ul style="list-style-type: none"> • Concept determined to be redundant.
C14	PSR Alternative #3 + Taylor Connection + Taylor ramps	<ul style="list-style-type: none"> • Concept determined to be redundant.
C15	PSR Alternative #3 + Eureka Road interchange + Remove Taylor Road interchange	<ul style="list-style-type: none"> • Concept determined to be redundant.
C16	PSR Alternative #3 + Relocated Taylor Road interchange	<ul style="list-style-type: none"> • Concept determined to be redundant.
C17	PSR Alternative #3 + Relocated Taylor Road interchange	<ul style="list-style-type: none"> • Concept determined to be redundant.
C18	PSR Alternative #3 + C-D Road & Relocated Taylor Road interchange <ul style="list-style-type: none"> • Partially relocated Taylor Road interchange and provided all four directional ramps through ramp braiding and new connections. Requires additional acquisitions from the Cattlemens restaurant commercial area and east of SR 65 at the self-storage commercial area. 	<ul style="list-style-type: none"> • Did not address the westbound I-80 weave, Eureka Road to Taylor Road. • Concept determined to have excessive right-of-way impacts, and poor operations on westbound I-80.
C19	PSR Alternative #3 + Elevated C-D Roads <ul style="list-style-type: none"> • Widened I-80 to the east to provide an eastbound I-80 C-D ramp system, requiring right-of-way from the Golfland Sunsplash commercial area, replacement of the Roseville Parkway structure, and relocation of power transmission facilities. 	<ul style="list-style-type: none"> • Did not address the westbound I-80 weave, Eureka Road to Taylor Road. • Concept determined to have excessive right-of-way impacts and associated construction costs, and poor operations on westbound I-80.
C20	PSR Alternative #3 + Elevated C-D Roads & Taylor Road Single Point Urban Interchange <ul style="list-style-type: none"> • Included a combination of eastbound and westbound C-D ramps, a new Taylor Road single-point urban interchange, and an extension of Antelope Creek Road • Widened I-80 to the west to provide a braided ramp configuration for the westbound off-ramp. Requires additional right-of-way acquisitions from the Cattlemens restaurant commercial area. • Widened I-80 to the east to provide an eastbound I-80 C-D ramp system, requiring right-of-way from the Golfland Sunsplash commercial area, replacement of the Roseville Parkway structure, and relocation of power transmission facilities. 	<ul style="list-style-type: none"> • Did not address the westbound I-80 weave, Eureka Road to Taylor Road. • Concept determined to have excessive right-of-way impacts and associated construction costs, and poor operations on westbound I-80.

Concept No.	Description	Reason for Elimination
C21	<p>PSR Alternative #1 Variation</p> <ul style="list-style-type: none"> • Three-lane loop ramp • Relocate Taylor Road interchange ramps (four each) • Included maintaining the existing eastbound I-80 to northbound SR 65 loop connector ramp alignment and expanding it to three lanes, and relocating Taylor Road interchange to the I-80/SR 65 interchange location using slip ramps from/to the connector ramps. 	<ul style="list-style-type: none"> • Dismissed based on Caltrans headquarters and district-level design feedback that a three-lane loop connector would not be an approvable alternative due to safety concerns.
C21A	<p>PSR Alternative #1 Variation</p> <ul style="list-style-type: none"> • Provided a three-lane connector loop ramp • Included maintaining the existing eastbound I-80 to northbound SR 65 loop connector ramp alignment and expanding it to three lanes, and maintaining the Taylor Road interchange at its current location. 	<ul style="list-style-type: none"> • Dismissed based on Caltrans headquarters and district-level design feedback that a three-lane loop connector would not be an approvable alternative due to safety concerns.
C22	<p>I-80/Sunset Boulevard interchange</p> <ul style="list-style-type: none"> • New interchange • Proposed extending Sunset Blvd to I-80 and providing a full access interchange at this location rather than Taylor Road 	<ul style="list-style-type: none"> • There would be new economic development opportunities but residential impacts. This concept would not provide the minimum interchange spacing between the system interchange and the Sunset Boulevard interchange. The City of Rocklin said this option has been previously discussed at the City of Rocklin and has never passed the screening process. This would require significant residential impacts and would not meet Caltrans interchange spacing requirements.

1.4 Permits and Approvals Needed

Table 1-7 lists the permits and coordination that would likely be required for the project.

Table 1-7. Permits and Approvals Needed

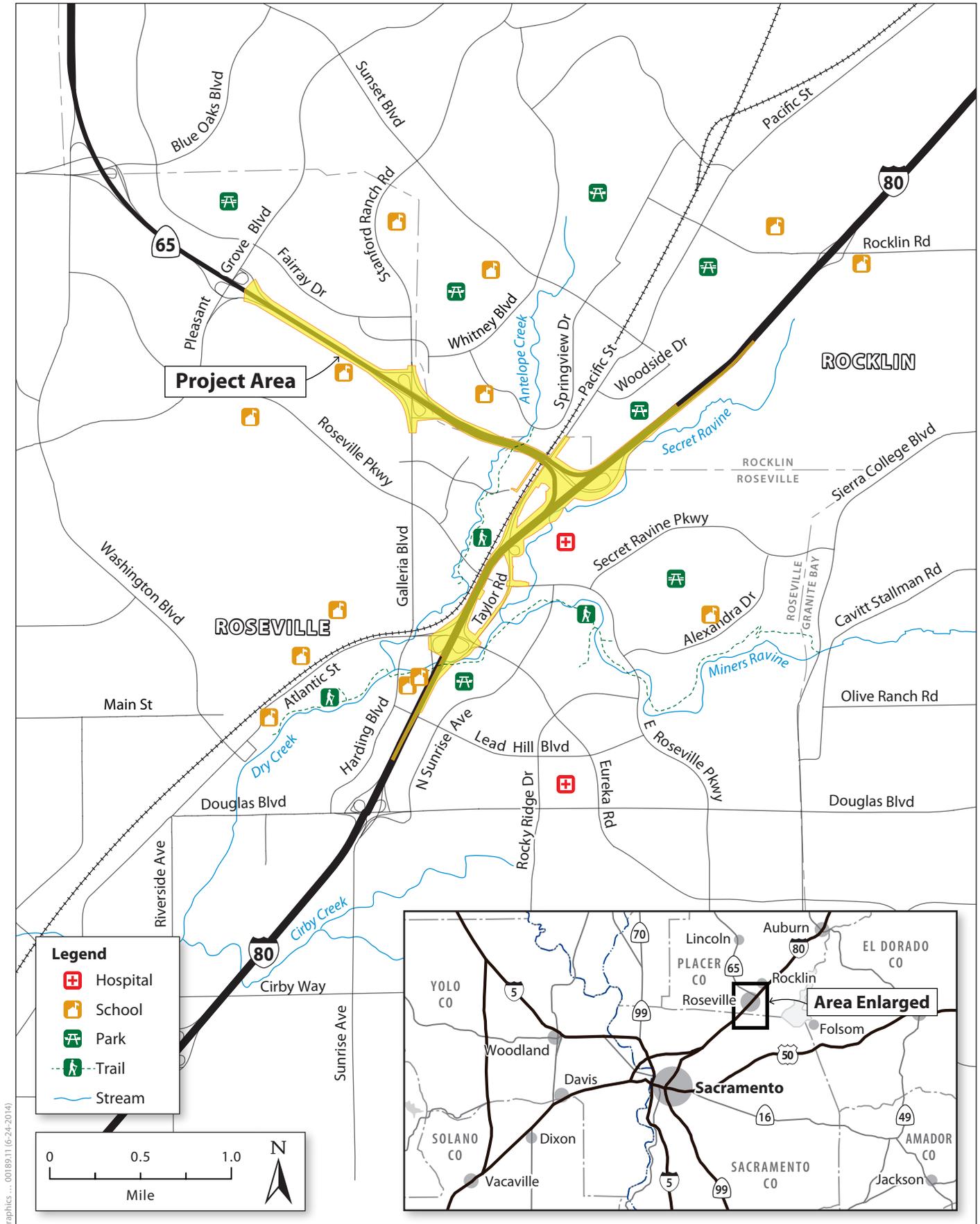
Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service	Coordination and Section 7 consultation regarding threatened and endangered species; <i>Amendment to City of Roseville Open Space Preserve Overarching Management Plan</i>	Initiated formal consultation for threatened and endangered species on April 24, 2015
National Marine Fisheries Service	Coordination and Section 7 consultation regarding threatened and endangered species	Informal consultation/ technical assistance initiated August 2014 Submitted documentation on April 24, 2015, requesting agency determination
U.S. Army Corps of Engineers	Section 404 authorization for fill of waters of the United States	Submitted delineation of potential waters of the United States, including wetlands, on March 4, 2015, to support a preliminary jurisdictional determination Permit application process not yet initiated
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	Not yet initiated
Central Valley Regional Water Quality Control Board	Section 401 Water Quality Certification and coverage under the existing Caltrans National Pollutant Discharge Elimination System Permit (Order No. 2012-0011-DWQ)	Not yet initiated
Central Valley Flood Protection Board	Permit for encroachment into jurisdictional floodway	Not yet initiated
Placer County Air Pollution Control District	Formal notification prior to construction	Not yet initiated

1.5 References Cited

Fehr & Peers. 2014. *Transportation Analysis Report – I-80/SR 65 Interchange Improvements*. Roseville, CA. August.

Caltrans. 2009. *Project Study Report – I-80/SR 65 Interchange Modification*. Marysville, CA. June.

CH2M HILL. 2015. *Draft Project Report to Authorize Release of the Draft Environmental Document*. On Route Interstate 80 and State Route 65 Between Douglas Blvd (PM1.9 to 6.1) and Rocklin Road and Interstate 80 and Pleasant Grove Blvd (PM R4.8 to R7.3). 03-4E3200 - Project Number.



Graphics ... 00189111 (6-24-2014)

**Figure 1-1
Project Location**

LEVELS OF SERVICE

for Freeways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. No delays
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. No delays
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. Minimal delays
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. Minimal delays
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. Significant delays
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. Considerable delays

Graphics ... 0018911 (2-27-2015)

Source: Caltrans Standard Environmental Reference. <http://www.dot.ca.gov/ser/forms.htm>. Accessed 2-27-2015.

Figure 1-2
Level of Service for Freeways

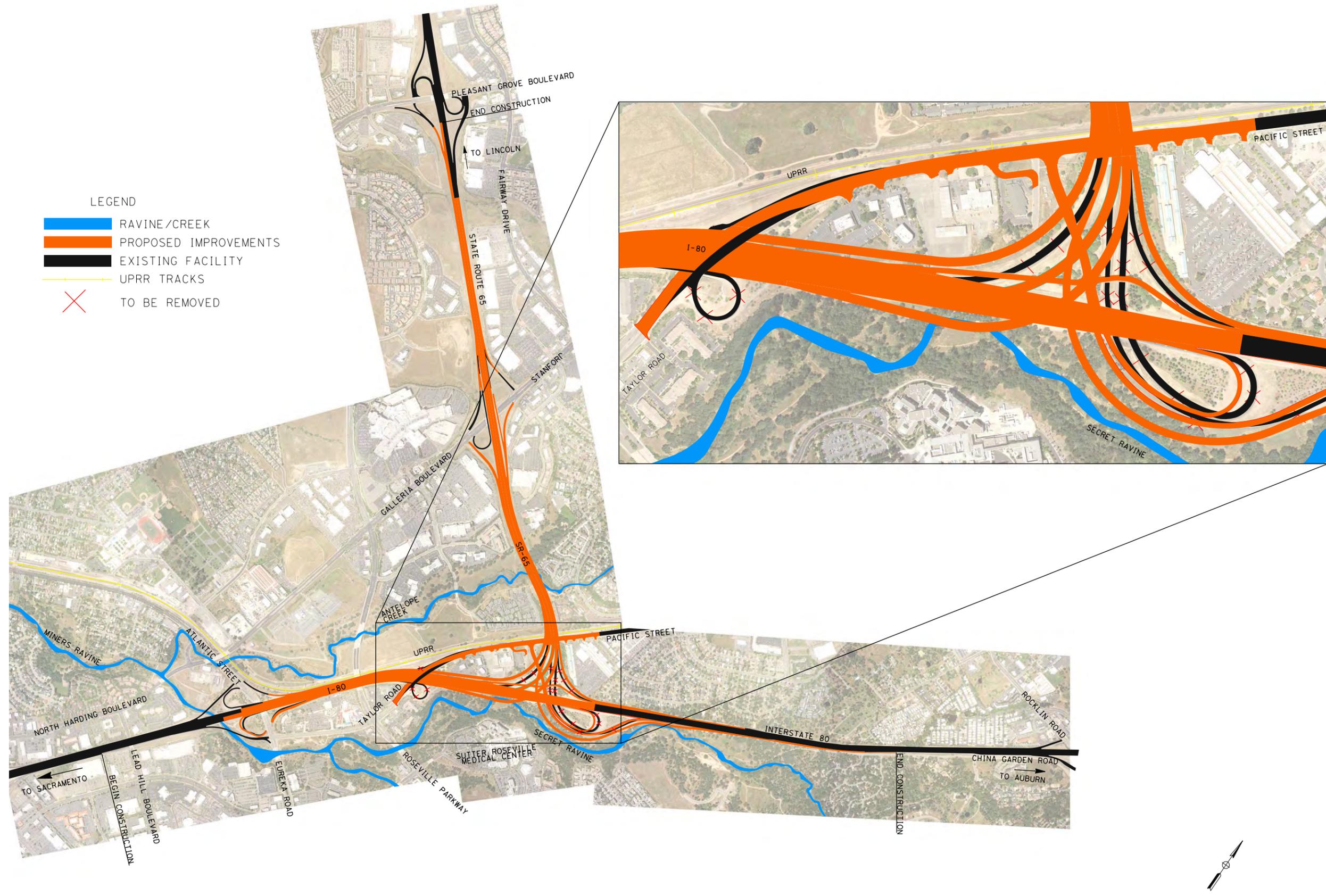


Figure 1-3
Alternative 1—Taylor Road Full Access Interchange

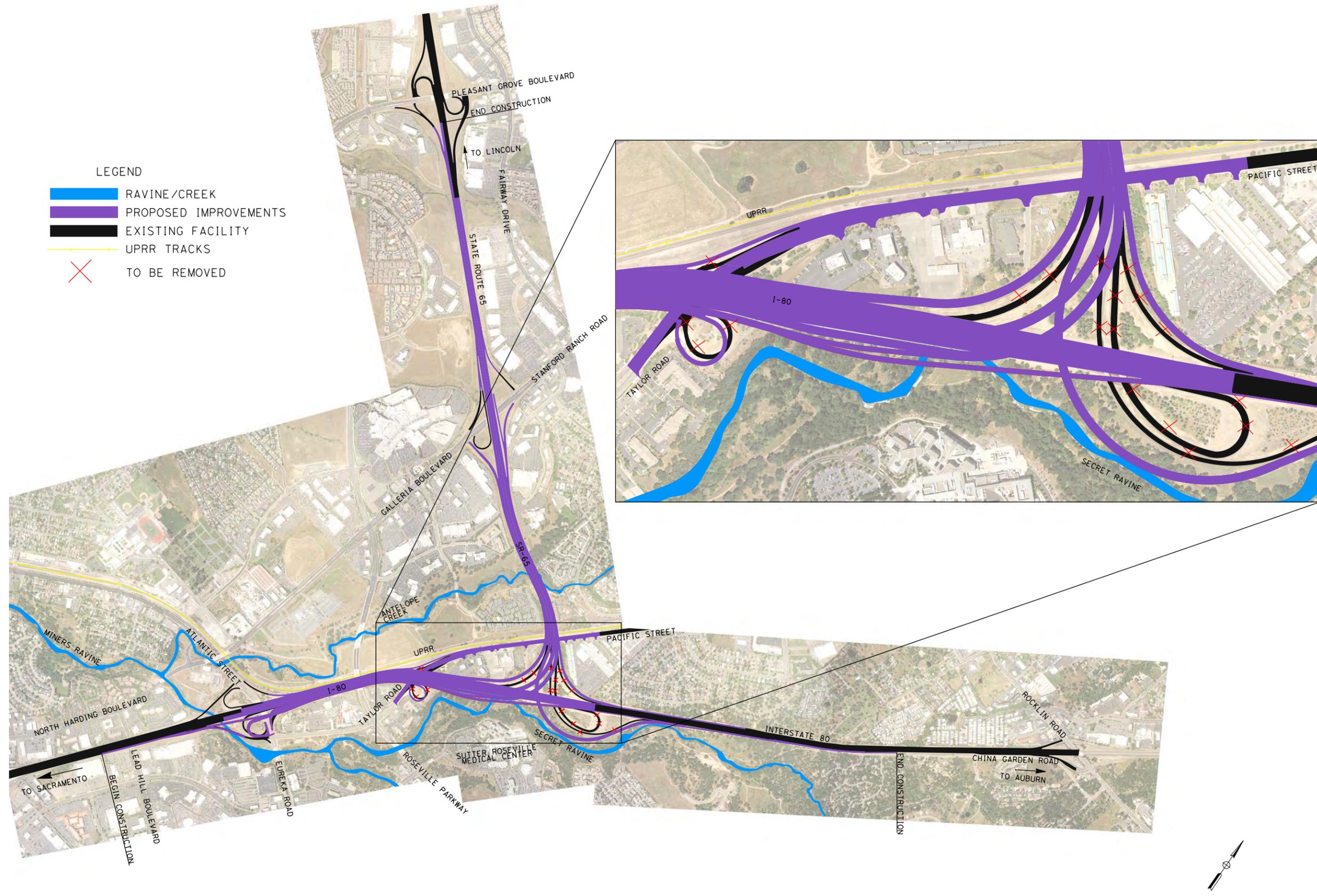


Figure 1-4
Alternative 2—Collector-Distributor System Ramps

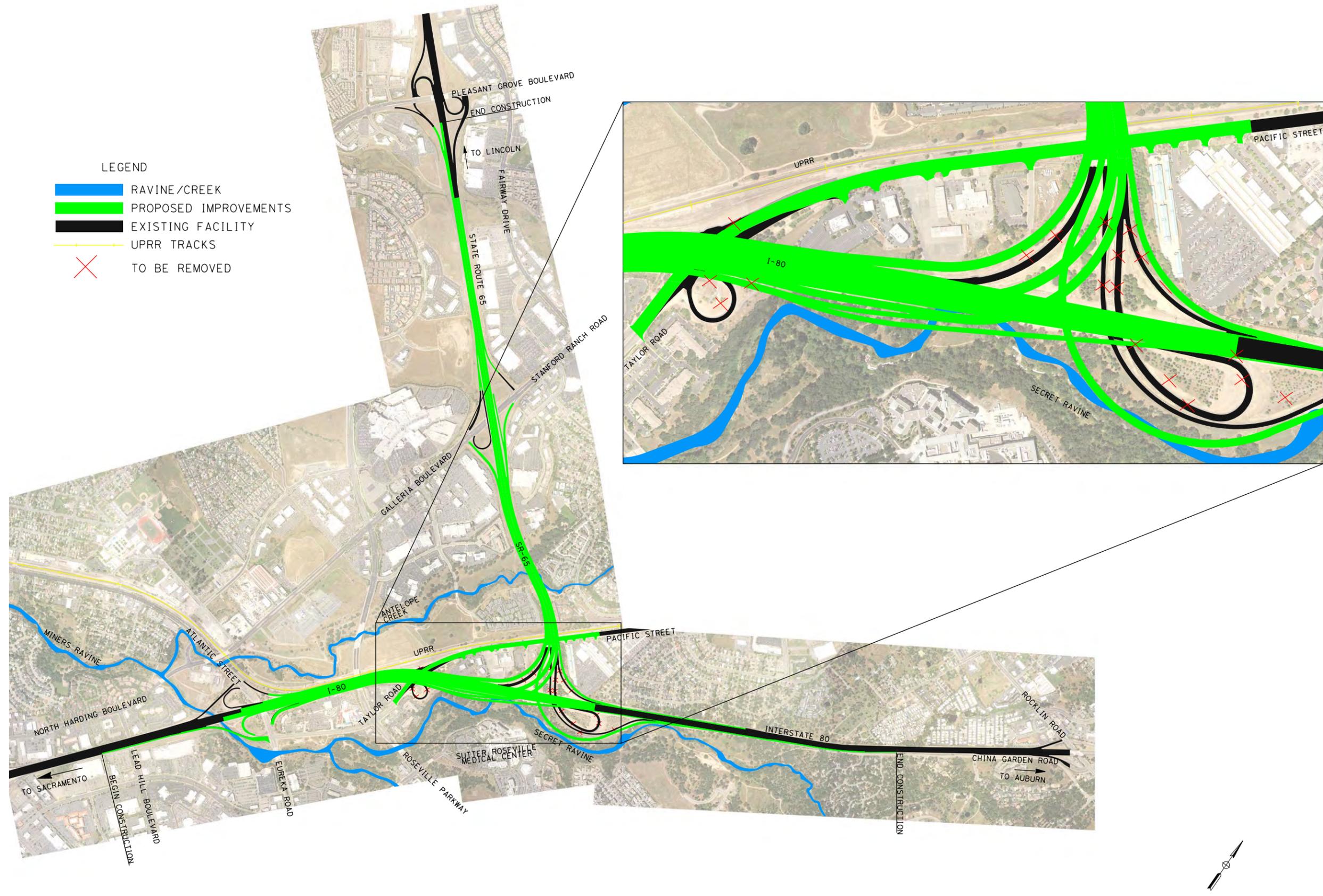


Figure 1-5
Alternative 3—Taylor Road Interchange Eliminated

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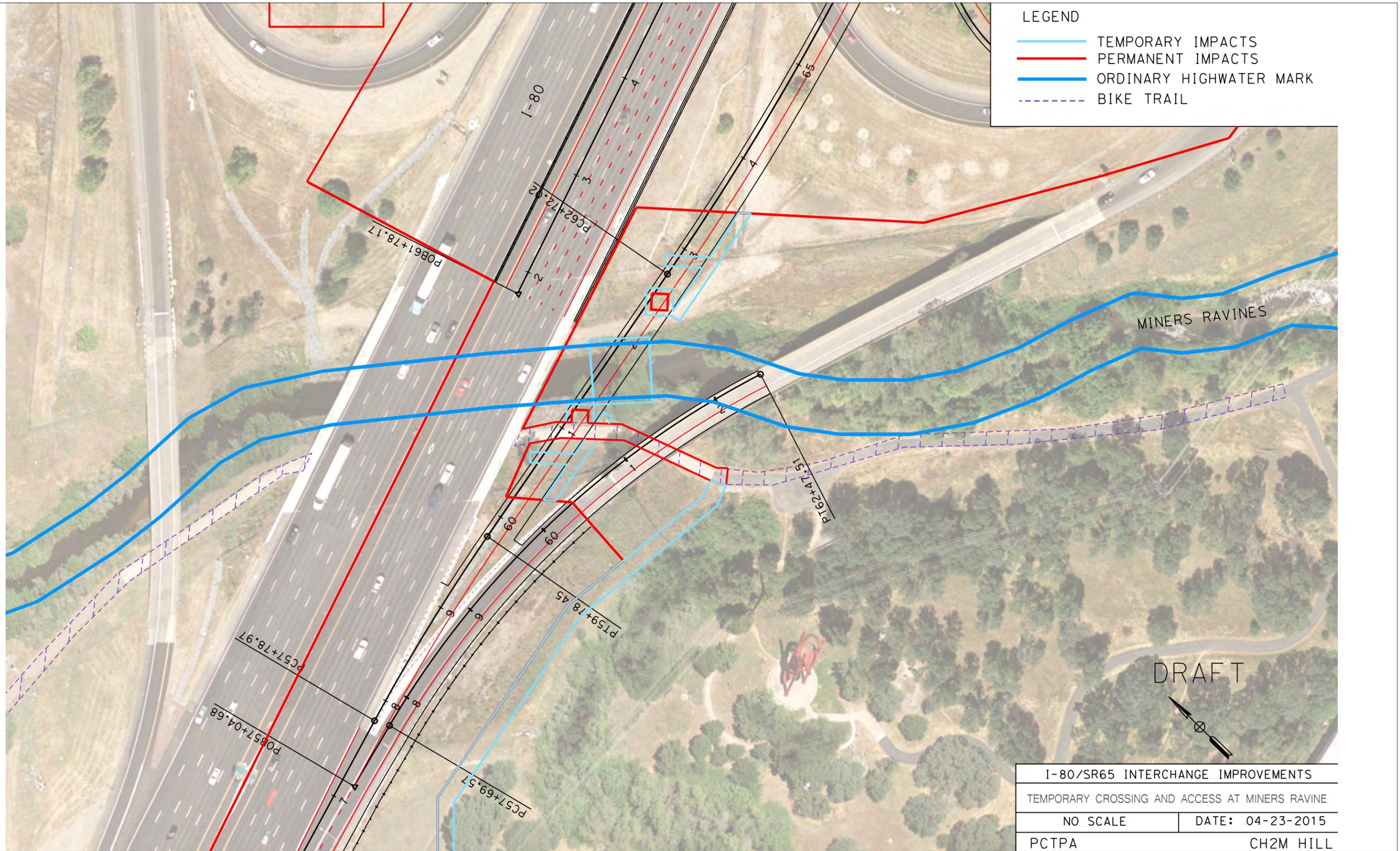
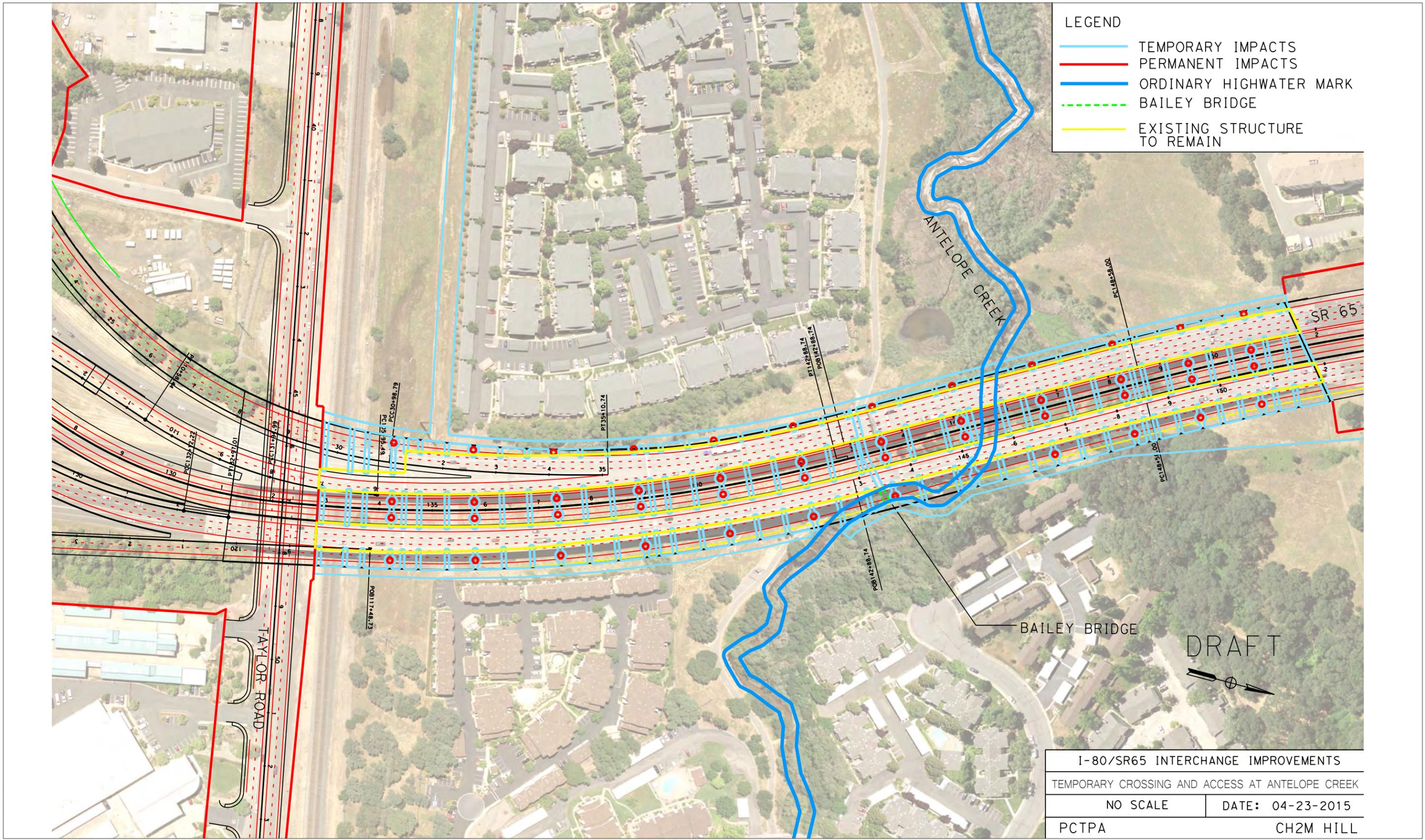


Figure 1-7
Temporary Crossing and Access at Miners Ravine



- LEGEND
- TEMPORARY IMPACTS
 - PERMANENT IMPACTS
 - ORDINARY HIGHWATER MARK
 - - - BAILEY BRIDGE
 - EXISTING STRUCTURE TO REMAIN

I-80/SR65 INTERCHANGE IMPROVEMENTS	
TEMPORARY CROSSING AND ACCESS AT ANTELOPE CREEK	
NO SCALE	DATE: 04-23-2015
PCTPA	CH2M HILL

DRAFT

00189.11 EIR/EA (04-2015) 55

Figure 1-8
Temporary Crossing and Access at Antelope Creek

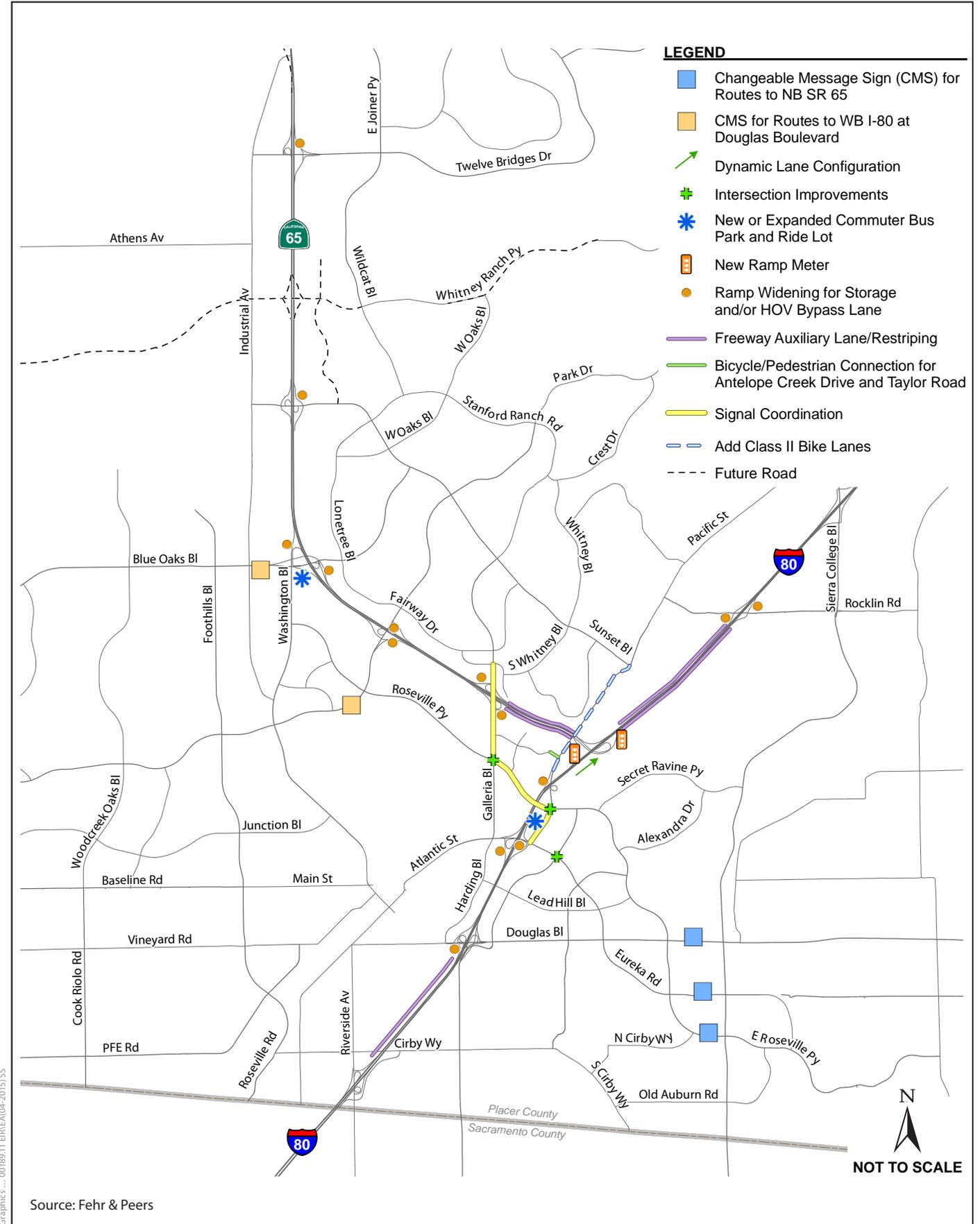


Figure 1-9
Alternative 4—Transportation System Management

