Chapter 5 California Environmental Quality Act Evaluation

This chapter constitutes the CEQA impact evaluation for this project (see Chapter 3 for the NEPA evaluation). To avoid unnecessary repetition, the CEQA setting sections and descriptions of the impact methodologies are contained in Chapter 3, as described below. Chapters 3 and 5 are organized in a similar fashion so that the reader can easily refer back and forth between the chapters.

Determining and documenting whether a project may have a significant effect on the environment plays a critical role in the CEQA process. CEQA requires lead agencies to know what constitutes a significant effect on the environment and whether mitigation measures are available to reduce a significant effect to a less-than-significant level. CEQA also requires mitigation of all significant effects on the environment to the extent feasible.

This chapter describes the environmental impacts and mitigation needed to avoid or reduce impacts for each of 12 environmental issues:

- 5.1. Land use, planning, and growth;
- 5.2. Community impacts and environmental justice;
- 5.3. Relocation;
- 5.4. Traffic and transportation/pedestrian and bicycle facilities;
- 5.5. Air quality;
- 5.6. Noise;
- 5.7. Hydrology, water quality, and floodplains;
- 5.8. Wildlife and botanical resources, threatened and endangered species, and wetlands and waters of the U.S.;
- 5.9. Historic and archeological resources;
- 5.10. Earth resources and hazardous materials;
- 5.11. Visual; and
- 5.12. Utilities/emergency services.

Pre-mitigation and post-mitigation significance conclusions for each environmental impact are also identified.

The reader should refer to the Affected Environment sections in Chapter 3 for a discussion of the setting for each environmental issue. The Environmental Impacts sections of this chapter assess the potential significant environmental effects that could occur with project implementation. The reader should refer to the Methodology sections in Chapter 3 for a description of the impact methodologies used for each environmental issue. The impacts associated with the SPDI are organized by permanent, temporary, and cumulative ones. **Each impact is given a letter/number designation (such as Impact LU1 which designates the first impact identified under Land Use, Planning, and Growth) and an impact title.** One or more mitigation measures are identified for each significant environmental impact that would avoid or reduce the impact. **These measures are also given a letter/number designation that corresponds with the impact nomenclature (such as Mitigation Measure LU1a). A bulleted mitigation measure indicates that the measure also mitigates another impact.**

The impact evaluations for the No-Project (2025), 6-Lane Tight Diamond, and 4-Lane Tight Diamond (2025) Alternatives follow the SPDI evaluations. The alternatives' evaluations are presented as comparative discussions when the impacts are the same as those associated with the SPDI. When the impacts of an alternative differ from those associated with the SPDI, the impacts are given a letter/number and title and are fully discussed. Table S.3-1 summarizes the impacts and mitigation measures associated with the preferred alternative. Table S.3-2 compares the preferred alternative with the No-Project, 6-Lane Tight Diamond, and 4-Lane Tight Diamond Alternatives.

As noted in the Introduction to this joint document, differences exist in the way impacts are addressed in CEQA versus NEPA documents. While CEQA requires that environmental documents judge the significance of individual environmental impacts, NEPA only uses the term "significance" to determine the type of environmental document to be prepared. Federal and state lead agencies can also use different thresholds for determining the need for mitigation. For the purpose of the impact discussions in this chapter, significance conclusions are provided in the context of CEQA only. With the exception of noise, the impacts and mitigation measure discussions are based on the same thresholds for NEPA and CEQA. For noise, different thresholds are used, and therefore, the noise impacts are identified as either NEPA or CEQA impacts.

Based on the results of the technical studies, as well as the Initial Study/Environmental Checklist Form attached to the Notice of Preparation (NOP) for the project (see Appendix D), the County has determined that the appropriate level of CEQA environmental documentation for this project is an EIR since substantial evidence supported a conclusion that the proposed project may have a significant effect on the environment. FHWA is preparing an EA for this project and tentatively intends (subject to further information generated through public comment) to adopt a Finding of No Significant Impact (FONSI) since it has determined, based on currently available information, that the whole of the proposed action would not result in a significant effect on the quality of the human environment.

The County prepared and distributed a NOP and a CEQA initial study checklist on August 14, 2001 (Appendix D). This EA/EIR includes a discussion of specific issues and concerns identified by the County as potentially significant or less than significant in the initial study checklist.

The CEQA initial study checklist contained in Appendix D identifies that the proposed project would have *no impact* on the following environmental issues:

- Ib. Scenic resources, including rock outcroppings and historic buildings along a scenic highway;
- IIa-c. Agricultural resources;
- VIe. Septic tanks or alternative wastewater disposal systems;
- VIIe. Safety hazards for areas within an airport land use plan or within 2 miles of a public airport or public use airport;
- VIIf. Safety hazards for areas within the vicinity of a private airstrip;
- VIIh. Risk of loss, injury, or death involving wildland fires;
- VIIIg. Housing within a 100-year flood hazard area;
- VIIIj. Inundation by seiche, tsunami, or mudflow;
- IXa. Physical division of an established community;
- Xa. Loss of availability of known mineral resources;
- Xb. Loss of availability of a locally important designated resource recovery site;
- Xif. Exposure of people to excessive noise levels near a private airstrip;
- XIIIa. Provision of or need for new or physically altered governmental facilities which could cause significant environmental impacts, in order to maintain

acceptable performance objectives for fire or police protection, schools, parks, or other public facilities;

- XIVa. Neighborhood and regional parks or other recreational facilities;
- XIVb. Recreational facilities;
- XVc. Air traffic patterns;
- XVIb. Water or wastewater treatment facilities;
- XVId. Water supply;
- XVIe. Wastewater treatment capacity;
- XVIf. Landfill capacity; and
- XVIg. Compliance with regulations related to solid waste.

Because, as noted above, the Initial Study checklist explains why these impacts are not treated in detail in this EIR, the checklist satisfies the requirements of CEQA Guidelines section 15128, which requires that an EIR "shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR".

5.1 Land Use, Planning, and Growth

See section 3.1.1, "Affected Environment," for a discussion of the land use, planning, and growth setting.

5.1.1 Determining Significance under CEQA

Appendix G of the State CEQA Guidelines provides guidance for the evaluation of project effects on land use and planning issues. Based on these guidelines, the project is considered to have a significant impact if it would:

- physically divide an established community;
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect; or
- result in adequate parking supply

Under CEQA, the social and economic effects of projects are not normally considered impacts on the environment; therefore, no criteria have been developed to evaluate the significance of purely social or economic effects of the project. These purely social or economic effects include construction-related economic effects caused by construction-related disruptions in access. Although CEQA allows social or economic changes to be used to determine the significance of the physical changes of the project, the significance of the physical changes themselves are addressed elsewhere in the document.

5.1.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact LU1: Permanent Right-of-Way Acquisitions from 19 Parcels

Impacts on land uses within the project area would result from the widening of Missouri Flat Road and the modifications to the U.S. 50 interchange. The preferred alternative would require corner or sliver permanent right-of-way acquisitions from residential or commercial parcels. Table 5.1-1 details the anticipated direct land use impacts associated with the preferred alternative. Table 3.1-2 details the anticipated

direct land use impacts associated with each of the Perks Court reconstruction options; the same number of parcels would experience right-of-way acquisitions under both reconstruction options. Figure 3.1-4 shows the location of the affected parcels. Because these acquisitions would not affect the land uses occupying these parcels and because the project is compatible with existing land uses in the area, this impact is considered less than significant.

See section 5.3, "Relocation" for a discussion of specific residential and commercial parcels that would experience displacements.

Mitigation Measure

None proposed.

Impact LU2: Compatible with Planned Land Uses

The preferred alternative is not anticipated to result in conflicts with planned land uses in the project area. One new development, El Dorado Villages shopping center, has begun construction of a Safeway market in the northeast quadrant of the Missouri Flat Road interchange (Figure 3.1-1). The Missouri Flat Road interchange project is being designed to be consistent with the design and layout of the shopping center. Since Phase 1 of the project is consistent with the Writ of Mandate and the Missouri Flat Area MC&FP, this impact is considered less than significant.

Mitigation Measure

None proposed.

Impact LU3: No Impact on Community Cohesion

According to Caltrans guidelines for conducting community impact assessments (California Department of Transportation 1997), community cohesion is the degree to which residents have a *sense of belonging* to their neighborhood; a level of commitment of the residents of the community; or a strong attachment to neighbors, groups, or institutions, usually because of continued association over time. Communities are often delineated by physical barriers, such as major roadways or large open space areas.

Cohesive communities are indicated by specific social characteristics, such as long average lengths of residency, home ownership, frequent personal contact, ethnic homogeneity, high levels of community activity, and shared goals. Transportation projects may divide cohesive neighborhoods when such projects act as physical

Table 5.1-1. Acquisitions and Easements under Preferred Alternative

Assessor's Parcel Number[a]	Phase 1				Ultimate Phase			
	Impact Area			Comments[c]	Impact Area[b]			Comments[c]
	Meter^2	Foot^2	Acre		Meter^2	Foot^2	Acre	
327-140-02	400	4,306	0.10	Permanent acquisition of property; no structure, parking, or signage loss	250	2,691	0.06	Permanent acquisition of property; no structure, parking, or signage loss
	1,800	19,376	0.44	Temporary construction easement	1,500	16,146	0.37	Temporary construction easement
327-140-05	0	0	0.00		60	646	0.01	Permanent acquisition of property; no structure, parking, or signage loss
327-140-46	0	0	0.00		500	5,382	0.12	Temporary construction easement
327-211-04	50	538	0.01	Temporary construction easement		0	0.00	
327-211-03	150	1,615	0.04	Temporary construction easement		0	0.00	
327-211-02	200	2,153	0.05	Temporary construction easement		0	0.00	
327-211-01	100	1,076	0.02	Temporary construction easement		0	0.00	
327-130-22				See Perks Court options, Table 3.1-3				See Perks Court options, see Table 3.1-2
327-130-25				See Perks Court options, Table 3.1-3				See Perks Court options, see Table 3.1-2
327-130-21				See Perks Court options, Table 3.1-3				See Perks Court options, see Table 3.1-2
327-130-20				See Perks Court options, Table 3.1-3				See Perks Court options, see Table 3.1-2
327-130-19				See Perks Court options, Table 3.1-3				See Perks Court options, see Table 3.1-2
327-130-18				See Perks Court options, Table 3.1-3				See Perks Court options, see Table 3.1-2
327-190-32	850	9,150	0.21	Permanent acquisition of property; no structure, parking, or signage loss	600	6,459	0.15	Permanent acquisition of property; no structure, parking, or signage loss
327-190-34	1,400	15,070	0.35	Permanent acquisition of property; no structure, parking, or signage loss	1,200	12,917	0.30	Permanent acquisition of property; no structure, parking, or signage loss
327-190-35	700	7,535	0.17	Permanent acquisition of property; no structure, parking, or signage loss	600	6,459	0.15	Permanent acquisition of property; no structure, parking, or signage loss
327-190-36	750	8,073	0.19	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
325-230-23	3,500	37,675	0.86	Temporary construction easement		0	0.00	
El Dorado County	8,500	91,496	2.10	Transfer from El Dorado County to State of California, Old bridge to remain with El Dorado County		0	0.00	
325-180-14	4,200	45,210	1.04	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
	6,000	64,586	1.48	Temporary construction easement		0	0.00	
325-230-18	1,600	17,223	0.40	Permanent acquisition of property; no structure, parking, or signage loss	300	3,229	0.07	Permanent acquisition of property; no structure, parking, or signage loss
327-130-47	1,400	15,070	0.35	Permanent acquisition of property; no structure, parking, or signage loss	150	1,615	0.04	Permanent acquisition of property; no structure, parking, or signage loss
327-130-49	3,500	37,675	0.86	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
327-130-43	1,500	16,146	0.37	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	

Table 5.1.1. Continued

Assessor's Parcel Number[a]	Phase 1				Ultimate Phase			
	Impact Area			Comments[c]	Impact Area[b]			Comments[c]
	Meter^2	Foot^2	Acre		Meter^2	Foot^2	Acre	
327-130-46	4,500	48,439	1.11	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
327-130-45	1,500	16,146	0.37	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
327-130-37	2,100	22,605	0.52	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
327-130-35	350	3,767	0.09	Jack-in-the-Box restaurant at 3945 Missouri Flat Road: building not impacted, but drive-through impacted by sidewalk; entire parcel (0.73 acre) likely to be purchased during Phase 1	150	1,615	0.04	Jack-in-the-Box restaurant: building impacted by sidewalk Entire parcel (0.73 acre) likely to be purchased during Phase 1
327-130-14	200	2,153	0.05	Chevron fuel island impacted at 3943 Missouri Flat Road; entire parcel (0.89 acre) likely to be purchased during Phase 1	40	431	0.01	Entire parcel (0.89 acre) likely to be purchased during Phase 1
327-130-13	400	4,306	0.10	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
327-130-12	150	1,615	0.04	Permanent acquisition of property; no structure, parking, or signage loss		0	0.00	
327-290-58	600	6,459	0.15	Maintain bank drive-through, reset retaining wall		0	0.00	
	1,500	16,146	0.37	Loss of 35 parking spaces near K-Mart in Prospector's Plaza				

Note: NA = not applicable.

[a] See Figure 3.1-4 for location of parcels.

[b] Areas reflect additional right-of-way needed after Phase 1.

[c] Permanent acquisition of property; no structure, parking, or signage loss indicates that only a sliver of the parcel would need to be acquired.

barriers or are perceived as psychological barriers by residents. A transportation project perceived as a physical or psychological barrier may isolate one portion of a homogeneous neighborhood. (California Department of Transportation 1997.)

The residential area to the southeast of the Missouri Flat Road interchange does not constitute a cohesive community because it lacks the features common to neighborhoods and does not contain substantial cohesion. The proposed project would not divide any community because improvements are being made to an interchange that already exists. Since the project would have no affect on community cohesion and would not physically divide an established community, this impact is considered less than significant.

Mitigation Measure
None proposed.

Impact LU4: Consistent with Local and Regional Plans and Policies

The proposed project is consistent with the following relevant County policies and regional plans, as discussed below.

1996 El Dorado County General Plan – The El Dorado County General Plan was adopted by the Board of Supervisors on January 23, 1996. As explained in section 1.2 of this joint document, new nonresidential development can be approved prior to the adoption of a new General Plan, if, among other things, such development is consistent with the text and maps of the 1996 General Plan or whatever general plan text and maps were in effect when rights to develop were vested.

The following goals, objectives, and policies from the General Plan (set aside in 1999) apply specifically to the preferred alternative.

Policy 3.1.2.2. A separation of at least 500 feet shall be provided between the terminus of freeway off ramps and the nearest future intersection.

A Caltrans' design exception was approved for the proposed action in August 2000 to allow for less than 125 meters (500 feet) between the U.S. 50/Missouri Flat Road eastbound ramp intersection and the Missouri Flat Road/Mother Lode Drive intersection. This design exception was needed due to the existing relative locations of these intersections. The other freeway ramp terminal and Missouri Flat Road intersections in the project area are designed to provide for the prescribed 500-foot

separation. The preferred alternative is considered to be consistent with Policy 3.1.2.2.

Objective 3.3.1. Improvement of Interchanges: Improve interchanges along U.S. 50 and the roadway system in the central urban corridor extending from the Sacramento/El Dorado County Line to Camino.

The preferred alternative would improve the U.S. 50/Missouri Flat Road interchange and is considered to be consistent with this objective.

Policy 3.4.1.1. Circulation facilities should be sited and designed in such a way that avoids damage to the County's scenic and environmental resources to the extent feasible. Roads should be planned and designed to minimize disruption of soils, topography, vegetative cover, and wildlife habitat.

Sections 3.11, "Visual", and 3.8, "Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the U.S.", identify a number of mitigation measures to ensure consistency with this policy. If the County implements the recommended mitigation measures identified in these sections to reduce significant environmental impacts to a less-than-significant level, the preferred alternative would be consistent with Policy 3.4.1.1.

Policy 3.5.1.1. The County shall adopt a roadway plan consistent with planned land use and shall maintain an operating LOS of "E" or better on all roadways, consistent with Objective 3.5.1. In addition, all road segments projected in the roadway plan at the year 2015 to be operating at LOS A, B, or C shall not be allowed to fall below LOS C and all road segments at LOS D shall not fall below LOS D.

The traffic report for the project (Fehr & Peers Associates 2002) indicates that the following intersections will operate at LOS C or better in 2015 and 2025 with project construction: Missouri Flat Road/Prospector's Plaza Drive, U.S. 50 westbound ramps/Missouri Flat Road, U.S. 50 eastbound ramps/Missouri Flat Road, and Missouri Flat Road/Mother Lode Drive.

Policy 3.5.1.3. The County shall identify those roadways with existing or projected capacity problems, prioritize them in terms of mitigation immediacy, and develop programs for planning, financing, and constructing the needed improvements.

The preferred alternative corrects existing operational deficiencies and provides capacity needed for planned growth, consistent with the adopted MC&FP. The preferred alternative is considered to be consistent with Policy 3.5.1.3.

Policy 3.9.1.3. The County shall continue to work with employers, residents, and other agencies to encourage increased car pools, van pools, and park-and-ride lots.

The proposed project would result in the loss of up to 20 automobile parking spaces in the existing park-and-ride lot, located in the southwest quadrant of the Missouri Flat Road interchange. If Mitigation Measure T4a is implemented, the proposed action would be consistent with Policy 3.9.1.3.

Policy 10.2.7.3 The County shall commit to the comprehensive development of the needed road circulation plan for this area immediately following adoption of the General Plan. This plan shall also include the identification and development of a specific funding mechanism that overcomes existing deficiencies and accommodates future traffic demands to the year 2015.

Phase 1 of the preferred alternative is consistent with this policy since it comprises roadway improvements included in the adopted MC&FP, a funding mechanism that is called for by this policy.

1998 Missouri Flat Area Master Circulation & Funding Plan – The MC&FP includes the following Phase1 improvements: expanding the Missouri Flat Road interchange, adding auxiliary lanes to U.S. 50 in each direction over the Weber Creek bridges, widening Missouri Flat Road from north of Prospector's Plaza Drive to south of Perks Court, constructing a northbound free right-turn at Mother Lode Drive to eastbound U.S. 50, and realigning Perks Court (EDAW 1998 and Boyer pers. comm.). The preferred alternative is considered to be consistent with the MC&FP. Appendix J of this joint document contains a table that describes the relationship of each program-level mitigation measure adopted as part of the MC&FP and the project-level mitigation measures that are recommended in this joint document. If the County Board of Supervisors adopts these recommended mitigation measures, then this project will be consistent with the MC&FP mitigation measures.

As noted earlier, this joint document also serves as a supplemental EIR to the MC&FP. This supplemental EIR modifies Mitigation Measure 4.8-1, adopted as part of the MC&FP, as described under Impact WQ2 in Chapter 3, section 3.7.1. If the

County Board of Supervisors adopts this mitigation measure modification, then this project will be consistent with the MC&FP.

Regional Transportation Plan – The 2025 MTP identifies the Missouri Flat Road interchange project as "U.S. 50 at Missouri Flat Road: Reconstruct interchange at U.S. 50 (Phase 1) including construction of auxiliary lanes over Weber Creek bridge and seismic retrofit of bridge" (page 103, July 24, 2002). The 2003/05 MTIP amendment #1 describes the proposed project as "U.S. 50/Missouri Flat Road Interchange: Reconstruct Missouri Flat Interchange at U.S. 50 (Phase 1) including construction of auxiliary lanes over Weber Creek Bridge and seismic retrofit of bridge; widen Missouri Flat Road 2 to 4 lanes from Mother Lode Drive to Prospector Plaza Drive" (page 14, December 23, 2002). Therefore, Phase 1 of the project is consistent with the MTP and the MTIP. If and when the County approves a Phase 2 project for construction, and if the County decides to seek federal funding for that project, then it would be included in a future MTP and MTIP. Appendix J of this joint document contains a table that describes the relationship of the program-level MTP mitigation measures and the project-level mitigation measures recommended in this joint document.

Because the project does not conflict with any applicable land use plan or policy, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact LU5: Potential Displacement of 35 Parking Spaces at Prospector's Plaza

The preferred alternative would result in the displacement of approximately 35 spaces on APN 327-290-058, used by patrons of the Prospector's Plaza shopping center. The County ordinance requires 960 spaces in Prospector's Plaza based on 1 space/250 square feet and 240,000 square feet. Currently, approximately 1,020 spaces exist. Therefore, this impact is considered less than significant.

Mitigation Measure

None proposed.

Growth Inducement Impacts

Growth rates and patterns are influenced by various local, regional, and national forces that reflect ongoing social, economic, and technological changes. Ultimately, the amount and location of population growth and economic development that occurs in a specific area is controlled largely by local and county governments through zoning, land use plans and policies, and decisions regarding development applications. Local government and other regional, state, and federal agencies also make decisions about infrastructure (such as roads, water facilities, and sewage facilities) that may influence growth rates and the location of future development.

Transportation infrastructure is one component of the overall infrastructure that may serve to accommodate planned growth. This infrastructure may also serve to hasten or shift planned growth, or encourage and intensify unplanned growth in an area. Transportation projects may induce growth when they directly or indirectly promote, hasten, shift, or intensify planned growth or encourage unplanned growth in a community or region. Examples of growth-inducing transportation projects include construction of a new interchange on an existing freeway, which could shift and encourage growth in the vicinity of the new interchange, or construction of a new roadway through an undeveloped area, which could promote unplanned growth.

The MC&FP EIR (EDAW 1998) assumes development of 199 ha (492 ac) of land in the Missouri Flat area designated on the General Plan as *commercial* and approximately 11.0 ha (26.7 ac) of land associated with proposed MC&FP improvements. The MC&FP EIR analyzes the impacts of this development. Project-specific environmental documentation, public notification and involvement, mitigation, and ultimately, approval by the County would be required for this development to occur.

The preferred alternative would not introduce a new transportation facility to the project area, nor would it increase or provide new access. The intent of Phase 1 of the preferred alternative is to improve the Missouri Flat Road interchange to solve existing operational deficiencies and congestion problems and also to accommodate the traffic demands associated with approved growth through 2015, consistent with the approved MC& FP. The growth that requires the construction of Phase 1 has already occurred and the interim tight diamond interchange configuration represents the minimum acceptable design necessary to alleviate existing congestion; it is needed today to solve existing traffic problems. The minimum acceptable design also

provides some additional capacity beyond what is required for existing traffic levels (although the design of Phase 1 would remain unchanged even if it was not intended to accommodate planned growth) to accommodate development through 2015 at acceptable levels of service. Although the proposed Phase 1 improvements would accommodate this planned growth, it is unlikely that they would induce unplanned growth since Phase 1 of the preferred alternative does not provide capacity above and beyond what is needed to accommodate planned growth to 2015, consistent with the MC&FP and Writ of Mandate. However, the Phase 1 improvements could hasten planned growth by adding capacity to the existing interchange that could be used by development, though planned for in the MC&FP, has not received project-level approvals. This hastened growth could especially occur in the immediate vicinity of the interchange. With the exception of the property formerly proposed for Sundance Plaza and the already-approved El Dorado Villages shopping center, the area adjacent to the project area is already developed.

The Ultimate Phase is evaluated in this joint document to be consistent with Caltrans' 20-year design life policy. The Ultimate Phase would be constructed only if it is proposed as a separate project and if it is warranted, based on future LOS, prior to the LOS reaching an unacceptable level. The need for and timing of implementing Phase 2 will depend on the land use map that the County ultimately adopts as part of its new General Plan, which was only in a draft stage at the time this draft EA/EIR was released for public review.

If the County adopts a new General Plan that provides for more growth than allowed by the Writ of Mandate, the County would have the option of pursuing Phase 2 (SPDI), as a separate project, if the following occurred:

- funding is available to build Phase 2,
- the Phase 2 improvements are added by Board action to the list of MC&FP-funded improvements; and
- the Phase 2 improvements are added to a future MTP and MTIP if federal funds are to be used to build these improvements.

Alternatively, the project could still be built in phases under this scenario (i.e. if adoption of a General Plan land use map that warrants a Phase 2 interchange) since Phase 2 is not likely to be needed until some time after 2015. Additional

environmental review is likely to be required if the Phase 2 project is built after 2015 since the conditions identified under CEQA Guidelines Sections 15162 and 15163 and 23 CFR 771.129 would likely be triggered.

Congestion and unacceptable levels of service at the Missouri Flat Road interchange may function as an obstacle to future growth in the MC&FP area if they hamper or delay market decisions to build additional planned and approved development. However, congestion and unacceptable levels of service by themselves might not substantially affect market demand for additional commercial development; lack of adequate services, such as water services, would likely have a more direct effect on market demand.

In conclusion, the proposed Phase 1 improvements primarily solve an existing operational and congestion problem. These improvements could be considered growth-inducing since, although the growth served by Phase 1 has been planned for in the MC&FP, individual projects have not been proposed and approved at the project-specific level. The Phase 1 improvements could also hasten planned growth.

The County is not in a position to act upon or construct the Ultimate Phase at this time since Phase 1, alone, is included in the approved 2025 MTP and the 2003/05 MTIP, as well as the Missouri Flat Area MC&FP, critical mass approval associated with the MC&FP, and MC&FP Community Facilities District financing plan. The proposed Ultimate Phase improvements, if and when they are approved, could also be considered growth-inducing since they would provide capacity for development that, at that time, would most likely not have been approved at the project level. As a practical matter, most transportation projects would be considered growth-inducing in this context since good planning dictates that improvements be constructed prior to severe congestion and safety problems occurring.

Temporary Impacts: SPDI

Impact LU6: Construction-Related Impacts

Short-term land use impacts could result from construction activities. The construction of the preferred alternative, including improvements to Missouri Flat Road and the U.S. 50/Missouri Flat Road interchange would generate temporary air quality impacts (e.g., diesel fumes and dust) and noise from heavy equipment operations. Traffic noise impacts affecting sensitive receptors, such as homes on Perks Court and Helmrich Lane, the hotel, and church could also occur. These impacts are discussed in sections 5.5, “Air Quality”, and 5.6, “Noise”. The potential

for daytime and nighttime light and glare impacts is discussed in section 5.11, "Visual".

Construction could also temporarily disrupt traffic circulation patterns on Missouri Flat Road and U.S. 50, including increased congestion of affected roadways during construction and disrupted access to businesses along Missouri Flat Road.

Temporary business disruptions are considered to be an adverse economic impact, but will not cause an environmental effect. Therefore, no significance conclusion is given. The following mitigation measure that also addresses traffic safety issues (see Impact T6) will also minimize this economic impact.

Mitigation Measure LU6a: Implement a Traffic Management Plan

To address this concern, the County will implement a traffic management plan (TMP), consistent with County and Caltrans roadway construction guidelines, that will identify the locations of temporary detours and signage to facilitate local traffic patterns and through-traffic requirements. On U.S. 50 and Missouri Flat Road, 1 lane in each direction will be kept open at all times during construction. Except in emergencies, U.S. 50 ramp closures will occur only during nonpeak hours and likely only at night; any ramp closure will comply with Caltrans ramp closure chart. Daytime access to businesses along Missouri Flat Road will be retained during construction. To the extent that business access must be disrupted, the disruption will occur only at night. Access to residences along Missouri Flat Road, Perks Court, and Helmrich Lane will be maintained during construction. The County will notify affected businesses and residences at least 1 week in advance of any lane or roadway closures or impacts related to access. The County will also notify personnel of emergency response services, such as fire and police protection, 1–2 weeks in advance of any lane or roadway closures so that alternate routes can be taken. (Tatman pers. comm.)

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts.

No- Project Alternative (2025)

No construction would occur under this alternative. Therefore, no direct or indirect land use or parking impacts would occur. No air quality- or noise-related construction impacts or disruption of traffic circulation and access would occur

related to construction of the proposed interchange improvements. The following impact would occur under this alternative.

Impact LU7: Inconsistent with Adopted Plans

The No-Project Alternative is inconsistent with the MC&FP, MTP, and MTIP since it does not include expanding the Missouri Flat Road interchange, adding auxiliary lanes to U.S. 50 in each direction over the Weber Creek bridges, and widening Missouri Flat Road from north of Prospector's Plaza Drive to south of Perks Court, as called for in these plans and programs. This impact is considered to be significant since the project conflicts with applicable land use plans and policies.

Mitigation Measure LU7a: Construct the SPDI, 6-Lane Tight Diamond Interchange Alternative, or the 4-Lane Tight Diamond Alternative

Any of these interchange configurations would meet the project purpose and need and be consistent with adopted plans. If the County decides to adopt one of these alternatives rather than the No-Project Alternative, this impact would be reduced to less than significant.

6-Lane Tight Diamond Alternative

Impacts related to direct land use changes, planned land uses, consistency with plans and policies, growth inducement, and construction-related activities would be similar to those of the preferred alternative, and are judged to have the same pre- and post-mitigation significance conclusions and require the same mitigation. However, the 6-Lane Tight Diamond Alternative requires that less land be acquired during the Ultimate Phase of construction than would be required under the SPDI, as shown in Tables 5.1-1 through 5.1-3. APNs 327-140-02, 327-190-32, 327-190-34, and 327-190-35 would have no permanent acquisitions under the Ultimate Phase of the 6-Lane Tight Diamond Alternative, but would experience permanent sliver acquisitions with construction of the SPDI. However, APN 327-140-02 would experience a greater temporary construction acquisition under the 6-Lane Tight Diamond Alternative than under the SPDI.

Construction-related disruptions (such as interference with driveway access and potentially less dust generation) on APNs 327-130-19 (6910 Perks Court) and 327-130-18 (6940 Perks Court) could be less under the Perks Court realignment option since the driveways for these parcels would not need to be reconstructed during the Ultimate Phase under this alternative as it would under the SPDI.

4-Lane Tight Diamond Alternative (2025)

This alternative would not include construction of an Ultimate Phase and assumes that the 4-lane tight diamond interchange configuration would accommodate planned development approved by the County's new general plan through 2025. Permanent right-of-way acquisitions or temporary construction easements from 29 parcels would occur during only 1 phase of construction. Since only 1 phase of construction would occur, permanent or temporary right-of-way acquisitions associated with the Ultimate Phase of construction would not occur (see Tables 5.1-1 through 5.1-3). Therefore, the magnitude of construction-related impacts would be less severe under this alternative, but it would have the same pre- and post-mitigation significance conclusions and require the same mitigation as the preferred alternative.

Table 5.1-2. Acquisitions and Easements under Perks Court Options

Assessor's Parcel Number[a]	Cul-de-sac Option, Phase 1 and Ultimate Phase				Realignment Option							
					Phase 1				Ultimate Phase[b]			
	Impact Area			Comments[c]	Impact Area			Comments[c]	Impact Area			Comments
	Meter^2	Foot^2	Acre		Meter^2	Foot^2	Acre		Meter^2	Foot^2	Acre	
327-130-22	30	323	0.01	Permanent acquisition of property; no structure, parking, or signage loss	60	646	0.01	Permanent acquisition of property; no structure, parking, or signage loss	0	0	0.00	
	30	323	0.01	Temporary construction easement				Temporary construction easement	0	0	0.00	
327-130-25	100	1,076	0.02	Permanent acquisition of property; no structure, parking, or signage loss	300	3,229	0.07	Permanent acquisition of property; no structure, parking, or signage loss	0	0	0.00	
	150	1,615	0.04	Temporary construction easement	30	323	0.01	Temporary construction easement	0	0	0.00	
327-130-21	200	2,153	0.05	Permanent acquisition of property; no structure, parking, or signage loss; no impact to residence	1,700	18,299	0.42	Residence at 6850 Perks Court to be purchased in whole	500	5,382	0.12	Purchased by El Dorado County in Phase 1
327-130-20	21,000	22,6050	5.19	H&S Gas Mart and residence at 6880 Perks Court to be purchased in whole	21,000	226,050	5.19	H&S Gas Mart and residence at 6880 Perks Court to be purchased in whole	1,800	19,376	0.44	Purchased by El Dorado County in Phase 1
327-130-19	3,800	40,904	0.94	Residence at 6910 Perks Court to be purchased in whole	250	2,691	0.06	Retain existing residence driveway at 6910 Perks Court; structures not impacted				New driveway access provided to residence at 6910 Perks Court
327-130-18	13,700	147,470	3.39	Residence at 6940 Perks Court to be purchased in whole	2,200	23,681	0.54	Retain existing residence driveway at 6940 Perks Court; structures not impacted				New driveway access provided to residence at 6940 Perks Court

Note: NA = not applicable.

[a] See Figure 3.1-4.

[b] Acres reflect additional right-of-way needed after Phase 1. Applies only to the SPDI. Under the 6-Lane Tight diamond Alternative, Perks Court would be realigned only under Phase 1 (not the Ultimate Phase) since the toe of the fill for the eastbound on-ramp does not encroach as far to the east.

[c] Permanent acquisition of property; no structure, parking, or signage loss indicates that only a sliver of the parcel would need to be acquired.

Table 5.1-3. Acquisitions and Easements under the 6-Lane Tight Diamond Alternative

Assessor's Parcel Number[a]	Phase 1	Ultimate Phase			
		Impact Area[b]			Comments[c]
		Meter^2	Foot^2	Acre	
327-140-02	Same as preferred alternative	1,800	19,376	0.44	Temporary construction easement
327-140-05		60	646	0.01	Permanent acquisition of property; no structure, parking, or signage loss; same as Ultimate Phase of SPDI
327-140-46		500	5,382	0.12	Temporary construction easement; same as Ultimate Phase of SPDI
327-211-04			0	0.00	Same as Ultimate Phase of SPDI
327-211-03			0	0.00	Same as Ultimate Phase of SPDI
327-211-02			0	0.00	Same as Ultimate Phase of SPDI
327-211-01			0	0.00	Same as Ultimate Phase of SPDI
327-130-22					See Table 3.1-2; either the Perks Court cul-de-sac or the realignment (Phase 1 only) option could be implemented
327-130-25					See Table 3.1-2; either the Perks Court cul-de-sac or the realignment (Phase 1 only) option could be implemented
327-130-21					See Table 3.1-2; either the Perks Court cul-de-sac or the realignment (Phase 1 only) option could be implemented
327-130-20					See Table 3.1-2; either the Perks Court cul-de-sac or the realignment (Phase 1 only) option could be implemented
327-130-19					See Table 3.1-2; either the Perks Court cul-de-sac or the realignment (Phase 1 only) option could be implemented
327-130-18					See Table 3.1-2; either the Perks Court cul-de-sac or the realignment (Phase 1 only) option could be implemented
327-190-32			0	0.00	
327-190-34			0	0.00	
327-190-35			0	0.00	
327-190-36			0	0.00	Same as Ultimate Phase of SPDI
325-230-23			0	0.00	Same as Ultimate Phase of SPDI
El Dorado County		NA	NA	NA	NA
325-180-14			0	0.00	Same as Ultimate Phase of SPDI
			0	0.00	Same as Ultimate Phase of SPDI
325-230-18		300	3,229	0.07	Permanent acquisition of property; no structure, parking, or signage loss; same as Ultimate Phase of SPDI
327-130-47		150	1,615	0.04	Permanent acquisition of property; no structure, parking, or signage loss; same as Ultimate Phase of SPDI
327-130-49			0	0.00	Same as Ultimate Phase of SPDI
327-130-43			0	0.00	Same as Ultimate Phase of SPDI
327-130-46			0	0.00	Same as Ultimate Phase of SPDI
327-130-45			0	0.00	Same as Ultimate Phase of SPDI
327-130-37			0	0.00	Same as Ultimate Phase of SPDI
327-130-35		150	1,615	0.04	Same as Ultimate Phase of SPDI, see Comments column in Table 3.1-1
327-130-14		40	431	0.01	Same as Ultimate Phase of SPDI, see Comments column in Table 3.1-1
327-130-13			0	0.00	Same as Ultimate Phase of SPDI
327-130-12			0	0.00	Same as Ultimate Phase of SPDI
327-290-58			0	0.00	Same as Ultimate Phase of SPDI

Note: NA = not applicable.

[a] See Figure 3.1-4.

[b] Areas reflect additional right-of-way needed after Phase 1.

[c] Permanent acquisition of property; no structure, parking, or signage loss indicates that only a sliver of the parcel would need to be acquired.

5.2 Community Impacts

See section 3.2.1, "Affected Environment," for a discussion of the community impacts setting.

5.2.1 Determining Significance under CEQA

A community impact is considered significant if it would displace a large number of residents thereby substantially changing the character or cohesion of an existing neighborhood.

Under CEQA, the social and economic effects of projects are not normally considered impacts on the environment; therefore, no criteria have been developed to evaluate the significance of purely social or economic effects of the project. These purely social or economic effects include tax revenue changes and construction-related economic effects. Although CEQA allows social or economic changes to be used to determine the significance of the physical changes of the project, the significance of the physical changes themselves are addressed elsewhere in the document.

5.2.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact C1: Minor Population Impacts

Under the Perks Court cul-de-sac option, an estimated 8 persons residing in 3 single-family homes located in the southeast quadrant of the Missouri Flat Road interchange could be displaced. Under the Perks Court realignment option, 5 residents residing in 2 single-family homes could be displaced (see also Impact R1 in section 3.3, "Relocation"). The potential change in population would be considered minor in the context of the current population of the County and the study area. This impact is considered to be less than significant since the project would not displace a large number of people or substantially change the character or cohesion of an existing neighborhood.

Mitigation Measure

None proposed.

Impact C2: Minor Local Tax Revenue Impacts

The removal of the residences and businesses and the acquisition of a right-of-way acquired for the preferred alternative could reduce property and sales tax revenues for the County and other local agencies. Annual County property tax revenues would be reduced by an estimated $21,200 (Perks Court cul-de-sac option) or $20,100 (Perks Court realignment option). Although such reductions would be adverse, they would not substantially affect the ability of local agencies and districts to provide public and educational services.

In addition to property tax revenue, sales tax revenue could also be reduced because of the displacement of the fast food restaurant and gas station. Based on average taxable sales data for establishments in El Dorado County, as reported by the California Board of Equalization (2001), the displacement of the restaurant and gas stations could cause the loss of approximately $2.6 million in taxable sales. This reduction could result in the loss of approximately $26,000 in sales tax revenue to El Dorado County. The revenue loss would represent about 0.5% of the county's sales tax revenue but would be offset if the businesses relocate to locations elsewhere in the county or if the lost sales are ultimately absorbed by existing or new businesses within the county.

Over the long term, the reductions in property and sales tax revenues potentially caused by the project will likely be offset. The project would facilitate new commercial development within the MC&FP area, thereby generating new sales taxes created by that development. The project could also indirectly generate revenues through project improvements. For example, the addition of sidewalks, curbs and gutters could increase the values of properties in the study area, thereby eventually leading to increased assessed values and higher property tax revenues. Similarly, intersection improvements and the resulting benefits in reduced traffic congestion may facilitate new commercial development within the study area, generating new sales tax revenue. These revenue benefits cannot be quantified, but these long-term revenue effects may offset the near-term effects of the project. This impact is considered an economic, not an environmental one, and, therefore, no significance conclusion is given.

Mitigation Measure

None proposed.

Impact C3: Minor Local and Roadside Business Impacts

As described under Impact R2 in section 3.3, "Relocation", Phase 1 construction of the preferred alternative could result in the displacement of three businesses in the study area, including H&S Gas Mart, a Jack-in-the-Box restaurant, and a Chevron Station & Gas Mart. Assuming these businesses do not relocate to sites within the study area, an estimated 27 retail jobs would be permanently lost within the area. While adverse, the loss of these jobs would not represent a substantial reduction in employment opportunities for study area or regional residents, representing 0.6% of 2000 study area employment and less than 0.1% of countywide employment. Ultimately, the employment effects may not be as great as 27 jobs since the sales of displaced businesses may be absorbed by businesses elsewhere in the county, resulting in new jobs being created in those businesses. Additionally, the loss of employment would be somewhat offset by employment opportunities generated by construction of the preferred alternative, although these jobs would be temporary and located within the construction section rather than the retail trade sector. This impact is considered to be less than significant since the project would not displace a large number of businesses.

Mitigation Measure

None proposed.

Temporary Impacts: SPDI

Impact C4: Minor Beneficial Construction-Related Economic Impacts

The construction of proposed improvements for the preferred alternative would generate temporary economic activity in the County and the region, including purchases of goods and services required for construction and employment of workers needed for construction. This increased economic activity would prompt secondary economic activity as construction-related revenue and employee income are respent in sectors throughout the regional economy. The extent of the economic impact of construction-related expenditures on the economy of the County would depend on the proportion of construction expenditures that would occur in the local and regional area and on the residential location of persons employed by construction contractors.

The employment and income impacts generated by construction activities would begin in 2005 for the Phase 1 construction and extend through the construction period, which is expected to last for about 18 months. If the Ultimate Phase of

construction were to occur after 2015, employment and income impacts would extend through this construction period. The number of jobs potentially generated by project construction is not known, but many of the non-specialized construction jobs could be filled by persons in the El Dorado County labor force; however, most of the specialists jobs (e.g., crane operators, iron workers) may be filled by outside-of-the-region workers. This impact is considered an economic, not an environmental one, and, therefore, no significance conclusion is given.

Mitigation Measure

None proposed.

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts.

No-Project Alternative (2025)

No construction would occur under this alternative. Therefore, no community impacts would occur.

6-Lane Tight Diamond Alternative

The impacts would be similar to the preferred alternative. The portions of properties within the project right-of-way have a total assessed value of $1.9 million (Perks Court cul-de-sac option) or $1.8 million (Perks Court realignment option). These properties annually generate approximately $21,000 (Perks Court cul-de-sac option) or $19,900 (Perks Court realignment option).

4-Lane Tight Diamond Alternative (2025)

The impacts would be similar to the preferred alternative. The portions of properties within the project right-of-way have a total assessed value of $1.9 million (Perks Court cul-de-sac option) or $1.8 million (Perks Court realignment option). These properties annually generate approximately $21,100 (Perks Court cul-de-sac option) or $20,000 (Perks Court realignment option). Beneficial short-term employment and economic impacts would not occur during a second phase of construction.

5.3 Relocation

See section 3.3.1, "Affected Environment," for a discussion of the relocation setting.

5.3.1 Determining Significance under CEQA

A relocation impact is considered significant if it would:

- substantially change the character or cohesion of an existing neighborhood by dividing, isolating, or disrupting the community;
- displace substantial numbers of existing housing or residents, necessitating the construction of replacement housing elsewhere; or
- displace existing businesses that provide essential or critical services to the local community.

5.3.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact R1: Displacement of 3 (Perks Court cul-de-sac Option) or 2 (Perks Court Realignment Option) Residences

In the area immediately southeast of the Missouri Flat Road interchange, Phase 1 construction of the preferred alternative with the Perks Court cul-de-sac option would displace a total of 3 residences located in a rural residential neighborhood along Perks Court (Assessor Parcel Numbers [APNs] 327-130-18, 327-130-19, and 327-130-20), resulting in the displacement of an estimated 8 residents. With the Perks Court realignment option, a total of 2 residences along Perks Court (327-130-20 and 327-130-21) would be displaced, resulting in the displacement of an estimated 5 residents. A total of 4 different residences could be affected by the Perks Court reconstruction options (see Tables 5.1-1 through 5.1-3).

None of the potentially displaced residents are known to have special relocation needs. According to 2000 Census data for the Census tract containing the displaced residents (i.e., Census tract 315.02), the age and ethnic characteristics of residents in the displacement area are similar to those of nearby Placerville. All of the displaced residential units are single-family homes located on rural lots ranging in size from 0.17-2.1 hectare (0.42-5.13 acres). Of the 4 homes that could be displaced under the

2 Perks Court reconstruction options, it is believed that 2 of the homes are owner occupied and that 2 of the homes are occupied by a tenant. The residential displacements include the following parcels:

Perks Court cul-de-sac option (Phase 1):

- 6940 Perks Court (APN 327-130-18): full acquisition, 1.4-hectare (3.56-acre) lot, 117-square meters (1,266-sqare feet (sf)) single-family home and 2 outbuildings, owner occupied;
- 6910 Perks Court (APN 327-130-19): full acquisition, 0.37-hectare (0.92-acre) lot, 181-square meters (1,952-sf) single-family home and detached garage/storage building, owner occupied;
- 6880 Perks Court (APN 327-130-20): full acquisition, 2.1-hectare (5.13-acre) lot, 71-square meters (768-sf) single-family home and shop building used for business (see Impact R2 below), renter occupied.

Perks Court realignment option (Phase 1):

Under the Perks Court realignment option, only a partial acquisition would be required for the properties located at 6910 and 6940 Perks Court (see above); their existing driveways would be retained and no displacement of structures on the properties would occur. Under this option, the displacement effects on the property at 6880 Perks Court would be the same as under the Perks Court cul-de-sac option. In addition to this displacement, the realigned Perks Court option would also result in the following residential displacement:

- 6850 Perks Court (APN 327-130-21): full acquisition, 0.17-hectare (0.42-acre) lot, 116-square meter (1,255-sf) single-family home; believed to be renter occupied.

No additional residential building displacements would occur during the Ultimate Phase of construction.

The County would comply with the requirements of state and federal laws to mitigate relocation impacts. The residents of the displaced homes are likely to seek single-family homes on parcels of 0.17-2.1 hectare (0.42-5.13 acres) within the same region. During the 2000 U.S. Census, 51 vacant housing units were identified as available to be rented or purchased within CTs 309.02 and 315.02. A more recent review of homes-for-sale data for the 95667 zip code area, which takes in the displacement area and the larger Placerville area, found that 118 single-family homes were for sale

(Realtor.com 2001). Of the homes for sale, 80 (68%) were located on parcels of 1 or more acres. The available homes were distributed across a range of prices, as described in the "Housing Stock, Vacancy Rates, and Housing Values" section in section 3.2.1, "Affected Environment" for Community Impacts and Environmental Justice. During this same period, 20 homes were listed for rent in the Placerville area. Similarly, data available for rental properties reveal a variety of housing units available for rent in the vicinity of the residential displacements. In December, 2001, 22 homes were available for rent in the Placerville area (*Mountain Democrat*, classified listings, December 13, 2001). More recently, more than 30 homes, many situated on acreage, were available (*Mountain Democrat*, classified listings, April 22, 2002). Available rental homes ranged from one to four bedrooms, with monthly rents ranging from $700 to $1,850. Apartment units were also available in 11 apartment complexes within the 95667 (Placerville) Zip Code area (homestore.com, April 22, 2002). Based on these data, the housing market in the vicinity of the displacement area appears to be fairly balanced and affordable to a wide range of buyers. There appears to be ample single-family residential replacement properties on the market similar to the displacement properties.

This impact is considered to be less than significant since substantial numbers of existing housing or residents would not be displaced, and replacement housing would not need to be constructed elsewhere. The County would still need to comply with Mitigation Measure R1a since it meets the legal obligations that arise under a law other than CEQA.

Mitigation Measure R1a: Compensate Displaced Land Uses in Conformance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act

The County will compensate displaced residences and businesses in conformance with Federal and state laws (i.e., the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Public Law 91-646, as amended April 2, 1987; California Government Code, Chapter 16, Section 7260, et seq. [the Uniform Relocation Act]). These laws require that relocation assistance be provided to any person, business, or nonprofit organization displaced because of the acquisition of real property by a public entity for public uses. Compliance with the federal act is required where federal funds are to be used in the acquisition or construction of the project. The Federal Uniform Relocation Assistance Act of 1970 (as amended) and the California Relocation Assistance Act (Government Code Section 7260 et seq.)

both require that, within a reasonable period of time prior to displacement, comparable replacement housing and commercial properties will be available or provided for each displaced person. Such assurance must be specifically given on every project requiring residential or business displacement. (California Department of Transportation 1997.)

A local certified public agency (El Dorado County) shall carry out the relocation plan to help eligible displaced individuals move with as little inconvenience as possible. All rights and services provided under Public Law 91-646, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, shall be strictly adhered to. Persons displaced as a result of the project shall receive fair and equitable treatment and shall not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole. Relocation resources will be made available to all commercial and residential displacees without discrimination. Appraisals to determine actual market value will be conducted for each property to be relocated once a final alignment has been selected and the Finding of No Significant Impact (FONSI) is signed. See Appendix F for more details.

Impact R2: Displacement of 3 Commercial Businesses

Construction of the preferred alternative would also displace 3 businesses that employ an estimated 27 persons. One of the businesses is located on Perks Court south of U.S. 50 and the other 2 are located along Missouri Flat Road north of U.S. 50. It is uncertain whether the displacements along Missouri Flat Road will occur during Phase 1 or the Ultimate Phase. During the final design phase of the project, a final determination will be made concerning the extent of acquisitions of these properties. The commercial displacements, which would be identical for both Perks Court reconstruction options, would include the following parcels (see Table 3.1-1):

- 6880 Perks Court (APN 327-130-20): full acquisition during Phase 1 H&S Gas Mart, an onsite propane distribution and repair business located in a 1,344-square-foot Butler-style shop building on a parcel shared with a single-family home. The business is operated by a tenant.
- 3945 Missouri Flat Road (APN 327-130-35): full acquisition during Phase 1 or Ultimate Phase, Jack-in-the-Box restaurant. Proposed Phase 1 sidewalks along Missouri Flat Road result in acquisition of drive-through lane and window. A partial acquisition may result during Phase 1 if the location of the drive-through lane and window can be reoriented to the rear of the structure, which would also require redesign of the restaurant's interior space. This outcome is considered

unlikely as the building setback is unlikely to meet County standards with the proposed sidewalks. The Ultimate Phase would encroach upon the building.

- 3943 Missouri Flat Road (APN 327-130-14): full acquisition during Phase 1 or Ultimate Phase, Chevron Station & Food Mart. A partial acquisition may result during Phase 1 if the gas pumps can be relocated to another area of the site (e.g., alongside the food mart and vehicle service bays), which would leave the business largely intact. This outcome is considered unlikely, however, because moving the pumps would be difficult and costly, shifting the location of the pumps would result in the loss of parking space needed for the food mart and service bays, and internal traffic circulation would likely be impeded.

No additional commercial displacements will occur during the Ultimate Phase of construction.

The County would comply with the requirements of state and federal laws to mitigate relocation impacts. The 3 displaced businesses would require replacement commercial properties suitable for their types of businesses. Informal discussions with the owner and tenant of the H&S Gas Mart propane property indicate that relocation of this business may not be necessary. The property owner has indicated an interest in selling the property, and the tenant-operator of H&S Gas Mart has indicated an interest in retiring and closing the business once the property has been sold (Payne pers. comm.). Should the business require relocation, H&S Gas Mart would require a nearby site with a relatively small (1,400-square-foot) light industrial type structure.

The Jack-in-the-Box and Chevron businesses would require visible locations on streets with high traffic volumes. Relocating these businesses may require constructing commercial retail space that fits the specific needs of the displaced businesses. According to the draft environmental impact report prepared for the MC&FP (EDAW 1998), an estimated 1.5 million square feet of commercial space was expected to be developed in the Missouri Flat area at buildout of areas designated for commercial uses, including 768,000 square feet of commercial space on vacant properties with no pending projects. According to CB Richard Ellis (2001), more than 62,000 square feet of commercial space were also available for lease in the Folsom/El Dorado Hills market area during the latter part of 2001. These data indicate that ample commercial properties are available in the Missouri Flat area and in nearby areas for relocation of the displaced businesses.

Additionally, an opportunity may exist to relocate at least 1 of the potentially displaced businesses to the El Dorado Villages Shopping Center site, an approved retail development that will be constructed on the vacant parcel immediately south of the displaced Jack-in-the-Box and Chevron businesses. The development includes sites for a gas station and 2 fast food restaurants. A commitment has already been made to lease the gas station site; however, the fast-food sites are still available, providing a potential opportunity for nearby relocation of the Jack-in-the-Box restaurant (Sparre pers. comm.).

This impact is considered to be significant since existing businesses would be displaced.

- *Mitigation Measure R1a: Compensate Displaced Land Uses in Conformance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act.* See Impact R1 for a description of this measure. Implementation of this measure would reduce this impact to less than significant.

Temporary Impacts: SPDI

The project would not result in any temporary displacement impacts.

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts.

No-Project Alternative (2025)

No construction would occur under this alternative. Therefore, no residential or commercial displacements would occur.

6-Lane Tight Diamond Alternative

Residential and commercial displacements would be identical to the preferred alternative.

4-Lane Tight Diamond Alternative (2025)

Residential and commercial displacements would be identical to the preferred alternative.

5.4 Traffic and Transportation/Pedestrian and Bicycle Facilities

See section 3.4.1, "Affected Environment," for a discussion of the traffic and transportation/pedestrian and bicycle facilities setting. Traffic volume forecasts for 2005 and 2015 are contained in Chapter 3. Traffic volume forecasts for 2025 are described below.

5.4.1 2025 Conditions

For 2025 conditions, 3 alternative build scenarios (SPDI, 6-Lane Tight Diamond Alternative, and 4-Lane Tight Diamond Alternative) were compared to the No-Project Alternative (2025). 2025 conditions are also compared to existing conditions. Figures 5.4-1 through 5.4-4 display the geometrics, traffic control, and peak-hour traffic volumes for these 3 scenarios. The analysis results are discussed below.

Freeway Operations

Traffic operations results for the U.S. 50 ramp junctions and weaving areas created by the SPDI, 6-Lane Tight Diamond Alternative, and 4-lane Tight Diamond Alternative under 2025 conditions are contained in Tables 5.4-1 and 5.4-2. Table 5.4-1 also includes the No-Project Alternative (2025). The ramp junctions would operate acceptably at LOS D or better during the a.m. and p.m. peak hours in 2025 with the SPDI or the 6-Lane Tight Diamond Alternative. The weaving area speeds would be approximately 60 mph in both directions during the a.m. and p.m. peak hours with either interchange configuration. These average speeds represent almost free-flow conditions and are substantially higher than the 42 mph LOS D threshold for nonweaving vehicles used by the 1994 HCM. Further, the CORSIM simulation shows no operational problems in the weaving sections. Therefore, both weaving sections were considered to operate acceptably. The 4-Lane Tight Diamond Alternative (2025) would have unacceptable LOS E operations at the eastbound off-ramp and p.m. peak-hour freeway speeds that are slightly lower than the other 2 build alternatives.

In comparison to No-Project Alternative, the 3 build alternatives provide substantial improvements to peak-hour traffic operations. For example, the westbound off-ramp under the No-Project Alternative would operate at LOS F and the freeway speeds on eastbound and westbound U.S. 50 between Missouri Flat Road and Forni

Road/Placerville Drive would be less than 20 mph during the a.m. and p.m. peak hours.

The Caltrans LOS C Method results are shown in Table 5.4-2.

The results in Table 5.4-2 show adequate weaving section lengths for the eastbound U.S. 50 between the Placerville Drive on-ramp and the Missouri Flat Road off-ramp. However, the weaving section length for westbound U.S. 50 would be insufficient. Since the LOS C methodology does not consider the rate of traffic flow into the weaving section, CORSIM was used to analyze the weaving section. This is an important consideration under 2025 conditions because the westbound U.S. 50 on-ramp from Placerville Drive would be metered. As a result, the CORSIM analysis showed that the weaving section would operate acceptably with a.m. and p.m. peak-hour average speeds of approximately 60 mph for all freeway vehicles between the 2 ramps under 2025 conditions under the proposed action and both build alternatives.

Table 5.4-2. Caltrans Weaving Section Evaluation—2025 Conditions

Weaving Section/Alternative	Weaving Length (meters)	Minimum Weaving Section Length to Maintain LOS C[a] (meters)	
		A.M. Peak Hour	P.M. Peak Hour
SPDI (Preferred Alternative)			
U.S. 50 eastbound—Missouri Flat Road on-ramp to Forni Road off-ramp	820	450	468
U.S. 50 westbound—Placerville Drive on-ramp to Missouri Flat Road off-ramp	314	**383**	**538**
6-Lane Tight Diamond Alternative			
U.S. 50 eastbound—Missouri Flat Road on-ramp to Forni Road off-ramp	884	450	468
U.S. 50 westbound—Placerville Drive on-ramp to Missouri Flat Road off-ramp	314	**383**	**538**
4-Lane Tight Diamond Alternative			
U.S. 50 eastbound—Missouri Flat Road on-ramp to Forni Road off-ramp	884	450	468
U.S. 50 westbound—Placerville Drive on-ramp to Missouri Flat Road off-ramp	314	**383**	**538**

[a] Caltrans Highway Design Manual, Section 504.7.
Bold and underlined minimum weaving section lengths are not achievable.

Arterial Intersection Operations

Traffic operations results for the arterial intersections are displayed in Table 5.4-3.

In comparison to the No-Project Alternative, the SPDI, 6-Lane Tight Diamond Alternative, and 4-Lane Tight Diamond Alternative (2025) provide substantial

Table 5.4-1. Ramp Junction and Weaving Section LOS/Operations Summary—2025 Conditions

Ramp Junction	SPDI (Preferred Alternative)		Alternatives					
			No-Project Alternative		6-Lane Tight Diamond Alternative		4-Lane Tight Diamond Alternative	
	A.M. Peak-Hour LOS/Density[a]	P.M. Peak-Hour LOS/Density[a]	A.M. Peak-Hour LOS/Density[a]	P.M. Peak-Hour LOS/Density[a]	A.M. Peak-Hour LOS/Density[a]	P.M. Peak-Hour LOS/Density[a]	A.M. Peak-Hour LOS/Density[a]	P.M. Peak-Hour LOS/Density[a]
U.S. 50 eastbound off-ramp	B/18	B/18	E/39	E/36	C/20	B/19	E/39	E/36
U.S. 50 eastbound on-ramp	*(b)*	*(b)*	D/32	D/32	*(b)*	*(b)*	*(b)*	*(b)*
U.S. 50 westbound off-ramp	*(b)*	*(b)*	D/30	F/*	*(b)*	*(b)*	*(b)*	*(b)*
U.S. 50 westbound on-ramp	C/23	D/33	C/23	D/33	C/23	D/33	C/23	D/33
Weaving area (CORSIM results)	A.M. peak hour avg. speed[c]	P.M. peak hour avg. speed[c]	A.M. peak hour avg. speed[c]	P.M. peak hour avg. speed[c]	A.M. peak hour avg. speed[c]	P.M. peak hour avg. speed[c]	A.M. peak hour avg. speed[c]	P.M. peak hour avg. speed[c]
U.S. 50 eastbound—Missouri Flat Road on-ramp to Forni Road off-ramp	58	59	13	13	58	58	59	58
U.S. 50 westbound—Placerville Drive on-ramp to Missouri Flat Road off-ramp	61	59	19	15	62	60	61	56

[a] Density is reported in passenger cars per mile per lane.
[b] The Phase 1 Tight Diamond interchange includes continuous auxiliary lanes on U.S. 50 between the Missouri Flat Road and Placerville Drive/Forni Road interchanges, which create weaving sections that govern the operation of the freeway in this area.
[c] Avg. speed = average speed for U.S. 50 freeway segments between Missouri Flat Road and Forni Road.
* Demand flow exceeds capacity.

Table 5.4-3. Intersection LOS Summary—2025 Conditions

Intersection	SPDI (Preferred Alternative)		Alternatives					
			No-Project Alternative		6-Lane Tight Diamond Alternative		4-Lane Tight Diamond Alternative	
	A.M. Peak-Hour LOS/Delay[a]	P.M. Peak-Hour LOS/Delay[a]	A.M. Peak-Hour LOS/Delay[a]	P.M. Peak-Hour LOS/Delay[a]	A.M. Peak-Hour LOS/Delay[a]	P.M. Peak-Hour LOS/Delay[a]	A.M. Peak-Hour LOS/Delay[a]	P.M. Peak-Hour LOS/Delay[a]
Missouri Flat Road/ Prospector's Plaza Drive	B/12	B/15	**F/>60**	**F/>60**	B/13	C/15	B/14	C/24
Missouri Flat Road/Bank Driveway (unsignalized)			**F/>45**	**F/>60**				
Missouri Flat Road/ U.S. 50 westbound ramps	C/20	C/24	**F/>60**	**F/>60**	C/16	C/18	C/17	D/26
Missouri Flat Road/ U.S. 50 eastbound ramps	C/20	C/24	**F/>60**	**F>60**	B/7	B/15	B/8	C/22
Missouri Flat Road/ Mother Lode Drive	B/8	B/8	**F/>60**	**F>60**	B/7	B/14	B/7	E/42
Arterial operations performance	A.M. peak hour	P.M. peak hour	A.M. peak hour	P.M. peak hour	A.M. peak hour	P.M. peak hour	A.M. peak hour	P.M. peak hour
Vehicle demand served	101%	100%	90%	79%	97%	98%	95%	95%
Vehicle hours of delay	32	55	76	390	33	71	34	149

Note: LOS shown in bold underlined font indicates the intersection LOS is assumed to be F because less than 95% of peak hour vehicle demand is served. As a result, peak hour conditions would spread to multiple hours.

[a] Average stopped delay. All delay is reported in seconds per vehicle.

improvements to peak-hour traffic operations. For example, all of the study intersections would operate at LOS F during the p.m. peak hour under the No-Project Alternative and only 79% of the projected demand would be served. As a result, the LOS F conditions would spread to multiple hours during the evening peak.

Although the 4-Lane Tight Diamond Alternative (2025) is reported to have acceptable peak-hour levels of service for overall intersection operations under 2025 conditions, isolated problems would be expected for individual turning movements and intersection approaches. This is evidenced by the queuing results, overall corridor delay, and visual simulation. Unacceptable queuing is projected at multiple intersections and only 95% of the a.m. and p.m. peak-hour demand is served by this alternative, which may indicate that the LOS results are worse than reported. The overall corridorwide delay is less than the No- Project Alternative, but more than double that of the other 2 build alternatives during the critical p.m. peak hour.

The SPDI and 6-Lane Tight Diamond Alternative would provide acceptable (i.e., LOS C or better) operations at the study intersections under 2025 conditions. During the a.m. peak hour, both alternatives would have similar intersection and corridorwide operations. With higher volumes during the p.m. peak hour, the SPDI would have less corridorwide vehicle hours of delay (VHD) mainly because of having 1 less intersection in the corridor. The vehicles traveling through the SPDI ramp terminals intersection would have approximately 24 seconds of average stopped delay during the p.m. peak hour. Vehicles traveling through the combination of the westbound and eastbound ramp terminal intersections associated with the 6-Lane Tight Diamond Alternative would have approximately 33 (18+15) seconds of stopped delay. This difference accounts for most of the additional VHD associated with the 6-Lane Tight Diamond Alternative. When traffic volumes are lower (i.e., during the a.m. peak hour), the combined intersection delays for the 6-Lane Tight Diamond Alternative are almost the same as that of the SPDI ramp terminals intersection and the overall corridor delay is also closer.

Some of the individual turning movements for the SPDI and 6-Lane Tight Diamond Alternative are projected to have maximum queues that would exceed available storage. The maximum queue is longer than the 95th percentile, which is typically used to size storage bays, and provides a conservative measure for evaluating potential queuing problems. The maximum queues were observed a very limited number of times during the peak-hour simulations, and the average queue lengths for

these movements are well within the available storage. Given these conditions and the fact that the CORSIM analysis uses conservative assumptions regarding saturation flow rates and traffic signal operations, these queuing results do not represent major problems and queuing would not affect mainline U.S. 50 operations. For the 4-Lane Tight Diamond Alternative (2025), queuing is more severe as noted above and is likely to adversely affect interchange operations.

5.4.2 Determining Significance under CEQA

Based on the policies of the El Dorado County General Plan and Caltrans, an impact is considered to be significant if any of the following would occur. Acceptable levels of service as defined below are based on Caltrans' policy for U.S. 50 and Policy 3.5.1.1 of the El Dorado County General Plan for County roadways (see the "Minimum Acceptable Levels of Service" section in section 3.4):

- Project implementation changes the level of service on any component of U.S. 50 (mainline, weaving segments, or ramp junctions) from acceptable levels (LOS A, B, C, or D) to unacceptable levels (E or F), or worsens an unacceptable LOS;
- Project implementation changes level of service at the Missouri Flat Road/ Prospector's Plaza Drive or the Missouri Flat Road/Bank Driveway intersections in the project vicinity from acceptable levels (LOS A, B, or C) to unacceptable levels (LOS D, E, or F), or worsens an unacceptable LOS;
- Project implementation changes level of service at the Missouri Flat Road/U.S. 50 westbound ramps intersection in the project vicinity from acceptable levels (LOS A, B, C, or D) to unacceptable levels (LOS E or F), or worsens an unacceptable LOS;
- Project implementation changes level of service at the Missouri Flat Road/U.S. 50 eastbound ramps intersection or the Missouri Flat Road/ Mother Lode Drive intersection in the project vicinity from acceptable levels (LOS A, B, C, D, or E) to unacceptable levels (LOS F), or worsens an unacceptable LOS;
- Project implementation disrupts existing or planned transit operations and facilities of the El Dorado Transit Authority;
- Project implementation disrupts existing or planned bicycle or pedestrian facilities contained in the El Dorado County Bicycle Transportation Plan (El Dorado County Parks and Recreation Division 2001) and the El Dorado County Bikeway Master Plan (El Dorado County 1977);
- Project construction results in unacceptable traffic safety concerns;

- Project implementation substantially increases hazards due to a design feature (such as sharp curves or dangerous intersections) or incompatible uses (such as farm equipment);
- Project implementation results in inadequate emergency access; or
- The project is in conflict with adopted policies, plans, or programs supporting alternative transportation (such as bus turnouts and bicycle racks).

5.4.3 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact T1: 2005—Acceptable LOS at All Ramp Junctions

All ramp junctions would operate at LOS C in 2005 with construction of the Phase 1 4-lane tight diamond interchange (Table 3.4-7). The project would not degrade existing or 2005 No-Project LOS from an acceptable to an unacceptable level (the minimum acceptable LOS is considered C at the Missouri Flat Road/Prospector's Plaza Drive and Missouri Flat Road/Bank Driveway intersections, D at the Missouri Flat Road/U.S. 50 westbound ramps intersection, and E at the Missouri Flat Road/U.S. 50 eastbound ramps and the Missouri Flat Road/Mother Lode Drive intersections. Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact T2: 2005—Unacceptable Weaving Conditions at the U.S. 50/Missouri Flat Road Eastbound On-Ramp until the U.S. 50/Forni Road/Placerville Drive Interchange is Improved

Unacceptable weaving conditions are expected to occur at the U.S. 50 eastbound on-ramp because of existing queuing from the U.S. 50/Forni Road/Placerville Drive interchange that originates at the ramp terminal intersections based upon the current weaving threshold criteria of LOS D (Caltrans has allowed LOS E at other locations in the state). Weaving conditions at the U.S. 50 westbound on-ramp are expected to be acceptable in 2005.

The eastbound queues are projected to extend onto the U.S. 50 mainline as far back as the U.S. 50/Missouri Flat Road interchange under both No-Project and Phase 1

conditions. The proposed Phase 1 improvements to the Missouri Flat Road interchange would allow more peak-hour traffic to enter eastbound U.S. 50 from Missouri Flat Road, which would exacerbate the existing queuing problem. (It should also be noted that the Phase 1 improvements provide a continuous auxiliary lane in the eastbound direction, which would reduce the delay to through vehicles and reduce the safety concerns associated with the queued vehicles encroaching on the through lanes.) This impact is considered to be significant in the short-term (until the U.S. 50/Forni Road/Placerville Drive interchange is improved) (even considering the reduction in delay) because the project would change the existing LOS of this weaving section from an acceptable one (LOS C) to an unacceptable one (as noted in the "2005 Conditions" section, the average speed through this weaving area is not associated with a specific LOS because the CORSIM output does not provide speed performance measures that are consistent with the 1994 HCM methodology. However, acceptable operations are not expected to occur based on evaluation of average speeds.).

Mitigation Measure T2

Reducing this significant impact to a less-than-significant would require construction of planned improvements at the U.S. 50/Forni Road/Placerville Drive interchange prior to completing the improvements to the U.S. 50/Missouri Flat Road interchange. The County cannot control the timing of improvements at the U.S. 50/Forni Road/Placerville Drive interchange. Until the U.S. 50/Forni Road/Placerville Drive interchange is improved, implementation of Mitigation Measure T2a (described below) would reduce this impact to a less-than-significant level since it would result in an acceptable LOS (LOS D or better) during the a.m. peak hour and significantly improve speeds during the p.m. peak hour at this weaving section.

Mitigation Measure T2a: Provide Temporary Ramp Metering for the U.S. 50 Eastbound On-Ramp from Missouri Flat Road

The CORSIM micro-simulation model that was developed for this project was used to analyze ramp metering at the U.S. 50 eastbound on-ramp for Phase 1. This analysis (David Stanek pers. comm.) assumed that the ramp meter has two metered lanes and the ramp geometry provides a storage length of approximately 313.9 meters (1,030 feet) (from the eastbound ramp intersection to the ramp meter stop bar). It was also assumed that two vehicles per lane would enter the freeway during each ramp meter cycle. This analysis included a.m. and p.m. peak hour analysis involving multiple iterations testing varying the ramp metering rates. The goal of this analysis was to

provide a balance between freeway mainline and arterial intersection operations. Two ramp metering rates were evaluated:

- Option 1 (minimum headway) with headways of 20 and 16.4 seconds per cycle for the a.m. and p.m. peak hours, respectively, such that queues on the ramp would not extend onto Missouri Flat Road and more traffic would be allowed onto U.S. 50 (360 vph per lane in the a.m. peak hour and 438 vph per lane in the p.m. peak hour);
- Option 2 (maximum headway) with maximum rate of 240 vph per lane (or 30 seconds per cycle) in the a.m. and p.m. peak hours to reduce demand on U.S. 50 approaching the Forni Road interchange.

Table 3.4-16 shows that adding a ramp meter at the eastbound on-ramp improves the average speed to near free-flow conditions during the a.m. peak hour and significantly improves speeds during the p.m. peak hour. Option 2 provides higher freeway speeds, primarily during the p.m. peak hour.

According to the 1994 HCM, average speeds above 42 mph for non-weaving vehicles and 40 mph for weaving vehicles are associated with LOS D conditions. Average speeds less than 35 mph are associated with LOS F conditions. Because CORSIM does not differentiate between non-weaving and weaving vehicles, a direct comparison to the 1994 HCM criteria is not possible. Nevertheless, the improvement in average speed during the a.m. peak hour is considered to generate LOS D or better conditions for both options.

Table 3.4-17 describes intersection operations results for Missouri Flat Road. This table shows results for three options:

- Phase 1 with no ramp metering;
- Phase 1 with minimum headway; and
- Phase 1 with maximum headway.

The results in Table 3.4-17 show that both ramp metering options provide acceptable levels of service (LOS D or better) during the a.m. peak hour. Option 1 also has acceptable LOS during the p.m. peak hour since queues from the ramp meter do not interfere with traffic operations on Missouri Flat Road. However, Option 2 creates unacceptable levels of service (LOS F) at all study intersections during the p.m. peak hour. In the a.m. peak hour, the queue from the Forni Road off-ramp extends about half-way back to the Missouri Flat Road on-ramp in the auxiliary lane. Both ramp

meter options reduce this queue by about half. The queue at the ramp meter does not affect Missouri Flat Road under Option 1, but Option 2 has congestion on northbound Missouri Flat Road approaching the interchange.

For the p.m. peak hour, Phase 1 has congestion on eastbound U.S. 50 at the Forni Road off-ramp that extends back to the Missouri Flat Road overcrossing. Ramp metering under Option 1 shrinks the congested area so that the back of queue is east of the Missouri Flat Road on-ramp. Option 2 reduces the queuing to only the auxiliary lane so that through traffic is relatively unimpeded. The ramp meter queue under Option 1 has little or no effect on Missouri Flat Road; however, the lower ramp metering rate under Option 2 causes a long ramp queue which extends onto Missouri Flat Road in both directions causing significant congestion at the adjacent intersections.

Installing a ramp meter at the eastbound on-ramp from Missouri Flat Road can mitigate the congestion on eastbound U.S. 50 for Phase 1. If the metering rate is set such that the queues on the ramp do not back onto Missouri Flat Road (Option 1), the freeway speeds can be improved to near free-flow during the a.m. peak hour and increased over no project conditions in the p.m. peak hour. Freeway operations in the p.m. peak hour can be further improved by reducing the metering rate to the minimum practicable rate (Option 2). However, this causes new negative impacts to intersection operations on Missouri Flat Road resulting in LOS F. Therefore, it is recommended that Option 1 be implemented.

Impact T3: 2005—Acceptable LOS at All Arterial Intersections

As shown in Table 3.4-9, all study intersections would operate at LOS C or better during both the a.m. and p.m. peak hours. Construction of the Phase 1 improvements would improve a.m. and p.m. peak-hour traffic operations compared to existing and No-Project 2005 conditions, under both of which LOS F is expected at all study intersections during the p.m. peak hour. The project would not degrade existing or 2005 No-Project LOS from an acceptable to an unacceptable level (the minimum acceptable LOS is considered C at the Missouri Flat Road/Prospector's Plaza Drive and Missouri Flat Road/Bank Driveway intersections, D at the Missouri Flat Road/U.S. 50 westbound ramps intersection, and E at the Missouri Flat Road/U.S. 50 eastbound ramps and the Missouri Flat Road/Mother Lode Drive intersections). Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact T4: 2005—Elimination of 20 Park-and-Ride Lot Spaces

Implementation of the Phase 1 4-lane tight diamond configuration would result in the loss of up to 20 automobile parking spaces in the existing 73-space park-and-ride lot in the southwest quadrant of the Missouri Flat Road interchange. This lot does not accommodate buses. This impact is considered significant since loss of these parking spaces could result in an inadequate supply of parking at this facility.

Mitigation Measure T4a: Establish Another Park-and-Ride Lot

The County will replace up to 20 automobile park-and-ride spaces by working with El Dorado County Transit Authority on its proposal to develop another park-and-ride lot that will serve the project area. One possible location for the new lot is the northwest quadrant of the Missouri Flat Road interchange where the existing westbound on-ramp and off-ramps are located. Since the northwest quadrant was included within the project area for the proposed project, the potential for sensitive environmental resources to occur in this quadrant has been evaluated and is addressed in this joint document. No sensitive environmental resources exist in this area (A non-jurisdictional seasonal wetland [0.0055 hectare or 0.01 acre in size] is located in this area. This wetland is a small, artificial feature that was created by highway construction activities, and it has been disturbed by human activities. See Impact BR2.).

Implementation of this measure is expected to reduce this impact to a less-than-significant level since it would ensure an adequate supply of park-and-ride spaces in the Missouri Flat area.

Impact T5: Provision of Class II Bicycle Lanes and a Continuous Sidewalk on Both Sides of Missouri Flat Road

The proposed project includes providing bicycle lanes (Class II facilities) along Missouri Flat Road within the project boundaries. In addition, sidewalks will be provided on Missouri Flat Road including on both sides of the overcrossing. The project would not disrupt an existing bicycle or pedestrian facility, nor would it interfere with the implementation of a planned facility. As such, the project is consistent with the El Dorado County Bicycle Transportation Plan, which calls for a Class II facility on Missouri Flat Road from U.S. 50 to Green Valley Road and from Forni Road to Mother Lode Drive, and the El Dorado County Bikeway Master Plan

which calls for a Class II facility on Missouri Flat Road from Pleasant Valley to Green Valley Road. Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Temporary Impacts: SPDI

Impact T6: Construction-Related Safety Concerns

During construction of Phase 1 and Ultimate Phase improvements, motorists, bicyclists, and pedestrians may experience delays and be required to take alternative routes to their destinations. This impact is considered significant since the proposed project has the potential to result in temporary construction-related safety concerns.

- *Mitigation Measure LU6a: Implement a Traffic Management Plan.* See Impact LU6a for a description of this mitigation measure.

Implementation of this measure is expected to reduce this impact to a less-than-significant level since it would ensure that an adequate level of traffic safety is maintained throughout construction.

Cumulative Impacts: SPDI

Impact T7: 2015—Acceptable LOS and Weaving Conditions at All Ramp Junctions

As shown in Table 3.4-10, all ramp junctions would operate at LOS D or better during both the a.m. and p.m. peak hours. Weaving sections are also expected to operate acceptably in both directions. The project would not degrade existing or 2005 No-Project LOS from an acceptable (A, B, C, or D) to an unacceptable level (E or F). Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact T8: 2015—Acceptable LOS at All Arterial Intersections

The proposed Phase 1 improvements would provide LOS C or better operations at study intersections in 2015 (Table 3.4-12). Implementation of these improvements would improve LOS over both existing and 2005 No-Project p.m. peak-hour levels (LOS F). The project would not degrade existing or 2005 No-Project LOS from an acceptable to an unacceptable level (the minimum acceptable LOS is considered C at the Missouri Flat Road/Prospector's Plaza Drive and Missouri Flat Road/Bank

Driveway intersections, D at the Missouri Flat Road/U.S. 50 westbound ramps intersection, and E at the Missouri Flat Road/U.S. 50 eastbound ramps and the Missouri Flat Road/Mother Lode Drive intersections. Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact T9: 2025—Acceptable LOS and Weaving Conditions at All Ramp Junctions

With construction of the SPDI, the ramp junctions would operate acceptably at LOS D or better during the a.m. and p.m. peak hours. In comparison to the No-Project Alternative (2025), the SPDI would provide substantial improvements to a.m. and p.m. peak hour traffic operations (Table 5.4-1). The project would not degrade existing or 2005 No-Project LOS from an acceptable (A, B, C, or D) to an unacceptable level (E or F). Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact T10: 2025—Acceptable LOS at All Arterial Intersections

Table 5.4-3 shows that LOS would be C or better at all study intersections. In comparison to the No-Project Alternative (2025), a.m. and p.m. peak-hour traffic operations would improve substantially with construction of the SPDI. Substantial improvements would also occur for existing p.m. peak-hour LOS (Table 5.4-3). The project would not degrade existing or 2005 No-Project LOS from an acceptable to an unacceptable level (the minimum acceptable LOS is considered C at the Missouri Flat Road/Prospector's Plaza Drive and Missouri Flat Road/Bank Driveway intersections, D at the Missouri Flat Road/U.S. 50 westbound ramps intersection, and E at the Missouri Flat Road/U.S. 50 eastbound ramps and the Missouri Flat Road/Mother Lode Drive intersections. Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

No-Project Alternative (2025)

The No-Project Alternative would not result in any construction-related impacts since no improvements would occur. Permanent and cumulative impacts associated with the No-Project Alternative are described below.

Impact T11: 2005—Acceptable LOS at Ramp Junctions

All ramp junctions would operate acceptably at LOS D or better in 2005 (Table 3.4-7). Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact T12: 2005—Unacceptable Weaving Conditions at the U.S. 50/Missouri Flat Road Eastbound and the U.S. 50/Forni Road/Placerville Drive Westbound On-Ramp until the U.S. 50/Forni Road/Placerville Drive Interchange is Improved

Unacceptable weaving conditions are expected to occur at both the U.S. 50/Missouri Flat Road eastbound and U.S. 50/Forni Road/Placerville Drive westbound on-ramps. This condition would occur because of queuing from the U.S./Forni Road/Placerville Drive interchange. These queues are projected to extend onto the U.S. 50 mainline as far back as the U.S. 50/Missouri Flat Road interchange. This impact is considered to be significant since unacceptable weaving conditions (worse than LOS D) are anticipated.

Mitigation Measure T12

Reducing the unacceptable weaving conditions at the eastbound on-ramp would require construction of planned improvements at the U.S. 50/Forni Road/Placerville Drive interchange prior to completing the improvements to the U.S. 50/Missouri Flat Road interchange. The County cannot control the timing of improvements at the U.S. 50/Forni Road/Placerville Drive interchange. Until the U.S. 50/Forni Road/Placerville Drive interchange is improved, implementation of Mitigation Measure T2a would reduce this impact to a less-than-significant level.

- *Mitigation Measure T2a: Provide Temporary Ramp Metering for the U.S. 50 Eastbound On-Ramp from Missouri Flat Road.* See Impact T2 for a description of this mitigation measure;

For the westbound weaving segment, the following mitigation measure would reduce this impact to less-than-significant levels:

Mitigation Measure T12a: Construct the 4-Lane Tight Diamond Alternative

This interchange configuration would provide acceptable (LOS D or better) peak-hour traffic operations at the weaving section of the westbound on-ramp. Therefore, implementation of this measure would reduce this impact to a less-than-significant level.

Impact T13: 2005—Unacceptable LOS at All Arterial Intersections during the P.M. Peak Hour

Table 3.4-9 shows that under the No-Project Alternative, all intersections would operate at LOS F during the p.m. peak hour because less than 95% of peak-hour vehicle demand is served. Therefore, peak-hour conditions would spread to multiple hours. This impact is considered to be significant since all intersections would not operate at the minimally acceptable level (the minimum acceptable LOS is considered C at the Missouri Flat Road/Prospector's Plaza Drive and Missouri Flat Road/Bank Driveway intersections, D at the Missouri Flat Road/U.S. 50 westbound ramps intersection, and E at the Missouri Flat Road/U.S. 50 eastbound ramps and the Missouri Flat Road/Mother Lode Drive intersections).

Mitigation Measure T13a: Construct the SPDI, 6-Lane Tight Diamond Alternative, or 4-Lane Tight Diamond Alternative

Any of these interchange configurations would provide acceptable peak-hour traffic operations. If the County decides to adopt one of these alternatives rather than the No-Project Alternative, this impact would be reduced to a less-than-significant level since these build alternatives would result in acceptable LOS at all arterial intersections.

Impact T14: No Provision of Bicycle Lane or Continuous Sidewalks along Missouri Flat Road as Part of Project

Under this alternative, a Class II bicycle lane would not be constructed along Missouri Flat Road as part of the project. Also, sidewalks would not be constructed. This impact is considered significant since the No-Project Alternative is not consistent with the County's Bicycle Master Plan or the Bicycle Transportation Plan.

- *Mitigation Measure T13a: Construct the SPDI, 6-Lane Tight Diamond Alternative, or 4-Lane Tight Diamond Alternative.* See Impact T13 for a description of this mitigation measure. If the County decides to adopt one of these alternatives rather than the No-Project Alternative, this impact would be reduced to a less-than-significant level since the build alternatives are consistent with the County's Bicycle Master Plan and the Bicycle Transportation Plan.

Impact T15: 2025—Unacceptable LOS and Weaving Operations at the Eastbound and Westbound Off-Ramps

As shown in Table 5.4-1, this alternative would have LOS F at the westbound off-ramp during the p.m. peak-hour hour and LOS E during the a.m. and p.m. peak hours. Also, a.m. and p.m. peak-hour freeway speeds would be less than 20 mph on eastbound and westbound U.S. 50 between Missouri Flat Road and Forni Road/Placerville Drive. This impact is considered significant since unacceptable LOS and weaving operations (worse than LOS D) are anticipated.

Mitigation Measure T15a: Construct the SPDI or 6-Lane Tight Diamond Alternative

Both of these interchange configurations would provide acceptable peak-hour traffic operations. If the County decides to adopt one of these alternatives rather than the No-Project Alternative or the 4-Lane Tight Diamond Alternative, this impact would be reduced to a less-than-significant level since the build alternatives would result in LOS D or better at the westbound and eastbound off-ramps.

Impact T16: 2025—Unacceptable LOS at All Arterial Intersections during the A.M. and P.M. Peak Hour

Table 5.4-3 shows that in 2025, all intersections would operate at LOS F during the a.m. and p.m. peak-hour hour because less than 95% of peak-hour vehicle demand is served. Therefore, peak-hour conditions would spread to multiple hours. This impact is considered to be significant since all intersections would not operate at the minimum acceptable levels (the minimum acceptable LOS is considered C at the Missouri Flat Road/Prospector's Plaza Drive and Missouri Flat Road/Bank Driveway intersections, D at the Missouri Flat Road/U.S. 50 westbound ramps intersection, and E at the Missouri Flat Road/U.S. 50 eastbound ramps and the Missouri Flat Road/Mother Lode Drive intersections).

- *Mitigation Measure T15a: Construct the SPDI or 6-Lane Tight Diamond Alternative.* See Impact T15 for a description of this mitigation measure. If the County decides to adopt one of these alternatives rather than the No-Project Alternative, this impact would be reduced to a less-than-significant level since these build alternatives would result in acceptable LOS at all arterial intersections.

6-Lane Tight Diamond Alternative

This alternative would have the same permanent (2005), temporary (construction-related), and cumulative (2015 and 2025) impacts as the preferred alternative. During

the a.m. peak hour, both alternatives would have similar intersection and corridor-wide operations in 2025. With higher volumes during the p.m. peak hour, the SPDI would have less corridorwide VHD than the 6-Lane Tight Diamond Alternative in 2025, mainly because of having 1 less intersection in the corridor. Impacts related to parking and bicycling and pedestrian use would be identical to those identified for the preferred alternative.

4-Lane Tight Diamond Alternative (2025)

This alternative would result in the same 2005 and 2015 impacts and require the same mitigation measures as the preferred alternative. Construction-related impacts would be of a similar nature to the preferred alternative. However, since this alternative entails only one phase of construction, overall temporary impacts would be less severe. Impacts related to parking and bicycling and pedestrian use would be identical to those identified for the preferred alternative.

The 2025 impacts for this alternative are described below.

Impact T17: 2025—Unacceptable LOS at the Eastbound Off-Ramp Ramp Junction

As shown in Table 5.4-1, this alternative would have LOS E at the eastbound off-ramp during the a.m. and p.m. peak hours and p.m. peak-hour freeway speeds that are slightly lower than the other build alternatives. This impact is considered to be significant since the minimum acceptable LOS is D.

Mitigation Measure T17

Mitigation of this impact will depend on the option (below) that is selected by the County. Either measure is capable of reducing this significant impact to less than significant since they would improve LOS to D or better.

- *Mitigation Measure T15a: Construct the SPDI or 6-Lane Tight Diamond Alternative.* See Impact T15 for a description of this mitigation measure.

  or

Mitigation Measure T17a: Construct a 2-Lane Eastbound Off-Ramp Similar to the Design Proposed for the 6-Lane Tight Diamond Alternative

Impact T18: 2025—Potentially Unacceptable LOS at Arterial Intersections

As shown in Table 5.4-3, this alternative is reported to have acceptable peak-hour levels of service for overall intersection operations under 2025 conditions. However, isolated problems would be expected for individual turning movements and intersection approaches. This expectation results from the queuing results, overall corridor delay, and visual simulation. Unacceptable queuing is projected at multiple intersections and only 95% of the a.m. and p.m. peak-hour demand is served by this alternative, which may indicate that the LOS results are worse than reported. This impact is considered to be significant since unacceptable LOS are anticipated at all arterial intersections.

- *Mitigation Measure T15a: Construct the SPDI or 6-Lane Tight Diamond Alternative.* See Impact T15 for a description of this mitigation measure.

5.5 Air Quality

See section 3.5.1, "Affected Environment," for a discussion of the air quality setting.

5.5.1 Determining Significance under CEQA

Appendix G of the State CEQA Guidelines provides guidance for evaluation of project effects on air quality. Based on these guidelines and professional standards, the proposed project would result in a significant impact on air quality if it would:

- conflict with or obstruct implementation of the applicable air quality management plan;
- violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors);
- expose sensitive receptors to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

In addition to the above significance criteria, emission thresholds are contained in the EDCAPCD's Guide to Air Quality Assessment (EDCAPCD 2002). The EDCAPCD's threshold of significance for project construction and operation is 82 ppd of reactive organic gases (ROG) or nitrogen oxide (NO_x).

5.5.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact AQ1: 2005—No Exceedances of CO Standards

The construction year for the Phase 1 4-Lane Tight Diamond (2005) was not modeled because all the intersections and links are expected to have LOS C or better based on the project traffic report. Therefore, no violations of either the 1-hour or the 8-hour CO state standard are expected to occur in 2005, and this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Temporary Impacts: SPDI

Impact AQ2: Temporary Increase in Construction-Related ROG and NO_x Emissions during Grading and Construction Activities

Implementation of the project would result in the construction of new ramps and embankments, as well as bridge construction. EDCAPCD recommends that the Sacramento Metropolitan APCD-approved Road Construction Model, Version 3.1, be used to assess construction emissions (EDCAPCD 2002). This model assumes that road construction typically entails 4 sequential activities: 1) grubbing/land clearing, 2) grading/excavation, 3) drainage/utilities/subgrade, and 4) paving. The road construction model was used to estimate construction-related ROG and NO_x emissions and the results are shown in Table 3.5-3.

The NO_x emissions estimate is over the threshold of 82 lbs/day set by the EDCAPCD. Therefore, this impact is considered to be significant.

Mitigation Measure AQ2a: Mitigate Construction Equipment Exhaust Emissions Consistent with EDCAPCD Requirements

To reduce construction-related emissions below the EDCAPCD threshold and reduce this impact to less than significant, the County will mitigate construction equipment exhaust emissions by keeping construction-related fuel use below the fuel use screening levels established by the EDCAPCD or by implementing measures required by the EDCAPCD. Based on conservative assumptions regarding emissions and fuel use rates for diesel-powered equipment used for construction, Table 3.5-4 sets forth the average daily fuel use per quarter for all construction equipment at a single site that would ensure that emissions remain below the combined 82 lbs/day significance thresholds for ROG and NO_x on a quarterly basis. The quarterly averaging approach is based on the quarterly calculation of emission offsets used for stationary facilities in the District's New Source Rule 523. If average daily fuel use is kept below the levels shown in Table 3.5-4 on a quarterly basis, implementation of additional measures is not required to reduce ROG and NO_x emissions from construction equipment.

If project construction fuel use exceeds these screening levels, the County will implement the following measures as required by the ECDAQMD:

- Contractor must ensure that the maximum amount of ground disturbed on any single day of construction is 12 acres or less.
- Contractor must use aqueous emulsified fuel (such as PuriNox) that has been verified by the California ARB or otherwise documented through emissions testing to have the greatest NO_x and PM10 reduction benefit available, provided each pollutant is reduced by at least 15%.

Impact AQ3: Temporary Increase in Construction-Related PM10 Emissions during Grading and Construction Activities

EDCAPCD air quality assessment guidelines (EDCAPCD 2002) considers mass emissions of fugitive dust PM10 to be minor if the project includes mitigation measures that will prevent visible dust beyond the project boundaries, in compliance with Rule 403 of the South Coast AQMD, as required by the EDCAPCD. Therefore, PM10 impacts are considered to be less than significant with implementation of Mitigation Measure AQ3a.

Mitigation Measure AQ3a: Comply with Rule 403 of the South Coast AQMD, as required by the EDCAPCD

The County will comply with all applicable aspects of Rule 403 as shown in Tables 3.5-5 and 3.5-6.

Cumulative Impacts: SPDI

Impact AQ4: 2015 and 2025—No Exceedances of CO Standards

Carbon monoxide concentrations were estimated for 13 sensitive receptor locations, including residences and other locations where individuals could be exposed. Sensitive receptors were identified during a project site visit.

Table 5.5-1 summarizes the CO modeling results. No violations of either the 1-hour or the 8-hour CO state standard would occur under Phase 1 (2015) or the Ultimate Phase (2025) of the preferred alternative (SPDI configuration). On the basis of assumptions about improvements in vehicle emission technology and the turnover in the vehicle fleet, estimated future CO concentrations for each project condition and averaging time would be well below the thresholds established for the state and federal ambient CO standards. Therefore, this impact is considered to be less than significant.

Mitigation Measure

None proposed.

Impact AQ5: Transportation Conformity Achieved

Phase 1 of the proposed project is included in the 2025 MTP, approved by FHWA on July 24, 2002, and the 2003/05 MTIP amendment #1, approved by FHWA on December 23, 2002. The MTP identifies the Missouri Flat Road interchange project as "U.S. 50 at Missouri Flat Road Interchange: Reconstruct interchange at U.S. 50 (Phase 1) including construction of auxiliary lanes over Weber Creek bridge and seismic retrofit of bridge" (page 103, July 24, 2002). The MTIP amendment describes the proposed action as "Reconstruct U.S. 50 Missouri Flat Road Interchange: Reconstruct Missouri Flat Interchange at U.S. 50 (Phase 1) including construction of auxiliary lanes over Weber Creek bridge and seismic retrofit of bridge; widen Missouri Flat Road 2 to 4 lanes from Mother Lode Drive to Prospectors Plaza Drive" (page 14, December 23, 2002). The reference to Phase 1 in these documents refer to the 4-lane tight diamond interchange. Therefore, the design concept and scope of Phase 1 have not changed from what was analyzed for air quality conformity, and it is a conforming transportation project. The proposed project would not interfere with the timely implementation of transportation control measures from the applicable SIP.

If the County decides to go forward with Phase 2 (SPDI) of the project and decides to use federal funds to build Phase 2, Phase 2 would be included in a future MTP and MTIP and modeled for transportation conformity.

Mitigation Measure

None proposed.

No-Project Alternative (2025)

No construction would occur under this alternative. Therefore, no construction-related impacts would occur and no mitigation would be required.

Carbon monoxide concentrations were estimated for 13 sensitive receptor locations, including residences and other locations where individuals could be exposed. Table 5.5-1 summarizes the CO modeling results. No violations of either the 1-hour or the 8-hour CO state standard would occur under the No-Project Alternative.

6-Lane Tight Diamond Alternative

Construction-related impacts, mitigation measures, and significance conclusions would be identical to the preferred alternative.

Table 5.5-1. Carbon Monoxide Modeling Concentrations (PPM) Results

Receptor[a]	Preferred Alternative				Alternatives to the Proposed Project (2025)					
	Phase 1 4-Lane Tight Diamond (2015)		Ultimate Phase Single Point Diamond Interchange (2025)		No-Project		6-Lane Tight Diamond		4-Lane Tight Diamond	
	1-hour	8-hour	1-hour	8-hour	1-hour	8-hour	1-hour	8-hour	1-hour	8-hour
1	1.8	0.4	1.9	0.4	2.7	1.0	1.9	0.4	2.0	0.5
2	1.7	0.3	1.7	0.3	1.9	0.4	1.7	0.3	1.7	0.3
3	1.6	0.2	1.7	0.3	1.9	0.4	1.7	0.3	1.6	0.2
4	1.7	0.3	1.8	0.4	2.0	0.5	1.8	0.4	1.7	0.3
5	1.6	0.2	1.7	0.3	1.9	0.4	1.7	0.3	1.6	0.2
6	1.6	0.2	1.6	0.2	1.7	0.3	1.6	0.2	1.6	0.2
7	1.6	0.2	1.7	0.3	2.0	0.5	1.7	0.3	1.6	0.2
8	1.6	0.2	1.7	0.3	1.9	0.4	1.6	0.2	1.6	0.2
9	1.8	0.4	1.8	0.4	2.2	0.6	1.8	0.4	1.8	0.4
10	1.8	0.4	1.8	0.4	2.4	0.8	1.8	0.4	1.9	0.4
11	1.8	0.4	1.8	0.4	2.6	0.9	1.8	0.4	2.0	0.5
12	1.9	0.4	2.0	0.5	2.9	1.1	2.0	0.5	2.2	0.6
13	2.1	0.6	2.1	0.6	3.4	1.5	2.2	0.6	2.6	0.9

Description of receptors:

1: Best Western Placerville Inn located at 6850 Green Leaf Drive.

2: Residence at 4221 Montana Court representing residences in the vicinity of Montana Court.

3: Residence at 6614 Runnymeade Drive representing residences in the vicinity of Runnymeade Drive and Brent Court.

4: Residence at 6910 Perks Court.[b]

5: Residence at 6940 Perks Court.[b]

6: Wamego Road near Forni Road representing residences at 3602, 3607, 3625, 3636, and 3643 Wamego Road.

7: Residence at 3081 Forni Road.

8: Area representing residences at 7080, 7125, 7081, and 7141 Helmrich Lane.

9: 7th-Day Adventist Church on Mother Lode Drive.

10: Residence at 6848 Perks Court representing residences at 6850,[c] 6846, 6844, and 6842 Perks Court.

11: Two residences at 4121 Missouri Flat Road.

12: Residence at 4127 Missouri Flat Road.

13: Residence at 4133 Missouri Flat Road.

[a] See Figure 3.5-1 for location of receptors.
[b] Parcel would be fully acquired under the Perks Court cul-de-sac option.
[c] Parcel would be fully acquired under the Perks Court realignment option.

CO concentrations were estimated for 13 sensitive receptor locations, including residences and other locations where individuals could be exposed. Table 5.5-1 summarizes the CO modeling results. No violations of either the 1-hour or the 8-hour CO state standard would occur under the 6-Lane Tight Diamond Alternative in 2025.

4-Lane Tight Diamond Alternative (2025)

The nature of construction-related impacts would be identical to the preferred alternative; however only 1 phase, rather than 2 phases of construction would occur under this alternative. Mitigation Measures AQ1a and AQ2a would be required under this alternative.

CO concentrations were estimated for 13 sensitive receptor locations, including residences and other locations where individuals could be exposed. Table 5.5-1 summarizes the CO modeling results. No violations of either the 1-hour or the 8-hour CO state standard would occur under this alternative in 2025.

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5.6 Noise

See section 3.6.1, "Affected Environment," for a discussion of the noise setting.

5.6.1 Determining Significance under CEQA

Thresholds of significance for noise impacts have been established for this assessment based on the CEQA Environmental Checklist found in Appendix G of the State CEQA Guidelines and on professional judgment. Noise standards from the 1996 General Plan were used as the basis for assessing the significance of noise impacts associated with the proposed project and alternatives. Consideration has also been given to the direct change in noise associated with the project. A small change in noise (i.e., less than 3 dB) is generally not considered to be a perceptible change. A 3-dB noise level change is considered to be barely perceptible.

The County's noise element establishes land use compatibility criteria relating to noise. Policy 6.5.1.9 states the following:

Policy 6.5.1.9. Noise created by new transportation sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6-1 at existing noise-sensitive land uses.

Table 6-1 identifies a level of 60 decibels (dB), day-night average sound level (Ldn) as the maximum exposure allowed at outdoor activity areas for residences, lodging, and churches. A level of 45 Ldn is identified as the maximum interior exposure at residences and lodging and 40 dB-Leq (highest 1 hour) is identified as the maximum interior exposure for churches. The noise element further states that where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with the noise levels described above. Like any other General Plan policy, this policy must be reconciled if reasonably possible with other General Plan policies, so that a single policy, read in isolation, does not tend to defeat a stated objective found elsewhere within the General Plan. (See No Oil, Inc. v. City of Los Angeles (1987) 196 Cal.App.3d 223, 244.)

An operational noise impact is considered significant if:

- Design-year traffic noise levels exceed noise compatibility standards in the County General Plan noise element and the project design-year noise level is more than 3 dB greater than the no-project design-year noise level (that is future-year no-project noise level); or
- Design-year traffic noise level is more than 5 dB greater than the existing noise level.

El Dorado County has not adopted specific noise level limits for construction noise. However, the El Dorado County Board of Supervisors recently approved a document entitled "Technical Memorandum for Night-Time Construction Work for the Green Valley Road Widening Project" (Hust pers. comm.) This document recognizes construction noise limits specified in the Model Community Noise Control Ordinance promulgated by the California Department of Health Services, Office of Noise Control (ONC). (Hust pers. comm.) Table 3.6-6 summarizes the ONC construction noise limits.

Construction noise impacts are considered significant if:

- Construction noise would exceed the limits in Table 3.6-6, or
- Airblast peak overpressures from blasting exceed 112 dB.

5.6.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

See the Cumulative Impacts section below.

Temporary Impacts: SPDI

Impact N1: Exposure of Noise-Sensitive Land Uses to Construction Noise

During construction of the project, noise from construction activities (primarily operation of heavy equipment) may intermittently dominate the noise environment in the immediate area of construction. Construction noise is regulated by Caltrans' standard specifications (section 7-1.01I, "Sound Control Requirements"), which state that noise levels generated during construction shall comply with applicable local, state, and federal regulations and that all equipment shall be fitted with adequate mufflers according to the manufacturers' specifications.

Table 3.6-6 summarizes noise levels produced by construction equipment that is commonly used on roadway-construction projects. Construction equipment is expected to generate noise levels ranging from 70–90 dB at a distance of 15 meters (50 feet), and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

In general, adverse noise impacts from construction are not anticipated because construction would be conducted in accordance with Caltrans' standard specifications and would be short-term, intermittent, and dominated by local traffic noise. However, there may be instances where construction operations in close proximity to residences could result in noise that exceeds the limits specified in Table 3.6-6. Therefore, this impact is considered significant.

Mitigation Measure N1a: Employ Noise-Reduction Construction Measures

The County will incorporate the following noise-reduction measures into the construction contract.

- For construction of the interchange, the County will prohibit the construction contractor from undertaking construction activities within 1,000 feet of residences on Sunday, legal holidays, or between the hours of 7 p.m. and 7 a.m. on other days, unless other factors (such as disruptions of peak hour traffic, disruptions to businesses, and traffic safety considerations) render this time frame infeasible.
- The County will require the construction contractor to use equipment with sound control devices no less effective than those provided on the original equipment.
- The County will require that no equipment have an unmuffled exhaust.
- As directed by the County, the contractor shall implement appropriate additional noise mitigation measures, including but not limited to changing the location of stationery construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources such that noise from construction does not exceed the limits specified in Table 3.6-6. If the existing background noise levels exceed the values in Table 3.6-6, then the limit for construction noise will be 5 db greater than the levels specified in Table 3.6-6.
- Where Caltrans requires construction during nighttime hours within 1,000 feet of an occupied residence, and the additional measures described above will not reduce construction to less than the limits specified in Table 3.6-6 (or to 5dB or less above the existing background noise levels), the County will consider temporarily relocating the affected resident, upon request, by providing hotel vouchers for nights when construction must occur.

Implementation of this measure would reduce this impact to less than significant because it would reduce construction noise levels to be consistent with the limits specified in Table 3.6-6.

Impact N2: Exposure of Noise-Sensitive Land Uses to Noise from Blasting

The installation of new piers at the Weber Creek bridges may require rock blasting. Noise resulting from blasting during construction has the potential to result in adverse noise impacts at residences on Helmrich Lane and Wamego Road. The County does not have noise-level criteria for evaluating noise impacts associated with blasting activities. However, the following text provides an explanation of criteria that can be employed to determine potential noise impacts associated with project-related blasting noise levels.

Noise levels from blasting activities are described as impulsive sound levels, which are of very low frequency and short duration (generally less than 1 second). These noise levels are reported as linear, peak noise levels, which represent the absolute maximum overpressure produced by a blast. According to researchers investigating human response to blasting, the threshold of persons becoming highly annoyed occurs when peak overpressures exceed about 122 dB. About 10% of the people in the surrounding area would be expected to become highly annoyed if peak overpressures exceed 125 dB. There is very poor correlation between air blasts below 112 dB and the percentage of people highly annoyed. Therefore, it can be concluded that peak overpressures below 112 dB would generally not cause people to become annoyed. In fact, people would probably not be startled by such levels and may not even notice them.

Because noise levels from blasting are generally very low frequency (approximately 2–25 Hz), the human ear does not detect the total energy associated with the overall linear sound energy. The A-weighted sound level de-emphasizes the very low frequency and very high frequency components of sound in a manner similar to the response of the human ear. Research on blasting indicates the typical fundamental frequency (the frequency at which the majority of sound energy for a blast is in the 20–25 Hz range. Applying a typical correction from linear sound levels to A-weighted sound levels at the 25 Hz range and taking into consideration typical noise-level data for blasting, a 40 dB correction can be applied to measured peak overpressures to estimate typical A-weighted maximum noise levels.

Table 5.6-1. Summary of Traffic Noise Modeling Results in Terms of El Dorado County Standards

Receiver[a]	Location	Type of Use	Compatibility Standard (dB-Ldn except where noted)	Existing Noise Level (dB-Ldn except where noted)	No-Project Alternative (2025)	Predicted Noise Level (dB-Ldn except where noted)				Noise Increase Relative to Existing Conditions (dB)				Noise Increase Relative to 2025 No-Project Alternative (dB)				Impact Significance[b]			
						Preferred Alternative		Alternatives to the Proposed Project (2025)		Preferred Alternative		Alternatives to the Proposed Project (2025)		Preferred Alternative		Alternatives to the Proposed Project (2025)		Preferred Alternative		Alternatives to the Proposed Project (2025)	
						Phase 1 4-Lane Tight Diamond (2015)	Ultimate Phase Single Point Diamond Interchange (2025)	6-Lane Tight Diamond	4-Lane Tight Diamond	Phase 1 4-Lane Tight Diamond (2015)	Ultimate Phase Single Point Diamond Interchange (2025)	6-Lane Tight Diamond	4-Lane Tight Diamond	Phase 1 4-Lane Tight Diamond (2015)	Ultimate Phase Single Point Diamond Interchange (2025)	6-Lane Tight Diamond	4-Lane Tight Diamond	Phase 1 4-Lane Tight Diamond (2015)	Ultimate Phase Single Point Diamond Interchange (2025)	6-Lane Tight Diamond	4-Lane Tight Diamond
1 (A)	Room 204 of the Best Western Placerville Inn[c]	Motel	45	48	50	49	50	50	50	1	2	2	2	NA	0	0	0	LTS	LTS	LTS	LTS
2 (B)	Montana Court	Residence	60	64	66	65	66	66	66	1	2	2	2	NA	0	0	0	LTS	LTS	LTS	LTS
3 (C)	Runnymeade Drive and Brent Court	Residence	60	59	62	61	62	62	62	2	3	3	3	NA	0	0	0	LTS	LTS	LTS	LTS
4 (D)	Perks Court[d]	Residence	60	63	66	65	65	67	66	2	2	4	3	NA	-1	1	0	LTS	LTS	LTS	LTS
5 (E)	Perks Court[d]	Residence	60	59	61	61	61	60	61	2	2	1	2	NA	0	-1	0	LTS	LTS	LTS	LTS
6 (F)	Wamego Road	Residence	60	63	64	64	64	64	64	1	1	1	1	NA	0	0	0	LTS	LTS	LTS	LTS
7 (G)	Forni Road	Residence	60	64	66	65	66	66	66	1	2	2	2	NA	0	0	0	LTS	LTS	LTS	LTS
8 (H)	Helmrich Lane	Residence	60	56	57	57	57	57	57	1	1	1	1	NA	0	0	0	LTS	LTS	LTS	LTS
9 (I)	7th-Day Adventist Church[c]	Church	40 dB-Leq	40 dB-Leq	42 dB-Leq	42 dB-Leq	42 dB-Leq	42 dB-Leq	42 dB-Leq	2	2	2	2	NA	0	0	0	LTS	LTS	LTS	LTS
10 (J)	Perks Court[e]	Residence	60	67	69	70	70	70	69	3	3	3	2	NA	1	1	0	LTS	LTS	LTS	LTS
11	Missouri Flat Road	Residence	60	69	70	71	71	71	71	2	2	2	2	NA	1	1	1	LTS	LTS	LTS	LTS
12	Missouri Flat Road	Residence	60	70	72	72	72	72	72	1	2	2	2	NA	0	0	0	LTS	LTS	LTS	LTS
13	Missouri Flat Road	Residence	60	71	72	73	73	73	73	2	2	2	2	NA	1	1	1	LTS	LTS	LTS	LTS
14	Placerville Church of Christ[f]	Church	40 dB-Leq	48 dB-Leq	49 dB-Leq	50 dB-Leq	50 dB-Leq	50 dB-Leq	50 dB-Leq	2	2	2	2	NA	1	1	1	LTS	LTS	LTS	LTS
15	Missouri Flat Road	Residence	60	69	71	71	73	71	72	2	4	2	3	NA	2	0	1	LTS	LTS	LTS	LTS

Note: Receiver with letter indicates noise monitoring position.

[a] See Figure 3.6-1 for location of receivers and noise monitoring positions.

[b] LTS = less than significant.

[c] Interior noise level is based on measurements inside motel or church.

[d] Parcels at 6910 and 6940 Perks Court would be fully acquired under the Perks Court cul-de-sac option.

[e] Parcel at 6850 Perks Court would be fully acquired under the Perks Court realignment option.

[f] Interior noise level is based on a 20 dB exterior to interior noise reduction.

The Model Community Noise Control Ordinance developed by the State of California establishes recommended exterior maximum noise level criteria for noise sources such as those associated with blasting activities. The ordinance recommends that a maximum noise level (L_{max}) of 70 dBA be used, which would result in a peak overpressure of approximately 110 dB. This result corresponds to the research discussed above that indicates there is a very poor correlation between air blasts below 112 dB and the percentage of people highly annoyed.

The noise level resulting from blasting activities can be attributed to many variables, which include the size and number of explosive charges, the shot timing between charges, and the inground depth and amount of overburden covering the charges.

The specific type and location of the blasting that may be required for this project has not been determined. However, based on the proximity of residences to the Weber Creek bridges construction area, there is potential for blasting to exceed 112 dB peak overpressure, thereby disturbing residences and resulting in adverse noise impacts. Therefore, this impact is considered to be significant.

Mitigation Measure N2a: Employ Measures to Limit Blast Noise

The County shall incorporate the following measures into the construction contract:

- The County shall notify all landowners within 3,000 feet of blasting sites of the specific date and time that blasting will occur. This notice shall be provided at least 1 week in advance of the proposed blasting and will specify the day and general timeframe (a.m. or p.m.) that blasting is anticipated.
- The County shall retain a qualified blasting consultant to develop and implement measures to limit peak overpressures from blasting to 112 dB at the nearest inhabited building facade. These measures may include but are not limited to using reduced charge sizes, changing the number of charges and charge timing, and modifying the depth of charges.

Implementation of this measure is expected to reduce this impact to less than significant because it would ensure that peak overpressures from blasting would be limited to 112 dB at the nearest building façade.

Cumulative Impacts: SPDI

Impact N3: 2015—2 dB Increase over Future No-Project Levels and 3 dB Increase over Existing Noise Levels

Although the no-project condition in 2015 was not evaluated, the results in Table 5.6-1 indicate that the change in noise levels under the 2015 Phase 1 tight diamond,

relative to the 2015 no-project conditions, would be minor (an increase of 2 dB or less). The increase in 2015 with-project noise levels over existing noise levels is also expected to be minor (an increase of 3 dB or less). Although 11 receivers (receivers 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, and 15) would exceed 60 dB (County noise standard per policy 6.5.1.9), the future changes in noise levels over future no-project conditions would be imperceptible, and the changes over existing levels would be barely perceptible. Therefore, these project-related increases are considered *de minimis*.

Because the change in future noise, directly attributable to the proposed project, is predicted to be less than 3 dB over no-project design-year levels and less than 5 dB over existing noise levels, the noise impacts associated with the Phase 1 tight diamond (2015) are considered to be less than significant. Furthermore, these small exceedances of noise levels ostensibly capped by Policy 6.5.1.9 should not be understood to render the project inconsistent with that policy, which must be reconciled if reasonably possible with other General Plan policies expressly calling for road improvements in the Missouri Flat area. (See Policies 10.2.7.3 and 2.1.4.8.)

Mitigation Measure

None proposed.

Impact N4: 2025—2 dB Increase over No-Project Design Year Levels and 4dB Increase over Existing Noise Levels

These results in Table 5.6-1 indicate that existing traffic noise levels exceed El Dorado County land use compatibility standards for most of the noise-sensitive land uses in the project area and will continue to do so in the future under 2025 no-project conditions. However, the change in noise levels that would result from the 2025 SPDI, relative to 2025 no-project conditions, would be minor (2 dB or less). The increase in existing noise levels would also be minor (4 dB or less). Furthermore, an increase in existing noise levels of up to 3 dB would occur in 2025 even if the project is not implemented. Although 11 receivers (receivers 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, and 15) would exceed 60 dB (County noise standard per policy 6.5.1.9), the future changes in noise levels over future no-project conditions would be imperceptible; therefore, these increases are considered *de minimis.*

Because the change in noise directly attributable to this alternative is predicted to be less than 3 dB over no-project design-year levels and less than 5 dB over existing noise levels, the noise impacts associated with the 2025 SPDI are considered to be

less than significant. Furthermore, these small exceedances of noise levels ostensibly capped by Policy 6.5.1.9 should not be understood to render the project inconsistent with that policy, which must be reconciled if reasonably possible with other General Plan policies expressly calling for road improvements in the Missouri Flat area. (See Policies 10.2.7.3 and 2.1.4.8.)

Mitigation Measure

None proposed.

No-Project Alternative (2025)

No construction noise or blasting noise would occur under this alternative. Therefore, no construction- or blasting-related impacts would occur and no mitigation would be required.

Table 5.6-1 summarizes predicted traffic noise levels under the No-Project Alternative. These noise levels were compared to the build alternatives. At receivers 3 and 5, the existing noise levels are below the County noise standard for residential uses (60 dB), but future background growth increases noise levels such that the 2025 no-project noise levels exceed this standard. At all other receivers except 1, 8, 9, and 14, the existing noise levels exceed this standard.

6-Lane Tight Diamond Alternative

Construction-related impacts would be identical to the preferred alternative; significant impacts are expected. Mitigation Measures N1a and N2a would be required under this alternative and are expected to reduce construction-related impacts to less than significant.

Table 5.6-1 summarizes predicted traffic noise levels under this alternative. These results indicate that traffic noise levels currently exceed County land use compatibility standards for most of the noise-sensitive land uses in the project area and will continue to do so in the future. However, the change in noise for this alternative is minor (1 dB or less as compared to no-project design-year noise levels and 4 dB or less as compared to existing noise levels) and, therefore, 2015 and 2025 impacts are considered to be less than significant.

4-Lane Tight Diamond Alternative (2025)

The nature of construction-related impacts would be identical to the preferred alternative; however, only 1 phase, rather than 2 phases of construction would occur

under this alternative. Therefore, the magnitude of construction-related impacts would be less severe under this alternative. Construction-related impacts are expected to be significant under this alternative. Mitigation Measures N1a and N2a would be required under this alternative and would reduce construction-related impacts to less than significant.

Table 5.6-1 summarizes predicted traffic noise levels under this alternative. These results indicate that traffic noise levels currently exceed County land use compatibility standards for most of the noise-sensitive land uses in the project area and will continue to do so in the future. However, the change in noise for this alternative is minor (1 dB or less as compared to no-project design-year noise levels and 3dB or less as compared to existing noise levels) and, therefore, 2015 and 2025 impacts are considered to be less than significant.

5.7 Hydrology, Water Quality, and Floodplains

See section 3.7.1, "Affected Environment," for a discussion of the hydrology, water quality, and floodplains setting.

5.7.1 Determining Significance under CEQA

The significance thresholds identified below are based on Appendix G of the State CEQA Guidelines and professional practice. Alterations to the hydraulic characteristics of water courses are considered significant if any of the following would occur:

- Substantial alteration of the existing drainage pattern of the site or area, including the alteration of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- Substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems;
- Substantial reduction of floodflow conveyance capacities; or
- Increased extent or severity of flooding.

Adverse impacts on water quality are considered significant if the project would result in any of the following:

- Violate any water quality standards or waste discharge requirements;
- Create or contribute runoff water which would provide substantial additional sources of polluted runoff;
- Any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity, that substantially diminishes the value of habitat for fish and wildlife; or
- Otherwise substantially degrade water quality

5.7.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact WQ1: Changes in Local Stormwater Drainage

Construction of roadways for the interchange and highway modifications would create more impervious areas than currently exist within the project area. The introduction of new impervious surfaces would reduce the ground surface available for infiltration of rainfall and runoff and subsequently generate additional runoff during storm events. Increased runoff can contribute to flood potential of natural stream channels, accelerate processes of soil erosion and stream channel scour, and increase the transport of pollutants to waterways. A draft drainage report (Quincy Engineering 2002) has been prepared in which Caltrans Highway Design Manual drainage design standards have been applied to the project. The report indicates that the quantity of stormwater runoff would increase once the additional roadway surfaces are constructed. Caltrans requires facilities to be constructed to accommodate the 25-year storm event. The existing drainage quantities and rates cannot be calculated until the final design phase of the project because survey information for all of the existing facilities has not been gathered. However, the combined rate of runoff from all proposed facilities for this alternative during a 25-year event would be about 0.34 cms (12.3 cfs). Some of the drainage would flow to Weber Creek, and the remainder would flow to either Mound Springs Creek or Indian Creek. The drainage report indicates that only minor modifications to the existing facilities would be required to accommodate the runoff consisting of new culverts and site grading to direct drainage to the appropriate culvert locations.

The impact is considered to be less than significant because the course and direction of offsite drainage is not being changed and drainage would not exceed the capacity of existing or planned stormwater systems.

Mitigation Measure

None proposed.

Impact WQ2: Flooding and Hydraulic Changes

Additional bridge piers would be constructed for the U.S. 50 bridges over Weber Creek to accommodate the additional highway lanes. The piers are located within the floodplain of Weber Creek, and thereby constitute a linear encroachment of the floodplain that is subject to compliance with Executive Order 11988. Increasing the degree of encroachment in the floodplain can alter flood conveyance, channel scour, and/or inundation and backwater patterns of floodwater. Based on the design

hydraulic study prepared for the project (Norman S. Braithwaite Inc. 2002), the potential changes in water elevation and velocity would be minimal, and no channel deepening is expected to occur during the expected design life of the bridge. The projected change in water surface elevation during a 100-year flood following construction would increase at the bridge by less than 0.07 meter (0.22 foot). Based on the final drainage report (Quincy Engineering 2002), the combined rate of drainage from all stormwater conveyance facilities would be about 0.34 cms (12.3 cfs) during a 25-year event. Calculations were not performed for a 50- or 100-year event; therefore, the additional stormwater drainage during larger events is not known. However, the additional 0.34 cms (12.3 cfs) is negligible compared to the 50-year flow in the river (252 cms or 8,896 cfs), and the additional stormwater drainage presumably would not appreciably add to streamflow during larger storms.

Construction of the bridge piers is not considered a significant encroachment on the floodplain pursuant to Executive Order 11988 for several reasons (refer to Appendix A, "Floodplain Evaluation Report Summary" in the project Hydrology and Water Quality Technical Report [Jones & Stokes 2002e]). The project would contribute a relatively small amount of flow relative to existing peak flows and is considered consistent with the goals of Executive Order 11988. The "Floodplain Evaluation Report Summary" identifies several findings:

- The risks associated with the implementation of the proposed action are not significant because the change in water surface elevation during flooding would be negligible. There are no residential or other inhabited structures within the Weber Creek channel portion of the project area; therefore, there would be no additional flood risk to life or property from the incremental increase in water surface elevations resulting from pier encroachment on the floodplain.
- The proposed action would not support incompatible floodplain development because it does not support development within the floodplain or alter existing access to the floodplain.
- The project would not have any significant adverse impacts on natural and beneficial floodplain values because the encroachment would be minor and would cause negligible changes in water surface elevations and/or channel scouring.
- There are no special mitigation measures necessary to minimize impacts to floodplain values because the probable changes are negligible.
- The proposed action does not constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q), because the project would not alter emergency access or evacuation routes during flooding, does not pose an

appreciable increased risk associated with flooding, does not adversely impact floodplain beneficial uses, and does not support base floodplain development.

This impact is considered less than significant since the change in water surface elevation would be negligible, and there would be no additional flood risk to life or property from the negligible increase in water surface elevations.

As described in Chapter 1, the County has identified the need to modify one small part of one adopted mitigation measure for the MC&FP (labeled 4.8-1 in the program EIR and County Board of Supervisor Findings of Fact [See Appendix J, page 6 of 14]), aimed at mitigating hydrologic and flooding impacts. As modified, MC&FP Mitigation Measure 4.8-1 would read as follows (modified language is shown as underlined text):

> Prior to the approval of a tentative map, or, for projects without maps, issuance of a building permit, a project applicant for retail development or roadway improvements in the MC&FP Area, including the project applicants for Sundance Plaza and El Dorado Villages Shopping Center projects, shall submit and obtain approval of the project drainage report by the El Dorado County Department of Transportation. This report shall demonstrate that, <u>for all such projects other than the Missouri Flat interchange itself</u>, post-development stormwater peak discharge levels from the project will remain at existing peak levels through the use of one or all of the following alternative mitigation measures. The drainage report shall be prepared by a Certified Civil Engineer and shall be in conformance with the El Dorado County Drainage Manual adopted by the Board of Supervisors in March 1995. The project applicant shall be financially responsible for his/her portion of stormwater drainage facility maintenance requirements and agreements. The drainage report shall include, at a minimum, written text addressing existing conditions, the effects of project improvements, all appropriate calculations, a watershed map, potential increases in downstream flows, proposed onsite improvements, and drainage easements, if necessary, to accommodate flows from the site.
>
> a) Design and construction of onsite detention facilities of adequate size to reduce peak discharge to pre-development levels. The detention facility may be incorporated into the parking lot design. If a detention facility is incorporated into the proposed parking lot, parking within the facility area shall be restricted during storm events through the placement of cones to ensure vehicles are not damaged by detained water. Permanent maintenance of the detention facility shall include semi-annual inspections to ensure facility integrity and debris removal as necessary.

b) Design and construction of a regional detention facility of adequate size to reduce peak discharge to pre-development levels. The detention facility may serve as a regional basin for multiple sites. Permanent maintenance of the detention basin shall include semi-annual inspections to ensure facility integrity and debris removal as necessary.

and/or

c) Improvements to existing storm drainage system to reduce peak discharge to pre-development levels. This may include up-sizing of pipes, culverts, etc., at downstream locations. Permanent maintenance of the drainage facilities shall include semi-annual inspections to ensure facility integrity and debris removal as necessary.

With adoption of this modification, the U.S. 50/Missouri Flat Road interchange project would not be subject to the requirement that post-development stormwater peak discharge levels remain at existing pre-project peak levels. This requirement is not needed for this project since the change in water surface elevation associated with this project would be negligible, and the project would not result in any additional flood risk to life or property.

To achieve pre-project peak levels, stormwater would need to be detained on-site within the project area at a logical location between the interchange (the high point) and Weber Creek (the easterly low point). However, on-site detention is infeasible since, with the area's relatively steep terrain, there are limited "flat areas" large enough to detain the water. The only possible flat area is within the H&S Gas Mart property (parcel 327-130-20) behind the existing facilities. This parcel is being purchased by the County for this project. The approximate elevation of this parcel is 528 meters (1732 feet), and the available flat area is 2400 meters^2 (0.6 acre). Groundwater movement is in a southeasterly direction based upon the existing contours. However, it has been determined that it would be infeasible to detain water at this location since the property has been identified in the project Initial Site Assessment (Taber Consultants 2001b) and a supplemental site assessment (Taber Consultants 2003) as a candidate for additional research of current and past waste disposal practices (Tatman pers. comm.).

Mitigation Measure

None proposed.

Impact WQ3: Water Quality Impacts from Changes in Stormwater Drainage

The proposed project would increase the amount of impervious paved roadway surfaces associated with widened roadways and interchange ramp improvements, and thereby increase the amount of contaminants in stormwater runoff from the project area. The improvements would require minor modifications to existing drainage improvements, primarily involving contouring during grading activities to control the direction and rate of drainage to project facilities. Culverts would need to be extended where roadways would be widened and/or upgraded where currently undersized. There would be no appreciable change in the direction or routing of storm drainage from existing conditions.

In addition to increased runoff, as development in the surrounding urban areas and use of the roadway improvements increase, greater quantities of contaminants such as petroleum products and other substances (e.g., trace metals, hazardous materials, litter) could be deposited on the road surfaces. Contaminants in roadway runoff, if discharged untreated to receiving water bodies, can be toxic to fish and other aquatic organisms. In particular, the initial storm events occurring each fall season can transport elevated levels of contaminants that have resulted from deposition during the dry season. Increases in the total runoff volume can also accelerate soil erosion and stream channel scour and increase the transport of contaminants to waterways. Caltrans statewide data for stormwater runoff characteristics indicate that runoff can contain contaminant concentrations that exceed the applicable water quality standards (California Department of Transportation 2001).

This long-term water quality impact is considered significant because temporary and intermittent stormwater discharges from project-related drainage facilities could have reduced water quality.

Mitigation Measure WQ3a: Obtain Authorization under the NPDES Permit for Permanent Post-Construction Best Management Practices

The County and Caltrans or its contractor will avoid or minimize long-term water quality impacts through development and implementation of permanent stormwater quality BMPs for the project area, pursuant to the NPDES stormwater permit. The BMPs would be identified and incorporated into the Plans, Specifications, & Estimates (PS&E) design package. The SWPPP and PS&E documents describe measures to accommodate the additional drainage discharges and avoid adverse effects such as offsite erosion, sedimentation, or water quality impairments.

Two broad classes of permanent post-construction BMPs, and several specific types of BMPs, were approved in the Caltrans NPDES permit. The first category of measures consists of erosion control measures such as preservation of existing vegetation, concentrated flow conveyance systems (ditches, berms, drains, flared culvert end sections, outlet protection and flow velocity dissipation), and slope protection measures. Permanent post-construction erosion control BMPs for slopes, such as mulching, seeding and planting, and slope roughening or terracing would be implemented for new cut-and-fill slopes and swales as deemed necessary by the project engineer. Slope protection measures would be implemented to control erosion such as reducing the length of disturbed slopes, reducing the gradient of slopes, and preventing concentrated flow over slope soils. Caltrans requires different slope protection measures based on whether the vertical to horizontal slope gradient is less than 1:4, between1:4 and 1:2, or is steeper than 1:2. The Caltrans District Landscape Architect must design or approve all slope stabilization designs for slopes with greater than 1:4 gradients. By controlling erosion, directing runoff through vegetation, or otherwise reducing the offsite discharge of particulate matter and sediment, the permanent erosion control measures would control offsite discharges of roadway pollutants that are associated with particulate matter. Caltrans would be responsible for long-term inspection and maintenance of the permanent BMPs within their jurisdictional right-of-way to ensure that they are maintained in good working order. Likewise, the County would be responsible for maintenance of all other project-related permanent BMPs adjacent to the state right-of-way.

The second category of approved permanent post-construction BMPs consists of runoff treatment measures such as detention infiltration and retention basins and detention basins. The drainage report for the project does not identify the need for retention or detention facilities for the project (Quincy Engineering 2002). However, because drainage runoff volumes will increase, the existing drainage system will need to be modified to accommodate the increased volumes without causing erosion of conveyance channels. The project will include selection of specific BMPs in accordance with Caltrans SWMP.

Implementation of this measure would reduce this impact to less than significant because compliance with the NPDES permit would ensure that long-term surface water quality is not altered such that the value of fish and wildlife habitat in Weber Creek is substantially diminished.

Temporary Impacts: SPDI

Impact WQ4: Temporary Construction Water Quality Impacts

Construction activities can impair water quality temporarily because disturbed and eroded soil, petroleum products, and miscellaneous wastes may be discharged into receiving waters. Soil and associated contaminants that enter stream channels can increase turbidity, stimulate algae growth, increase sedimentation of aquatic habitat, and introduce compounds that are toxic to aquatic organisms. Construction materials such as fuels, oils, paints, and concrete are potentially harmful to fish and other aquatic life if released into the environment. The extent of potential environmental effects depends on the erodibility of soil types encountered, type of construction practices, extent of disturbed area, duration of construction activities, timing of precipitation, proximity to receiving water bodies, and sensitivity of those water bodies to contaminants of concern. Accidental spills of construction-related substances such as oils, fuels, and concrete can contaminate both surface water and groundwater.

This project would involve construction grading, earthmoving, and facility construction activities that would occur over a number of months. The construction activities would directly disturb soils and surface drainage swales adjacent to the interchange area. In addition, construction would occur within the Weber Creek channel for additional bridge piers.

This temporary water quality impact is considered significant because temporary and intermittent discharges of contaminated stormwater could occur from the construction activities.

Mitigation Measure WQ4a: Obtain Authorization under the NPDES Stormwater Permit for Construction-Related Best Management Practices

The County and Caltrans or its contractors would avoid or minimize potential construction-related water quality by developing and implementing the appropriate water pollution prevention and erosion control measures as dictated through the SWPPP that is prepared for this project. The County would independently coordinate with the RWQCB and ensure compliance with NPDES stormwater permit conditions for those portions of the project that lie outside of the Caltrans right-of-way. The county's preparation and implementation of a SWPPP that includes selection of BMPs consistent with Caltrans SWMP is expected to meet these requirements.

The following grading and erosion control BMP specifications that are necessary to prevent water quality impairment would be included in the SWPPP and final PS&E design package for the project (California Department of Transportation 2001). Several classes of construction BMPs are identified in the Caltrans NPDES permit including soil stabilization, sediment control, wind erosion control, tracking control, non-storm water control, and waste management and materials pollution control practices. There are numerous approved BMPs within each of these classes, although, not every BMP is used for each project. Typically, the general contractor(s) develop the SWPPP that includes an appropriate suite of BMPs for the specific activities that will occur. All elements of the SWPPP are reviewed by Caltrans.

Given the site-specific conditions of the project area, the SWPPP for this project would generally include limiting soil disturbances during the designated winter rainfall season of October 15 through April 15 and standard sediment erosion control measures, such as silt fencing, straw bale barriers, sediment traps, or other measures to directly reduce the offsite transport of sediment from disturbed slopes. Existing vegetation that can be preserved would be identified and flagged or fenced to avoid disturbance. Erosion in disturbed areas would be controlled through the use of grading operations that eliminate direct routes for conveying runoff to drainage channels and use of soil stabilization BMPs such as mulching, erosion control fabrics, and/or reseeding with grass or other plants where necessary. Standard staging area practices for sediment tracking reduction would also be identified where necessary including vehicle washing and street sweeping. Temporary concentrated flow conveyance systems would also be considered such as berms, ditches, and outlet flow velocity dissipation devices to reduce erosion from newly disturbed slopes.

Under the direction of Caltrans engineering staff, the general contractor(s) and subcontractor(s) conducting the work would be responsible for constructing or implementing, regularly inspecting, and maintaining the BMPs in good working order. The construction contractor(s) and subcontractor(s) would also be required to implement appropriate hazardous materials management practices to reduce the possibility of chemical spills or releases of contaminants, including any nonstormwater discharge to drainage channels. Standard hazardous materials management and spill control and response measures would minimize the potential for surface and groundwater contamination. If soils containing ADL are proposed for

reuse within the project area, Caltrans would coordinate with the RWQCB and DTSC as needed to identify necessary protective measures.

Work conducted within Weber Creek for pier construction would require additional BMPs such as placing staging areas away from the stream bank, conducting all in-water work behind coffer dams, sheet piling, or other containment facilities to control discharges of contaminated runoff.

- *Mitigation Measure BR3f: Limit In-Water Construction Activities to the Summer Low- or No-Flow Period.* Refer to Impact BR3 in section 5.8 of this joint document for a description of this mitigation measure.
- *Mitigation Measure BR3g: Ensure That Turbidity Increases Do Not Exceed Central Valley Regional Water Quality Control Board Standards.* Refer to Impact BR3 in section 5.8 of this joint document for a description of this mitigation measure.
- *Mitigation Measure BR3h: Develop and Implement a Toxic Materials Control and Spill-Response Plan.* Refer to Impact BR3 in section 5.8 of this joint document for a description of this mitigation measure.
- *Mitigation Measure BR3i: Store Hazardous Materials at an Approved Storage Facility.* Refer to Impact BR3 in section 5.8 of this joint document for a description of this mitigation measure.

Implementation of these measures would reduce this impact to less than significant because they would ensure that short-term water quality is not altered such that the value of fish and wildlife habitat in Weber Creek is substantially diminished.

No-Project Alternative (2025)

Under the No-Project Alternative, no interchange and intersection improvements would be constructed along Missouri Flat Road. Additionally, the improvements to the Weber Creek bridge would also not occur. There would be no impacts on hydrology or water quality.

6-Lane Tight Diamond Alternative

Hydrology and water quality impacts of this alternative would be essentially the same as those described for the proposed project. Consistency with Executive Order 11988 for floodplain encroachment in Weber Creek would be identical to the proposed project because the configuration of the new bridge piers would be identical. Impacts,

mitigation measures, and significance conclusions would be the same as the preferred alternative.

4-Lane Tight Diamond Alternative (2025)

Permanent hydrology and water quality impacts of this alternative would be essentially the same as those described for the proposed project. Consistency with Executive Order 11988 for floodplain encroachment in Weber Creek would be identical to the proposed project because the configuration of the new bridge piers would be identical. Temporary water quality impacts would be of a similar nature to the preferred alternative, but would be less severe in magnitude since only 1 phase of construction would occur, rather than 2 phases. Required mitigation measures and significance conclusions would be the same as the preferred alternative.

Cumulative Impacts

See Chapter 4 for a discussion of cumulative impacts.

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5.8 Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the U.S.

See section 3.8.1, "Affected Environment," for a discussion of the wildlife and botanical resources, threatened and endangered species, and wetlands and waters of the U.S. setting.

5.8.1 Determining Significance under CEQA

The State CEQA Guidelines and professional standards were used to determine whether the proposed project would have a significant impact on biological resources.

Based on section 15065 of the State CEQA Guidelines, as well as Appendix G to those Guidelines, the County concludes that a project would have a significant impact on biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by DFG or USFWS;
- have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan (HCP), natural communities conservation plan (NCCP), or other approved local, regional, or state habitat conservation plan; or
- have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

Standard professional practice was also used to determine whether an impact on biological resources would be significant. The proposed project likely would cause a significant impact if it would result in:

- long-term degradation of a sensitive plant community because of substantial alteration of land form or site conditions (e.g., alteration of wetland hydrology);
- substantial loss of a plant community and associated wildlife habitat;
- fragmentation or isolation of wildlife habitats, especially riparian and wetland communities;
- substantial disturbance of wildlife resulting from human activities;
- avoidance by fish of biologically important habitat for substantial periods, which may increase mortality or reduce reproductive success;
- disruption of natural wildlife movement corridors;
- reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation of:
  - species qualifying as rare and endangered under CEQA,
  - species that are state-listed or federally listed as threatened or endangered, or
  - portions of local populations that are candidates for state or federal listing and federal and state species of concern; or
- substantial reduction or elimination of species diversity.

5.8.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact BR1: Permanent Loss of Approximately 0.0016 Hectare (0.004 Acre) of Weber Creek and Approximately 0.0032 Hectare (0.008 Acre) of Oak Woodland

The preferred alternative would permanently affect 0.0016 hectare (0.004 acre) of Weber Creek with the placement of 2 new bridge piers within the creek and 0.0032 hectare (0.008 acre) of oak woodland with the placement of 4 new bridge piers in the oak woodland area.

Although this permanent loss is minor, this impact is considered significant since piers will be placed in Weber Creek; therefore, the project could result in the long-

term degradation and loss of a sensitive plant community and associated wildlife habitat, and have a substantial adverse effect, either directly or through habitat modification, on special-status wildlife species. (The project area provides habitat for CRLF, foothill yellow-legged frog ,and northwestern pond turtle.) See also the corresponding temporary impact discussion under Impact BR3.

To reduce this impact to a less-than-significant level, the County will implement Mitigation Measures BR3a-k described under the corresponding permanent impact (see Impact BR3). These measures will also ensure that the project will not reduce the number or restrict the range of the CRLF, a federally-threatened species. Mitigation Measure BR4d requires that preconstruction surveys be conducted for the CRLF and that, if frogs are found, construction cease until the frogs are moved upstream of the project area; this measure will ensure that frogs are not harmed during construction. Mitigation Measure BR3k calls for implementation of a riparian restoration plan that would ensure that the aquatic and upland habitat impacted by the project would be restored at a minimum of a 1:1 ratio (1 acre planted for every 1 acre removed) through the planting of native species; this measure ensures that the project will not result in the destruction or adverse modification of California red-legged frog habitat.

Mitigation Measure

See Mitigation Measures BR3a–k.

Impact BR2: Potential Loss of 0.019 Hectare (0.045 Acre) of Jurisdictional Seasonal Wetlands and of 0.0055 Hectare (0.01 Acre) of Non-Jurisdictional Seasonal Wetlands

The preferred alternative could result in the complete filling of 1 jurisdictional seasonal wetland (Seasonal Wetland 1) and no more than 50% of 1 jurisdictional seasonal drainage (Seasonal Drainage 2), resulting in the loss of up to 0.019 hectare (0.045 acre) of habitat. The project could also result in the complete filling of 1 non-jurisdictional seasonal wetland (Seasonal Wetland 3), totaling 0.0055 hectare (0.01 acre). (Seasonal Drainage 1 would not be filled with project construction.). These features are small, artificial features that were created from highway construction activities and have been disturbed by human activities. They do not provide important, irreplaceable habitat functions and values.

The federal government supports a policy of minimizing "the destruction, loss, or degradation of wetlands" (EO 11990, May 24, 1977). In addition, DFG has adopted a no-net-loss policy for wetlands (California Fish and Game Commission 1987), as has the State of California (the Governor's California Wetlands Conservation Policy, August 23, 1993).

Impacts on these jurisdictional wetlands are considered significant since the project would affect federally-protected wetlands through filling. See also the corresponding temporary impact under Impact BR4.

To reduce this impact to a less-than-significant level, the County will implement Mitigation Measures BR3a and BR3f–i described under the corresponding permanent impact (see Impact BR4).

Mitigation Measure

See Mitigation Measures BR3c and BR3f–i.

Temporary Impacts: SPDI

Impact BR3: Disturbance to Approximately 0.1 Hectare (0.25 Acre) of Weber Creek and Approximately 0.29 Hectare (0.71 Acre) of White Alder Riparian Forest Vegetation

The preferred alternative would result in the loss of or disturbance to approximately 0.1 hectare (0.25 acre) of Weber Creek and approximately 0.29 hectare (0.71 acre) of white alder riparian forest vegetation adjacent to Weber Creek (acreage estimates include permanent loss described above under Impact BR1) during construction of the Weber bridges improvements. The creek flows would be diverted to facilitate construction if necessary. Construction equipment would not be operated within the "live" creek channel. See also the corresponding permanent impact discussion under Impact BR1.

Construction activities associated with the construction of 6 new piers and related activities at Weber Creek would contribute to the deterioration of existing fish and wildlife habitat along the creek through the following types of impacts:

- removal of riparian vegetation that provides shade, cover, and bank stabilization along the creek;
- short-term increase in suspended sediment concentrations and turbidity resulting from channel disturbance that could result in a reduction of feeding opportunities

for sight-feeding fish, sedimentation of spawning habitat, and suffocation of eggs (fish and amphibian), as well as cause clogging and abrasion of gill filaments;

- short-term degradation of food-producing habitat downstream of the bridge;
- potential for short-term degradation of water quality if hazardous material spills of substances, such as gasoline and diesel fuels, engine oil, and hydraulic fluids, occur, thereby potentially contaminating the creek and affecting aquatic species;
- temporary increase in ambient noise levels associated with construction equipment (drilling, grading, potential need for blasting) in and around Weber Creek;
- short-term disturbance of critical habitat for CRLF; and
- short-term disturbance of habitat and potential for mortality of CRLF, foothill yellow-legged frog, and northwestern pond turtle.

Temporary project-related impacts on CRLF, foothill yellow-legged frog, northwestern pond turtle, and their habitats are considered adverse, based on the following:

- These species have experienced dramatic population declines throughout their ranges in California.
- Localities at which these species are extant on the western slope of the northern Sierra Nevada appear to be patchy and widely scattered (Jennings and Hayes 1994).
- Project-related impacts could result in a reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation.

Project construction could result in extended periods of localized, high suspended sediment concentrations and turbidity resulting from channel disturbance, which could also result in an adverse impact on common fish species, including reduction of feeding opportunities for sight-feeding fish, sedimentation of spawning habitat and suffocation of eggs, and clogging and abrasion of gill filaments. It could also result in the degradation of food-producing habitat downstream of the project area.

Riparian habitats are considered sensitive locally, regionally, and statewide because they provide numerous habitat values and are in decline across the state. Substantial statewide decline of riparian communities in recent years has increased concerns about dependent plant and wildlife species, leading state and federal agencies to adopt policies to arrest further loss. Riparian vegetation provides a variety of

functions, such as bank stabilization, erosion control, and wildlife habitat. The DFG has adopted a no-net-loss policy for riparian habitat value. In addition, USFWS mitigation policy identifies California's riparian habitats in Resource Category 2, for which no net loss of existing habitat value is recommended (46FR 7644, January 23, 1981).

Additionally, DFG regulates activities that alter the beds, channels, and banks of streams. The proposed bridge improvements at Weber Creek would include such activities and therefore would require a streambed alteration agreement with DFG under Section 1601 of the California Fish and Game Code.

This impact is considered significant since the project could result in the long-term degradation and loss of a sensitive plant community and associated wildlife habitat; could have a substantial adverse effect, either directly or through habitat modification, on special-status wildlife species (habitat for CRLF, foothill yellow-legged frog, and northwestern pond turtle); and could reduce the number or restrict the range of an endangered, rare, or threatened species.

The County will mitigate this impact to a less-than-significant level by implementing the mitigation measures described below. Mitigation Measures BR3a–c are general measures to protect sensitive biological resources; BRd–e call for preconstruction surveys within the aquatic and riparian habitat at Weber Creek; BRf–i are intended to protect the water quality of Weber Creek; and BRj–k address impacts to the riparian habitat at Weber Creek. These measures will ensure that the project will not result in the long-term degradation of wildlife habitat; substantially adversely affect special-status wildlife species; or reduce the number or restrict the range of the CRLF, a federally-threatened species, as described above under Impact BR1.

Mitigation Measure BR3a: Install Construction Barrier Fencing around the Construction Area to Protect Sensitive Biological Resources That Will Be Avoided

The County or its contractors will ensure that the removal or disturbance of sensitive biological resources adjacent to the construction area are avoided by installing orange construction barrier fencing (and sedimentation fencing in some cases) around the construction areas. The area that would generally be required for construction, including staging and access, is shown in Figure 3.8-1 (labeled "project area"); pockets within this area that can be avoided during construction should be fenced off to avoid disturbance in these areas. Sensitive resources that occur within and

adjacent to the construction area ("project area") include the riparian forest along Weber Creek, blue oak woodland, individual native oaks greater than 15.2 centimeters (6 inches) in diameter at breast height (dbh), and the identified valley elderberry shrub located immediately outside the construction area.

Prior to construction, the construction contractor will work with the project engineer and a resource specialist to identify the location for the barrier fencing and will place stakes around the sensitive resource sites to indicate the location for fencing. The protected area will be designated as an "environmentally sensitive area" (ESA) and clearly identified on the construction specifications. The fencing will be installed prior to the initiation of construction activities and will be maintained throughout the construction period. The following paragraphs will be provided in the construction specifications for ESAs:

> The Contractor's attention is directed to the areas designated as "Environmentally Sensitive Areas" and to state and federal regulations that may pertain to such areas. These areas are protected and no entry by the Contractor for any purpose will be allowed unless specifically authorized in writing by the County. The Contractor shall take measures to ensure that the Contractor's forces do not enter or disturb these areas, including giving written notice to his employees and subcontractors.

Temporary fences around the "Environmentally Sensitive Areas" shall be installed as the first order of work. Temporary fences shall be furnished and constructed, maintained, and later removed as shown on the plans, as specified in the special provisions, and as directed by the project Engineer. The fencing shall be commercial quality woven polypropylene, orange in color, and a minimum of 1.2 meters (4 feet) high (Tensor Polygrid or equivalent). The fencing will be tightly strung on posts with a maximum 3-meter (10-foot) spacing.

Mitigation Measure BR3b: Conduct a Biological Resources Education Program for Construction Crews and Enforce Construction Restrictions

The County or its contractors will conduct environmental awareness training for construction crews before project implementation. The education program will include a brief review of the special-status species that could potentially occur in the project area (including their life history, habitat requirements, and pictures of the species), the portions of the project area in which they may occur, and their legal status and protection under the ESA of 1973 (16 USC 1536). The program will also

cover the restrictions and guidelines that must be followed by all construction personnel to reduce or avoid effects on these species during project implementation. The crew foreman will be responsible for ensuring that crew members adhere to the guidelines and restrictions. Education programs will be conducted for appropriate new personnel as they are brought on the job during the construction period. Restrictions and guidelines that must be followed by construction personnel are:

- Project-related vehicles will observe the posted speed limit on hard-surfaced roads and a 16.1-kilometer-per-hour (10-miles-per-hour) speed limit on unpaved roads during travel in the project area.
- Project-related vehicles and construction equipment will restrict off-road travel to the designated construction area.
- Nighttime construction adjacent to Weber Creek will be minimized.
- All food-related trash will be disposed of in closed containers and removed from the project area at least once a week during the construction period. Construction personnel will not feed or otherwise attract wildlife to the project area.
- No pets or firearms will be allowed in the project area.
- No rodenticides or herbicides will be applied in the project area during construction activities (Ludwig pers. comm.).
- To prevent possible resource damage from hazardous materials such as motor oil or gasoline, construction personnel will not service vehicles or construction equipment outside of designated staging areas.
- Any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped, will immediately report the incident to the biological monitor. The monitor will immediately notify the County, who will provide verbal notification to the USFWS Endangered Species Office in Sacramento, California, and to the local DFG warden or biologist within 3 working days. The County will follow up with written notification to USFWS and DFG within 5 working days.

Mitigation Measure BR3c: Retain a Biologist to Monitor Construction Activities within Weber Creek

A qualified biologist will monitor all construction activities occurring in water within Weber Creek for compliance with the project's mitigation measures. For construction activities occurring outside of the water, a qualified biologist will be available during the construction period and will make weekly monitoring visits to the Weber Creek construction area. The biological monitor will assist the construction personnel, as needed, to comply with all project implementation

restrictions and guidelines. Furthermore, the biological monitor will be responsible for ensuring that the contractor maintains the staked and flagged perimeters of the construction area and staging areas adjacent to sensitive biological resources.

Mitigation Measure BR3d: Conduct Preconstruction Surveys and Minimize Mortality to CRLF and Foothill Yellow-Legged Frog

To minimize impacts on CRLF and foothill yellow-legged frog, the County or its contractors will implement the following avoidance and minimization measures:

- A preconstruction survey by a qualified biologist for CRLFs and foothill yellow-legged frogs will be conducted within 48 hours prior to the start of construction activities within the riparian or aquatic habitat at Weber Creek. If a CRLF or foothill yellow-legged frog is located within the construction area, the frog will be relocated out of the construction area and exclusion fence will be installed to prevent the movement of frogs back into the construction area.
- A biological monitor will be on site during construction activities within Weber Creek, as described under Mitigation Measure BR3c. The monitor will survey the construction area for CRLFs and foothill yellow-legged frogs.
- If a CRLF or yellow-legged frog becomes trapped during construction activities within the creek, activities will cease until the biological monitor is contacted and the frog is relocated upstream from the construction area and exclusion fence is installed to prevent the movement of the frogs back into the construction area.
- Relocation of CRLFs will only take place by an individual permitted by USFWS to handle this species.
- Any incidental take of CRLFs will be reported to USFWS immediately as described under Mitigation Measure BR3ba.

Mitigation Measure BR3e: Conduct Preconstruction Surveys to Minimize Mortality to Northwestern Pond Turtles

To minimize impacts on northwestern pond turtles and their habitat, the County or its contractors will implement the following avoidance and minimization measures:

- A preconstruction survey by a qualified biologist for northwestern pond turtles will be conducted within 48 hours prior to the start of construction activities at Weber Creek. If a northwestern pond turtle is located within the construction area, the turtle will be relocated out of the construction area and exclusion fence will be installed to prevent the movement of turtles back into the construction area.
- If a turtle becomes trapped during construction activities within the waterway, activities will cease until the turtle is removed and placed upstream from the

construction area and exclusion fence is installed to prevent the movement of turtles back into the construction area.

Mitigation Measure BR3f: Limit In-Water Construction Activities to the Summer Low- or No-Flow Period

To reduce the potential for impacts on amphibians, reptiles, and fishery resources associated with construction-related activities, the County or its contractors will limit in-water construction activities to the summer low- or no-flow period (generally between May 1 and October 15 or before the onset of the rainy season, whichever occurs first. The rainy season is defined as a frontal system that results in depositing 0.25 inches or more of precipitation in one event in the area.). By keeping the construction period within low-precipitation months, the risk of bank erosion is also decreased. Stream banks and adjacent areas disturbed by construction activities should be stabilized to avoid increased erosion during subsequent storms and runoff.

Mitigation Measure BR3g: Ensure That Turbidity Increases Do Not Exceed Central Valley Regional Water Quality Control Board Standards

To meet the CVRWQCB requirements (Palisoc pers. comm.), the County or its contractors will use a turbidity meter to monitor immediately upstream and 91 meters (300 feet) downstream of the construction area every 4 hours during construction in Weber Creek if construction activities create a visible plume in surface waters. Construction activities shall not cause turbidity increases in surface waters to exceed the following:

- Where natural turbidity is between 0 and 5 Nephelometirc Turbidity Units (NTUs), increases shall not exceed 1 NTU;
- Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20%;
- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10%.

If the turbidity increases exceed these standards, mitigation measures shall be implemented immediately to meet these standards. Potential mitigation measures include:

- minimizing disturbance of soils and stream bed gravels, and
- constructing a silt barrier immediately downstream of the construction area.

Mitigation Measure BR3h: Develop and Implement a Toxic Materials Control and Spill-Response Plan

The County or its contractors will develop and implement a toxic materials control and spill-response plan. The plan will include measures to:

- prevent raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life from contaminating the soil or entering watercourses;
- establish a spill-prevention and countermeasure plan before project construction that includes strict on-site handling rules to keep construction and maintenance materials out of drainages and waterways;
- immediately clean up all spills according to the spill-prevention and countermeasure plan and immediately notify DFG of any spills and cleanup procedures;
- provide staging and storage areas located outside the creek's normal high-water area for equipment, materials, fuels, lubricants, solvents, and other possible contaminants; and
- remove vehicles from the normal high-water area of the channel before refueling and lubricating.

Mitigation Measure BR3i: Store Hazardous Materials at an Approved Storage Facility

The County or its contractors will store hazardous substances at approved staging facilities located at least 30.5 meters (100 feet) from any surface waters. Refueling and vehicle maintenance will be performed at least 30.5 meters (100 feet) from these receiving waters. Sedimentation fences, certified weed-free hay bales, sandbags, water bars, and baffles will be used as additional sources of protection for waters, ditches, and wetlands.

Mitigation Measure BR3j: Minimize Long-Term Impacts on Woody Riparian Vegetation and Associated Habitat

The County or its contractors will minimize long-term impacts on woody riparian vegetation by trimming trees and shrubs rather than removing the entire woody species, where feasible, within the bridge construction area. Where possible, shrubs and trees should be cut 0.9 to 1.5 meters (3 to 5 feet) above ground level to leave the root systems intact and allow for more rapid regeneration following construction.

Mitigation Measure BR3k: Enhance Riparian Habitat by Developing and Implementing a Riparian Restoration Plan

The County will prepare a riparian restoration plan to compensate for the temporary, unavoidable loss of riparian vegetation along Weber Creek. The County proposes to restore woody riparian that will be removed during construction at a minimum of a 1:1 ratio (1 acre planted for every 1 acre cleared). To further compensate for riparian impacts, as well as permanent impacts to aquatic habitat, indirect impacts, and the temporal loss of riparian habitat, the County will contribute to the Spivey Pond fund established by the American River Conservancy (or another party mutually agreed upon between the County and USFWS) for the purposes of enhancing or constructing California red-legged frog habitat in the vicinity of Spivey Pond.

The riparian restoration plan will be developed through coordination with representatives from Caltrans, DFG, and USFWS. It will include design specifications, an implementation plan, maintenance requirements, and a monitoring program. Monitoring for a minimum of 5 years will be conducted to document the degree of success in achieving the success criteria and to identify remedial actions that may be needed. The mitigation will be considered successful once the following criteria have been met:

- The riparian habitat is composed of a mix of native species similar to that removed during construction of the Weber Creek bridges improvements.
- At least 75% total cover of native riparian vegetation is established at the mitigation site.
- The riparian species that dominate the mitigation site rate good or excellent vigor and growth. This assessment should be based on a qualitative comparison of leaf turgor, stem caliber, leaf color, and foliage density in the planted sites with individuals of the same species in the adjacent riparian areas.
- Less than 5% of total cover on each site will be composed of weedy annual or perennial species.
- Plantings are self-sustaining without human support (e.g., weed control, rodent control, or irrigation).

Annual monitoring reports will be submitted to Caltrans, DFG, and USFWS (and the Corps, if required as part of the Section 404 permit) during the 5-year monitoring period. The report will summarize the data collected during monitoring periods, describe how the riparian habitat is progressing in terms of the success criteria, and discuss any remedial actions performed.

Impact BR4: Potential Disturbance to 0.044 Hectare (0.12 Acre) of Jurisdictional Seasonal Wetlands/Drainages

In addition to the permanent fill described under Impact BR2, the preferred alternative could result in the indirect disturbance of 1 jurisdictional seasonal drainage (Seasonal Drainage 1) (No fill of this drainage is anticipated.). The project could also indirectly affect all of Seasonal Drainage 2 (0.0055 hectare or 0.01 acre) (Up to 50% of this drainage will be filled.) (Figure 3.8-1). These wetlands/drainages could be indirectly affected if project-related sedimentation drains to Weber Creek, especially during the wet season. See also the corresponding permanent impact discussion under Impact BR2.

These features are small, artificial features that were created from highway construction activities and have been disturbed by human activities. They do not provide important, irreplaceable habitat functions and values. However, impacts on these jurisdictional wetlands are considered significant since the project could affect federally-protected wetlands through sedimentation.

To reduce this impact to a less-than-significant level, the County will implement the mitigation measures described below. Mitigation Measure BR3a is a general measure aimed at protecting sensitive biological resources. Mitigation Measures BR3f–i are intended to protect water quality.

- *Mitigation Measure BR3a: Install Construction Barrier Fencing around the Construction Area to Protect Sensitive Biological Resources That Will Be Avoided.* See Impact BR3 for a description of this measure.
- *Mitigation Measure BR3f: Limit In-Water Construction Activities to the Summer Low- or No-Flow Period.* See Impact BR3 for a description of this measure.
- *Mitigation Measure BR3g: Ensure That Turbidity Increases Do Not Exceed Central Valley Regional Water Quality Control Board Standards.* See Impact BR3 for a description of this measure.
- *Mitigation Measure BR3h: Develop and Implement a Toxic Materials Control and Spill-Response Plan.* See Impact BR3 for a description of this measure.
- *Mitigation measure BR3i: Store Hazardous Materials at an Approved Storage Facility.* See Impact BR3 for a description of this measure.

Impact BR5: Removal of and Disturbance to Up to 8–12 Hectares (20–30 Acres) of Blue Oak Woodland and an Undetermined Number of Native Trees

The preferred alternative would result in the removal of or disturbance to up to 8–12 hectares (20–30 acres) of blue oak woodland, including several native blue oaks, foothill pines, and interior live oaks outside the blue oak woodland habitat. Senate Concurrent Resolution 17 states that state agencies should make every effort to avoid impacts on oak woodlands. The removal of blue oak woodland is considered a significant impact because the project would result in the degradation and loss of a sensitive plant community and associated wildlife habitat.

The County will reduce long-term impacts on the blue oak woodland and native oak trees to a less-than-significant level by implementing the following mitigation measures. Mitigation Measure BR3a is a general measure to protect sensitive biological resources. Mitigation Measure BR5a specifically addresses impacts to oak woodland.

Short-term impacts on oak woodland habitat will remain significant and unavoidable even with implementation of Mitigation Measure BR5a since, even though it provides for the planting of oak saplings at a 3:1 ratio, it does not mitigate for the loss of fully-grown oak trees which take many years to mature.

- *Mitigation Measure BR3a: Install Construction Barrier Fencing around the Construction Area to Protect Sensitive Biological Resources That Will Be Avoided.* See Impact BR3 for a description of this measure.

Mitigation Measure BR5a: Minimize and Compensate for Impacts on Blue Oak Woodlands and Individual Native Oak Trees by Replanting Oaks

To minimize long-term impacts on the blue oak woodland and compensate for direct and indirect impacts on native oaks and woodland habitat on the project site, the County or its contractors will implement the following:

- Retain an arborist to identify the species and numbers of native trees that will be removed and indirectly affected within the construction zone.
- Protect oaks not to be removed but that are within 61 meters (200 feet) of the grading activity by fencing them 1.5 meters (5 feet) beyond the dripline and root zone (as determined by a certified arborist). This fence, intended to prevent activities that result in soil compaction beneath the canopy or over the root zone, will be maintained until all construction activities are complete. No grading,

trenching, or movement of construction equipment will be allowed to occur within fenced areas. Protection for oak trees on slopes will include installation of a silt fence. A silt fence will be installed at the upslope base of the protective fence to prevent any soil drifting down over the root zone.

- Replace native oak trees removed during construction, at a ratio of 3:1 for trees (Burmester pers. comm.) measuring greater than 15.2 centimeters (6 inches) in dbh. Plantings of acorns or one-gallon container stock will occur within the construction area or on other publicly-owned land that can be protected in perpetuity, such as publicly-owned parks and road right-of-ways.
- Plantings shall be monitored annually by a qualified biologist for 5 years after construction is complete. Results of the monitoring shall be submitted to the appropriate agencies. Success will be achieved if there is a minimum of 80% survival by the end of the fifth year and a stable viable population for the duration of the monitoring period. If the performance standards are not met, remedial measures such as replanting will be implemented. During monitoring, the following information will be evaluated: average tree height, percent of tree cover, tree density, percent of woody shrub cover, seedling recruitment, and invasion by non-native species. During the revegetation process, tree survival will be maximized by using deer screens or other maintenance measures as recommended by a certified arborist.
- Require the Contractor to perform any necessary pruning, including pruning for utility line clearance, using the "Pruning Guidelines" adopted by the California Department of Forestry and Fire Protection pruning standards.
- Inspect the areas that have vegetative pruning and tree removal immediately prior to construction, following construction, and 1 year following construction to determine the amount of existing vegetative cover, cover that is removed, and cover that resprouts. If these areas have not sufficiently resprouted in order to return the cover to the level of cover existing prior to project construction, those areas will be replanted with the same species to reestablish the cover to the pre-project condition.

Impact BR6: No Impact on Special-Status Plant Species

No special-status plant species were found in the project area. Therefore, the project would not impact special-status plant species.

Mitigation Measure

None proposed.

Impact BR7: Introduction of New Noxious Weeds or Spread of Existing Noxious Weed Species

The preferred alternative could result in the introduction or spread of noxious weed species that could displace native species, changing the diversity of species or number of any species of plants. Soil-disturbing activities during construction and maintenance of the proposed project could promote the introduction of plant species not currently found in the project area, including exotic pest plant species. Exotic pest plants include noxious weeds designated as federal noxious weeds by the U.S. Department of Agriculture and listed by the CDFA, as well as other exotic pest plants designated by the CalEPPC (California Exotic Pest Plant Council 2000) and the County. Roads, highways, and related construction projects are some of the principal dispersal vectors for exotic pest plants. The introduction and spread of exotic pest plants adversely affect natural plant communities by displacing native plant species that provide shelter and forage for wildlife species. This impact is considered significant since the spread of invasive species could result in the substantial reduction or elimination of native species diversity or abundance.

Mitigation Measure BR7a: Avoid the Introduction of New Noxious Weeds or the Spread of Existing Noxious Weeds

Based on the "Weeds of Interest in El Dorado County" list, the County has completed the "Weed Survey Form" for weeds found in the project area (see Table 3.8-3) and provided these forms to the El Dorado County Department of Agriculture. In addition, to avoid the introduction or spread of noxious weeds into previously uninfested areas and reduce this impact to less than significant, the County or its contractors will implement the following measures:

- Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weed infestations.
- Clean construction equipment at designated wash stations before entering the construction area.
- Seed all disturbed areas with certified weed-free native mixes. Use only certified weed-free straw or rice mulch in uplands only.
- Conduct a follow-up inventory of the construction area to verify that construction activities have not resulted in the introduction of new noxious weed infestations.
- If new noxious weed infestations are located during the follow-up inventory, the appropriate resource agency will be contacted to determine the appropriate species-specific treatment methods.

Impact BR8: Potential Disturbance of 1 Blue Elderberry Shrub—Valley Elderberry Longhorn Beetle Habitat

The preferred alternative would not directly or indirectly affect one blue elderberry shrub—host plant for VELB. A shrub was identified approximately 9 meters (30 feet) outside of the project area adjacent to Helmrich Lane (Figure 3.8-1), during the field surveys, this road would be used by construction personnel and equipment for access to work and staging areas; however, the shrub would not be exposed to increased levels of dust since the road is paved. The shrub consisted of several 1-inch-diameter stems growing near the base of a larger dead elderberry shrub that had at least 3 branch breaks, possibly from passing vehicles. Under Section 7 of the federal Endangered Species Act, the preferred alternative will have no effect on VELB since the 1 isolated blue elderberry shrub identified as potential VELB habitat is located outside of the construction zone and would be avoided; no VELB occurrences exist within 24 kilometers (15 miles) of the project area; there is no evidence of VELB occupancy in the shrub; and the project area is located on the eastern edge of the species range. Fencing will be placed so as to protect the shrub from construction vehicles.

This impact is considered to be less than significant since the project would not substantially affect the USFWS-listed species or reduce the number or restricted the range of this species. The County will implement Mitigation Measure BR8a to protect the shrub from construction vehicles.

Mitigation Measure BR8a: Avoid Disturbance of Valley Elderberry Longhorn Beetle Habitat

The County or its contractors will implement the following avoidance measure:

> Fencing will be placed at the edge of the existing road adjacent to the elderberry bush, for 30.5 meters (100 feet) along the road on both sides of the bush, for a total of 61 meters (200 feet) (per the USFWS' 1996 "Revised Mitigation Guidelines for the Valley Elderberry Longhorn Beetle"), to protect it from construction vehicles. This buffer zone will be marked with fencing or flagging, and a sign will be erected at the edge of this buffer zone. The sign shall have the following information: "This bush is potential habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment."

- *Mitigation Measure BR3a: Conduct a Biological Resources Education Program for Construction Crews and Enforce Construction Restrictions.* See Impact BR3 for a description of this measure.

- *Mitigation Measure BR3b: Retain a Biologist to Monitor Construction Activities.* See Impact BR3 for a description of this measure.

Impact BR9: Potential Disturbance of Non-Special-Status Nesting Raptors

The preferred alternative could result in the disturbance of non-special status nesting raptors or the removal of occupied nests if construction occurs during the breeding season (generally between February 1 and August 15). This disturbance could cause nest abandonment and death of young or loss of reproductive potential at active nests located at or near the project site. No breeding activity was observed during the breeding surveys conducted in April and May 2002. A single adult female red-tailed hawk was observed circling within 152.4 meters (500 feet) of the Weber Creek bridges in April 2002, but it was not associated with a nest site. Based on the relatively small amount of nesting habitat impacted by project construction and the territorial range of these species (ranging from 7.7–8.0 hectares [19–20 acres]), it is unlikely that more than one active nest would be disturbed by the project. These species are also locally or regionally abundant.

Effects on non-special-status nesting raptors would be considered less-than-significant since the project would not substantially disturb non-special status species raptors.

Mitigation Measure

None proposed.

Impact BR10: Loss of Raptor Foraging Habitat

Implementation of the preferred alternative would result in the temporary disturbance of 0.29 hectare (0.71 acre) of riparian habitat and loss of less than 1 acre of annual grasslands that are considered potential foraging habitat for non-special-status raptors. Red-tailed hawks were observed soaring over the project area; however, there is a moderate potential for any of these species to forage in the project site. Based on the regional abundance of these habitat types in the project vicinity, the project is considered to have a less-than-significant effect since the loss of a small

area of foraging habitat would not substantially reduce the local population size of foraging raptors.

Mitigation Measure

None proposed.

Impact BR11: Disturbance of Nesting Swallows

The preferred alternative could result in the disturbance of nesting swallows. Approximately 20 active swallow nests and remnants of other swallow nests were observed on the underside of the existing Missouri Flat Road interchange structure over U.S. 50 during the June 2001 field surveys. Potential nesting habitat was also identified under the U.S.50 bridge structures over Weber Creek and the abandoned U.S. 50 bridge structure over Weber Creek. Swallows are not considered special-status species, but their occupied nests and eggs are protected by both federal and state laws, including the federal MBTA and the California Fish and Game Code, Section 3503, 3513 and 3800 (50 CFR 10 and 21).

Effects on nesting swallows would be considered adverse if the project results in a substantial reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation. Based on the colonial nesting habits of swallows and nest site fidelity, a large colony of swallows could be disturbed by project-related construction activities at the Missouri Flat Road interchange overcrossing; therefore, this impact is considered significant.

Mitigation Measure BR11a: Avoid Construction during Swallow Nesting Season or Remove Empty Nests and Prevent New Nesting

If active nests are found, construction activities that could potentially disturb nesting swallows will be conducted outside the breeding season for these species. To avoid impacts on nesting swallows and reduce this impact to less than significant, the County or its contractors will implement the following avoidance and minimization measures:

- To the extent possible, construction activities that could potentially disturb nesting swallows will be conducted outside of the breeding season for these species (March 1 to August 1).
- If construction activities are to occur during the swallows' breeding season, the County shall hire a qualified biologist to inspect the interchange and bridge structures during the swallows' nonbreeding season. If nests are found and are abandoned, they may be removed. To avoid damaging active nests, nests must be

removed before the breeding season occurs (March 1). A permit from DFG and USFWS is required if active nests are to be removed.

- After nests are removed, the underside of the bridge shall be covered with 0.5- to 0.75-inch mesh net, poultry wire, or other DFG-approved swallow exclusion device. All devices shall be installed before March 1. The device must be anchored so swallows cannot attach their nests to the bridge through gaps in the device. An alternative to netting is to continually hose down non-active nests until construction occurs.
- If netting of the interchange or bridge structures does not occur by March 1 and swallows colonize the bridge, modifications to these structures shall not begin before August 1 or until the young have fledged and all nest use has been completed.
- If steps are taken to prevent swallows from constructing new nests, work can proceed at any time of the year notwithstanding other restrictions specified in the mitigation measures identified above and in County ordinances.

Impact BR12: Direct Mortality and Short-Term Disturbance of Common Slow-Moving and Ground-Dwelling Animals

Grading, fill, soil compaction, and other construction activities associated with the preferred alternative could result in the direct mortality or short-term disturbance of slow-moving and ground-dwelling animals. This possible impact is considered less than significant because those animals that could be affected by construction activities are common species that are locally and regionally abundant and the project would not substantially disturb these animals.

Mitigation Measure

None proposed.

Impact BR13: Short-Term Disturbance and Removal of Habitat Occupied by Common Wildlife Species

The preferred alternative would result in a short-term disturbance and removal of habitat occupied by common wildlife species in the project area. This impact is considered less than significant because these species are locally and regionally abundant and populations of these species and the project would not substantially disturb these species.

Mitigation Measure

None proposed.

Impact BR14: Consistent with El Dorado County General Plan Policies

The proposed project is consistent with the following relevant County policies governing impacts on biological resources. As is apparent from its language, which references "discretionary *permit* review," Policy 7.4.4.4, which addressing tree canopy coverage standards, applies only to privately initiated projects, and thus is not applicable to public projects such as the proposed interchange. County staff has confirmed that this is the settled interpretation of the policy. (Payne pers. comm.)

Policy 7.3.3.2. All feasible project modifications shall be considered to avoid wetland disturbance. Direct or indirect losses of wetlands and/or riparian vegetation associated with discretionary application approval shall be compensated by replacement, rehabilitation, or creation of a wetlands habitat on a no-net-loss basis. Compensation may result in provision of wetlands habitat on- or off-site at a minimum of 1:1 ratio as associated with the disturbed resource. A wetland study and mitigation monitoring program shall be submitted to the County and concerned State and Federal agencies for review prior to permit approval.

As is apparent from its language, Policy 7.3.3.2 begins with broad language that is then followed by narrowing language limiting certain specific aspects of the policy to privately initiated projects only. The first sentence, which states that "all feasible project modification shall be considered to avoid wetland disturbance," is a generic statement applicable to all classes of projects adversely affecting "wetlands," as defined by the General Plan. This first statement thus requires that all County projects, as well as private projects, avoid "wetland" disturbance whenever feasible. The remainder of Policy 7.3.3.2 – and particularly the language creating a "no net loss" policy for wetlands impacts – applies only to "discretionary *application* approval[s]." As with Policy 7.4.4.2, which applies only to "discretionary permit review," this language, referring to "application[s]," applies only to private projects, as the County need not file any "application" to pursue its own projects.

Notably, the County General Plan Glossary (El Dorado County 1996a) defines "wetlands" as being land that qualifies as jurisdictional wetlands according to the definition employed by the Corps; this definition requires the presence of positive indicators for 3 parameters (hydrophtic vegetation, hydric soils, and wetland hydrology) to be considered a wetland under federal jurisdiction. This definition is thus narrower than that employed by some other regulatory entities, such as, for example, the California Department of Fish and Game, which treats areas as wetlands

if they contain only 1 of the 3 parameters that the Corps deems necessary for true "wetlands" to exist. In other words, DFG might treat an area as a "wetland", because of the presence of 1 parameter, while the Corps might not treat the same area as a "wetland."

Based on the definition of "wetlands" used by the Corps and the County, the proposed project could result in the complete filling of 1 jurisdictional seasonal wetland and no more than 50% of 1 jurisdictional seasonal drainage, totaling the potential loss of 0.019 hectare (0.045 acre) of jurisdictional wetlands (see Impact BR2). The project could also result in the potential indirect disturbance of 2 jurisdictional seasonal drainages (one of which could be filled up to 50%, as mentioned above), totaling the potential disturbance of 0.044 hectare (0.12 acre) of jurisdictional seasonal wetlands (see Impact BR4). These wetlands are small, artificial features that were created by highway construction activities and have been disturbed by human activities. They do not provide important, irreplaceable habitat functions and values. Loss of these wetlands cannot be avoided with project implementation since they are located adjacent to the existing interchange and mainline facilities (see Figure 3.8-1) where the new westbound on-ramp and auxiliary lanes are proposed and where construction access would be required. Therefore, project modifications to avoid these wetlands is infeasible. As a result, the proposed project does not violate, and indeed is fully consistent with those portions of General Plan Policy 7.3.3.2 that apply to public projects. As noted above, that policy does not require the achievement of a "no-net-loss" mitigation performance standard for a public project such as the proposed interchange.

Policy 7.4.1.5. Species, habitat, and natural community preservation/conservation strategies shall be prepared to protect special status plant and animal species and natural communities and habitats when discretionary development is proposed on lands with such resources unless it is determined that those resources exist, and either are or can be protected, on public lands or private Natural Resource lands.

Mitigation Measures BR3d (Conduct preconstruction surveys and minimize mortality to CRLF and foothill yellow-legged frog) and BR3e (Conduct preconstruction surveys and minimize mortality to northwestern pond turtles) protect special-status animal species. Mitigation Measures BR3j (Minimize long-term impacts to woody riparian vegetation and associated habitat), BR3k (Enhance riparian habitat by developing and implementing a riparian restoration plan), and BR5a (Minimize and

compensate for impacts on blue oak woodlands and individual native oak trees by replanting oaks) protect the habitat of special-status wildlife species. The project area contains no special-status plant species.

Policy 7.4.1.6. Where substantial modifications of natural communities and habitats of special status plants and animal species through grading or other disturbances occur in anticipation of or prior to either the submittal and/or approval of a formal discretionary application, that application shall be accompanied with a comprehensive habitat restoration and/or off-site mitigation plan. The provisions of the plan shall be implemented as part of the project approval.

See the discussion for Policy 7.4.1.5 above. Since this project is not a private project, it does not require formal discretionary application. The mitigation measures described under Policy 7.4.1.5 could be adopted by the County as conditions of approval. Implementation of these measures would render this project to be consistent with this policy.

Because the project is consistent with adopted policies, this impact is considered less than significant.

Mitigation Measure

None proposed.

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts.

No-Project Alternative (2025)

Under the No-Project Alternative, no impacts to biological resources would occur.

6-Lane Tight Diamond Alternative

The impacts and mitigation measures associated with Weber Creek and associated white alder riparian forest vegetation, under this alternative, would be the same as those described for the preferred alternative since the proposed improvements to the Weber Creek bridges would be identical to the preferred alternative. Impacts on wetlands and blue oak woodland habitat along Missouri Flat Road (see Figure 3.8-1) are also expected to be the same as the preferred alternative because the footprint of this alternative is essentially the same as the SPDI where wetland and blue oak

woodland habitat occur. Impacts on special-status, non-special-status, and common wildlife species would also be the same.

4-Lane Tight Diamond Alternative (2025)

The impacts associated with this alternative would be the same as those described for the preferred alternative. All ground-disturbing activities related to the construction of improvements at the Weber Creek bridges, described for the preferred alternative, would also occur under this alternative. Ultimate Phase improvements associated with the preferred alternative would not occur under this alternative. However, since the Ultimate Phase of construction would not entail any ground-disturbing activities (only the bridge decks would be affected) or blasting, the effects on Weber Creek and associated riparian vegetation would be the same under both the SPDI and the 4-Lane Tight Diamond Alternative (2025).

Impacts on wetlands and blue oak woodland along Missouri Flat Road are also expected to be the same as the preferred alternative since the footprint of this alternative is essentially the same as the SPDI where wetland and blue oak woodland habitat occur. Impacts on special-status non-special-status, and common wildlife species would also be the same.

5.9 Historic and Archeological Resources

See section 3.9.1, "Affected Environment," for a discussion of the historic and archeological resources setting. This section also includes a description of state regulations.

5.9.1 Determining Significance under CEQA

An impact is considered significant under CEQA if the project would:

- cause a substantial adverse change in the significance of an historical resource (CEQA Guidelines rev. 1998, Section 15064.5[b]). The State CEQA Guidelines further state that a substantial adverse change in the significance of an historical resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. Actions that would materially impair the significance of an historic resource are those that would demolish or adversely alter those physical characteristics that convey its historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of sections 5020.1(k) and 5024.1(g) of the Public Resources Code;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- disturb any human remains, including those interred outside of formal cemeteries; or
- eliminate important examples of the major periods of California history or prehistory.

5.9.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact CR1: Potential Damage to Currently Unknown Cultural Resources

The proposed project may result in the destruction of unknown cultural features located within the project area. Field surveys can locate only those cultural resources with an above ground component. Cultural resources may be buried under alluvial sediments and may not be locatable by surface inspection alone. Additionally,

surface visibility limitations may prevent the discovery of some cultural resources. It is possible that construction or operation activities will uncover previously unknown cultural resources.

The proposed project would result in a significant impact if it causes a substantial adverse change in the significance of a historical resource or a unique archaeological resource through the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource or unique archaeological resource would be materially impaired. (CEQA rev. 1998, Section 15064.5 [4] and [5]. The data potential for an archaeological resource would be irrecoverably lost if construction activity disturbed or destroyed an archaeological deposit.

Mitigation Measure CR1a: Implement Procedures for the Unanticipated Discovery of Cultural Resources

If historical or unique archaeological resources are accidentally discovered during construction, the County shall take steps to provide for an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, the County shall make available contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation. Work may continue on other parts of the building site while historical or unique archaeological resources mitigation takes place (CEQA Guidelines rev. 1998, Section 15064.5[f]).

If human bone is found as a result of any construction or operational activity, the County's contractor will be required to stop all disturbance activities and notify the El Dorado County Coroner within 48 hours in compliance with California Public Resource Code 5079.94 and 5097.98. If the coroner determines that the remains are Native American, the California Native American Heritage Commission will be notified by the County.

The lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission (CEQA Guidelines rev. 1998, Section 15064.5[d]).

Implementation of Mitigation Measure CR1a would reduce this impact to less than significant as it would provide a means for data recovery.

Temporary Impacts: SPDI

The preferred alternative would not result in any temporary impacts.

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts related to earth resources and hazardous materials.

No-Project Alternative (2025)

Because no project-related grading would occur, there would be no potential for damage to currently unknown cultural resources.

6-Lane Tight Diamond Alternative

Cultural resource impacts associated with this alternative would be the same as those described for the preferred alternative.

4-Lane Tight Diamond Alternative (2025)

Cultural resource impacts associated with this alternative would be the same as those described for the preferred alternative.

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5.10 Earth Resources and Hazardous Materials

See section 3.10.1, "Affected Environment," for a discussion of the earth resources and hazardous materials setting.

5.10.1 Determining Significance under CEQA

Appendix G of the State CEQA Guidelines provides guidance for evaluation of project effects on geologic and hazardous materials. Based on these guidelines, the project is considered to have a significant impact on the geology and soils and hazardous materials if it would:

- expose people or structures to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
- expose people or structures to strong seismic groundshaking;
- expose people or structures to seismic-related ground failure, including liquefaction;
- expose people or structures to landslides;
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

5.10.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts: SPDI

Impact ER1: Change in Topography from Grading Activities during Construction

Implementation of the project would result in the construction of new ramps and embankments requiring the excavation of roadbed and/or ground surface material and the replacement of equivalent amounts of fill material. Grading that would occur during project construction would primarily disturb areas that already have been graded for prior road construction, and the increased disturbance would be minimal. This impact is considered to be significant since soil erosion could occur if standard grading permit requirements are not followed.

Mitigation Measure ER1a: Approve Grading Design Plans Consistent with County and Caltrans Grading Requirements

The County or its contractor will comply with County grading requirements, found principally in the County of El Dorado Design and Improvements Standards Manual, Volumes IV and V, and Caltrans' standard specifications for earthwork. Prior to the issuance of grading permits, grading design plans will incorporate the findings of detailed geologic and geotechnical investigations. Erosion-control plans, specifications, and an estimate will also be included in the project construction documents, which require that all soil directly or indirectly disturbed during construction be treated and stabilized with erosion control measures.

Implementation of this measure will reduce this impact to less than significant since compliance with County and Caltrans' earthwork requirements will ensure that soil erosion is controlled.

Impact ER2: Potential for Unstable Slope Conditions from Grading Activities during Construction of Embankments and Cut Slopes

Implementation of the project would result in construction activities involving excavations into steep slopes to construct embankments and permanent cut slopes. Excavating into existing steep slopes could lead to unstable ground surfaces, inducing ground failure. This impact is considered significant since unstable soil conditions could occur if standard specifications for earthwork are not followed.

Mitigation Measure ER2a: Approve Grading Design Plans Consistent with County and Caltrans' Standard Earthwork Specifications

The County or its contractor will implement construction standards for embankment and permanent cut slopes to maintain slope stability and minimize the potential for slope failure during construction, based on the County's standard specifications for earth work (found principally in the County of El Dorado Design and Improvements Standards Manual, Volume IV and V). Requirements for the embankment slope and actual dimensions of structures will be incorporated in the final design plans before County and Caltrans approval. Erosion-control plans, specifications, and estimates will also be included in the project construction documents, which require that all soil directly or indirectly disturbed during construction be treated and stabilized with erosion-control measures.

Implementation of this measure will reduce this impact to less than significant because slope stabilization and erosion-control measures will be implemented to ensure that ground failure does not occur.

Impact ER3: Potential for Structural Damage from Development in Seismic Risk Zone 3

The project site is not located in an Alquist-Priolo Special Studies Zone or a known active fault zone, but implementing the project would result in continued development in Uniform Building Codes Seismic Risk Zone 3, where earthquake severity and probable structural damage from nearby earthquakes would be moderate (United States Geological Survey 1984). Structures not built according to seismic safety standards are more susceptible to damage (and, subsequently, to increased risk of injury to persons) than structures built in accordance with those codes. At the Weber Creek bridges site, existing foundation stability/capacity with respect to seismic loading will be addressed as part of the seismic retrofit for the bridges (Taber Consultants 2001b). This impact is considered significant because given the unpredictability of the occurrence of a seismic event, the project could expose people or structures to seismic groundshaking.

Mitigation Measure ER3a: Approve Final Design Plans That Are Consistent with Caltrans and Uniform Building Code Seismic Safety Standards

The County or its contractor will construct all proposed structures so that they conform to the latest Caltrans and Uniform Building Code standards that establish requirements for seismic safety.

Implementation of this measure would reduce this impact to less than significant since conformance with Caltrans and Uniform Building Code standards will ensure that the project is constructed to resist stresses developed by earthquakes.

Impact ER4: Potential for Structural Damage from Development on Materials Subject to Liquefaction

Moderate to strong ground shaking in the project area could be caused by a large earthquake on nearby faults, resulting in subsequent liquefaction in clay-free soils. This impact is considered significant because the project could expose people and structures to seismic-related ground failure, including liquefaction, if seismic safety requirements are not followed.

- *Mitigation Measure ER3a: Approve Final Design Plans That Are Consistent with Caltrans and Uniform Building Code Seismic Safety Standards.* See Impact ER3 for a description of this measure.

Implementation of this measure would reduce this impact to less than significant since conformance with Caltrans and Uniform Building Code standards will ensure that the project is constructed to resist stresses caused by liquefaction.

Temporary Impacts: SPDI

Impact ER5: Potential for Increased Short-Term and Long-Term Erosion Rates from Grading Activities

Implementation of the project would result in construction activities involving ground breaking and removal of vegetative cover, which would lead to increased wind and water erosion rates. Additionally, construction activities may compact the soil, increasing runoff and decreasing the revegetation potential. This impact is considered significant since construction and grading activities could accelerate the natural ongoing soil erosion process, and grading operations for the project could lead to a substantial change in short-term and long-term erosion because the project is located in relatively steep terrain and will entail removal of vegetation on uplands and along stream corridors.

- *Mitigation Measure ER1a: Approve grading design plans consistent with County and Caltrans grading requirements.* See Impact ER1 for a description of this measure.

Implementation of this measure would reduce this impact to less than significant since compliance with grading requirements will ensure that all soil directly or

indirectly disturbed during construction be treated and stabilized with erosion-control measures.

Impact ER6: Potential for Exposure of People to Asbestos

As described in the setting section above, published mapping shows that no asbestos-containing material is contained within the limits of the project area. However, the potential exists for unknown deposits of asbestos to be disturbed by grading and vehicle traffic, which could affect construction workers and nearby land uses. Therefore, this impact is considered significant since the project could create a hazard to the public or the environment involving the accidental release of hazardous materials.

Mitigation Measure ER6a: If Unknown Deposits of Asbestos Are Found During Construction, Comply with El Dorado County's Asbestos Ordinance

If unknown deposits of asbestos are found during construction, the County's contractors will be required to comply with El Dorado County's Naturally Occurring Asbestos & Dust Protection Ordinance and associated control measures in force in El Dorado County at the time the project undergoes construction. The ordinance requires that the project proponent (DOT) prepare an Asbestos Hazard Dust Mitigation Plan (HDMP) to protect the public's health by minimizing the potential for release of asbestos dust emissions during and after construction activities. The HDMP includes Best Management Practices for management of asbestiform material including the following: watering/maintaining wet surfaces at all times during potential disturbance periods; conducting air quality monitoring pursuant to guidelines set forth in the ordinance; avoiding serpentine materials to the extent feasible and covering disturbed serpentine areas; and limiting speeds to 10 miles per hour or less at the construction site.

Implementation of this measure will reduce this impact to less than significant since, if asbestos deposits are found during construction, measures will be taken to minimize the potential for release of asbestos dust emissions.

Impact ER7: Potential for Exposure of Previously Unknown Hazardous Wastes to Construction Workers and/or Nearby Land Uses

The ISA concludes that the potential for project construction workers to encounter significant hazardous materials or petroleum product contamination within the project corridor is generally low. However, information obtained during the study of the project area indicates that additional investigation should be conducted for a number

of properties described in the "Setting" section. In addition, the ISA recommends that measures be taken to ensure that hazardous levels of lead and/or asbestos do not occur on or under the Weber Creek bridges and on the highway and roadways. Therefore, this impact is considered significant since the project could create a hazard to the public or the environment involving the accidental release of hazardous materials.

Mitigation Measure ER7a: Implement Recommendations Related to Hazardous Materials Contained in the Project Initial Site Assessment (Additional Sampling Investigations at Selected Sites and Surveys to Determine the Occurrence of Lead-Based Paint and Asbestos at the Weber Creek Bridges and on the Roadways)

The County or its contractor will conduct additional sampling investigation of the properties identified in the project ISAs (Taber Consultants 2001b and 2003) prior to any acquisition of the properties for project implementation where hazardous material or petroleum product contamination could occur. The sampling investigation will be conducted to characterize the type and nature of the potential contaminated materials on site. If the sampling investigation identifies that 1 or more of the properties contains contaminated materials or petroleum products at a hazardous level, the County, in coordination with Caltrans and FHWA, will follow local, state, and federal regulations (such as NESHAP; California Health and Safety Code Division 20, Chapter 6.5; California Water Code Section 13304; California Code of Regulations Title 8 1532.1; and other applicable regulations) in establishing the appropriate clean-up measures. These measures may include, but are not limited to, identifying the parties responsible for cleanup and identifying the type of clean-up activity (such as movement of materials off-site, in-place remediation, project redesign to avoid hazardous materials).

The County or its contractor will also implement other recommendations contained in the ISA related to the potential for asbestos and lead-based paint to occur on the Weber Creek bridges, hazardous levels of chromium and lead in yellow traffic stripes to be removed, and aerial deposited lead along the highway. If lead-based paint and asbestos surveys indicate the presence of asbestos exceeding threshold quantities, measures consistent with federal regulations will be implemented. Yellow pavement markings to be removed will be disposed of in accordance with the Standard Special Provisions for removal of yellow strips and pavement markings.

Implementation of this measure will reduce this impact to less than significant since, if unknown hazardous materials are found, clean-up measures will be taken prior to construction so as to avoid the accidental release of hazardous materials.

No-Project Alternative (2025)

Under the No-Project Alternative, no interchange and intersection improvements would be constructed along Missouri Flat Road. Additionally, the improvements to the Weber Creek bridge would also not occur. There would be no impacts on geology and soils or hazardous materials. As a part of this project, the Weber Creek bridges would not be seismically retrofitted. Seismic retrofitting of the bridges could occur as part of another project in the future. Until such time, the following impact could occur.

Impact ER8: Potential for Structural Damage of the Weber Creek Bridges during a Seismic Event

Preliminary analysis indicates that the bridges are vulnerable to failure during the maximum credible earthquake; the bridges are located in Seismic Zone 3, where earthquake severity and probable structural damage from nearby earthquakes is moderate. This impact is considered significant under the No-Project Alternative.

Mitigation Measure ER-8a: Construct the SPDI, the 6-Lane Tight Diamond Alternative, or the 4-Lane Tight Diamond Alternative

All of these alternatives entail seismically retrofitting the Weber Creek bridges. If the County decides to adopt one of these alternatives rather than the No-Project Alternative, this impact would be reduced to less than significant.

6-Lane Tight Diamond Alternative

Geology and soils, seismicity, and hazardous materials impacts of this alternative would be the same as those described for the preferred alternative.

4-Lane Tight Diamond Alternative (2025)

The permanent geology and soils and seismicity impacts of this alternative would be the same as those described for the preferred alternative. The temporary soils and hazardous materials impacts would only occur during 1 phase of construction, rather than 2 phases as under the preferred alternative and the 6-Lane Tight Diamond Alternative; therefore, although the nature of these impacts would be the same as the preferred alternative and the 6-Lane Tight Diamond Alternative, the overall magnitude of the impacts would be less severe.

5.11 Visual

See section 3.11.1, "Affected Environment," for a discussion of the visual setting.

5.11.1 Determining Significance under CEQA

Appendix G of the State CEQA Guidelines provides guidance for evaluation of project effects on visual resources. Based on these guidelines, the project is considered to have a significant impact on visual resources if it would:

- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

5.11.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent Impacts

Impact VR1: Changes in Regional Visual Character

The proposed project would result in a larger U.S. 50/Missouri Flat Road interchange and wider freeway between this interchange and the Forni Road/Placerville Drive interchange to the east (see Impact VR3 for more details on changes in views to the interchange and adjacent freeway). This impact is considered to be less than significant since the project would not substantially degrade the existing visual character or quality of the site or its surroundings; the proposed improvements would be constructed at the same location as the existing interchange and in an area that is already developed with roadway infrastructure and urban uses.

Mitigation Measure

None proposed.

Impact VR2: Changes in Views of Landscape Units 1 and 2

Characteristics of the proposed project that could potentially change the viewsheds in these landscape units include providing new auxiliary/ramp lanes on U.S. 50 from the Missouri Flat Road to the Forni Road/Placerville Drive interchanges, including widening of the Weber Creek bridges and providing standard shoulders and standard

bridge railings on the bridges. The substructures of the bridges would be improved and the bridge decks would be widened during Phase 1. During the Ultimate Phase, the bridge decks would be further widened, but no further work would be required for the bridges' substructures. Vegetation along the creek would be removed to accommodate this improvement; however, the area of vegetation removal would only be visible at creek level and would not be seen by motorists on U.S. 50. (The "Wildlife and Botanical Resources, Threatened and Endangered Species, and Wetlands and Waters of the U.S." section discusses vegetation removal.)

The existing 0.9-meter (36-inch) high solid bridge rail, with handrail, would be replaced with a 0.8-meter (32-inch) high solid bridge rail. The new girders, span configuration, concrete columns, and abutments for the bridge widenings would match the clean, simple, rectilinear shape of the existing bridges. The color of the new girders would match the green coloration of the existing girders.

The effect of the widened highway on key viewers is not considered to be adverse because (1) viewer sensitivities are low and travelers' views at highway speeds are fleeting and of short duration; (2) it would not represent a substantial change in the existing viewshed as the proposed improvements are generally in the same footprint as the existing bridges; (3) the prominent vertical elements in the foreground of roadway travelers on U.S. 50 would be improved with the installation of lowered rails; (4) viewers are familiar with the existing roadway infrastructure; and (5) the proposed improvements would not limit or alter the vividness, intactness, or unity of existing views from these corridors as the viewshed of this location was changed dramatically by the construction of U.S. 50 in 1963.

The draft program EIR for the MC&FP (EDAW 1998) evaluated the impacts of adding auxiliary lanes to the Weber Creek bridges at a general, conceptual level. That program EIR identified the visual impacts of widening the Weber Creek bridges (Impact 4.3-7) as significant and unavoidable under CEQA since the widening would result in a substantial increase in paved area as viewed by travelers along U.S. 50. At the time that the MC&FP EIR was prepared, no preliminary engineering on the bridge retrofit or widening had been completed. Given the specifics of the proposed interchange design that are now available, this impact is judged to be less than significant since the project would not substantially degrade the existing visual character of these landscape units for the five reasons identified above.

Mitigation Measure

None proposed.

Impact VR3: Changes in Views of Landscape Units 3, 4, 5, and 6

Characteristics of the proposed project that could potentially change the viewsheds in these landscape units includes:

- replacing the existing Missouri Flat Road overcrossing, including flattening the crest vertical curve of the overcrossing and lowering it by 0.6–0.9 meter (2–3 feet). The grade of the approaches to the overcrossing will be slightly increased in height by approximately 0.3–0.6 meter (1–2 feet). Under Phase 1 of construction, the existing modified L-8 interchange would be replaced with a tight diamond configuration. The visual changes under the Ultimate Phase of construction would be more dramatic as the tight diamond is replaced with the SPDI, especially since this design would be visually unique in the County. Under the SPDI, the ramps would be reconfigured in a circular/arching manner, rather than the relatively straight formation of the existing ramps.
- widening the U.S. 50/Missouri Flat Road interchange ramps and ramp intersections (Phase 1 and Ultimate Phase);
- reconstructing Perks Court (Phase 1);
- widening Mother Lode Drive and its intersections with Missouri Flat Road and Greenleaf Drive (Phase 1 and Ultimate Phase); and
- widening the Missouri Flat Road/Prospectors Plaza Drive intersection (Phase 1).

Implementation of the proposed project would, in general, enlarge the existing Missouri Flat Road interchange and roadway, in their same general location, within an existing commercial area. During Phase 1, vegetation along the west and east sides of Missouri Flat Road, just north of the interchange to Prospector's Plaza Drive, would be removed to accommodate the roadway widening, and utilities along Missouri Flat Road between Prospector's Plaza Drive and Perks Court would be installed underground. A retaining wall would be constructed along Missouri Flat Road to retain the trees that front the west side of the road adjacent to the Best Western Placerville Inn (Figure 3.11-6d). The County would landscape the new interchange during Phase 1 to reduce the mass and visually screen the proposed interchange improvements. The replanting of vegetation within the U.S. 50/Missouri Flat Road interchange would be consistent with provisions of Caltrans' existing viewshed enhancement projects along U.S. 50. This vegetative buffer would be designed to include the following:

- The species composition would consist of plants that are native and indigenous to the project area. The species would be mixed to include trees, shrubs, and an herbaceous understory of varying heights, as well as evergreen and deciduous types. Species variety would increase the effectiveness of the screening by providing multiple layers, seasonality, visual diversity, and reduced susceptibility to disease. Recommended tree species could include, but are not limited to, valley oak (*Quercus lobata*), western redbud (*Cercis occidentalis*), and California buckeye (*Aesculus californica*). Recommended shrub and herbaceous species could include, but are not limited to, toyon (*Heteromeles arbutifolia*), coffee berry (*Rhamnus californica*), elderberry (*Sambucus mexicana*), coyote bush (*Baccharis pilularis*), wild lilac (*Ceanothus* spp.), and manzanita (*Arctostaphylos* spp.). The understory would be broadcast seeded with native perennial grasses and forbs.
- A zone of a minimum of 1.8 meters (6 feet) in diameter would be mulched around each plant.
- The planting design would be randomized to mimic natural patterns.
- The landscaping plan would be implemented during the Phase 1 construction contract. An irrigation and maintenance program would be implemented during the establishment period.
- Plant species would be selected that maximize the screening of the interchange without compromising the traffic safety of the interchange.
- Plantings would be monitored for 5 years after the landscaping plan is implemented. Success will be achieved if there is a minimum of 80% survival by the end of the 5th year. Remedial measures, such as replanting, would be implemented if this standard is not met.

Views of the interchange from the home above Eppie's Lounge would continue to be largely shielded by vegetation along the access road leading to the house. Much of the vegetation that shields views of the interchange from the 7th-Day Adventist Church parking lot (located along the church's property line near the eastbound off-ramp) would be removed during Phase 1 construction. This vegetation would be replaced as part of the interchange landscaping plan described above.

The widening and reconfiguration of this interchange in its current location and widening of Missouri Flat Road is not considered adverse since (1) it would not represent a substantial change in the existing viewshed because the improvements are proposed for the same general footprint as the existing interchange within a commercial area; (2) the Missouri Flat Road overcrossing would be lower in height with a flattened crest vertical curve; (3) vegetation removal would be minimal and the interchange would be landscaped; (4) viewers of this change are accustomed to seeing existing roadway infrastructure; and (5) the proposed improvements would not

limit or alter the vividness, intactness, or unity of existing urbanized views in this corridor.

The draft program EIR for the MC&FP (EDAW 1998) evaluated the impacts of replacing the existing Missouri Flat Road interchange with a SPDI, at a general, conceptual level. This program EIR judged the visual impacts of improving the Missouri Flat Road interchange and widening the overpass (Impact 4.3-7) to be significant and unavoidable, under CEQA, since the SPDI design would be more urban in appearance than the existing interchange, would be larger, and would be visually different and unique. At the time that the MC&FP EIR was prepared, no preliminary engineering on the interchange design had been completed (and, therefore, features such as the interchange's lowered overcrossing height and flattened crest vertical curve were unknown) and the interchange landscaping plan had not been developed. Given the specifics of the proposed interchange design that are now available, this impact is judged to be less than significant since the project would not substantially degrade the existing visual character of these landscape units for the five reasons identified above

Mitigation Measure
None proposed.

Impact VR4: Imperceptible Changes in Light and Glare with 14 New Fixtures at the Interchange under the Ultimate Phase, 8 of Which Would Be Pedestrian-Level on the Overcrossing

The existing condition of nighttime lighting in the project area includes roadway lights, vehicle lights, and lighting from adjacent development. Seven overhead light fixtures are associated with the Missouri Flat Road overcrossing; others occur at the gore points and along U.S. 50. Sources of daytime glare include reflective surfaces, such as cars and glass and metal on nearby structures. The roadway features themselves do not substantially contribute to daytime glare. The proposed project would eliminate, replace, or relocate many of the existing light fixtures at the interchange. Under Phase 1, existing light fixtures wou1d be replaced with 11 lights at the interchange, 9 of which would be pedestrian-level fixtures on the Missouri Flat Road overcrossing railing (which are on shorter standards than roadway lighting) (Tatman pers. comm.). Under the Ultimate Phase, the Phase 1 lights would be replaced with 14 new fixtures, 8 of which would be pedestrian-level fixtures on the overcrossing railing (Tatman pers. comm.). All fixtures would meet Caltrans

standard specifications, and would be box-style, downcast, cut-off type fixtures directed at the roadway to minimize backscatter and fugitive light (Tatman pers. comm.).

As proposed, the changes in nighttime light under Phase 1 and the Ultimate Phase, relative to the current amount of light in the project area, would be imperceptible. Further, the proposed project would not introduce new substantial sources of daytime glare as all metal roadway features would be galvanized steel, which would oxidize within a few seasons and not contribute to daytime glare. This impact is considered to be less than significant since the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views.

Mitigation Measure

None proposed.

Temporary Impacts: SPDI

Impact VR5: Short-Term Visual Changes in Views from Construction Activities

The improvements to the U.S. 50/Missouri Flat Road interchange would include widening of the overcrossing, ramps and ramp intersections, and the Weber Creek bridges by constructing continuous auxiliary/ramp lanes to the Forni Road/Placerville Drive interchange. These improvements would generally occur in the location of the existing interchange, but would require a greater footprint to accommodate the proposed widenings (approximately 2.8–3.2 hectares [7–8 acres] of additional paved area [Tatman pers. comm.]). These improvements would occur in 2 phases. Each phase would occur over approximately an 18-month period. Construction activities to improve the interchange and widen the Weber Creek bridges would be visible to travelers in both directions along U.S. 50 and Missouri Flat Road. Travelers and surrounding land uses would be subjected to visual changes associated with new activities and facilities such as vegetation removal and clearing, grading, paving, and temporary signage.

As the project site is located in a developed setting where additional development is approved (such as El Dorado Villages Shopping Center and Wal-Mart) and future planned development could occur, construction activities and equipment are not new or uncommon components of views in this area. This visual quality impact would not be considered adverse for the following reasons: (1) the short-term nature of construction activities; (2) overall low vividness, intactness, and unity of project site

views; (3) viewers' relative familiarity with construction equipment and activities; and (4) a landscaping plan would be implemented during Phase 1 of construction (this plan is described under Impact VR3).

The draft program EIR for the Missouri Flat Area MC&FP (EDAW 1998) evaluated short-term visual changes related to construction of the interchange at a general, conceptual level. That program EIR identified short-term visual changes as significant and unavoidable. At the time that the MC&FP was prepared, the interchange landscaping plan had not been developed. Given the reasons listed above, this visual quality impact is considered less than significant.

Light and glare impacts from any nighttime construction of the eastbound U.S. 50/Missouri Flat Road on-ramp are not expected to substantially affect residences on Perks Court. According to a County study conducted for the Green Valley Road widening project (Hust pers. comm.), glare from light towers used for construction would have minimal impacts to residents that are over 15.2 meters (50 feet) from the nighttime construction. The closest residence that would be affected on Perks Court (under the Perks Court realignment option of the SPDI configuration) is over 30.4 meters (100 feet) from the edge of pavement of the eastbound on-ramp. Due to the potential for short-term light and glare impacts, light and glare impacts are considered significant.

Mitigation Measure VR5a: Implement Measures to Minimize Short-term Light and Glare on Nearby Residents from Nighttime Construction

The County or its contractors will implement the following measures to minimize short-term light and glare impacts on nearby residents:

- Direct lighting onto the immediate area under construction to avoid shining lights toward residences;
- Angle the light tower floodlights to no more than 45 degrees to avoid shining lights toward residences;
- Raise the light tower no more than 20 feet when construction is adjacent to residences; and
- Use light shields to reflect the glare back onto the construction area (Hust pers. comm.).

Implementation of this measure would reduce this impact to a less-than-significant level since it would ensure that light intensity from construction-related light towers is dissipated to zero or ambient light levels at adjacent residences.

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts related to visual resources.

No-Project Alternative (2025)

Under the No-Project Alternative, no interchange and intersection improvements would be constructed along Missouri Flat Road. Additionally, the improvements to the Weber Creek bridge would not occur. Therefore, there would be no changes to existing visual resources as a result of implementation of this alternative.

6-Lane Tight Diamond Alternative

The visual resource impacts of this alternative would be essentially the same as those described for the proposed project. Vegetation removal required for a 6-lane Missouri Flat Road would be the same as required for a 4-lane Missouri Flat Road. The number of light fixtures that would be eliminated, replaced, and relocated on the interchange would be identical to those described for the proposed project except that the new light fixtures would be placed farther apart since there would be 2 additional lanes on the Missouri Flat Road overcrossing. Impacts on and from the Weber Creek bridges would be identical to the proposed project since the bridge design is the same for the proposed project and this alternative. The Ultimate Phase of the interchange would be a tight diamond configuration, rather than the more visually unique single-point diamond configuration.

4-Lane Tight Diamond Alternative (2025)

The nature of the permanent visual resource impacts associated with this alternative would be identical to those identified for Phase 1 of the proposed project since the configuration of this alternative is identical to Phase 1. Short-term visual impacts, as described above under Impact VR5, would occur under only 1 phase of construction rather than 2, as would occur under the preferred alternative and the 6-Lane Tight Diamond Alternative. Under this alternative, the Ultimate Phase (SPDI or 6-lane tight diamond configuration) of the interchange would not be constructed. Therefore, short-term impacts would be less severe under this alternative than under the preferred alternative and the 6-Lane Tight Diamond Alternative.

5.12 Utilities/Emergency Services

See section 3.12.1, "Affected Environment," for a discussion of the utilities/ emergency services setting.

5.12.1 Determining Significance under CEQA

Based on Appendix G of the State CEQA Guidelines, the project is considered to have a significant impact on public services and utilities if it would result in substantial adverse physical impacts associated with the provision of new or physically altered water, wastewater, fire protection, police protection, emergency medical service, or solid waste disposal facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives, or facilities with adequate capacity.

5.12.2 Environmental Impacts

Refer to the associated Methods section in Chapter 3 for a description of the methods used to evaluate impacts.

Permanent and Temporary Impacts: SPDI

Impact U1: No Long-Term Disruption of Services

Project construction could affect EID water and wastewater lines located in the project area. PG&E lines along Missouri Flat Road would be relocated underground. Relocation costs would be funded and would occur before project construction to accommodate construction activities and preserve continuity of service. If services were stopped at any time, the service providers would provide advance notice to users. This impact is considered to be less than significant because the project would not require the construction of new water or wastewater facilities.

Mitigation Measure

None proposed.

Impact U2: Temporary Interference to Law Enforcement, Fire Protection, and Emergency Medical Services

During project construction, travel on Missouri Flat Road and U.S. 50 could be temporarily disrupted, including increased congestion on affected roadways and

disrupted access to businesses along Missouri Flat Road and homes along Perks Court. Access to residential properties along Helmrich Lane would also be temporarily affected during construction of the Weber Creek bridges auxiliary lanes; construction in the Weber Creek canyon is estimated to last approximately 9 months. Construction periods on Missouri Flat Road and U.S. 50 would last approximately 18 months. This impact considered significant because project construction has the potential to affect response times by law enforcement, fire protection, and emergency medical service personnel.

- *Mitigation Measure LU6a: Implement a Traffic Management Plan.* See Impact LU6 for a description of this measure.

Impact U3: Generation of Construction-Related Solid Waste

Construction of the Missouri Flat Road overcrossing would generate 720 cubic meters of concrete to be removed from the existing overcrossing. Approximately 120 cubic meters of concrete would be removed during construction of the Weber Creek bridge improvements. This concrete would become the property of the construction contractor who would be responsible for disposing of the construction waste at the appropriate landfill or at a facility that recycles concrete into aggregate base or other products. This impact is considered to be less than significant because the project would not require the construction of new solid waste facilities.

Mitigation Measure

None proposed.

Cumulative Impacts: SPDI

See Chapter 4 for a discussion of cumulative impacts related to utilities and emergency services.

No- Project Alternative

No construction would occur under this alternative. Therefore, no permanent or temporary impacts to utilities or emergency services would occur.

6-Lane Tight Diamond Alternative

Impacts to water, wastewater, law enforcement, fire protection, emergency medical services, and solid waste generation would be identical to those described for the preferred alternative. The temporary disruption of traffic circulation patterns on Missouri Flat Road, Perks Court, and Helmrich Lane, and U.S. 50 during construction

would be addressed through implementation of a Traffic Management Plan, as described for the preferred alternative.

4-Lane Tight Diamond Alternative (2025)

Construction-related impacts would be of a similar nature to the preferred alternative, but less severe in magnitude because only 1 phase (not 2 phases) of construction would occur in 2005. Therefore, utilities and emergency service providers would only be disrupted during 1 phase of construction.

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5.13 Mitigation Monitoring Program

A draft mitigation monitoring program for the proposed project is contained in Appendix G of this joint document.

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