Western Slope Roadway Capital Improvement Program and Traffic Impact Mitigation Fee Program for El Dorado County

Final

Environmental Impact Report

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September 2016

Environmental Scientists Planners Engineers

FINAL

ENVIRONMENTAL IMPACT REPORT

WESTERN SLOPE ROADWAY CAPITAL IMPROVEMENT PROGRAM AND TRAFFIC IMPACT MITIGATION FEE PROGRAM FOR EL DORADO COUNTY

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FINAL
EL DORADO COUNTY
WESTERN SLOPE ROADWAY CAPITAL IMPROVEMENT PROGRAM AND TRAFFIC IMPACT MITIGATION FEE PROGRAM UPDATE EIR

Table of Contents

List of Figures

List of Tables

Appendices

A. FINAL EIR INTRODUCTION

This document comprises the Final Program Environmental Impact Report (EIR) for the County of El Dorado's update of the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program. A Draft Program EIR for this project was circulated for public review on May 19, 2016 and concluded on July 5, 2016 (SCH #2016022018). The Final Program EIR is an informational document prepared by the County that must be considered by decision makers before approving or denying the CIP and TIM Fee Program (the "proposed project").

Pursuant to Section 15132 of the California Environmental Quality Act (CEQA) Guidelines, this Final Program EIR consists of the following:

a. Revisions to the Draft Program EIR – the complete Draft EIR (all sections including the Executive Summary, 1.0 – 7.0, and the Appendices) is contained within this Final EIR and edits/updates in this Final EIR to the text in the Draft EIR are shown in ~~strikeout~~ for deletions and <u>underline</u> for additions.
b. A list of persons and organizations that commented on the Draft Program EIR - see Section 8.0, *Comments and Responses / Revisions to the Draft Program EIR*.
c. Comments received on the Draft Program EIR - see Section 8.0, *Comments and Responses / Revisions to the Draft Program EIR*.
d. The County's responses to significant environmental points raised in the review and consultation process - see Section 8.0, *Comments and Responses / Revisions to the Draft Program EIR*.
e. Any other information added by the County - see Section 8.0, *Comments and Responses / Revisions to the Draft Program EIR*.
f. The mitigation monitoring and reporting program (MMRP) - see Appendix D.

The Final Program EIR will be used for review and consideration for certification by the El Dorado County Board of Supervisors.

Measure E. During the public review period for the Draft EIR (May 19, 2016 to July 5, 2016) Measure E was approved by the voters on June 7, 2016. Measure E is the "Initiative to Reinstate Measure Y's original intent – no more paper roads". Measure E rescinded the 2008 amendments to Measure Y and made further amendments to the General Plan's policies regarding traffic impact mitigation by new development. It amended Policy TC-Xa to require that road capacity improvements needed to prevent new development's cumulative traffic impacts from reaching LOS F be completed "before any form of discretionary approval can be given to a project." It also amended Policy TC-Xf, which currently provides two methods for the County to mitigate traffic impacts: (1) condition the project to construct necessary road improvements or (2) ensure that the necessary road improvements are scheduled for construction within the County's CIP, which is primarily funded by impact fees collected with each building permit. Measure E eliminated the second option.

Measure E requires that mitigation fees and assessments be applied to the geographic zone from which they originated and that they may be applied to existing roads for maintenance and improvement projects. Measure E also added a policy requiring voter approval before creating an Infrastructure Financing District, a requirement already imposed by state law. In addition,

Measure E requires that the County make findings of compliance before approving certain development projects. Finally, a number of statements were included in Measure E under the heading "Implementation."

Policies adopted or amended by Measure E will remain in effect indefinitely unless amended or repealed by voter approval.

On August 9, 2016 the Board held a workshop of the Measure E implementation. On August 30, 2016 an item was taken to the Board to adopt interim interpretive guidelines to implement Measure E. The item was continued to an undetermined date. Measure E does not change level of service standards as stated in General Plan policy TC-Xd, the land use map diagram or projected growth patterns. As a result the proposed CIP and TIM Fee Program does not change; however, funding for the Diamond Springs Parkway project has changed. The Draft CIP and TIM Fee Nexus Study have proposed removing Master Circulation and Financing Plan (MC&FP) funding from Diamond Springs Parkway and supplementing it with other funding sources. Adoption of Measure E does not create any additional impacts to projects discussed in the EIR and therefore does not require document revision.

EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project, as well as the project's environmental impacts and recommended mitigation measures at a programmatic level.

PROJECT SYNOPSIS

Project Applicant

The project applicant is El Dorado County.

El Dorado County
Community Development Agency
Long Range Planning Division
2850 Fairlane Court, Placerville CA 95667

Project Description

The proposed project is the update of the Capital Improvement Program (CIP) list and Traffic Impact Mitigation (TIM) Fee for El Dorado County. The CIP is the long-range plan for all individual capital improvement projects and funding sources in the County. The CIP provides strategic direction for capital projects over a current year, 5, 10, and 20 year horizon. It is used as a planning tool and updated periodically (as required by the County's General Plan Policy TC-Xb and Implementation Measure TC-A). The TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, and roadway intersection improvements~~, , and transit,~~ to accommodate travel demand from future land use growth during a defined time period (currently based on 20 years of growth). Where appropriate, TIM Fee funds can be used for pedestrian, bicycle, and transit facilities.~~-~~ The TIM Fee funded improvements are a part of the CIP and the proposed TIM Fee Update would provide funding for traffic improvements necessary for all roadways as a result of growth in the county to operate at an acceptable Level of Service (LOS) under 2035 General Plan 20 year time horizon conditions, in accordance with the County's General Plan.

The transportation projects proposed to be included on the CIP list would occur in the western, developed area of El Dorado County (Western Slope). Typical non-TIM Fee funded improvement projects include bridge replacement/maintenance of off-system bridges, improvements to bicycle lanes/bike routes, sidewalks, pedestrian access and trails, safety improvements such as crosswalks or signage for pedestrians at intersections, drainage improvements, traffic safety improvements such as realignments, and improvements that increase capacity of roadways with existing operational deficiencies, such as road widenings or traffic signal interconnects.

The CIP and TIM Fee Program Update would also require an amendment to the County's General Plan Transportation and Circulation Element as a result of the CIP and TIM Fee Program Update. These changes are proposed in order to ensure that the CIP and TIM Fee Program Update is consistent with the General Plan. These proposed changes also include clean-up items, clarifications, and corrections to the Transportation and Circulation Element

and Figure TC-1 as summarized below. If the General Plan Amendment to the Transportation and Circulation Element is approved, its provisions would be implemented in the context of the whole General Plan.

A primary objective is to maintain the required LOS of El Dorado County's roadway network. Based on General Plan requirements and previous County Board of Supervisors direction, the CIP and TIM Fee Program Update is intended to fulfill the following goal and objectives:

Goal: *Consistent with the County's General Plan Policy TC-Xb and Implementation Measures TC-A and TC-B, develop and maintain a 10- and 20-Year CIP as well as a 20-Year TIM Fee Program that maintains the required level of service (LOS) on the County's roadway network.*

Objectives:

- *Plan a balanced transportation system that meets the needs of current and future County residents and visitors;*
- *Manage and plan for an increase in vehicle trips on local and state roads and highways throughout the County to facilitate a safe, efficient flow of vehicle traffic;*
- *Finance and construct necessary roadway improvements to provide a safe and reliable transportation network to accommodate growth pursuant to the County General Plan while maintaining acceptable level of service standards as required by the General Plan;*
- *Develop a legally-defensible 20 year CIP that is consistent with the General Plan and supports its implementation.*
- *Develop a legally-defensible TIM Fee Program that supports CIP implementation and is consistent with the Mitigation Fee Act (AB 1600).*
- *Reduce the TIM Fees to the extent possible while still achieving the objectives above.*

ALTERNATIVES

This Program Environmental Impact Report (EIR) examines four alternatives to the proposed CIP and TIM Fee Program Update (the "Proposed Project"):

Alternative 1: 2035 No Project. The No Project alternative represents the continued implementation of the currently approved CIP and TIM Fee Program without any update to the project list. No further transportation projects would be added to the existing CIP project list and no updated TIM Fee projects would be implemented. Further, no CIP or TIM Fee projects on the existing CIP list would be removed from the current project list. Implementation of the No Project alternative would lead to a net increase in the amount of transportation improvement projects constructed throughout the Western Slope. The No Project alternative would not remove 28 projects currently on the CIP list and not add three new CIP projects (thus a net increase of 24 projects compared to the proposed CIP and TIM Fee Program Update). In addition, the actual TIM Fees would be the same as the current fees (thus no adjustment). Analysis of this alternative is based on the estimated year 2035 population projections envisioned under the current General Plan (which includes the 2015 amendments).

Alternative 2: No Project - No Build. The No Project - No Build alternative assumes there would be no update to the CIP or TIM Fee Program and no further construction of any CIP projects that are planned within the currently approved CIP and TIM Fee Program. Therefore, no further transportation improvement projects would be constructed within the Western Slope of El Dorado County and the physical conditions of transportation facilities would remain as is under the 2015 baseline. Analysis of this alternative is based on the estimated year 2035 population projections envisioned under the current General Plan (which includes the 2015 amendments).

Alternative 3: No Parallel Capacity Projects. The No Parallel Capacity Projects alternative assumes that the proposed parallel facility projects would be removed from the project list and not implemented under the Western Slope Roadway CIP and TIM Fee Program Update. "Parallel Capacity Project" refers to an alternate roadway that serves the same corridor as another (typically primary) roadway. Thus, for the No Parallel Capacity Projects alternative, the following five projects would not be included on the CIP list: Saratoga Way Extension, Country Club Drive Extension (three segments), Country Club Drive Realignment, Diamond Springs Parkway, Latrobe Connection, and Headington Road Extension.

Alternative 4: Historical Growth: The Historical Growth alternative assumes that growth in the Western Slope through the year 2035 would occur in a similar manner as the historical growth based on actual building permit data compiled by the County from 2000 to 2011 for residential development in the Western Slope area. The historical growth data indicated that there was a 1.03% growth rate in that time frame. Both the proposed CIP and TIM Fee Program Update and the Historical Growth alternative assume the same growth rate of 1.03% per year. However, the distribution of that growth between 2000 and 2011 included approximately 58% of development occurring in the Community Regions and approximately 42% occurring in the Rural Regions and Rural Centers. Thus, under this alternative, the distribution of growth in the Western Slope would occur in a different manner as opposed to the estimated distribution under the proposed CIP and TIM Fee Program Update which assumes the distribution of growth would be approximately 75% in the Community Regions and 25% in the Rural Region and Rural Centers.

Specificity of Environmental Review

A program EIR differs from the typical "project EIR" that is prepared for a site-specific project such as a highway interchange. The degree of specificity in the Western Slope Roadway CIP and TIM Fee Program Update EIR corresponds to the degree of specificity contained in the proposed updated CIP and TIM Fee Program, consistent with CEQA Guidelines Section 15146.

Because the Western Slope Roadway CIP and TIM Fee Program Update does not include design level documents for the transportation projects, it does not have the degree of specificity that would be expected of the EIR prepared for a transportation project. This approach corresponds with CEQA Guidelines Section 15146(b), which states:

> *An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.*

The Western Slope Roadway CIP and TIM Fee Program Update is not required to, nor does it speculate about the specific development that might someday be proposed which would impact the transportation network. CEQA does not require lead agencies "to engage in speculation in order to analyze a 'worst case scenario'" (*Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 373). CEQA Guidelines Section 15151 describes the standard for adequacy of an EIR as follows:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

CEQA will apply to future transportation-specific projects, even after the Final Western Slope Roadway CIP and TIM Fee Program Update EIR is certified. The CEQA analyses prepared for those proposed projects will provide decision-makers and the public with information on the potential project-specific impacts, as well as mitigation measures. The holding in *Town of Atherton v. California High-Speed Rail Authority* (2014) __ Cal.App.4th __ explains the expected level of detail in a program EIR in relation to that expected in a project-level CEQA document.

> *… Requiring a first-tier program EIR to provide greater detail as revealed by project-level analyses, "undermine[s] the purpose of tiering and burden[s] the program EIR with detail that would be more feasibly given and more useful at the second tier stage." (Bay-Delta, supra, 43 Cal.4th at p. 1173.) While significant new information must be included in an EIR, requiring a program EIR to include everything discovered in project-level analyses before the program EIR is certified would result in "endless rounds of revision and recirculation" of EIRs that the Legislature did not intend. (Laurel Heights Improvement Assn. v. Regents of University of California (1993) 6 Cal.4th 1112, 1132.)*

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 includes a brief description of the identified environmental impacts, proposed mitigation measures, and the level of significance after mitigation. Impacts are categorized by classes. Class I impacts are defined as significant, unavoidable adverse impacts which require a statement of overriding considerations to be issued per Section 15093 of the *State CEQA Guidelines* if the project is approved. Class II impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the State CEQA Guidelines. Class III impacts are less than significant impacts.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
Aesthetics		
Impact AES-1 Proposed transportation improvement projects under the updated CIP and TIM Fee Program are not located within any of the designated State scenic highway sections. While implementation of the transportation improvement projects would be predominantly at grade level or would repair or replace existing structures and would not degrade views from important scenic viewpoints, some proposed road widening projects on scenic roadways may result in moderate intrusions on the aesthetics of these roadways. Increases in the dimensions of existing routes could entail the removal of existing vegetation that lines scenic roadways, altering the foreground of scenic views. This would be a Class II, *significant but mitigable* impact.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **AES-1(a)** Where a particular transportation improvement project under the CIP and TIM Fee Program Update affects adjacent landforms, the project sponsor shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade. **AES-1(b)** Where a particular transportation improvement project under the CIP and TIM Fee Program Update removes existing vegetation and/or trees, when feasible the project sponsor shall ensure that landscaping is installed to restore natural features along corridors after widening, interchange modifications, realignment, or construction of ancillary facilities. Associated landscape materials and design shall enhance landform variation, provide erosion control, and blend with the natural setting. **AES-1(c)** The project sponsor shall ensure that a project in a scenic view corridor will have the minimum possible impact, consistent with project goals, upon foliage, existing landscape architecture and natural scenic views. **AES-1(d)** For projects in visually sensitive areas, the project sponsor shall apply development standards and guidelines from the most current General Plan and County ordinances to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, and site grading.	With proposed mitigation measures, impacts would be less than significant.
Impact AES-2 Development of proposed transportation improvement projects under the CIP and TIM Fee Program Update would contribute to the alteration of the Western Slope of El Dorado County's character from primarily rural (or semi-rural) to a somewhat more suburban condition. This would be a Class II, *significant but mitigable* impact.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **AES-2(a)** When feasible, roadway extensions and widenings shall avoid the removal of existing mature trees to the extent possible. The loss of trees that are protected by local agencies shall be replaced consistent with development standards and guidelines from the current (at the time of project approval) General Plan and County ordinances and	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	incorporated into the landscaping design for the roadway. **AES-2(b)** Roadway lighting shall be minimized to the extent possible, and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of hoods, low intensity lighting, and using as few lights as necessary to achieve the goals of the project. **AES-2(c)** Bus shelters and other ancillary facilities constructed as part of roadway improvements under the CIP and TIM Fee Program Update shall be designed in accordance with the County's architectural review requirements and per standards in accordance to the El Dorado County Transit Authority (EDCTA) that are in place at the time of project approval. Such facilities shall incorporate colors and wood materials complementary to the natural surroundings.	
Impact AES-3 Development of proposed transportation improvement projects under the CIP and TIM Fee Program Update would contribute new sources of light and glare. This would be a Class II, *significant but mitigable* impact.	Implementation of mitigation measure AES-2(b) above would reduce potential impacts.	With proposed mitigation measures, impacts would be less than significant.
Air Quality		
Impact AQ-1 Construction activities associated with transportation projects under the proposed CIP and TIM Fee Program Update would create fugitive dust and ozone precursor emissions and have the potential to result in temporary adverse impacts on air quality in El Dorado County. Impacts would be Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **AQ-1(a)** Require the prime contractor to provide an approved plan demonstrating that heavy-duty (i.e., greater than 50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve, at a minimum, a fleet-averaged 20% NOx reduction compared to the most recent Air Resource Board (ARB) fleet average. Successful implementation of this measure requires the prime contractor to submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. Usually the inventory includes the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. In addition, the inventory list is updated and submitted monthly	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	throughout the duration of when the construction activity occurs. **AQ-1(b)** Stipulate that the prime contractor ensure emissions from all off-road diesel powered equipment used on the project site do not exceed the requirements of the current (at the time of project approval) EDCAQMD Rule 202. As an enforcement component of the measure, the prime contractor is required to agree to a visual survey of all in-operation equipment conducted on a periodic basis. In addition, a summary of the visual results is submitted throughout the duration of the construction activity. Usually, the summary includes the quantity and type of vehicles surveyed as well as the dates of each survey. EDCAQMD and other qualified officials may conduct periodic site inspections to determine compliance. In the case where any equipment found exceeds the opacity requirement, it would require immediate repair and notification of noncompliant equipment to EDCAQMD. **AQ-1(c)** Idling times will be minimized by shutting off equipment when it is not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points. **AQ-1(d)** All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.	
Impact AQ-2 Implementation of the proposed CIP and TIM Fee Program Update would reduce on-road vehicle emissions compared to existing conditions and would result in generally similar, though slightly reduced on-road vehicle emissions when compared to the "No Project" scenario in the year 2035. Therefore, long-term operational impacts would be Class III, *less than significant*.	None required	Impacts would be less than significant without mitigation.
Impact AQ-3 The transportation improvement projects included in the CIP and TIM Fee Program Update may facilitate increased exposure of sensitive receptors to hazardous air pollutants that may cause health risks. Implementation of the proposed update to the CIP and TIM Fee Program would not result in a regional increase in toxic	None required	Impacts would be less than significant without mitigation.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
air emissions. Impacts would be Class III, *less than significant*.		
Impact AQ-4 Re-entrained dust has the potential to increase airborne PM10 and PM2.5 levels in El Dorado County. The increase in growth expected would result in additional VMT and also has the potential to add to the PM10 and PM2.5 levels in the area. However, re-entrained dust levels with the CIP and TIM Fee Program Update would be generally similar to the 2015 baseline levels and "No Project" scenario. In addition, implementation of planned El Dorado County control measures would reduce VMT and further reduce such emissions. Impacts would be Class III, *less than significant.*	None required	Impacts would be less than significant without mitigation.
BIOLOGICAL RESOURCES		
Impact B-1 Implementation of transportation improvements proposed by the CIP and TIM Fee Program Update may result in impacts to special status plant and animal species. Impacts would be Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **B-1 (a) Biological Resources Screening and Assessment.** Prior to final design approval of individual projects, the sponsor agency shall have a qualified biologist conduct a field reconnaissance of the environmental limits of the project in an effort to identify any biological constraints for the project, including special status plants, animals, and their habitats, as well as protected natural communities including wetland and terrestrial communities. If the biologist identifies protected biological resources within the limits of the project, the sponsor agency shall first prepare alternative designs that seek to avoid and/or minimize impacts to the biological resources. If the project cannot be designed without complete avoidance, the sponsor agency shall coordinate with the appropriate regulatory agency (i.e. USFWS, NMFS, CDFW, USACE) to obtain regulatory permits and implement project - specific mitigation prior to any construction activities. If restoration is necessary to mitigate impacts, sensitive plants and habitat, impacts should be mitigated at a minimum ratio of 1:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration and a restoration plan shall be prepared and submitted to the jurisdiction overseeing the project for approval.	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	B-1(b) Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA (under Mitigation Measure B-1(a)), measures shall be selected from among the following to reduce the potential for impacts to non-listed special status animal species that may be discovered during construction activity: • For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction and if species are collected, relocation of the species to suitable site shall be completed. • Pre-construction clearance surveys shall be conducted prior to start of construction (including staging and mobilization). If necessary, all non-listed special-status species shall be relocated from the site either through direct capture or through passive exclusion (e.g., American badger). A report of the pre-construction survey shall be submitted to the lead agency for their review and approval prior to the start of construction. • A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities. • Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.	
Impact B-2 Implementation of transportation improvements proposed by the CIP and TIM Fee Program Update may result in impacts to sensitive habitats, including federally protected wetlands. This impact would be Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **B-2(a) Jurisdictional Delineation.** Prior to approval of individual projects, the sponsor agency shall retain a qualified biologist to perform an assessment of the project area to identify wetlands, riparian, and other sensitive aquatic environments. If wetlands are present the qualified biologist shall perform a wetland delineation following the 1987 Army Corps of Engineers Wetlands Delineation Manual and any current and applicable regional supplements to the	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	Delineation Manual. The wetland delineation shall be submitted to the USACE for verification. **B-2(b) Wetlands, Riparian, or Other Sensitive Aquatic Environments.** If wetlands, riparian, or other sensitive aquatic environments are found within the project limits, the sponsor agency shall design or modify the project to avoid direct and indirect impacts on these habitats, if feasible. Additionally, the sponsor agency shall minimize the loss of riparian vegetation by trimming rather than removal where feasible. Techniques to avoid impacts to environmentally sensitive areas should include the use of orange construction barrier fencing and temporary fencing to identify environmentally sensitive areas and stabilizing exposed soils/slopes after construction activity with erosion control treatments. **B-2(c) Restoration of Habitat.** If wetlands or riparian habitat are disturbed as part of an individual project, the sponsor agency shall compensate for the disturbance to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site -specific information and determined through coordination with state, federal, and local agencies as part of the permitting process for the project. The sponsor agency shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created and monitored over a minimum period of time.	
Impact B-3 Implementation of transportation improvements proposed by the CIP and TIM Fee Program Update may impact wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This impact would be Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measure, or one of equal or greater efficacy: **B-3 Design Measures.** Prior to design approval of individual projects that contain movement habitat such as the use of long segments of fencing and lighting, the sponsor agency shall incorporate economically viable design measures, as applicable and necessary and as determined by a qualified biologist, to allow wildlife or fish to move through the transportation corridor, both during construction activities and post construction. Such measures may include appropriately spaced breaks in a center barrier, the use of hoods to direct light away from natural habitat, using low intensity lighting, or other measures that are designed to allow wildlife to move through the transportation corridor. If the project cannot be designed with these design measures (i.e. due to traffic safety, etc.) the sponsor agency shall coordinate with the appropriate regulatory agency (i.e. USFWS, NMFS, CDFW) to obtain regulatory permits and implement alternative project-specific mitigation	With proposed mitigation measure, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	prior to any construction activities.	
Cultural Resources		
Impact CR-1 Implementation of proposed transportation improvements under the CIP and TIM Fee Program Update could disturb known and unknown cultural resources. Impacts to archaeological and paleontological resources would be Class II, significant but mitigable and impacts to historical resources would be Class I, *significant and unavoidable.*	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **CR-1(a)** Improvement projects involving earth disturbance, the installation of pole signage or lighting, or construction of permanent above ground structures or roadways shall ensure that the following elements are included in the project's individual environmental review: 1. Prior to construction, a map defining the project site shall be prepared on a project by project basis for improvements which involve earth disturbance, the installation of pole signage or lighting, or construction of permanent above ground structures. This map will indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known archaeological, paleontological or historical resources are located within the impact zone. 2. A preliminary study of each project area, as defined in the Area of Potential Effects (APE), shall be completed to determine whether or not the project area has been studied under an earlier investigation, and to determine the impacts of the previous project. 3. If the results of the preliminary studies indicate additional studies are necessary; development of field studies and/or other documentary research shall be developed and completed (Phase I studies). Negative results would result in no additional studies for the project area. 4. Based on positive results of the Phase I studies, an evaluation of identified resources shall be completed to determine the potential eligibility/ significance of the resources (Phase II studies). Based on the evaluations of the Phase II studies, if necessary Phase II mitigation studies shall be coordinated with the Office of Historic Preservation (OHP), as the research design will require review and approval from the OHP. In the case of prehistoric or Native American related resources, the Native American Heritage Commission and/or local representatives of the Native American population	Implementation of the measures would reduce impacts to archaeological and paleontological resources to a less than significant level. However, impacts related to historic structures would remain significant and unavoidable.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	shall be contacted and permitted to respond to the testing/mitigation programs. **CR-1(b)** If development of the proposed improvement requires the presence of an archaeological, Native American, or paleontological monitor, the County shall ensure that a Native American monitor, certified archaeologist, and/or certified paleontologist, as applicable, has an opportunity to monitor the grading and/or other initial ground altering activities. The schedule and extent of the monitoring will depend on the grading schedule and/or extent of the ground alterations. This requirement can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review. **CR-1(c)** The project sponsor shall ensure that materials recovered over the course of any given improvement are adequately cleaned, labeled, and curated at a recognized repository. This requirement can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review. **CR-1(d)** The project sponsor shall ensure that mitigation for potential impacts to significant cultural resources includes one or more of the following: • Realign the project right-of-way (avoidance; the most preferable method). • Cap the site and leave it undisturbed. • Address structural remains with respect to the most current (at the time of project approval) National Register of Historic Places (NRHP) guidelines (Phase III studies). • Relocate structures per current (at the time of project approval) NRHP guidelines. • Create interpretative facilities at the site. • Develop measures to prevent vandalism. • These measures can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review. **CR-1(e)** The project sponsor shall ensure that mitigation for potential impacts to significant historical structures examine preservation alternatives designed to prevent impacts such as adjacent construction and or rehabilitation.	
Impact CR-2 Implementation of proposed transportation improvements could disturb unknown human remains during construction activity. Impacts would be Class II, *significant but*	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
mitigable.	sponsor) shall implement the following mitigation measure, or one of equal or greater efficacy: **CR-2 Implement Stop-Work and Consultation Procedures Mandated by Public Resources Code 5097.** In the event of discovery or recognition of any human remains during construction or excavation activities, the sponsor agency shall cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the following steps are taken: o The El Dorado County Coroner has been informed and has determined that no investigation of the cause of death is required. o If the remains are of Native American origin, the following steps will be taken: • The coroner will contact the Native American Heritage Commission who will assign a Most Likely Descendant (MLD). The coroner will make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains. • The sponsor agency or its authorized representative will retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs: ▪ The Native American Heritage Commission is unable to identify a MLD. ▪ The MLD identified fails to make a recommendation. ▪ The sponsor agency or its authorized representative rejects the recommendation of the MLD, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.	
GEOLOGY AND SOILS		
Impact G-1 Some projects under	The lead agency shall perform an initial review to	With proposed

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
the proposed CIP and TIM Fee Program Update could be at risk from seismic activity. Although fault rupture and seismically induced liquefaction do not pose a substantial threat in El Dorado County, ground-shaking may affect some projects. This is considered a Class II, *significant but mitigable* impact.	determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **G-1 Geotechnical Standards.** The project sponsor shall ensure that bridge-related projects are designed and constructed to the latest (at the time of project approval) geotechnical standards. In most cases, this will necessitate site-specific geologic and soils engineering investigations performed by a qualified geotechnical expert to satisfy or exceed state and/or code requirements for high groundshaking zones. This can be accomplished through the placement of conditions on the project by the project sponsor during individual environmental review. **G-2 Slope Stabilization.** If a project involves cut slopes over 15 feet in height, the County shall ensure that specific slope stabilization studies are conducted. If stabilization is necessary, possible stabilization methods include buttresses, retaining walls and soldier piles which should be implemented prior to construction and/or operation of the transportation improvement project.	mitigation measures, impacts would be less than significant.
Impact G-2 Implementation of proposed transportation improvements under the proposed update to the CIP and TIM Fee Program could be subject to soil erosion. However, with adherence to existing regulations, impacts would be Class III, *less than significant.*	None required.	Impacts would be less than significant without mitigation.
Impact G-3 Some projects under the proposed update to the CIP and TIM Fee Program may be located on unstable soils. This is considered a Class II, *significant but mitigable* impact.	The lead agency shall perform initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement Mitigation Measure G-2 above, or one of equal or greater efficacy.	With proposed mitigation measures, impacts would be less than significant.
GREENHOUSE GAS (GHG) EMISSIONS/CLIMATE CHANGE		
Impact GHG-1 Construction of the transportation improvement projects included in the proposed update to the CIP and TIM Fee Program would generate temporary short-term GHG emissions. Impacts would be Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measure, or one of equal or greater efficacy: **GHG-1** The project sponsor shall ensure that applicable GHG-reducing diesel particulate and NOX	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	emissions measures for off-road construction vehicles are implemented during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Applicable GHG reducing measures include the following: • Configure on-site construction parking to minimize traffic interference and to ensure emergency vehicle access; • Provide temporary traffic control during appropriate phases of construction activities to improve traffic flow; • Use best efforts to minimize truck idling to not more than two minutes during construction; • Apply non-toxic soil stabilizers (according to manufacturers' specifications) to all inactive areas; • During construction, replace ground cover in disturbed areas as quickly as possible; • When feasible, during the period of construction, install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip; • When feasible, during the period of construction, reduce traffic speeds on all unpaved roads to 15 mph or less; • When feasible, pave all construction access roads onto the site from permanent roadways; • On Caltrans projects, the most current (at the time of project approval) Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust Palliative shall be incorporated into project specifications when appropriate; • When feasible, avoid project designs requiring significant amounts of material, such as excavated soil and construction debris, to be transported from the site to disposal facilities; and • When feasible, employ a balanced cut/fill ration on construction sites, thus reducing haul-truck trip emissions.	
Impact GHG-2 Implementing the CIP and TIM Fee Program Update would decrease per capita GHG emissions from the transportation sector compared to both the 2015 baseline and future “No Project” scenario. Impacts would be Class III, *less than significant*.	None required.	Impacts would be less than significant without mitigation.
Impact GHG-3 Implementing the proposed update to the CIP and TIM Fee Program would be	None required.	Impacts would be less than significant without mitigation.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
consistent with the goals of applicable GHG reduction plans and policies, including the adopted Environmental Vision for El Dorado County Resolution No. 29-2008 as well as AB 32. Impacts would be Class III, *less than significant*.		
HYDROLOGY AND WATER QUALITY		
Impact W-1 Implementation of proposed transportation improvements under the CIP and TIM Fee Program Update could result in soil erosion and contaminants in runoff, which could degrade surface and groundwater quality. This impact is considered Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **W-1(a) Application Plans.** Fertilizer/pesticide application plans for any new right-of-way landscaping shall be prepared to minimize deep percolation of contaminants. The plans shall specify the use of products that are safe for use in and around aquatic environments. **W-1(b) Post-construction Measures.** For any widening or roadway extension project, the improvement shall design post-construction measures per the Phase II MS4 Permit in place at the time of project approval to direct runoff into subsurface percolation basins and traps or other methods that would allow for the removal of urban pollutants, fertilizers, pesticides, and other chemicals and encourage groundwater recharge to the MEP. Qualifying projects shall also be designed to meet the MS4 Hydromodifcation Management requirements in place at the time of project approval to the MEP. **W-1(c) Stormwater Pollution Prevention Plan (SWPPP).** For any project that would disturb one acre or more or is part of a larger common plan of development, a SWPPP shall be developed per State and County standards prior to the initiation of grading and implemented for all construction activity on the project site. The SWPPP shall include specific BMPs designed by a qualified professional to control the discharge of material from the site and into the creeks and local storm drains. BMP methods may include, but would not be limited to, the use of temporary retention basins, straw bales, sand bagging, mulching, erosion control blankets and soil stabilizers. For any project disturbing less than one acre, and ESCP shall be prepared per County standards in place at the time of project approval.	With proposed mitigation measures, impacts would be less than significant.
Impact W-2 Implementation of proposed transportation improvements facilitated by the CIP and TIM Fee Program Update	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project	With proposed mitigation measures, impacts would be less than significant.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
could be subject to flood hazards due to storm events and/or dam failure. Impacts are considered Class II, *significant but mitigable*.	would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **W-2(a) Minimizing Flood Risk.** If a project is located in an area with high flooding potential due a storm event or dam inundation, the structure shall be elevated at least one foot above the 100-year flood zone elevation and bank stabilization and erosion control measures shall be implemented along creek crossings. **W-2(b) Flood Risk Communication Strategy.** For projects within a dam failure inundation hazard zone, a comprehensive flood risk communication strategy shall be developed, which would include an evacuation plan and/or an Emergency Action Plan and promote dam failure risk awareness and safety.	
Impact W-3 Implementation of transportation improvements facilitated by the proposed CIP and TIM Fee Program Update could potentially impact drainage systems, but not to a degree that would result in alteration of the course of a stream or river that would result in erosion, or increase the amount of surface runoff. Impacts are considered Class III, *less than significant*.	None required	Impacts would be less than significant without mitigation.
NOISE		
Impact N-1 Construction activity associated with transportation improvement projects envisioned by the proposed CIP and TIM Fee Program Update would create temporary noise level increases and vibration in discrete locations along existing roadways in the Western Slope of El Dorado County. Impacts would be Class II, *significant but mitigable*.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **N-1(a)** The project sponsor shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures shall be implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise. **N-1(b)** If a particular project within 800 feet of sensitive receptors requires pile driving, the County or project sponsor shall require the use of pile drilling techniques instead, where feasible. This shall be accomplished through the placement of conditions on	Implementation of the measures would reduce potential impacts to a less than significant level.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	the project during its individual environmental review. **N-1 (c)** Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds). **N-1(d)** Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation. **N-1(e)** Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled.	
Impact N-2 Implementation of the proposed update to the CIP and TIM Fee Program would increase traffic-generated noise levels in El Dorado County on highways and roadways that could expose sensitive receptors to noise in excess of normally acceptable levels. This is a Class II, *significant but mitigable*, impact.	The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy: **N-2(a)** The project sponsor shall complete detailed noise assessments using applicable guidelines at the time of project approval (e.g., the California Department of Transportation Traffic Noise Analysis Protocol for roadway projects). The noise survey shall be sufficient to indicate existing and projected noise levels, to determine the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards. This shall be accomplished during the project's individual environmental review as necessary. **N-2(b)** Where new or expanded roadways or transit are found to expose receptors to noise exceeding normally acceptable levels, the individual project sponsor shall consider various sound attenuation techniques. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of	Implementation of the measures would reduce potential impacts to a less than significant level.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including open grade paving, solid fences, walls, and, landscaped berms. Determination of appropriate noise attenuation measures will be assessed on a case-by-case basis during a project's individual environmental review pursuant to the regulations of the applicable lead agency.	
TRANSPORTATION AND CIRCULATION		
Impact T-1 Total daily vehicle miles traveled on freeways and roadways in 2035 would increase when compared to existing (2015) baseline conditions. However, implementation of the proposed update to the CIP and TIM Fee Program would reduce overall VMT in 2035 when compared to 2035 conditions under the "No Project" scenario. Impacts related to total daily freeway and roadway vehicle miles traveled would be Class III, *less than significant*.	None required.	Impacts would be less than significant without mitigation.
Impact T-2 With implementation of the proposed CIP and TIM Fee Program Update, LOS conditions at all roadways in the Western Slope of the county would operate at an acceptable Level of Service (LOS) in the year 2035. Thus, the project would be consistent with the General Plan LOS standards. This is a Class III, less *than significant* impact.	None required.	Impacts would be less than significant without mitigation.
Impact T-3 The proposed update to the CIP and TIM Fee Program would generally be consistent with applicable alternative transportation plans and policies. This is a Class III, *less than significant* impact.	None required.	Impacts would be less than significant without mitigation.

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1.0 INTRODUCTION

This document is a Program Environmental Impact Report (EIR) that evaluates the potential environmental effects associated with the County of El Dorado's (County) update of the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program. It should be noted that typically a County's CIP is not a project as defined by the California Environmental Quality Act (CEQA). As stated in Section 15378(b)(4) of the CEQA Guidelines, a project does not include:

> *The creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment.*

The CIP serves an administrative function, the purpose of which is to provide the applicable decision makers with the ability to prioritize the timeline and funding for various capital improvement projects. The CIP does not result in any commitment to any specific project. Therefore, approval of the CIP (or the recommended projects that would be added to the CIP as a result of the CIP and TIM Fee Program Update) does not result in direct physical impacts to the environment. When individual projects listed within the CIP proceed to implementation they will be subject to environmental review for the possible impacts which are unique to that particular project. Further, while fee programs are identified as a project under CEQA, the proposed TIM Fee Program Update would not result in the commitment of implementation of such projects or directly result in projects that have physical impacts. Nevertheless, although not obligated to do so, the County has decided to prepare a Program Environmental Impact Report (EIR) for the proposed CIP and TIM Fee Program Update to identify potential environmental issues within the general footprint of the suggested transportation improvements and the general type of mitigation measures which may need to be implemented for the individual transportation projects to meet CEQA requirements. Section 1.2 below describes the difference between a "Program" and a "Project" level EIR.

This Program EIR presents a region-wide assessment of the impacts of the proposed CIP and TIM Fee Program Update. As stated above, analysis of site-specific impacts of individual traffic improvements is not the intended use of this EIR. Many specific traffic improvements are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each traffic improvement will be undertaken as necessary by the appropriate sponsor agency prior to each traffic improvement being considered for discretionary approval. Where subsequent environmental review is required, such review would focus on project-specific significant effects specific to the project, or its site. This Program EIR assesses impacts to the program as whole and provides an assessment of anticipated typical impacts that may be associated with construction and/or operation of transportation projects. If necessary, this Program EIR offers reasonable mitigation measures that the County or another sponsor agency for individual transportation projects can implement during the project level review in order to reduce impacts as necessary.

For example, a roadway widening project may result in the removal of trees or existing vegetation such as native grasslands. At this time or stage of the CIP, the level of disturbance for that individual roadway widening project is not yet able to be determined as the exact roadway

width, dimensions and the existing conditions of the site have not yet been defined. As such it would be speculative to require site specific mitigation for each project on the proposed CIP list at this time. Rather in this Program EIR, impacts related to the removal of trees or vegetation as a result of all roadway widening projects may be determined to be potentially significant. As a result of potential impacts, general mitigation measures are suggested that could be utilized and refined for each individual project's specific conditions to reduce impacts during the design and environmental review stage of that project (prior to approval and construction activity). Thus the impacts and mitigation measures suggested in this EIR are to be referenced, reviewed, and if necessary refined for the individual transportation project's specific conditions. The mitigation measure could be dismissed by the reviewing agency if it is determined to not be necessary at the project level (for example, if the roadway widening project would not actually remove any trees or vegetation and thus the project would not result in direct impacts).

The CIP is the long-range plan for all individual County capital improvement projects and funding sources. The CIP provides strategic direction for capital projects over a current year, 5, 10, and 20 year horizon. It is used as a planning tool, and updated annually (as required by the County's General Plan Policy TC-Xb). The TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, and transit to deal with future growth during a defined time period (currently based on 20 years of growth). The TIM Fee funded improvements are a part of the CIP and the proposed TIM Fee Update would provide funding for traffic improvements necessary for all roadways as a result of growth in the County to operate at an acceptable Level of Service (LOS) under 2035 General Plan 20 year time horizon conditions, in accordance with the County General Plan (originally adopted in 2004 and last amended in 2015). As part of the approvals (as discussed in Section 2.6, Project Approvals), the CIP and TIM Fee Program Update would also require an amendment to the County's General Plan Transportation and Circulation Element. These changes are proposed in order to ensure that the CIP and TIM Fee Program Update is consistent with the General Plan. These proposed changes also include clean-up items, clarifications, and corrections to the Transportation and Circulation Element and Figure TC-1. If the General Plan Amendment to the Transportation and Circulation Element is approved, its provisions would be implemented in the context of the whole General Plan.

The County is currently working on a number of land use development standards and regulations that are proceeding separately from the Western Slope Roadway CIP and TIM Fee Program Update EIR. These include: portions of the Design Improvements Standards Manual (DISM) and the biological policy review. Each of these efforts is subject to CEQA and the County will prepare a CEQA document assessing the environmental impacts separately.

Although related by the fact that the DISM and the biological policy are part of the County's overall planning and regulatory scheme, neither the proposed project or the other land use standards/regulations is dependent on the adoption of the other. They are independent projects with independent outcomes. Completion and approval of the DISM (to be re-named the Land Development Manual), or biological policies review is not necessary for approval of the Western Slope Roadway CIP and TIM Fee Program Update EIR. Similarly, none of the aforementioned projects are dependent upon approval of the Western Slope Roadway CIP and TIM Fee Program Update EIR.

The Western Slope Roadway CIP and TIM Fee Program Update EIR is not related to any of the major general plan amendment residential projects that are currently proposed by private developers (e.g., Mill Creek, Lime Rock Valley Specific Plan, Village of Marble Valley Specific Plan, Central El Dorado Hills Specific Plan, and Dixon Ranch).

This section: (1) provides an overview of the background behind the existing and the proposed update to the CIP and TIM Fee Program; (2) describes the purpose and legal authority of the EIR document; (3) summarizes the scope and content of the EIR; (4) describes the EIR baseline and approach for impact analysis; (5) lists lead, responsible, and trustee agencies for the EIR; (6) describes the intended uses of the EIR; and (7) provides a synopsis of the environmental review process required under CEQA.

The contents of other EIR sections are as follows:

- *Section 2.0, Project Description, provides a detailed discussion of the proposed update to the CIP and TIM Fee Program.*
- *Section 3.0, Environmental Setting, describes the general environmental setting for the Western Slope of El Dorado County.*
- *Section 4.0, Environmental Impact Analysis, describes the potential environmental effects associated with implementation of the update to the CIP and TIM Fee Program.*
- *Section 5.0, Long-Term Effects, discusses issues such as growth inducement and significant irreversible environmental effects.*
- *Section 6.0, Alternatives, discusses alternatives to the proposed update to the CIP and TIM Fee Program, including the CEQA-required "no project" alternative.*
- *Section 7.0, References and Preparers, lists informational sources for the EIR and persons involved in the preparation of the document.*

1.1 PROJECT BACKGROUND AND HISTORY

A Capital Improvement Program (CIP) identifies and prioritizes future transportation investments that will be required to meet the County's existing and future transportation needs for the next 20 years. CIP projects can include roadways, intersections, sidewalks, bicycle lanes, traffic calming treatments, transit service improvement projects, and ongoing administrative costs for transportation monitoring programs, including traffic model update costs, traffic study guideline updates and Circulation Element updates. Consistent with state law and General Plan policies (specifically General Plan Policy TC-Xb and Implementation Measure TC-A), the County completes minor updates to its CIP list every year and completes a major update approximately every five years to ensure that the CIP list is appropriate and reasonable based on current market conditions and costs of construction/investment. Funding for most CIP projects is provided from a variety of sources including state and/or federal grants. However, funding for the portion of the CIP related to new development in the County is financed by the Traffic Impact Mitigation (TIM) Fee Program which is required by County General Plan Policy TC-Xb and Implementation Measure TC-B (adopted in 2004). TIM Fees are collected by the County to offset the costs of impacts to the transportation system created by new development. Consistent with state law and General Plan policies, the County has minor updates to the TIM Fee Program every year and major updates approximately every five years to ensure they are

appropriate and reasonable based on current market conditions and costs of construction/investment.

As described in greater detail in Section 2.0, *Project Description*, the proposed project is a major update of both the CIP and the TIM Fee Program.

In compliance with the CEQA Guidelines (Section 15063), El Dorado County, as the Lead Agency responsible for the CIP and TIM Fee Program Update, solicited preliminary public agency comments on the project through distribution of a Notice of Preparation (Appendix A) and receipt of public comments during a scoping meeting held on March 3rd, 2016 at 5:30 pm in the Planning Commission Hearing Room at 2850 Fairlane Court, Placerville, CA 95667. The County received four responses to the NOP. The letters, included in Appendix A, are addressed as appropriate in the analysis contained in the various subsections of Section 4.0, *Environmental Impact Analysis*. Input from the public scoping meeting is also reflected in the EIR analysis.

1.2 STATEMENT OF PURPOSE AND LEGAL AUTHORITY

This EIR identifies and describes potential environmental impacts associated with the proposed update to the CIP and TIM Fee Program.

Section 21000 of the California Government Code, commonly referred to as the California Environmental Quality Act of 1970 (CEQA), requires the evaluation of environmental impacts associated with all proposed planning programs or development projects. As such, this EIR is an informational document for use by El Dorado County, other agencies, and the general public in their consideration and evaluation of the environmental consequences of implementing the proposed updates to the CIP and TIM Fee Program.

In accordance with Section 15121 (a) of the *State CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3), the purpose of an EIR is to:

> *Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

This EIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as those of a Project EIR, Program EIRs are typically more conceptual and may contain a more general discussion of impacts, alternatives, and mitigation measures than a Project EIR. As provided in Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that may be characterized as one large project. Use of a Program EIR provides El Dorado County (as Lead Agency) with the opportunity to consider broad policy alternatives and program-wide mitigation measures and provides the County with greater flexibility to address environmental issues and/or cumulative impacts on a comprehensive basis. Agencies generally prepare Program EIRs for programs or a series of related actions that are linked geographically, are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program, or are individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. By its nature, a Program EIR

considers the "macro" effects associated with implementing a program (such as a General Plan) and does not, and is not intended to examine the specific environmental effects associated with individual projects that may be implemented pursuant to the CIP and TIM Fee Program updates.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities could be found to be within the Program EIR scope and additional environmental documents may not be required (CEQA Guidelines Section 15168(c)). When a Program EIR is relied on for a subsequent activity, the Lead Agency must incorporate feasible mitigation measures and alternatives developed in the Program EIR into the subsequent activities (CEQA Guidelines Section 15168(c)(3)). If a subsequent activity would have effects not within the scope of the Program EIR, the Lead Agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or a project level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. The CEQA Guidelines (Section 15168(h)) encourage the use of Program EIRs, citing five advantages:

1. *Provision of a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR;*
2. *Focus on cumulative impacts that might be slighted in a case-by-case analysis;*
3. *Avoidance of continual reconsideration of recurring policy issues;*
4. *Consideration of broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them; and*
5. *Reduction of paperwork by encouraging the reuse of data (through tiering).*

It should be noted that as a program level environmental document, the CIP and TIM Fee Program Update EIR uses appropriately programmatic thresholds as compared to the project-level thresholds that might be used for an EIR on a specific development project. It should not be assumed that impacts determined not to be significant at a program level would not be significant at a project level. In other words, determination that implementation of the CIP and TIM Fee as a "program" would not have a significant environmental effect does not necessarily mean that an individual project would not have significant effects based on project-level CEQA thresholds, even if the project is consistent with the CIP and TIM Fee Program. Conversely, it may be possible for certain impacts identified as significant at the program level to be less than significant for certain individual projects, depending on the nature of the project.

Specificity of Environmental Review

A Program EIR differs from the typical "Project EIR" that is prepared for a site-specific project such as a highway interchange. The degree of specificity in the Western Slope Roadway CIP and TIM Fee Program Update EIR corresponds to the degree of specificity contained in the proposed CIP and TIM Fee Program, consistent with CEQA Guidelines Section 15146.

Because the Western Slope Roadway CIP and TIM Fee Program Update does not include design level documents for the transportation projects, it does not have the degree of specificity that

would be expected of the EIR prepared for a transportation project. This approach corresponds with CEQA Guidelines Section 15146(b), which states:

> *An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.*

The Western Slope Roadway CIP and TIM Fee Program Update is not required to, nor does it speculate about the specific development that might someday be proposed which would impact the transportation network. CEQA does not require lead agencies "to engage in speculation in order to analyze a 'worst case scenario'" (*Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 373). CEQA Guidelines Section 15151 describes the standard for adequacy of an EIR as follows:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

CEQA will apply to future transportation-specific projects, even after the Final Western Slope Roadway CIP and TIM Fee Program Update EIR is certified. The CEQA analyses prepared for those proposed projects will provide decision-makers and the public with information on the potential project-specific impacts, as well as mitigation measures. The holding in *Town of Atherton v. California High-Speed Rail Authority* (2014) __ Cal.App.4th __ explains the expected level of detail in a Program EIR in relation to that expected in a project-level CEQA document.

> *… Requiring a first-tier program EIR to provide greater detail as revealed by project-level analyses, "undermine[s] the purpose of tiering and burden[s] the program EIR with detail that would be more feasibly given and more useful at the second tier stage." (Bay-Delta, supra, 43 Cal.4th at p. 1173.) While significant new information must be included in an EIR, requiring a program EIR to include everything discovered in project-level analyses before the program EIR is certified would result in "endless rounds of revision and recirculation" of EIRs that the Legislature did not intend. (Laurel Heights Improvement Assn. v. Regents of University of California (1993) 6 Cal.4th 1112, 1132.)*

1.3 EIR CONTENT AND FORMAT

This document includes discussions of environmental impacts related to several issue areas. The analysis of environmental impacts identifies impacts by category: significant and unavoidable (Class I), significant but mitigable (Class II), adverse but less than significant (Class III), and beneficial (Class IV). It proposes mitigation measures, where feasible, for identified significant environmental impacts.

This EIR has been organized into the following seven sections:

1.0 Introduction - Provides the Statement of Purpose, project background, and information about the EIR content and format.

2.0 Project Description - Identifies the project applicant, presents and discusses the project objectives, project location and specific project characteristics.

3.0 Environmental Setting - Provides a description of the existing physical setting of the project area and an overview of the progress in implementing the CIP and TIM Fee Program Update.

4.0 Environmental Impact Analysis - Describes existing conditions found in the project area and assesses potential environmental impacts that may be generated by implementing the proposed project and cumulative development in El Dorado County. These potential project impacts are compared to "thresholds of significance" to determine the nature and severity of the direct and indirect impacts. Mitigation measures, intended to reduce adverse, significant impacts below threshold levels, are proposed where feasible. Impacts that cannot be eliminated or mitigated to less-than-significant levels are also identified.

5.0 Long-Term Effects - Identifies the spatial, economic, or population growth impacts that may result from implementation of the proposed project, as well as long-term effects of the project and significant irreversible environmental changes.

6.0 Alternatives - Presents and assesses the potential environmental impacts of four alternatives analyzed in addition to implementation of the proposed CIP and TIM Fee Program Update.

7.0 References/Preparers - Lists all published materials, federal, state, and local agencies, and other organizations and individuals consulted during the preparation of this EIR. It also lists the EIR preparers.

1.4 EIR BASELINE AND APPROACH FOR IMPACT ANALYSIS

Section 15125 of the CEQA Guidelines states that an EIR "must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation [NOP] is published." Section 15125 states that this approach "normally constitute[s] the baseline physical conditions by which a lead agency determines whether an impact is significant." In certain instances, the lead agency has the discretion to use a baseline other than existing conditions at the time of the release of the NOP based on the information available at the time the analysis is being performed.

This EIR evaluates potential impacts against existing conditions at the time of the release of the NOP (February 2016), where information is available, for issue areas that would not be substantially influenced by future growth that would occur with or without implementation of the CIP and TIM Fee Program. It was determined that for these issues a comparison to current,

existing baseline conditions would provide the most relevant information for the public, responsible agencies, and El Dorado County decision-makers. These issue areas include:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology
- Greenhouse Gas Emissions/Climate Change
- Hydrology/Water Quality
- Noise
- Transportation/Circulation

For the air quality, greenhouse gas emissions, noise, and traffic environmental impacts due to the update to the CIP and TIM Fee Program, this EIR evaluates potential impacts against both (1) a forecast future baseline condition and (2) current, existing baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not the update to the CIP and TIM Fee Program is adopted. The CIP and TIM Fee Program is a long-term, approximately 20-year plan that proposes transportation projects through the year 2035. It is important to emphasize that population growth, urbanization and volume of average daily traffic generated in El Dorado County will increase by 2035, with or without implementation of the CIP and TIM Fee Program, as a result of a range of demographic and economic factors. This EIR evaluates potential impacts against both a future baseline and a current baseline standard.

An analysis that attributed physical environmental impacts solely to the CIP and TIM Fee Program that are in fact due to future regional growth that would occur in the absence of the CIP and TIM Fee Program would overstate the impacts caused by the program. For this reason, certain environmental issues analyzed in the EIR compare future conditions including the updates to the CIP and TIM Fee Program with the expected future conditions without the updates (the "future baseline") as well as to the current baseline, controlling for future regional growth that would occur independently of the CIP and TIM Fee Program. These comparisons isolate environmental effects potentially resulting from the updates to the CIP and TIM Fee Program from those caused by future growth that would occur regardless of the CIP and TIM Fee Program, as compared to existing baseline conditions in February 2016.

Identification of potential impacts and mitigation measures for these environmental issue areas is therefore based on the increment of physical change due to the CIP and TIM Fee Program, rather than the future regional growth that would occur regardless of whether or not the updates to the CIP and TIM Fee Program is adopted and implemented. The environmental issue areas for which this approach is used include the following:

- Air Quality
- Greenhouse Gases Emissions/Climate Change
- Noise
- Transportation and Circulation

1.5 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

El Dorado County is the lead agency under CEQA for this EIR because it has discretionary authority to determine whether or how to approve the update to the CIP and TIM Fee Program.

"Responsible Agencies," are other agencies that are responsible for carrying out or implementing a specific component of the CIP or for approving a project included in the CIP or that implements the goals and policies of the CIP. Section 15381 of the State CEQA Guidelines defines a "responsible agency" as:

> *A public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, responsible agencies include all public agencies other than the lead agency that have discretionary approval authority over the project.*

It should be noted that additional environmental review may be required by the responsible agency for individual projects contained within the updated CIP and TIM Fee Program. In addition to approval by El Dorado County, future approvals for individual transportation projects identified in the CIP and TIM Fee Program may also have to be completed by the following agencies:

- California Department of Transportation (Caltrans)
- U.S. Department of Transportation, Federal Highways Administration (FHWA)
- Federal Transit Administration (FTA)

Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project. CEQA Guidelines Section 15386 designates four agencies as potential Trustee Agencies for projects subject to CEQA: The California Department of Fish and Wildlife (CDFW) with regard to fish and wildlife, native plants designated as rare or endangered, game refuges, and ecological reserves; the California State Lands Commission, with regard to state-owned "sovereign" lands, such as the beds of navigable waters and state school lands; the California Department of Parks and Recreation, with regard to units of the state park system; and the University of California with regard to sites within the Natural Land and Water Reserves System.

1.6 INTENDED USES OF THE EIR

This EIR discloses the possible environmental consequences associated with the proposed update to the CIP and TIM Fee Program. The information and analysis in this EIR will be used by El Dorado County, responsible and trustee agencies, and the general public.

The purpose of this EIR is to:

- *Provide information about the proposed update to the CIP and TIM Fee Program for consideration by the lead agency in its selection of an alternative or a combination of various elements from each alternative for approval;*

- *Review and evaluate the potentially significant environmental impacts that could occur as a result of projects envisioned by the CIP and TIM Fee Program;*
- *Identify feasible mitigation measures that may be incorporated into the project in order to reduce or eliminate potentially significant effects;*
- *Disclose any potential growth-inducing and/or cumulative impacts associated with the CIP and TIM Fee Program; and*
- *Examine a reasonable range of alternatives that could feasibly attain the basic project objectives, while eliminating and/or reducing some or all of the potentially significant adverse environmental effects.*

1.7 EIR PROCESS

The environmental review process, as required under CEQA, is summarized below.

1. **NOP.** After deciding that an EIR is required, the lead agency must file an NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (CEQA Guidelines Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. For projects of regional significance, the lead agency holds a scoping meeting during the 30-day NOP review period. The NOP for this project began on February 5, 2016 and concluded on March 7, 2016. A NOP scoping meeting was held on March 3, 2016.

2. **Draft EIR.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.

3. **Notice of Completion.** Upon completion of a Draft EIR, the lead agency must file a Notice of Completion with the State Clearinghouse and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the Notice in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the Notice to anyone requesting it (CEQA Guidelines Section 15087). In addition, public notice of the availability of the Draft EIR must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off of the project site; or c) direct mailing to owners and occupants of contiguous properties and others who have requested such notification. The lead agency must solicit comments from the public and respond in writing to all written comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days (Public Resources Code Section 21091).

4. **Final EIR.** Following the close of the Draft EIR review period, a Final EIR is prepared. The Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) a list of persons and entities commenting; and d) responses to comments.

5. **Final EIR Certification.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving the project (CEQA Guidelines Section 15090).

6. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible *(*CEQA Guidelines Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision and explains why the project's benefits outweigh the significant environmental effects.

7. **Mitigation Monitoring/Reporting Program.** An agency must makes findings on significant effects identified in the EIR. The agency then must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

8. **Lead Agency Project Decision.** Upon certification of an EIR, the lead agency makes a decision on the project analyzed in the EIR. A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (CEQA Guidelines Sections 15042 and 15043).

1.8 INCORPORATION BY REFERENCE

Consistent with CEQA Guidelines Section 15150, this EIR incorporates reference documents which are a matter of public record and generally available to the public. These documents include:

- El Dorado County Targeted General Plan Amendment and Zoning Ordinance Update (TGPA/ZOU) and Environmental Impact Report (Adopted December 2015)
- Traffic Impact Mitigation Fee Program Supplement to the El Dorado County General Plan Environmental Impact Report (March 2006).

As noted in CEQA Guidelines Section 15150, where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of the EIR. These documents are discussed and utilized in the setting and impact analysis of this EIR as they relate to traffic, air quality, noise, greenhouse gas emissions, and alternatives, and thus are discussed in Sections 4.2, *Air Quality*; 4.6, *Greenhouse Gas Emissions/Climate Change*; 4.8, *Noise*; 4.9, *Transportation and Circulation;* and 6.0, *Alternatives*.

These documents are listed in the references section in Section 7.0, *References and Preparers*, and each document incorporated by reference is available for public review on the County's webpage at: https://www.edcgov.us/.

2.0 PROJECT DESCRIPTION

This Section describes the proposed components of the County of El Dorado's (County) update of the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program.

2.1 PROJECT PROPONENT

El Dorado County
Community Development Agency
Long Range Planning Division
2850 Fairlane Court, Placerville CA 95667

2.2 CAPITAL IMPROVEMENT PROGRAM (CIP) AND TRAFFIC IMPACT MITIGATION (TIM) FEE PROGRAM BACKGROUND

A CIP identifies and prioritizes future transportation investments that will be required to meet El Dorado County's existing and future transportation needs for the next 20 years. CIP projects can include County roadways, intersections, sidewalks, bicycle lanes, traffic calming treatments, transit service improvement projects, and ongoing administrative costs for transportation monitoring programs, including traffic model update costs, traffic study guideline updates and Circulation Element updates. Consistent with state law and El Dorado County General Plan policies (specifically General Plan Policy TC-Xb), the County completes minor updates to its CIP list every year and completes a major update approximately every five years to ensure that the CIP list is appropriate and reasonable based on current market conditions and costs of construction/investment. Funding for most CIP projects is provided from a variety of sources including state and/or federal grants. However, funding for the portion of the CIP related to new development in the County is financed by the TIM Fee Program which is required by County's General Plan Implementation Measure TC-B (adopted in 2004 and last amended in 2015).

El Dorado County's Measure Y, also known as the "The Control Traffic Congestion Initiative" was first approved by voters in 1998 with a subsequent Measure Y approved by voters in 2008. Measure Y along with General Plan policies that were adopted in conjunction with Measure Y allow two methods to mitigate a new project's traffic impacts: (1) condition the project to construct the necessary road improvements, or (2) ensure that construction of the necessary road improvements is in the 10-year CIP[1]. -Measure E, also known as the "Initiative to Reinstate Measure Y's original intent – no more paper roads," was passed by the voters on June 7, 2016. Measure E removed the second option of paying TIM fees and relying on the inclusion of road improvements in the 10-year CIP for residential projects to mitigate their impacts.

TIM Fees are collected by the County to offset the costs of impacts to the transportation system created by new development. Consistent with state law and General Plan policies, the County has minor updates to the TIM Fee every year and major updates approximately every five years to ensure they are appropriate and reasonable based on current market conditions and costs of

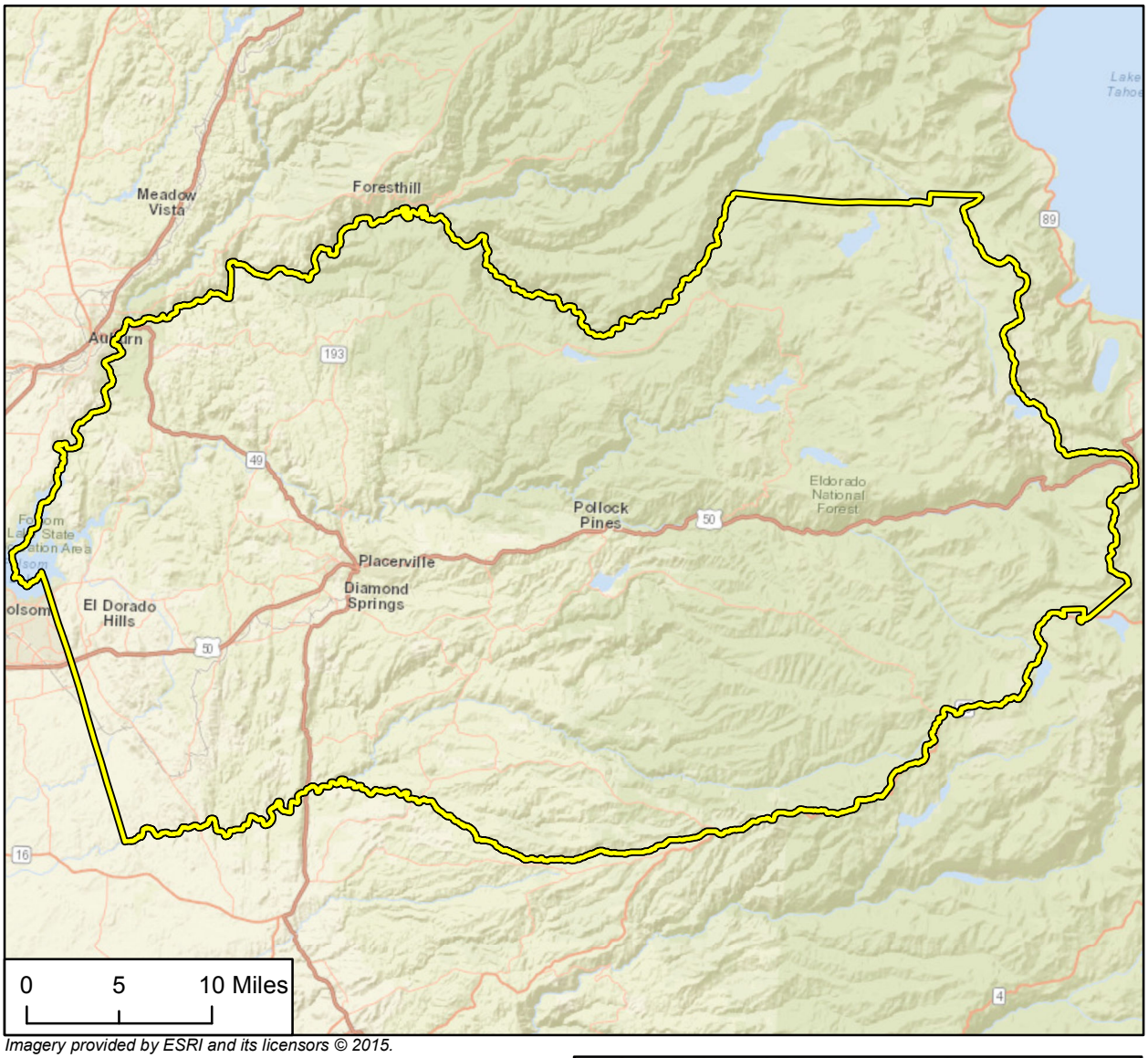
[1] *Non-residential projects may be approved if the traffic mitigation are in the 20-year CIP.*

construction/investment. The TIM Fees are based on planned development assumed to occur in the County's General Plan (adopted in 2004, last amended in 2015). The planned development, according to the latest amendments to the General Plan (2015), are assumed to occur through the year 2035. The TIM Fees are based on the total cost of transportation improvements needed to accommodate this growth, and assumed local/state/federal revenue streams anticipated to be available to the County for transportation improvements. This information allows a nexus between the unfunded improvement costs and projected future development. As part of the TIM Fee Program, a nexus study is completed which results in a calculation that determines the fair share that future development must pay for a particular type of land use development (i.e., residential and/or non-residential uses). The nexus analysis for the updates to the TIM Fee program are based on the incremental land use growth projected to occur in the County between January 1, 2015 and January 1, 2035 (a twenty year growth projection consistent with the adopted General Plan's land use projections for the County). It should be noted that in 2015, the County amended its General Plan allowing for higher density in existing community areas and thus promoting infill development in existing urban areas served by existing infrastructure rather than sprawl or low density development across undeveloped regions of El Dorado County. The nexus analysis includes a comprehensive review of the existing and projected traffic conditions during various times of the day at key locations in the unincorporated areas of El Dorado County. Based on General Plan land use designations and policies, this information was used as part of the proposed update to the TIM Fee Program to identify existing and future operational deficiencies in the transportation network and the types of projects and costs that would be required to mitigate them. This information along with the General Plan land use growth projections (consistent with the 2015 amendments) and other anticipated revenue streams were used to determine the proposed fair-share cost contribution. Those transportation improvement projects identified in the analysis that would be necessary to alleviate deficiencies in the County's transportation system (both existing and future) would be added to the CIP list and funding for those specific TIM Fee projects would be provided by development projects.

It should be noted that TIM Fee projects are CIP projects that are driven by new development and are to be funded via TIM Fee revenue. The other (non-TIM Fee) projects are also included in the CIP and funded with a variety of other sources (including, but not limited to, local, state and/or federal grants). Since these other projects do not meet the nexus requirements per the Mitigation Fee Act (Government Code Section 66000 et. seq.) they are not identified as TIM Fee projects and are not eligible for TIM Fee funding.

2.3 PROJECT LOCATION

The project area as shown on Figure 2-1, known as the Western Slope, includes the parts of unincorporated El Dorado County that are outside the Tahoe basin, west of Echo Summit. The majority of proposed CIP projects would be generally near and along US Highway 50 (US 50), between the border of Sacramento and El Dorado counties and the community of Pollock Pines. Some of the proposed roadway and bridge repair/maintenance projects would be located more than two miles from US 50. Figure 2-2 shows the location and type of improvements for just the TIM Fee funded projects. Figure 2-3 shows the general location for the majority of those non-TIM Fee funded projects on the CIP list.



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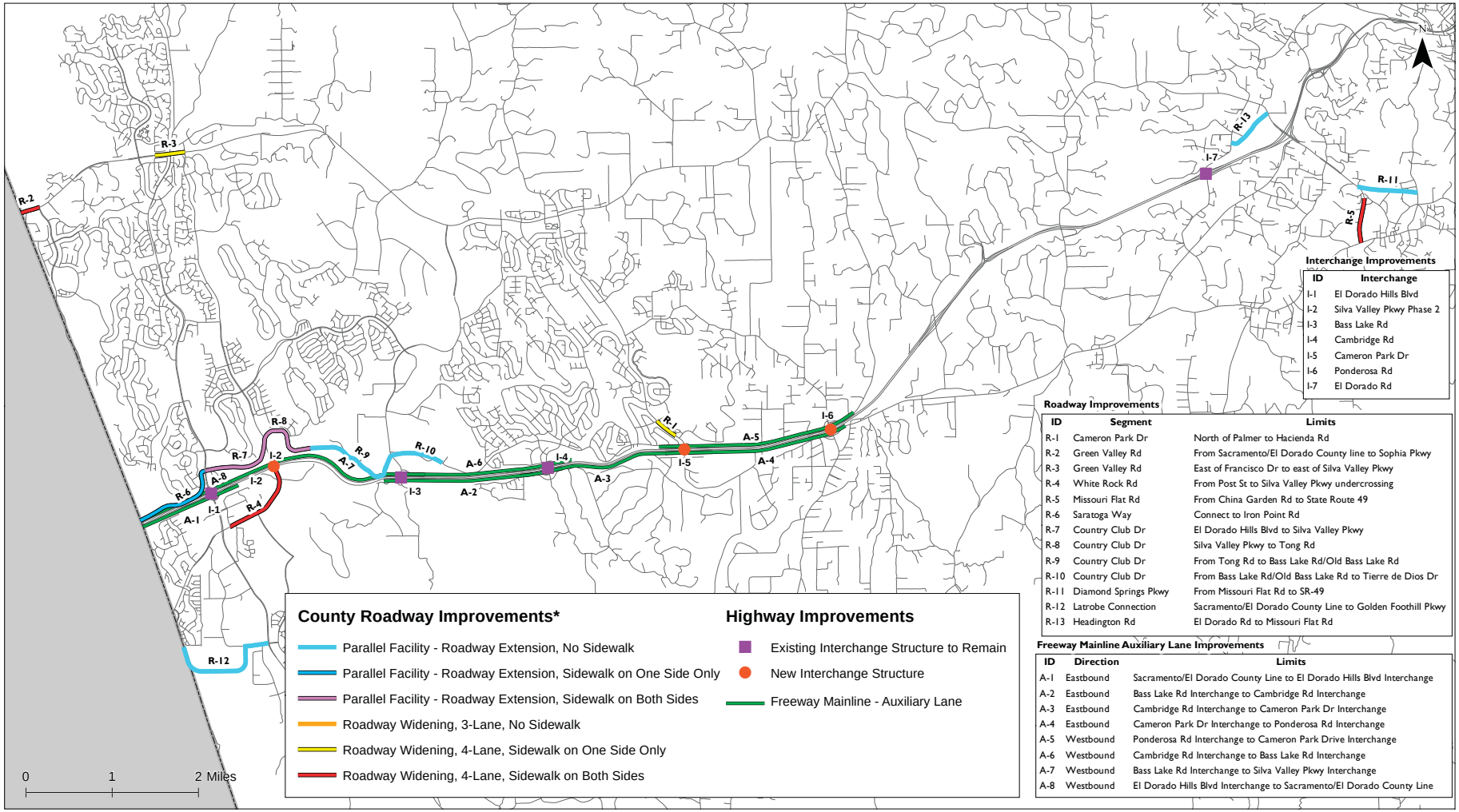
★ Project Location

Western Slope Project Area

Figure 2-1



Interchange Improvements

ID	Interchange
I-1	El Dorado Hills Blvd
I-2	Silva Valley Pkwy Phase 2
I-3	Bass Lake Rd
I-4	Cambridge Rd
I-5	Cameron Park Dr
I-6	Ponderosa Rd
I-7	El Dorado Rd

Roadway Improvements

ID	Segment	Limits
R-1	Cameron Park Dr	North of Palmer to Hacienda Rd
R-2	Green Valley Rd	From Sacramento/El Dorado County line to Sophia Pkwy
R-3	Green Valley Rd	East of Francisco Dr to east of Silva Valley Pkwy
R-4	White Rock Rd	From Post St to Silva Valley Pkwy undercrossing
R-5	Missouri Flat Rd	From China Garden Rd to State Route 49
R-6	Saratoga Way	Connect to Iron Point Rd
R-7	Country Club Dr	El Dorado Hills Blvd to Silva Valley Pkwy
R-8	Country Club Dr	Silva Valley Pkwy to Tong Rd
R-9	Country Club Dr	From Tong Rd to Bass Lake Rd/Old Bass Lake Rd
R-10	Country Club Dr	From Bass Lake Rd/Old Bass Lake Rd to Tierre de Dios Dr
R-11	Diamond Springs Pkwy	From Missouri Flat Rd to SR-49
R-12	Latrobe Connection	Sacramento/El Dorado County Line to Golden Foothill Pkwy
R-13	Headington Rd	El Dorado Rd to Missouri Flat Rd

Freeway Mainline Auxiliary Lane Improvements

ID	Direction	Limits
A-1	Eastbound	Sacramento/El Dorado County Line to El Dorado Hills Blvd Interchange
A-2	Eastbound	Bass Lake Rd Interchange to Cambridge Rd Interchange
A-3	Eastbound	Cambridge Rd Interchange to Cameron Park Dr Interchange
A-4	Eastbound	Cameron Park Dr Interchange to Ponderosa Rd Interchange
A-5	Westbound	Ponderosa Rd Interchange to Cameron Park Drive Interchange
A-6	Westbound	Cambridge Rd Interchange to Bass Lake Rd Interchange
A-7	Westbound	Bass Lake Rd Interchange to Silva Valley Pkwy Interchange
A-8	Westbound	El Dorado Hills Blvd Interchange to Sacramento/El Dorado County Line

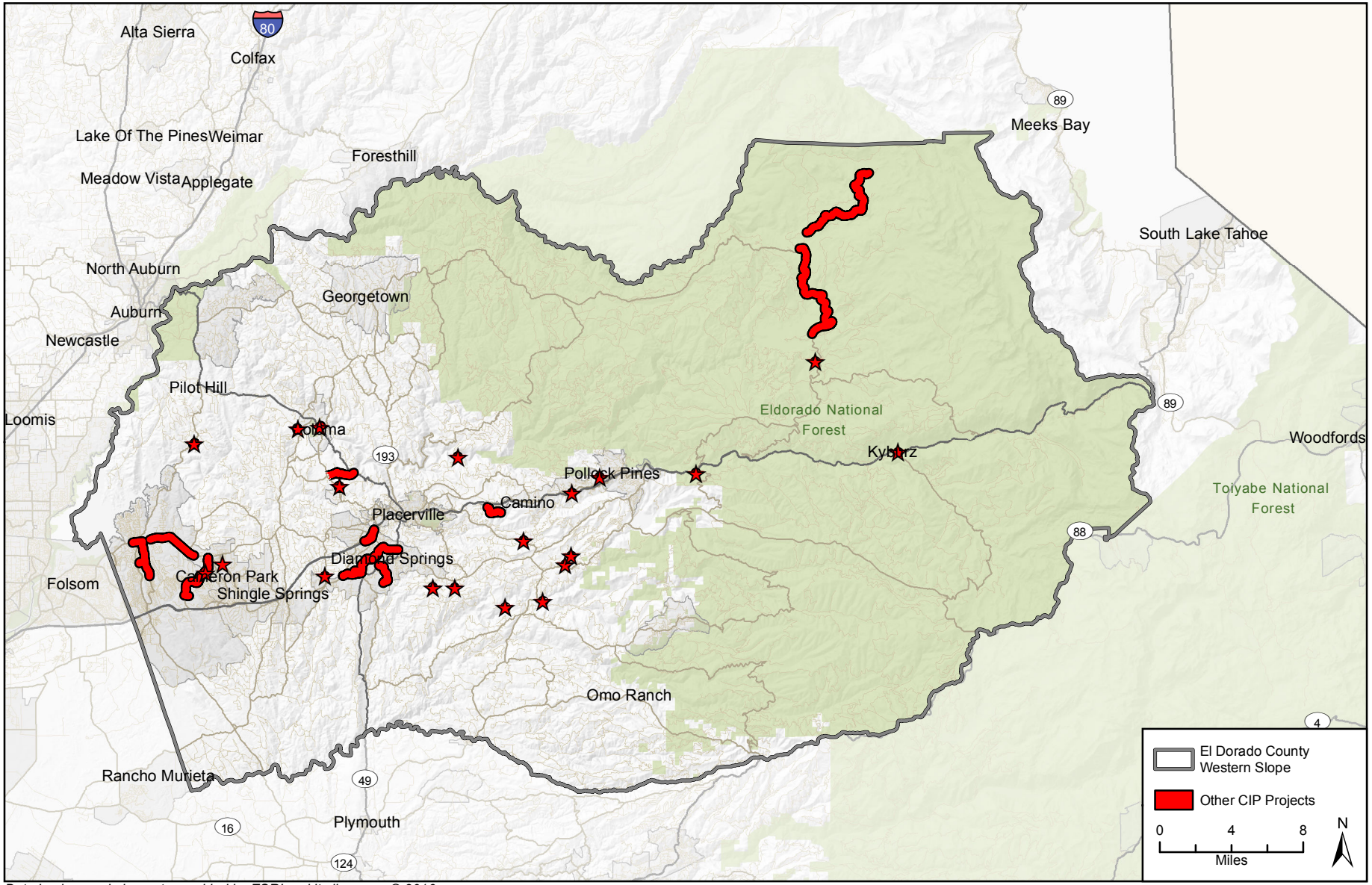
* Descriptions indicate the portion of the projects included in the TIM Fee Program. The descriptions are not intended to indicate the roadway cross section.

TIM Fee Funded CIP Improvement Locations
West Slope Traffic Impact Mitigation Fee and Capital Improvement Program Update
El Dorado County, CA

Source: Kittelson & Associates, Inc.

Proposed TIM Fee Funded CIP Improvements

Figure 2-2



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Non-TIM Fee Funded CIP Projects

Figure 2-3

2.4 PROJECT CHARACTERISTICS

El Dorado County is in the process of updating its CIP and TIM Fee Program. The CIP is the long-range plan for all individual capital improvement projects and funding sources in the County. The CIP provides strategic direction for capital projects over a current year, 5, 10, and 20 year horizon. It is used as a planning tool, and updated periodically (as required by the County's General Plan Policy TC-Xb). The TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, and transit, to deal with future growth during a defined time period (currently based on 20 years of growth). The TIM Fee funded improvements are a part of the CIP and the proposed TIM Fee Update would provide funding for traffic improvements necessary for all roadways in the county to operate at an acceptable Level of Service (LOS) under 2035 General Plan 20 year time horizon conditions, in accordance with the Adopted General Plan (originally adopted in 2004 and amended in 2015).

The transportation projects proposed to be included on the CIP list would occur in the western, developed area of El Dorado County (Western Slope). Typical non-TIM Fee funded improvements projects include bridge replacement/maintenance of off-system bridges, improvements to bicycle lanes/bike routes, sidewalks, pedestrian access and trails, safety improvements such as crosswalks or signage for pedestrians at intersections, drainage improvements, traffic safety improvements such as realignments, and improvements that increase capacity of roadways with existing operational deficiencies, such as road widenings or traffic signal interconnects.

Table 2-1 provides the full list of proposed CIP projects and distinguishes between those projects that are TIM Fee funded and non-TIM Fee funded. The majority of the funded transportation improvements that would be included on the CIP list are generally on or near US 50 in the western, developed area of El Dorado County. However, as shown on Figures 2-2 and 2-3, some projects are located on roads more than 10 miles from US 50. The location of the proposed transportation improvements are surrounded primarily by undeveloped land, though in some areas, improvements would be adjacent to commercial and residential land uses.

Table 2-1
Proposed CIP Project List

	Proposed TIM Fee Program Project	Source	Type
	Constructed, still needed in CIP for Mitigation Monitoring (LTM - Long Term Monitoring)		
	Project		
1	77123 Alder Drive at EID Canal - Bridge Replacement	2015 CIP	Bridge
2	77128 Bassi Road at Granite Creek - Bridge Replacement	2015 CIP	Bridge
3	77119 Blair Road at EID Canal - Bridge Replacement	2015 CIP	Bridge
4	77116 Bucks Bar Road at the North Fork Cosumnes River - Bridge Replacement	2015 CIP	Bridge
5	GP144 Cameron Park Drive Widening - North of Palmer Drive to Hacienda Drive	TIM Update	Capacity

Table 2-1
Proposed CIP Project List

	Proposed TIM Fee Program Project Constructed, still needed in CIP for Mitigation Monitoring (LTM - Long Term Monitoring) **Project**	**Source**	**Type**
6	77139 Clear Creek Road at Clear Creek (PM 0.25) - Bridge Replacement	2015 CIP	Bridge
7	77138 Clear Creek Road at Clear Creek (PM 1.82) - Bridge Replacement	2015 CIP	Bridge
8	73360 Cold Springs Road Realignment	2015 CIP	Safety
9	72377 Country Club Drive Ext. - East of El Dorado Hills Blvd. to Silva Valley Parkway	TIM Update	Parallel Capacity
10	71362 Country Club Drive Extension - Silva Valley Parkway to Tong Road	TIM Update	Parallel Capacity
11	71361 Country Club Drive Extension - Tong Road to Bass Lake Road/Old Bass Lake Road	TIM Update	Parallel Capacity
12	71360 Country Club Drive Realignment - Bass Lake Road/Old Bass Lake Road to Tierre de Dios Drive	TIM Update	Parallel Capacity
13	72375~~/72334~~Diamond Springs Parkway - Phase 1A - SR-49 Realignment	~~TIM Update~~2015 CIP	Capacity
14	72334 Diamond Springs Parkway - Phase 1B (~~Widen to~~ New ~~4~~ lane roadway) (Only 2 lanes are TIM Fee eligible)	~~2015 CIP~~TIM Update	Capacity
15	97012 El Dorado Trail - Los Trampas to Halcon	2015 CIP	Bike/Ped
16	97015 El Dorado Trail - Missouri Flat Road Bike/Pedestrian Overcrossing	2015 CIP	Bike/Ped
17	97014 El Dorado Trail - Missouri Flat Road to El Dorado Road	2015 CIP	Bike/Ped
18	72309 Green Valley Road from Loch Way to Signalized Entrance to Pleasant Grove Middle School	2015 CIP	Bike/Ped
19	72376 Green Valley Road Widening - County line to Sophia Parkway	TIM Update	Capacity
20	GP178 Green Valley Road Widening - East of Francisco to East of Silva Valley Road	TIM Update	Capacity
21	77127 Green Valley Road at Indian Creek - Bridge Replacement	2015 CIP	Bridge
22	77136 Green Valley Road at Mound Springs Creek - Bridge Replacement	2015 CIP	Bridge
23	77109 Green Valley Road at Tennessee Creek - Bridge Replacement	2015 CIP	Bridge
24	77114 Green Valley Road at Weber Creek - Bridge Replacement	2015 CIP	Bridge
25	77137 Greenstone Road at Slate Creek - Bridge Replacement	2015 CIP	Bridge

Table 2-1
Proposed CIP Project List

	Proposed TIM Fee Program Project Constructed, still needed in CIP for Mitigation Monitoring (LTM - Long Term Monitoring) **Project**	**Source**	**Type**
26	77135 Hanks Exchange at Squaw Hollow Creek - Bridge Replacement	2015 CIP	Bridge
27	77140 Happy Valley Cutoff Road at Camp Creek - Bridge Maintenance Project	2015 CIP	Bridge
28	77125 Hazel Valley Road at EID Canal - Bridge Replacement	2015 CIP	Bridge
29	71375 Headington Road Extension - Missouri Flat Road to El Dorado Road	TIM Update	Capacity
30	72369 Hollow Oak Road Drainage Project	2015 CIP	Drainage
31	77131 Ice House Road at Jones Fork Silver Creek - Bridge Maintenance Project	2015 CIP	Bridge
32	72191 Ice House Road Rehabilitation - Phase II	New Project	Capital Overlay
33	66116 Latrobe Connection	TIM Update	Capacity
34	OP005 Metal Beam Guardrail Installation - Various Locations	2015 CIP	Safety
35	72142 Missouri Flat Road - China Garden Road to Pleasant Valley Road	TIM Update	Capacity
36	77126 Mosquito Road Bridge at South Fork American River	2015 CIP	Bridge
37	77129 Mount Murphy Road at South Fork American River - Bridge Replacement	2015 CIP	Bridge
38	72308 New York Creek Trail East - Phase 2	2015 CIP	Bike/Ped
39	77122 Newtown Road at South Fork of Weber Creek - Bridge Replacement	2015 CIP	Bridge
40	77134 Oak Hill Road at Squaw Hollow Creek - Bridge Replacement	2015 CIP	Bridge
41	72190 Overlay - Patterson Drive - Pleasant Valley Road	2015 CIP	Capital Overlay
42	72119 Overlay - Gold Hill Road	2015 CIP	Capital Overlay
43	73320 Pleasant Valley Road (SR49/Patterson Drive)	2015 CIP	Intersection Signalization
44	77117 Rubicon Trail at Ellis Creek - Bridge Replacement	2015 CIP	Bridge
45	73362 Salmon Falls Road South of Glenesk Lane Realignment	2015 CIP	Safety / Capacity
46	71324/GP147 Saratoga Way Extension - Phase 1/Phase 2	TIM Update	Parallel Capacity
47	72141 Silva Valley Parkway / Serrano Parkway Traffic Circulation Improvement	2015 CIP	Capacity

Table 2-1
Proposed CIP Project List

	Proposed TIM Fee Program Project Constructed, still needed in CIP for Mitigation Monitoring (LTM - Long Term Monitoring) **Project**	**Source**	**Type**
48	72310 Silva Valley Parkway Class 1 and Class 2 Bike Lanes (Harvard to Green Valley)	2015 CIP	Bike/Ped
49	77124 Silver Fork Road at South Fork American River - Bridge Rehabilitation	2015 CIP	Bridge
50	53125 U.S. 50 Auxiliary Lane Eastbound - Sacramento County line to El Dorado Hills Blvd I/C	TIM Update	Mainline
51	GP148 U.S. 50 Auxiliary Lane Eastbound - Bass Lake Road I/C to Cambridge Road I/C	TIM Update	Mainline
52	53126 U.S. 50 Auxiliary Lane Eastbound - Cambridge Road I/C to Cameron Park Drive I/C	TIM Update	Mainline
53	53127 U.S. 50 Auxiliary Lane Eastbound - Cameron Park Drive I/C to Ponderosa Road I/C	TIM Update	Mainline
54	53128 U.S. 50 Auxiliary Lane Westbound - Ponderosa Road I/C to Cameron Park Drive I/C	TIM Update	Mainline
55	GP149 U.S. 50 Auxiliary Lane Westbound - Cambridge Road I/C to Bass Lake Road I/C	TIM Update	Mainline
56	53117 U.S. 50 Auxiliary Lane Westbound - Bass Lake Road I/C to Silva Valley Parkway I/C	TIM Update	Mainline
57	53115 U.S. 50 Auxiliary Lane Westbound - El Dorado Hills Boulevard I/C to Sacramento County line	TIM Update	Mainline
58	71330/GP148 U.S. 50/Bass Lake Road Interchange Improvements - Phase 1 and Phase 2	TIM Update	Interchange
59	71332/GP149 U.S. 50/Cambridge Road Interchange Improvements - Phase 1 and Phase 2	TIM Update	Interchange
60	72361 U.S. 50/Cameron Park Drive Interchange Improvements	TIM Update	Interchange
61	71319 - U.S. 50/Camino Area local road improvements (County Share)	2015 CIP	Safety
62	71323 U.S. 50/El Dorado Hills Boulevard Interchange Improvements - Phase 2B	TIM Update	Interchange
63	71347/71376 U.S. 50/El Dorado Road Interchange Improvements - Phase 1 and Phase 2	TIM Update	Interchange
64	71359 U.S. 50/Missouri Flat Road Interchange - Phase 1B.2	2015 CIP	Interchange
65	71346 U.S. 50/Missouri Flat Road Interchange Improvements - Phase 1C Riparian Restoration	2015 CIP	Interchange
66	71333/71338/71339 U.S. 50/Ponderosa Road Interchange Improvements	2015 CIP	Interchange
67	71368 U.S. 50 / Silva Valley Parkway - Landscape Improvements Phase 1A - in conjunction with Silva Valley I/C Project	2016 CIP	Interchange
68	71345 U.S. 50/Silva Valley Parkway Interchange - Phase 2 - On Ramps	2015 CIP	Interchange

Table 2-1
Proposed CIP Project List

	Proposed TIM Fee Program Project Constructed, still needed in CIP for Mitigation Monitoring (LTM - Long Term Monitoring) **Project**	**Source**	**Type**
69	77118 Wentworth Springs Road at Gerle Creek - Bridge Replacement	2015 CIP	Bridge
70	GP137 White Rock Road (2 to 4 lanes) - Manchester Drive to Sacramento County line	2015 CIP	Capacity
71	72374 White Rock Road Widening (2 to 4 lanes) - Post Street to South of Silva Valley Parkway	TIM Update	Capacity
72	53118 Transit Service Improvements	2015 CIP	Transit
73	TIM Fee Program Administration	2015 CIP	Program
74	TIM Fee Intersection Improvements (Traffic Signal and Intersection Operational Improvements, seed funding for ITS #31202)	2015 CIP	Intersections
75	Bridge Replacement Match Funds	2015 CIP	Bridge
76	76108 Silver Springs Pkwy to Bass Lake Road (south segment) – Offsite	2015 CIP	Safety
77	77115 Sly Park Road at Clear Creek Crossing - Bridge Replacement	TIM Update	Bridge
78	53124 U.S. 50 HOV Lanes - Phase 0	2015 CIP	Mainline
79	71328 U.S. 50/Silva Valley Parkway Interchange - Phase I	2015 CIP	Interchange

The CIP and TIM Fee Program Update would also require an amendment to the County's General Plan Transportation and Circulation Element as a result of the CIP and TIM Fee Program Update. These changes are proposed in order to ensure that the CIP and TIM Fee Program Update is consistent with the General Plan. These proposed changes also include clean-up items, clarifications, and corrections to the Transportation and Circulation Element and Figure TC-1 as summarized below. If the General Plan Amendment to the Transportation and Circulation Element is approved, its provisions would be implemented in the context of the whole General Plan.

The minor changes to Figure TC-1 are detailed in Table 2-2 below.

Table 2-2
Summary of Revisions to General Plan Figure TC-1

Roadway / Location of Proposed Change	Proposed Changes
Bass Lake Road	• Change from "Future Road" to existing road (i.e., change from dashed line to solid line) near intersection with Serrano Parkway • Remove old alignment of Bass Lake Road (near Serrano Parkway) • Change from 4-Lane Undivided Road to Major 2-Lane Road from Country Club Drive (realignment) to Silver Springs Parkway
Cameron Park Drive	Change from 4-Lane Divided Road to Major 2-Lane Road from Oxford Road to Hacienda Road
Country Club Drive	• Add Major 2-Lane Road from Silva Valley Parkway to El Dorado Hills Boulevard (Conceptually Proposed Alignment) • Update alignment of roadway between Bass Lake Road and Silva Valley Parkway (Conceptually Proposed Alignment) • Change from 2-Lane Regional Road to Major 2-Lane Road from Cameron Park Drive to Bass Lake Road
Diamond Springs Parkway	Update alignment of future roadway, per most recent draft plans (Established Alignment)
El Dorado Hills Boulevard	Change from 4-Lane Divided Road to Major 2-Lane Road from Governor Drive/St Andrews Drive to Francisco Drive
Francisco Drive	Change from 4-Lane Divided Road to Major 2-Lane Road from El Dorado Hills Boulevard to Green Valley Road
Green Valley Road	• Change to blue Major 2-Lane Road from Cameron Park Drive to Ponderosa Road • Change from 4-Lane Divided Road to Major 2-Lane Road from just east of Silva Valley Parkway to Deer Valley Road (West)
Headington Road	Add extension project as future Major 2-lane Road from Missouri Flat Road to El Dorado Road. (Conceptually Proposed Alignment)
Latrobe Connection	Add Major 2-Lane Road from County Line to Golden Foothills Parkway
Latrobe Road	Change from 6-Lane Divided Road to 4-Lane Divided Road from White Rock Road to just south of Suncast Lane
Ray Lawyer Drive	Add adopted extension of Ray Lawyer Drive between Forni Road and SR 49 (Established Alignment)
Serrano Parkway	• Change from "Future Road" to existing road (i.e. change from dashed line to solid line) near intersection with Bass Lake Road • Change from Major 2-Lane Road to 4-Lane, Divided Road from Silva Valley Parkway to Villagio Drive, based on current configuration
Silva Valley Parkway	Change from 4-Lane Divided Road to Major 2-Lane Road from Harvard Way to Green Valley Road
SR 49	Change to the blue Major 2-Lane Road throughout unincorporated County
US 50 / Red Hawk Parkway	Remove "Proposed New US 50 Interchange Location" icon
US 50 / Silva Valley Parkway	Change from "Proposed New US 50 Interchange Location" to 4-Lane, Divided Road, including new alignment near US 50
White Rock Road	Change White Rock Road from County Line to US 50 to the Capital Southeast Connector Corridor
Map Legend	• Change title from "2025 Level Improvements" to "2035 Circulation System" • Reorder legend items • Minor changes to line types, colors, and legend items • Divide item for "Future Road" into two different items: "Future Road – Established Alignments" and "Future Road – Conceptually Proposed Alignments" • Change item labeled "2-Lane Regional Road (Potential Spot Improvements)" to "Major 2-Lane Road"
Source Note	Change from "July, 2004" to "July, 2004 (Amended [date amended])"
Add Table	Added "2035 and Potential Future Roadway Facility" Table
Map Notes	• Remove note that starts "Note: This is a reduced version…" • Add standard map disclaimers

Additionally, minor changes and clarifications to text in the Transportation and Circulation Element are proposed and are detailed in Table 2-3 below. Edited or additional text is underlined in Table 2-3.

Table 2-3
Summary of Revisions to General Plan Transportation and Circulation Element

Location of Proposed Change	Current Language	Proposed Language
Page 61	Impact Fee Programs "The County has four traffic impact mitigation fee programs that are used to fund capital improvements to the road system to mitigate traffic impacts resulting from development. These programs are: • West Slope Area of Benefit Traffic Impact Mitigation Fee Program: this program was originally adopted in 1991. The Board adopted major revisions to the program in August 1996. • Transportation Impact Fee Program for the State System's Capacity and Interchanges: this program was adopted in August 1996. • El Dorado Hills/Salmon Falls Area Road Impact Fee Program: this program was originally adopted in 1984. The Board adopted major revisions to the program in August 1996 and December 2000. • Interim Transportation Impact Fee for Highway 50 Corridor Improvements: this program was adopted in October 2002.	Impact Fee Program "The County has a countywide traffic impact mitigation (TIM) fee program that is used to fund capital improvements to the local and State road system to mitigate traffic impacts resulting from development. This program originated as several individual fee programs, which were adopted between 1984 and 2002. The countywide TIM Fee program incorporates former fee programs, including the West Slope Area of Benefit Traffic Impact Mitigation Fee Program, the Transportation Impact Fee Program for the State System's Capacity and Interchanges, the El Dorado Hills/Salmon Falls Area Road Impact Fee Program, and the Interim Transportation Impact Fee for Highway 50 Corridor Improvements."
Page 61 – 62	"The Circulation Map (Figure TC-1) depicts the proposed circulation system to support existing, approved, and planned development in unincorporated El Dorado County through 2025."	"The Circulation Map (Figure TC-1) depicts the proposed circulation system to support existing, approved, and planned development in unincorporated El Dorado County through **2035**."
Page 62	"Regional highways are shown on the Circulation Map in the following two forms: • **Established alignments**: depicted by solid lines on the map. These include existing highways where the centerline is the precise centerline and future highways where the Board of Supervisors, a City Council, or the subdivision process has established a precise	"Regional roadways are shown on the Circulation Map in the following three forms: • **Existing roadways:** depicted by solid lines on the map. • **Established alignments:** depicted by dashed lines on the map. These include future roadways where the Board of Supervisors, a City Council, or the subdivision process has established a precise alignment. • **Conceptually proposed alignments:** depicted by center lines with background shading indicating future facilities, the precise alignments of which have yet to be determined.

Table 2-3
Summary of Revisions to General Plan Transportation and Circulation Element

Location of Proposed Change	Current Language	Proposed Language
	alignment. • **Conceptually proposed alignments**: depicted by dashed lines indicating future facilities, the precise alignments of which have yet to be determined."	
Page 62	None	Figure TC-1 contains a table of the 2035 and Potential Future Roadway Facilities (post-2035) for select locations. The 2035 roadway widenings shown on the table are needed to support planned growth consistent with the current General Plan land use, and the potential future facilities (post-2035) are identified for longer-range planning purposes.
Page 63	N/A	Add the following paragraph under the "**Other Facilities**" heading: "In addition to other highway facilities, the Circulation Map includes the Capital Southeast Connector, a future regional multi-modal facility. The Capital Southeast Connector shall be consistent with the most current Capital Southeast Connector JPA-approved "Project Design Guidelines," provided that the Project Design Guidelines will not be applied to diminish or alter the rights of County approved projects or the County's land use authority."
Page 67 Table TC-1	Table Title is "GENERAL ROADWAY STANDARDS FOR NEW DEVELOPMENT BY FUNCTIONAL CLASS"	Change Table Title to "GENERAL ROADWAY STANDARDS FOR NEW DEVELOPMENT BY ROAD CLASSIFICATION"
Page 67 Table TC-1	Column heading "Functional Class"	Change Column heading to "Road Classification"
Page 69 Policy TC-1u	"The County shall amend the circulation diagram to include a new arterial roadway from the west side of the El Dorado Hills Business Park to US 50."	Delete policy due to the inclusion of the Latrobe Connection on Figure TC-1.
Page 69 Policy TC-1y	"Development through 2025, within Traffic Analysis Zones 148 and 344, shall be conditioned so that a cap of 10,045 full-time employees is not exceeded, unless it can be demonstrated that a higher number of employees would not violate established level of service standards."	Delete policy due to the inclusion of the Latrobe Connection on Figure TC-1. The Latrobe Connection provides additional roadway capacity to and from the El Dorado Hills Business Park, such that the level of service standards in Policy TC-Xd would not be violated through the General Plan horizon year of 2035.
Page 84 Measure TC-V(1)	"Work with the Sacramento Area Council of Governments (SACOG), Sacramento County, and the City of Folsom to identify potential alignments for the new arterial roadway from the west side of El Dorado Hills Business Park to US Highway 50. [Policy TC-1u]"	Delete implementation measure due to the inclusion of the Latrobe Connection on Figure TC-1.

Finally, the amendments to the General Plan associated with the CIP and TIM Fee Program Update would also include the addition of a new table to Figure TC-1 of the Transportation and Circulation Element to identify potential future roadway facilities (post-2035), as listed below in Table 2-4. When the General Plan was originally adopted in 2004, the circulation system shown on Figure TC-1 was based on a growth rate of approximately 3% per year. In 2014, the Board directed the County's Long Range Planning (LRP) division to adjust the growth rate to 1.03% per year, which is better aligned to the County's historical growth rate. As a result, some of the facilities shown on the existing Figure TC-1 are larger than what will be required by 2035. LRP is proposing to change Figure TC-1 to reflect the 2035 circulation system and add the "2035 and Potential Future Roadway Facility" Table to Figure TC-1. The table (as shown below in Table 2-4) displays the future facility size for roadways which need fewer lanes by 2035 than what is currently shown on the existing Figure TC-1. The potential future facility list is generally consistent with the existing Figure TC-1 and would be for longer-range planning purposes.

Table 2-4
2035 and Potential Future Roadway Facilities

Roadway	Segment	2035 Facility	Potential Future Facility
Bass Lake Road	US 50 to Silver Springs Parkway	Major 2-Lane	4-Lane Divided
Cameron Park Drive	Hacienda Drive to Meder Road	Major 2-Lane	4-Lane Divided
El Dorado Hills Boulevard	Governor Drive/St Andrews Drive to Francisco Drive	Major 2-Lane	4-Lane Divided
Francisco Drive	El Dorado Hills Boulevard to Green Valley Road	Major 2-Lane	4-Lane Divided
Green Valley Road	Silva Valley Parkway to Deer Valley Road (West)	Major 2-Lane	4-Lane Divided
Latrobe Connection (Carson Crossing Drive)	Golden Foothills Parkway to El Dorado County Line	Major 2-Lane	4-Lane Divided
Latrobe Road	White Rock Road to Suncast Lane	4-Lane Divided	6-Lane Divided
Silva Valley Parkway	Harvard Way to Green Valley Road	Major 2-Lane	4-Lane Divided
White Rock Road	Latrobe Road to US 50	4-Lane Divided[1]	6-Lane Divided[1]

[1] *White Rock Road is the eastern end of the Capital Southeast Connector Corridor.*

2.5 PROJECT GOAL AND OBJECTIVES

The CIP and TIM Fee Program Update is intended to fulfill the following goal and objectives:

Goal: *Consistent with the County's General Plan Policy TC-Xb and Implementation Measures TC-A and TC-B, develop and maintain a 10- and 20-Year CIP as well as a 20-Year TIM Fee Program that maintains the required level of service (LOS) on the County's roadway network.*

Objectives:

- *Plan a balanced transportation system that meets the needs of current and future County residents and visitors;*
- *Manage and plan for an increase in vehicle trips on local and state roads and highways throughout the County to facilitate a safe, efficient flow of vehicle traffic;*
- *Finance and construct necessary roadway improvements to provide a safe and reliable transportation network to accommodate growth pursuant to the County General Plan while maintaining acceptable level of service standards as required by the General Plan;*
- *Develop a legally-defensible 20 year CIP that is consistent with the General Plan and supports its implementation.*
- *Develop a legally-defensible TIM Fee Program that supports CIP implementation and is consistent with the Mitigation Fee Act (AB 1600).*
- *Reduce the TIM Fees to the extent possible while still achieving the objectives above.*

2.6 PROJECT APPROVALS

Approval of the proposed CIP and TIM Fee Program Update and the General Plan amendment (which is necessary in order to ensure that the Program is consistent with the General Plan) is at the discretion of the County Board of Supervisors, as El Dorado County is the lead agency for the update to the CIP and TIM Fee Program and for most of the CIP projects on the CIP list, the County would be the lead agency and project sponsor overseeing the project's approval and implementation. However, for some individual transportation projects included on the CIP list, such as highway projects and interchanges, it should be noted that the California Department of Transportation (Caltrans) would likely act as the lead or sponsor agency for the individual project and thus may have approval authority. As discussed in Section 1.5, additional environmental review may be required by a responsible agency for individual projects contained within the updated CIP and TIM Fee Program. In addition to approval by El Dorado County, future approvals for individual transportation projects identified in the CIP and TIM Fee Program may also have to be completed by the following agencies:

- California Department of Transportation (Caltrans)
- U.S. Department of Transportation, Federal Highways Administration (FHWA)
- Federal Transit Administration (FTA)

The relationship of this EIR to future environmental review of individual transportation projects is further discussed in EIR Section 1.0, *Introduction*.

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3.0 ENVIRONMENTAL SETTING

3.1 PHYSICAL SETTING

a. Geography. The project area (the Western Slope) is located within El Dorado County which spans approximately 1,788 square miles, including 78 square miles of water surface area. The elevation ranges dramatically from 765 feet in El Dorado Hills, to 1,866 feet in Placerville and 10,891 feet at the highest peak in the Central Sierra Nevada Foothills. The County's topography is unique, ranging from rolling hills, grasslands, chaparral, oak, and alpine forest, lakes, mountains, the American River, and a portion of Lake Tahoe. El Dorado was the first County in which gold was discovered and is situated within the historic Gold Country of the Sierra Nevada mountain range. It is located 30 miles east of Sacramento, 125 miles northeast of San Francisco, nestled right in the bend of California's eastern state line. Its boundaries include nearly half of Folsom Lake reservoir, and the County shares an eastern border with the state of Nevada and a small portion of South Lake Tahoe including the infamous, Emerald Bay. Eldorado National Forest and the Sierra Nevada mountains run through two thirds of the County.

El Dorado County can be divided into two general topographic zones: the foothills and the mountain region in the Sierra Nevada. The Western Slope of the County (the project area for this EIR) is located in the foothills of the Sierra Nevada. The eastern portion is in the Sierra Nevada Mountain Range and includes part of the Lake Tahoe Basin. The agricultural areas of the County are generally limited to the foothills. Timber production occurs in the center portions of the County in heavily forested regions of the Sierra Nevada.

The foothills contain the majority of the urban development such as the City of Placerville, communities (including, but not limited to, El Dorado Hills, Cameron Park, Camino, Coloma, Cool, Pollock Pines), infrastructure rights-of-way, and other urban uses. The eastern portion of the County (which is outside of the project area for this EIR) begins to the east of Echo Summit and is predominantly National Forest land within the Eldorado National Forest. Development in the eastern portions is predominantly characterized by timber production with small rural communities and individual rural homes. However, the City of South Lake Tahoe is located in the Lake Tahoe Basin at the eastern corner of the County.

For this EIR, the project area, which is the Western Slope of El Dorado County, includes the parts of unincorporated El Dorado County that are outside the Tahoe Basin, west of Echo Summit. The majority of proposed CIP projects would be generally near US 50, beginning at the border of Sacramento and El Dorado counties and would extend along US 50 to Pollock Pines. Some of the proposed roadway and bridge repair/maintenance projects would be located more than two miles from US 50.

b. Regional Transportation System. The El Dorado County Transportation and Circulation Element (amended 2015) provides the framework for all decisions concerning the county-wide transportation system and coordinates between incorporated cities, as well as regional, state, and federal agencies. In the Western Slope portion of El Dorado County, the County offers commercial bus services, bikeways, hiking and equestrian trails, sidewalks for pedestrians, taxi service, vanpools, carpools, and park-and-ride facilities. There are 14 park-and-

ride facilities. In-County travel is primarily centered around the automobile roadway network. This is likely due to a combination of low density development patterns and lack of financial investment in bicycle and pedestrian infrastructure. Most of the demand on the transportation system is due to commuting, consumer activities (shopping), recreation, and shipping goods (Transportation and Circulation Element, Amended 2015).

Local transit options are offered in the County servicing commuter routes connecting Pollock Pines to Sacramento with seven different bus routes. El Dorado County Transit Authority (EDCTA) offers an interactive map and a trip planning guide on the website to encourage use of public transportation. Although Amtrak trains do not service the County, Amtrak busses provide connection services from Placerville and South Lake Tahoe to train stations. In addition, the Western Slope of El Dorado County has three public aviation airports within the region: Placerville Airport (178 operations per day), Georgetown Airport (62 per day), and Cameron Airpark (99 per day) (Transportation and Circulation Element, amended 2015).

The Western Slope of the County contains four highways, such as US 50 dividing the northern part of the County from the south almost equally in half geographically. Other highways include State Routes (SR) 49, 153 and 193. Several highways in El Dorado County have route or concept reports which identify long-range improvements (20 year plans), completed by Caltrans. Sacramento Area Council of Governments (SACOG), the El Dorado County Transportation Commission (EDCTC), and El Dorado County staff are responsible for regional transportation planning in the western portion of the County, whereas in the Tahoe Basin, the Tahoe Regional Planning Agency (TRPA) is responsible for addressing regional transportation planning.

The County has a countywide traffic impact mitigation (TIM) fee program that is used to fund capital improvements to the local and state roadway system to mitigate traffic impacts resulting from development. This program originated as several individual fee programs, which were adopted between 1984 and 2002. The countywide TIM Fee program incorporates former fee programs, including the West Slope Area Benefit Traffic Impact Mitigation Fee Program; Transportation Impact Fee Program for the State System's Capacity and Interchanges; El Dorado Hills/Salmon Falls Area Road Impact Fee Program; and the Interim Transportation Impact Fee for US 50 Corridor Improvements.

A Bicycle Transportation Plan was originally developed in 1979 and most recently updated in 2010 to define the general location and classification of all existing and proposed regional bikeways in El Dorado County. However, bicycles are primarily used by residents in the County for recreation, sport, or exercise rather than transportation due to a combination of low density development patterns, steep grades and historic low demand for bicycle and pedestrian infrastructure. The Plan provides connectivity between cities throughout the County and adjoining counties, including access to parks, bicycling routes, and other recreational areas. The Plan also defines the general location and classification of all existing and proposed regional bikeways in the County. EDCTC's Regional Transportation Plan also includes discussions of bicycle facilities. There are ~~three~~four main classification categories for the Bikeway System: Class I Bikeway (Bike Paths)~~or Bicycle Trails~~; Class II Bikeway ~~or~~ (Bike~~cycle~~ Lanes); Class III Bikeway ~~or Bicycle~~ (Bike Routes); and Class IV (Separated Bikeways). These classifications clarify specific details related to design and intended use as specified in the Caltrans Highway

Design Manual Chapter 1000 Bicycle Transportation Design and Caltrans Design Information Bulletin 89 for Class IV facilities.

Some of the most popular recreational spaces include the American River, Marshall Gold Discovery State Historic Park, Folsom Lake, Sly Park Reservoir, Historic Downtown Placerville, Apple Hill, Wine Country, and South Lake Tahoe. US 50 is the main transportation facility connecting Sacramento County with the State of Nevada. US 50 also provides a means of access to tourist attractions, recreational spaces, and commercial shopping or social activities for visitors coming from Sacramento and the San Francisco Bay Area.

3.2 WESTERN -SLOPE EL DORADO COUNTY 20–YEAR PLANNING HORIZON

Based on the current growth projections for the County, it is anticipated that the Western Slope of El Dorado County will increase in population from a current (year 2015) estimate of 147,360 residents to approximately 180,854 residents in the year 2035 (BAE, 2013). In order to accommodate this growth and to ensure that all roadways in the County operate at an acceptable LOS in that 20--year time horizon, the proposed CIP projects (as shown in Table 2-1 in Section 2.0, *Project Description*) would be necessary, consistent with the goals and policies of the County's General Plan. -The transportation projects identified in the CIP and TIM Fee Program Update (as listed in Table 2-1 of this EIR), provide the framework for growth within the region and the cumulative impact analysis utilized in this EIR.

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4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified as having the potential to experience significant impacts.

"Significant effect" is defined by the *State CEQA Guidelines* §15382 as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of each issue includes a discussion of the setting for that issue and an analysis of the project's impact. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds", which are those criteria adopted by El Dorado County, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsections describe each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

> *Class I. Significant and Unavoidable: An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the State CEQA Guidelines.*
>
> *Class II. Significant: An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made under §15091 of the State CEQA Guidelines.*
>
> *Class III. Not Significant: An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.*
>
> *Class IV. Beneficial: An effect that would reduce existing environmental problems or hazards.*

Following each environmental effect discussion are recommended mitigation measures (when required) and the residual effects or level of significance remaining after the implementation of the measures. While El Dorado County cannot mandate that sponsoring agencies (for example if another agency such as Caltrans is overseeing implementation of a transportation improvement project) implement the mitigation measures, ongoing interagency consultation during project specific environmental review process would ensure that mitigation contained herein is considered and implemented where applicable. Each section concludes with a screening-level discussion of specific CIP projects that may result in identified impacts.

Information and data used to prepare the impact analyses in the Western Slope Roadway CIP and TIM Fee Program Update EIR were obtained from numerous sources as referenced in Section 7.0, References and Preparers. In addition, El Dorado County provided data used during development of the CIP and TIM Fee Program Update for incorporation where applicable in the EIR and related technical documentation. Data were obtained from the following sources as well as supporting technical manuals and methodology reports:

- El Dorado County Final Travel Demand Model (2012 Update) and Model Technical Documentation Report (Catalog dated 01/21/2016)
- TIM Fee Program Update - Nexus & Funding Model
- Draft Technical Memorandum 2-3: Existing and Future Deficiency Assessment (contained in Appendix C)
- ARB's Emission Factors Model (EMFAC 2014) Mobile Source Inventory Model
- El Dorado County General Plan (last Amended December 2015) and EIR
- Geographic Information System and other data for the following resources:
    - land use
    - topography
    - critical habitat
    - waterways
    - wetlands and jurisdiction boundaries
    - roadway network
    - transit/rail routes
    - bicycle/trail network
    - airports
    - farmland including Williamson Act Lands
    - population estimates
    - employment estimates
    - housing units
    - land use typologies
- BAE Urban Economics Inc., Memorandum Regarding 2035 Growth Projections (2013)

Cumulative Impact Analysis

The CEQA Guidelines require the analysis of the cumulative effects of a program or project in combination with other probable future actions. Section 15130 of the State CEQA Guidelines prescribes two methods for analyzing cumulative impacts: (1) use of a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts; or (2) use of a summary of projections contained in an adopted general plan or related planning document(s).

This document is a Program EIR that analyzes the effects of the cumulative 20-year planning horizon of the Western Slope CIP and TIM Fee Program Update. The cumulative effects of all probable future circulation system improvements as documented in the CIP list (see Table 2-1) are considered the scope of analysis for the purpose of cumulative effects review. In this chapter, thresholds of significance for cumulative impacts are the same as those for direct, program impacts, as authorized by CEQA case law. (See *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059.) When program impacts are judged to be potentially

significant, they also by definition are considered "cumulatively considerable" incremental contributions to potentially significant cumulative impacts. (See CEQA Guidelines Section 15130(a).) Mitigation measures proposed to address potentially significant impacts associated with the CIP and TIM Fee Program Update may also be feasible options for mitigating the incremental contribution to significant cumulative impacts associated with CIP implementation. (See CEQA Guidelines Section 15130(b)(5).)

In addition, probable future projects outside the Western Slope of El Dorado County region in neighboring counties could generate vehicle trips that originate or terminate within El Dorado County. These trips could further contribute to significant cumulative impacts. The CIP and TIM Fee Program Update and EIR traffic impact analysis accounted for impacts of trips originating and/or terminating outside the region. The impacts associated with what are referred to as "external trips", are also reflected in the EIR air quality, greenhouse gases/climate change, and traffic impact analyses.

As discussed, the cumulative effects evaluation within this program EIR is based on method 2 which is the summary of projections approach. A method 2 evaluation is based, in part, on information contained in an adopted general plan or related planning document(s), and/or certified environmental document(s) that describes the project scope and potential effects. This information is used to evaluate how cumulative projects, when considered together, can cause or contribute to adverse environmental impacts. The CIP and TIM Fee Program Update is a regional planning document; thus, as noted, cumulative impacts of the projects comprising the CIP list (contained in Table 2-1) are disclosed in the EIR's analysis of the CIP and TIM Fee Program Update impacts.

It should be noted that an existing project, currently under construction in El Dorado County, was considered as part of the overall Program analysis and it relates to a single project on the CIP list (thus is considered as part of the programmatic and cumulative analysis in this EIR). The Carson Crossing Road project extends from Golden Foothill Parkway in the El Dorado Hills Business Park to White Rock Road. The roadway was constructed as part of a Condition of Approval of the Carson Crossing Specific Plan. The roadway is not a part of the proposed CIP and TIM Fee Update Program, nor was it part of the existing CIP or TIM Fee Programs. However the Latrobe Connection project on the proposed CIP list (project #66116 - as listed in Table 2-1 in Section 2.0, *Project Description*) would construct further improvements to Carson Crossing Road, including re-striping and installing a traffic signal at the Golden Foothill Parkway/Carson Crossing Road intersection. It should be noted that the County's CIP project (the Latrobe Connection) is not the project that would construct Carson Crossing Road from Golden Foothill Parkway to White Rock Road, but rather the proposed CIP project is intended to add safety and capacity improvements at the intersection of Golden Foothill Parkway/Carson Crossing Road.

It should be noted that with the completion of the two projects (the County's CIP project for the Latrobe Connection and the Carson Crossing Road recently completed), the "Employment Cap" on the El Dorado Hills Business Park would be removed. The employment cap was implemented as part of a mitigation measure contained in the County's 2004 General Plan EIR to mitigate traffic impacts at the Latrobe Road/White Rock Road intersection. Construction of Carson Crossing Drive and the Latrobe Connection improvements would alleviate the

unacceptable LOS conditions that were forecasted to occur under cumulative conditions without the roadway in place. Thus the two projects would result in improved LOS conditions under cumulative 2035 conditions, consistent with the County's standards and would mitigate impacts identified in the 2004 General Plan EIR.

For this Program EIR for the CIP and TIM Fee Program Update, the County's individual CIP project (the Latrobe Connection) would not directly result in an increase of employees at the business park. Assuming so would be speculative. However, with implementation of the Latrobe Connection (combined with the CIP and TIM Fee Program Update as a whole) traffic impacts related to roadway LOS would be improved to acceptable LOS standards. Thus, impacts associated with the Carson Crossing Road project, constructed as a result of the Carson Creek Specific Plan, and the possibility of an increase of employees at the adjacent business park and any secondary impacts related to additional traffic utilizing the new roadways is already included in the growth and land use projections consistent with the County's adopted General Plan.

4.1 AESTHETICS/VISUAL RESOURCES

4.1.1 Setting

a. Visual Character of the County. El Dorado County encompasses approximately 1,788 square miles of land on the western slope of the Sierra Nevada Mountain Range along the eastern side of the Central Valley of the State of California. The County can be divided into two general topographic zones: the Western Slope and the mountain region in the Sierra Nevada. The western part of the County, or Western Slope, contains the agricultural areas of the County as well as the majority of the urban development such as cities, communities, infrastructure rights-of-way, and other urban uses. The eastern portion is predominantly National Forest land within the Eldorado National Forest in the Sierra Nevada Mountain Range and includes part of the Lake Tahoe Basin.

The open space resources of El Dorado County are mainly federally or state owned. Federal and state lands, which include national forest, Bureau of Land Management holdings, State forest, State parks and State historic parks, make up a substantial portion of land found in the County. El Dorado County contains the majority of Eldorado National Forest, Desolation Wilderness, and portions of the Lake Tahoe Basin Management Unit.

Much of the Western Slope is characterized by rural residences and communities, with a mixture of agriculture, open space. Agricultural uses in the Western Slope include predominantly apples, wine grapes and Christmas tree crops as well as pasture and rangeland for raising cattle and calve (El Dorado County, 2003). The Sierra Nevada foothills across the Western Slope have a mixture of forests, woodlands, and riparian river valleys of the Middle Fork and South Fork of the American River and the Cosumnes River and their tributaries. Rural residences and communities are spread throughout the Western Slope connected by rural roads and highways. More developed urban centers are concentrated along the US 50 corridor going east to west through the County, including the communities of El Dorado Hills and Cameron Park. Outside of the US 50 corridor, small communities and rural residences maintain the overall rural character of the Western Slope.

b. Scenic Resources and Primary Viewing Corridors. El Dorado County is in the process of developing a Scenic Corridor Ordinance for the purposes of identifying and protecting scenic local roads and State highways. Until the adoption of the Scenic Corridor Ordinance, all projects within State Scenic Highway corridors must comply with State criteria. Furthermore, projects are reviewed by the County for impacts to important scenic viewpoints identified in the 2003 General Plan Draft EIR.

There is one officially designated state scenic highway located in the Western Slope of El Dorado County:

- US Highway 50 between the Placerville government center and the City Limits of South Lake Tahoe

In addition, El Dorado County has two highway segments designated as eligible state scenic highways by the state:

- US Highway 50 from State Route 49 to the Nevada state line; and
- State Route 49 across El Dorado County.

In addition to the State Designated Scenic Highways, El Dorado County has identified important scenic viewpoints throughout the Western Slope including:

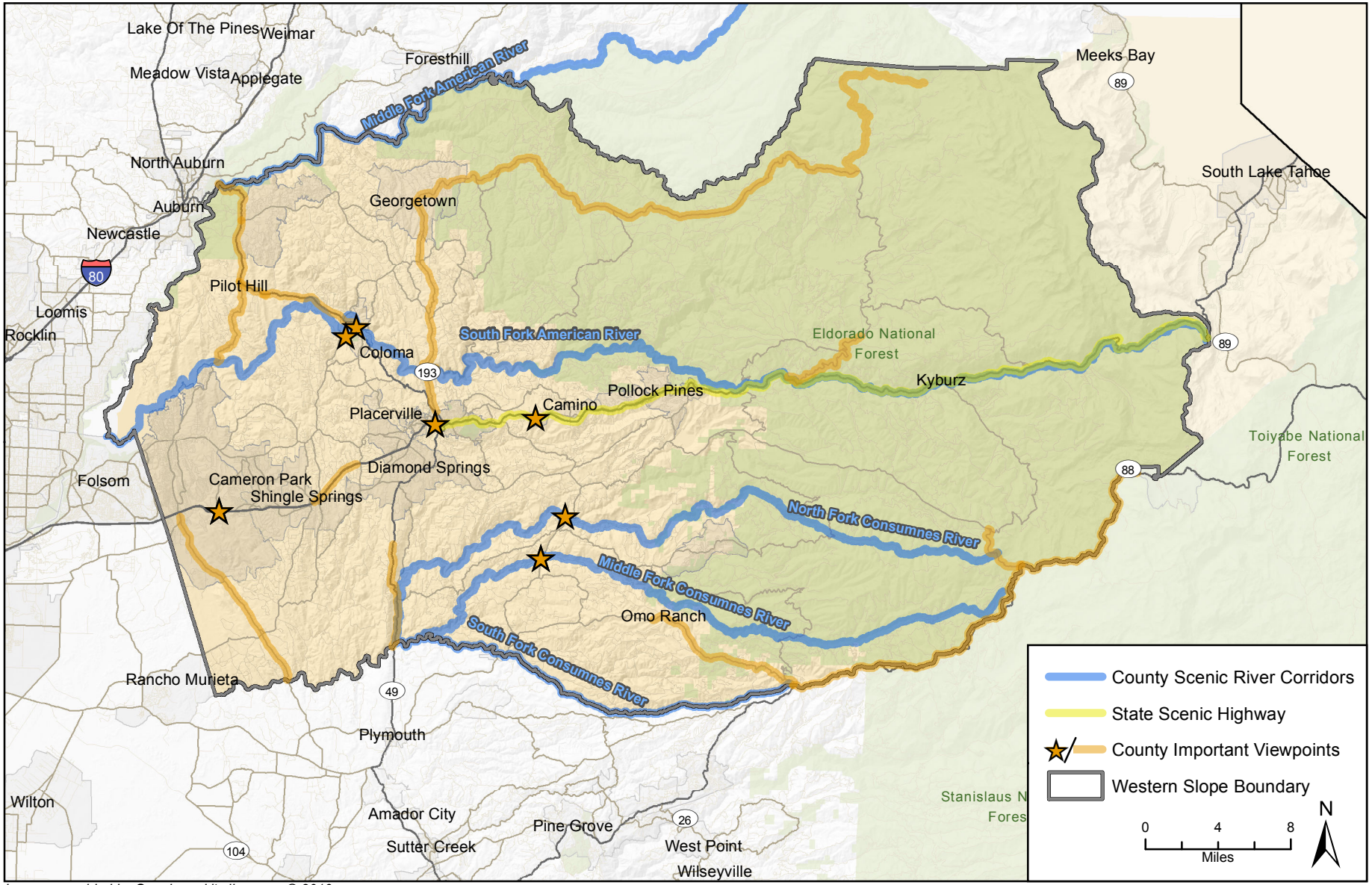
- US 50 westbound east of Bass Lake Road
- US 50 westbound between South Shingle Road/Ponderosa Road interchange and Greenstone Road
- US 50 eastbound at Camino Heights
- US 50 eastbound at Bass Lake Grade
- SR 49 northbound at Marshall Grade Road to Cool
- SR 49 northbound north of Cool Quarry to County line
- SR 49 at Coloma
- SR 49 southbound from Pedro Hill Road to Coloma
- SR 49 southbound south of Crystal Boulevard to County line
- SR 193 between Georgetown and Placerville
- US 88 from Kirkwood to Omo Ranch Road
- Mormon Emigrant Trail from US 88 to 10 miles west of intersection
- Mt. Aukum Road crossing the North Fork of the Cosumnes River
- Mt. Aukum Road crossing the Middle Fork of the Cosumnes River
- Omo Ranch Road between Omo Ranch and US 88
- Icehouse Road from Peavine Road to US 50
- Salmon Falls Road from SR 49 to Folsom Reservoir
- Latrobe Road from White Rock Road to County Line
- Wentworth Springs Road east of Georgetown
- Viewshed of Marshall Gold Discovery State Historic Park

Lastly, El Dorado County has identified the following scenic river corridors:

- South and Middle Fork of the American River
- North, Middle and South Fork of the Cosumnes River

Figure 4.1-1 shows the location of all the above scenic resources throughout the Western Slope.

c. Regulatory Setting. The Land Use element of the El Dorado County General Plan contains a number of objectives and policies related to the protection and improvement of scenic values along scenic road corridors throughout the County. Relevant objectives and policies are described in Table 4.1-1 below.



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Western Slope Scenic Viewpoints

Figure 4.1-1

Table 4.1-1
El Dorado County General Plan Objectives and Policies Related to Scenic Values

Objective 2.1.3	Provide a land use pattern that maintains the open character of the County, preserves its natural resources, recognizes the constraints of the land and the limited availability of infrastructure and public services, and preserves the agricultural and forest/timber area to ensure its long-term viability for agriculture and timber operations.
Objective 2.3.2	Maintain the visual integrity of hillsides and ridge lines
Objective 2.6.1	Scenic Corridor Identification
Policy 2.6.1.1	A Scenic Corridor Ordinance shall be prepared and adopted for the purpose of establishing standards for the protection of identified scenic local roads and State highways. The ordinance shall incorporate standards that address at a minimum the following: A. Mapped inventory of sensitive views and viewsheds within the entire County; B. Criteria for designation of scenic corridors; C. State Scenic Highway criteria; D. Limitations on incompatible land uses; E. Design guidelines for project site review, with the exception of single family residential and agricultural uses; F. Identification of foreground and background; G. Long distance viewsheds within the built environment; H. Placement of public utility distribution and transmission facilities and wireless communication structures; I. A program for visual resource management for various landscape types, including guidelines for and restrictions on ridgeline development; J. Residential setbacks established at the 60 CNEL noise contour line along State highways, the local County scenic roads, and along the roads within the Gold Rush Parkway and Action Program; K. Restrict sound walls within the foreground area of a scenic corridor; and L. Grading and earthmoving standards for the foreground area.
Policy 2.6.1.2	Until such time as the Scenic Corridor Ordinance is adopted, the County shall review all projects within designated State Scenic Highway corridors for compliance with State criteria.
Policy 2.6.1.3	Discretionary projects reviewed prior to the adoption of the Scenic Corridor Ordinance, that would be visible from any of the important public scenic viewpoints identified in Table 5.3-1 and Exhibit 5.3-1 of the El Dorado County General Plan Draft Environmental Impact Report, shall be subject to design review, and Policies 2.6.1.4, 2.6.1.5, and 2.6.1.6 shall be applicable to such projects until scenic corridors have been established.
Policy 2.6.1.5	All development on ridgelines shall be reviewed by the County for potential impacts on visual resources. Visual impacts will be assessed and may require methods such as setbacks, screening, low-glare or directed lighting, automatic light shutoffs, and external color schemes that blend with the surroundings in order to avoid visual breaks to the skyline.
Policy 2.6.1.6	A Scenic Corridor (-SC) Combining Zone District shall be applied to all lands within an identified scenic corridor. Community participation shall be encouraged in identifying those corridors and developing the regulations.
Policy 2.6.1.8	In addition to the items referenced in Policy 2.6.1.1, the Scenic Corridor Ordinance shall consider those portions of Highway 49 through El Dorado County that are appropriate for scenic highway designation and pursue nomination for designation as such by Caltrans.
Objective 2.7.1	Regulation of the location, number and size of highway signs and potential relocation or elimination of billboards along designated scenic corridors and historic routes (as may be designated in the future) in accordance with state and federal law.
Policy 2.7.1.1	The Sign Ordinance shall include design review for signs within the foreground and background of the designated scenic corridors commensurate with the goal of scenic corridor viewshed protection.

Table 4.1-1
El Dorado County General Plan Objectives and Policies Related to Scenic Values

Policy 2.7.1.2	Existing billboards within designated scenic corridors shall be considered for removal or relocation out of the corridor in accordance with state and federal law.
Objective 2.8.1	Provide standards, consistent with prudent safety practices, for the elimination of high intensity lighting and glare.
Policy 2.8.1.1	Development shall limit excess nighttime light and glare from parking area lighting, signage, and buildings. Consideration will be given to design features, namely directional shielding for street lighting, parking lot lighting, sport field lighting, and other significant light sources, that could reduce effects from nighttime lighting. In addition, consideration will be given to the use of automatic shutoffs or motion sensors for lighting features in rural areas to further reduce excess nighttime light.

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. Environmental assessment of a proposed project's impacts to the aesthetic and visual resources of a site begins with identification of the existing visual resources on and off that site, including the site's physical attributes, its relative visibility, and its relative uniqueness. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual resource against the proposed action, analyzing the nature of the anticipated change.

The CEQA Guidelines (Appendix G) identifies the following criteria for determining whether a project's impacts would have a significant impact on the environment. Significant impacts may result if a project would:

1. *Have a substantial adverse effect on a scenic vista.*

2. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.*

3. *Substantially degrade the existing visual character or quality of the site or its surroundings.*

4. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.*

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with proposed transportation improvements envisioned under the updated Capital Improvement Program (CIP) and the Traffic Impact Mitigation (TIM) Fee Program. Table 4.1-2 in Section 4.1.2.c. summarizes a number of the specific projects that could result in aesthetic impacts.

Impact AES-1 Proposed transportation improvement projects under the updated CIP and TIM Fee Program are not located within any of the designated State scenic highway sections. While implementation of the transportation improvement projects would be predominantly at grade level or would repair or replace existing structures and would not degrade views from important scenic viewpoints, some proposed road widening projects on scenic roadways may result in moderate intrusions on the aesthetics of these roadways. Increases in the dimensions of existing routes could entail the removal of existing vegetation that lines scenic roadways, altering the foreground of scenic views. This would be a Class II, *significant but mitigable* impact.

Development within the Western Slope of El Dorado County, such as the urban areas around the communities of El Dorado Hills and Cameron Park, is focused along the US 50 corridor. The majority of traffic improvements proposed as part of the CIP and TIM Fee Program Update would generally be located along the US 50 corridor adjacent to and within these existing developed portions of the Western Slope. While several proposed improvements would be located off of the US 50 corridor, these improvements would be predominantly adjacent to existing urban and/or rural residential land uses. Transportation improvements are not proposed on or immediately adjacent to any of the eligible state scenic highways. However, improvements along US 50 are within important viewpoints identified by the County in the 2003 Draft EIR for the General Plan (El Dorado County, 2003).

Construction of the proposed transportation improvements along eligible scenic corridors or County Scenic Routes could create potentially significant, but short-term, visual impacts. As listed in Table 4.1-2, transportation improvements are proposed on or immediately adjacent to the following eligible scenic highways and County Scenic Routes:

- US 50 westbound east of Bass Lake Road
- US 50 westbound between Ponderosa Road and Greenstone Road
- US 50 eastbound at Bass Lake Grade

These routes are located along US 50 between El Dorado Hills and Placerville and provide scenic viewpoints of Marble Valley, the Crystal Range and the Sacramento Valley. Transportation projects could block these pastoral views as a result of construction equipment and staging areas or through disruption of views by temporary signage and exposure of slopes and removal of vegetation. Specific projects that may result in temporary adverse impacts to scenic corridors during the construction phase are discussed below.

With regard to long-term aesthetic impacts, implementation of the CIP and TIM Fee Program Update would primarily result in modification to existing transportation facilities within existing roadway rights-of-way (Table 4.1-2 lists projects with the potential to result in adverse aesthetic impacts). Many of the proposed projects are at-grade with the surrounding environment. Because the proposed traffic improvements would be at ground level, they would not significantly impact the scenic vistas from the important viewpoints listed above. For example, auxiliary lane projects along US 50 are not likely to result in massive obstructions or blockages of views of the Crystal Range, Marble Valley and the Sacramento Valley.

Nevertheless, proposed widening on scenic roadways may result in moderate intrusions on the aesthetics of these roadways. Increases in the dimensions of existing routes could entail the removal of existing vegetation that lines scenic roadways, altering the foreground of scenic views. In particular, the proposed auxiliary lanes of US 50 between Bass Lake Road and Ponderosa Road could involve the loss of rows of trees and vegetation immediately adjacent to the roadway.

Additionally, as discussed in Table 4.1-1, *Regulatory Setting*, the El Dorado County General Plan contains goals and policies related to the design of transportation infrastructure projects throughout the County. For example, Policy 2.6.1.1 calls for the establishment of a Scenic Corridor Ordinance for the purpose of establishing standards for the protection of identified scenic local roads and State highways.

Projects within the CIP and TIM Fee Program update that are not in the vicinity of designated scenic viewpoints are predominantly either at grade level or involve the maintenance or replacement of existing structures. For example, there are numerous bridge replacement or repair projects proposed as CIP projects throughout the County. However, because the bridges are existing structures, these projects would not represent a permanent visual change that results in a significant impact to a scenic vista. The CIP includes several proposed projects that do involve new above grade structures, but these improvements would be located outside of any designated important viewpoints. These projects include:

- El Dorado Trail / Missouri Flat Road bike/pedestrian overcrossing
- Mosquito Road Bridge at South Fork of the American River

Although projects under the CIP and TIM Fee Program Update would be subject to existing policies and regulations that would help to minimize aesthetic impacts, specific projects identified in the CIP and TIM Fee Program Update would still have the potential to adversely impact scenic resources when compared to existing conditions. Impacts would be significant but mitigable.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.1-2. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

AES-1(a) Where a particular transportation improvement project under the CIP and TIM Fee Program Update affects adjacent landforms, the project sponsor shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade.

AES-1(b) Where a particular transportation improvement project under the CIP and TIM Fee Program Update removes existing vegetation and/or trees, when feasible the project sponsor shall ensure that

landscaping is installed to restore natural features along corridors after widening, interchange modifications, realignment, or construction of ancillary facilities. Associated landscape materials and design shall enhance landform variation, provide erosion control, and blend with the natural setting.

AES-1(c) The project sponsor shall ensure that a project in a scenic view corridor will have the minimum possible impact, consistent with project goals, upon foliage, existing landscape architecture and natural scenic views.

AES-1(d) For projects in visually sensitive areas, the project sponsor shall apply development standards and guidelines from the most current General Plan and County ordinances to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, and site grading.

Significance After Mitigation. Mitigation measures AES-1(a) - (d) would assure that visual impacts from transportation projects would be less than significant because potential impacts would be avoided, reduced or minimized. With implementation of the identified mitigation measures, impacts would be less than significant.

Impact AES-2 Development of proposed transportation improvement projects under the CIP and TIM Fee Program Update would contribute to the alteration of the Western Slope of El Dorado County's character from primarily rural (or semi-rural) to a somewhat more suburban condition. This would be a Class II, *significant but mitigable* impact.

Improvement projects under the CIP and TIM Fee Program Update would be located in the more developed and urban Western Slope portion of El Dorado County. Further, the majority of the proposed traffic improvements are located within existing urban areas along the US 50 corridor within or adjacent to existing urban development. Improvements outside of the US 50 corridor would include road widening of Missouri Flat Road from China Garden Road to Pleasant Valley Road and two segments of Green Valley Road, roadway extensions of the Latrobe Connection and Diamond Springs Parkway, and various bridge repair and replacement projects.

Road widenings would incrementally change the character by increasing pavement and potentially removing roadside native plant species, including oak trees and other species typical of scrub, grassland, and woodland habitats. Ancillary facilities constructed along new or existing roads (such as lighting, bus shelters, and signs) would further contribute to the trend toward a more suburban visual character. However, the majority of the projects included in the CIP and TIM Fee Program Update would occur along the US 50 corridor in developed areas or adjacent to urban environments.

The CIP Update also includes numerous bridge maintenance or replacement projects and one new pedestrian overcrossing throughout the Western Slope of the County. With the exception of the new pedestrian overcrossing and the new Mosquito Road Bridge, these projects predominantly involve existing bridge structures and would not represent a significant change in the area character. The pedestrian overcrossing, located at Missouri Flat Road and El Dorado Trail is located in an existing urban setting and would not represent a significant change in character. The Mosquito Bridge would be larger and more substantial than the existing bridge; however, this bridge is not located in a scenic corridor and would not constitute a significant change in character.

As discussed in Table 4.1-1, the El Dorado County General Plan contains a number of goals and policies to regulate the design of transportation infrastructure projects throughout the County. Nonetheless, the overall visual effect of planned roadway projects would contribute to an incremental transformation in visual character from rural (or semi-rural) to more urban or suburban. This would be a significant but mitigable impact.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.1-2. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

AES-2(a) When feasible, roadway extensions and widenings shall avoid the removal of existing mature trees to the extent possible. The loss of trees that are protected by local agencies shall be replaced consistent with development standards and guidelines from the current (at the time of project approval) General Plan and County ordinances and incorporated into the landscaping design for the roadway.

AES-2(b) Roadway lighting shall be minimized to the extent possible, and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of hoods, low intensity lighting, and using as few lights as necessary to achieve the goals of the project.

AES-2(c) Bus shelters and other ancillary facilities constructed as part of roadway improvements under the CIP and TIM Fee Program Update shall be designed in accordance with the County's architectural review requirements and per standards in accordance to the El Dorado County Transit Authority (EDCTA) that are in place at the time of project approval. Such facilities shall incorporate colors and wood materials complementary to the natural surroundings.

Mitigation measures AES-1(a) through AES-1(d) would also incrementally reduce potential impacts.

Significance After Mitigation. Mitigation measures AES-2(a) - (c) would assure that visual impacts from transportation projects would be less than significant because implementation of the above mitigation measures would reduce project-specific impacts to a less than significant level.

Impact AES-3 Development of proposed transportation improvement projects under the CIP and TIM Fee Program Update would contribute new sources of light and glare. This would be a Class II, *significant but mitigable* impact.

The proposed projects under the CIP and TIM Fee Program Update include improvements to bridges, interchanges, roads, US 50, and bicycle and pedestrian facilities throughout the Western Slope of El Dorado County. These projects predominantly involve improvements to existing facilities and structures. However, installation of streetlights at roadway extension projects and a new pedestrian overcrossing proposed under the CIP and TIM Fee Program updates could introduce new sources of light and glare. Impacts to light and glare within the surrounding area would be significant but mitigable.

Mitigation Measures. Implementation of mitigation measure AES-2(b) above would reduce potential impacts.

Significance After Mitigation. Mitigation measures AES-2(b) would assure that light and glare impacts from transportation projects would be less than significant because implementation of AES-2 (b) would reduce project-specific impacts to less than significant.

c. Specific CIP and TIM Fee Program Projects That May Result in Impacts. Table 4.1-2 identifies those projects that may create impacts as discussed in Section 4.1.2.b above. The individual projects listed could create significant aesthetic impacts but would not necessarily do so. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact.in Section 4.1.2.c. summarizes a number of the specific projects that could result in aesthetic impacts.

Table 4.1-2
CIP and TIM Fee Program Projects That May Result in Aesthetic Impacts

Project ID	Project Type	Direction	Segment	Description of Potential Impact
GP148	Freeway Mainline Auxiliary Lane	Eastbound	US 50 - Bass Lake Road Interchange to Cambridge Road Interchange	Scenic viewpoint
53128	Freeway Mainline Auxiliary Lane	Westbound	US 50 - Ponderosa Road Interchange to Cameron Park Drive Interchange	Scenic viewpoint
GP149	Freeway Mainline Auxiliary Lane	Westbound	US 50 - Cambridge Road Interchange to Bass Lake Road Interchange	Scenic viewpoint
53125	Freeway Mainline Auxiliary Lane	Eastbound	U.S. 50 - Sacramento County line to El Dorado Hills Boulevard Interchange	Character Change
53126	Freeway Mainline Auxiliary Lane	Eastbound	U.S. 50 - Cambridge Road Interchange to Cameron Park Drive Interchange	Character Change
53127	Freeway Mainline Auxiliary Lane	Eastbound	U.S. 50 - Cameron Park Drive Interchange to Ponderosa Road Interchange	Character Change
53117	Freeway Mainline Auxiliary Lane	Westbound	U.S. 50 - Bass Lake Road Interchange to Silva Valley Parkway Interchange	Character Change
53115	Freeway Mainline Auxiliary Lane	Westbound	U.S. 50 - El Dorado Hills Boulevard Interchange to Sacramento County line	Character Change
72142	Roadway widening	Both	Missouri Flat Road – China Garden Road to Pleasant Valley Road	Character change
72375/ 72334	Parallel Capacity	Both	Diamond Springs Parkway – SR 49 realignment (Phase 1A) - New 4-lane Phase 1B.	Character change, light and glare
66116	Parallel Capacity	Both	Latrobe Connection – Sacramento County Line to Golden Foothill Parkway	Character change, light and glare
71375	Parallel Capacity	Both	Headington Road– El Dorado Road to Missouri Flat Road	Character change, light and glare
97051	Pedestrian Overcrossing	Both	El Dorado Trail – Missouri Flat Road, Bike and Pedestrian Overcrossing	Character change, light and glare
72334	Parallel Capacity	Both	Diamond Springs Parkway - New 4 lane arterial roadway from Golden Center Drive to SR 49	Character change, light and glare
71324/ GP147	Parallel Capacity	Both	Saratoga Way Extension - Phase 1/Phase 2	Character change, light and glare
71335	Parallel Capacity	Both	Country Club Drive Extension - West of Silva Valley Parkway to Tong Road	Character change, light and glare
GP125	Parallel Capacity	Both	Country Club Drive Extension - Tong Road to Bass Lake Road/Old Bass Lake Road	Character change, light and glare
GP126	Parallel Capacity	Both	Country Club Drive Realignment - Bass Lake Road/Old Bass Lake Road to Tierre de Dios Drive	Character change, light and glare
72376	Roadway Widening	Both	Green Valley Road Widening - County line to Sophia Parkway	Character change
GP178/ GP159	Roadway Widening	Both	Green Valley Road Widening - East of Francisco Drive to East of Silva Valley Parkway	Character change
GP137	Roadway Widening	Both	White Rock Road (2 to 4 lanes) - Manchester Drive to Sacramento County line	Character change

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4.2 AIR QUALITY

4.2.1 Setting

a. Local Climate and Meteorology. For criteria pollutants, air quality is affected by the rate and location of pollutant emissions and by climatic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local and regional topography, provide the links between air pollutant emissions and air quality.

El Dorado County is located within two distinct air basins: the Mountain Counties Air Basin (MCAB) and the Lake Tahoe Air Basin (LTAB). However, the project area (the Western Slope of El Dorado County) is located in the MCAB.

MCAB lies along the northern Sierra Nevada mountain region. The portion of El Dorado County that lies within MCAB stretches from Lake Tahoe on the east to the Sacramento County boundary on the west. There is a large elevation change, at over 10,000 feet at the Sierra crest and below several hundred feet at the Sacramento County boundary. In addition, the topography is highly variable with rugged mountain peaks, valleys with steep slopes, and rolling foothills (El Dorado County Air Pollution Control District (APCD) – CEQA Guide, 2002).

In general, the climate of the MCAB is highly variable due to elevation and terrain. During the winter, the Sierra Nevada receives large amounts of rainfall from storms moving in from the Pacific, especially at high elevations. The western portion of MCAB receives significantly less precipitation but temperatures usually drop below freezing at night and precipitation falls as mixed rain or light snow in the winter. Mild summer temperatures occur in the mountains but can reach over 100°F in the western part of the basin (El Dorado County APCD – CEQA Guide, 2002).

Temperature inversions (where warm air overlies cooler air below) occur commonly in the District. An inversion can trap pollution, such as smog, close to the ground, with possible adverse health effects. During the winter, temperature inversions can lead to carbon monoxide (CO) "hotspots" in areas with high traffic such as heavily traveled roads and busy intersections (El Dorado County APCD – CEQA Guide, 2002).

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to move and disperse air pollutants. In the MCAB, mountains and hills have a direct influence on surface air flows by causing shallow vertical mixing and creating areas of high pollutant concentrations by hindering dispersion. Winds control the rate and dispersion of local pollutant emissions. The strong upwind valley air enters the MCAB from the Central Valley, carrying in ozone precursors and ozone generated in the Bay Area, Sacramento Valley, and San Joaquin Valley. The transport of these pollutants into the MCAB is largely responsible for the exceedance of state and federal ozone levels in this region (El Dorado County APCD – CEQA Guide, 2002).

b. Pollutants. Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere. Primary criteria pollutants

include carbon monoxide (CO), reactive organic gases (ROG), nitric oxide (NO_X), fine particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions; reactive organic gases (ROG) together with nitrogen oxides form the building blocks for the creation of photochemical (secondary) pollutants. Secondary pollutants include oxidants, ozone (O_3), sulfate, and nitrate particulates (smog). The characteristics, sources, and effects of critical air contaminants are provided in Table 4.2-1.

The Western Slope of El Dorado County contains a wide variety of emission sources including stationary, area-wide, on-road vehicles, and other mobile sources. The El Dorado County Air Quality Management District (EDCAQMD) is listed as "attainment" or "unclassified" for all the federal and State ambient air quality standards except for the State 1-hour standard for ozone, the State 24-hour PM_{10} (particulate matter with a diameter of 10 micrometers or less), and the Federal 8-hour standard for ozone (ARB, December 2015). Ozone emissions were mainly due to on- and off-road mobile emissions. The principal precursors of ozone, ROG and NO_X, were estimated at 116 and 66 tons, respectively, in 2000. Emissions of PM_{10} in El Dorado County were estimated at 122 tons per day in 2000, with 60% from road dust, 15% from residential fuel combustion, and 13% from construction, demolition, and waste burning. Additional emissions of PM_{10} came from wildfires, which added another six tons per day (El Dorado County APCD – CEQA Guide, 2002).

An important fraction of the particulate matter emissions inventory is formed by diesel engine fuel combustion. Particulates in diesel emissions are very small and readily respirable (i.e. easily breathed in). The particles absorb hundreds of chemicals onto their surfaces, including many known or suspected mutagens and carcinogens. The California Office of Environmental Health Hazard Assessment (OEHHA) reviewed and evaluated the potential for diesel exhaust to affect human health (ARB, April 1998). Based on the available scientific evidence, OEHHA and ARB determined that no known research has identified a level of diesel PM exposure where carcinogenic effects would not be anticipated. The Scientific Review Panel that approved the OEHHA report determined that, based on studies to date, 3×10^{-4} $(\mu g/m^3)^{-1}$ is a reasonable estimate of the unit risk for diesel PM. This means that a person exposed to a diesel PM concentration of 1 $\mu g/m^3$ continuously over the course of a lifetime has a 3 per 10,000 chance (or 300 in one million chance) of contracting cancer due to this exposure. Based on an estimated year 2000 statewide average concentration of 1.26 $\mu g/m^3$ for indoor and outdoor ambient air, about 380 excess cancers per one million population could be expected if diesel PM concentrations remain the same (ARB, October 2000). Therefore, these particulate emissions have been determined by the ARB to be a toxic air contaminant (TAC).

Compared to other air toxics that the ARB has identified and controlled, diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures ("hot-spots"). Depending on the activity and nearness to receptors, these potential risks can range from small to 1,500 per million or more (ARB, October 2000). Risk characterization scenarios have been conducted by the ARB staff to determine the potential excess cancer risks involved due to the location of individuals near various sources of diesel engine emissions, ranging from school buses to high-volume freeways. The purpose of the risk characterization was to estimate, through air dispersion modeling, the cancer risk associated.

Table 4.2-1
Description Of Selected Air Contaminants

PHOTOCHEMICAL OXIDANT (Ox)
Characteristics - The term "photochemical oxidant" can include several different pollutants, but consists primarily of ozone (more than 90 percent) and a group of chemicals called organic peroxynitrates. Photochemical oxidants are created in the atmosphere rather than emitted directly into the air. Reactive organic gases and oxides of nitrogen are the emitted contaminants, which participate in the reaction. Ozone is a pungent, colorless toxic gas, which is produced by the photochemical process. Photochemical oxidant is a characteristic of southern California-type smog, and reaches highest concentrations during the summer and early fall. Sources - Ozone is caused by complex atmospheric reactions involving oxides of nitrogen and reactive organic gases with ultraviolet energy from sunlight. Motor vehicles are the major source of oxides of nitrogen and reactive organic gases in the basin. Effects - The common manifestations of ozone and other photochemical oxidants are damage to vegetation and cracking of untreated rubber. Ozone in high concentrations (ranging from 0.15 ppm to 0.50 ppm) can also directly affect the lungs, causing respiratory and coronary irritation and possible changes in lung functions. These health problems are particularly acute in children and elderly people exposed to these pollutants.
CARBON MONOXIDE (CO)
Characteristics - CO is a colorless, odorless, toxic gas produced through the incomplete combustion of fossil fuels. Concentrations are higher in winter when more fuel is burned for heating purposes and weather conditions favor the build-up of directly emitted contaminants. Sources -The use of gasoline-powered engines is the major source of this contaminant, with automobiles being the primary contributor. CO emissions from gasoline-powered engines are higher during winter months due to poor engine efficiency in cold temperatures. Various industrial processes also produce CO emissions through incomplete combustion of fossil fuels. Effects - CO does not irritate the respiratory tract. However, it passes through the lungs directly into the blood stream and, by interfering with the transfer of oxygen, deprives sensitive tissues of oxygen.
NITROGEN OXIDES (NO_X)
Characteristics - It primarily consists of nitric oxide (NO) (a colorless, odorless gas formed from atmospheric nitrogen and oxygen when petroleum combustion takes place under high temperatures and/or pressure) and nitrogen dioxide (NO_2) (a reddish-brown irritating gas formed by the combination of nitric oxide with oxygen). Due to the role they play as ozone precursors, oxides of nitrogen are one of the two criteria pollutants subject to federal ozone requirements. Sources - High combustion temperatures cause nitrogen and oxygen to combine and form nitric oxide. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Ships, railroads, and aircraft are other substantial emitters. Effects - Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of sunlight, to form nitrogen dioxide and ozone. Nitrogen dioxide, the most substantial of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 21 0-mile visibility. NO_2 is an important air pollutant in the region because it is a primary receptor of ultraviolet light. The latter initiates photochemical reactions, helping to form ozone and/or particulate nitrate. It will also react in the air to form nitrate particulates.

Table 4.2-1
Description Of Selected Air Contaminants

SULFUR DIOXIDE (SO_2)
Characteristics - SO_2 is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, SO_2 can form sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting to produce sulfate particulates. Sources -This contaminant is the natural combustion product of sulfur or sulfur-containing fuels. Fuel combustion is the major source, while chemical plants, sulfur recovery plants, and metal processing are minor contributors. Effects - At sufficiently high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO_2 appears able to do still greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves of plants, dissolve marble and eat away iron and steel. Sulfur oxides can also react to form sulfates, which reduce visibility.
PARTICULATES (Total Suspended Particles and PM_{10})
Characteristics - Atmospheric particulates are made up of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. About 90 percent by weight of the emitted particles are larger than 10 microns in diameter, but about 10 percent by weight, or 90 percent of the total *number* of particulates, are less than 5 microns in diameter. The aerosols formed in the atmosphere, primarily sulfate and nitrate, are usually smaller than 1 micron. In areas close to major sources, particulate concentrations are generally higher in the winter, when more fuel is burned for heating, and meteorological conditions favor the build-up of directly-emitted contaminants. However, in areas remote from major sources and subject to photochemical smog (ozone), particulate concentrations can be higher during summer months because the presence of ozone increases the potential for SO_2 and NO_2 to convert to sulfate and nitrate particulates. Sources - Particulate matter consists of particles in the atmosphere resulting from combustion, atmospheric photochemical reactions, and many kinds of dust and fume-producing industrial and agricultural operations. Re-entrained road dust from vehicles is a substantial source of particulates. Natural activities also put particulates into the atmosphere; wind-raised dust and ocean spray are two such sources of particulates. Effects - In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Suspended in the air, particulates less than 5 microns in diameter can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Table 4.2-1
Description Of Selected Air Contaminants

DIESEL PARTICULATE MATTER (DPM)
Characteristics - Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is commonly found throughout the environment. Diesel exhaust is composed of two phases, either gas or particle, and both phases contribute to the risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. Diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. The particle phase also has many different types of particles that can be classified by size or composition. The size of diesel particulates that are of greatest health concern are those that are in the categories of fine and ultra fine particles. The composition of these fine and ultra fine particles may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals, and other trace elements. Sources - Diesel exhaust is emitted from a broad range of diesel engines: the on-road diesel engines of trucks, buses, and cars and the off-road diesel engines that include locomotives, marine vessels, and heavy-duty equipment. Effects - Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, and some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure in experimental animal inhalation studies have shown a range of dose-dependent lung inflammation and cellular changes in the lung. Moreover, diesel exhaust can also cause immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen. Human epidemiological studies demonstrate an association between diesel exhaust exposure and increased lung cancer rates in occupational settings.
HYDROCARBONS AND OTHER ORGANIC GASES (Total Hydrocarbons, CH_4 NMHC (non-methane), AHC, NHC)
Characteristics - Any of the vast family of compounds consisting of hydrogen and carbon in various combinations are known as hydrocarbons. Fossil fuels are included in this group. Many hydrocarbon compounds are major air pollutants, and those which can be classified as olefins or aromatics are highly photochemically reactive. Atmospheric hydrocarbon concentrations are generally higher in winter because the reactive hydrocarbons react more slowly in the winter and meteorological conditions are more favorable to their accumulating in the atmosphere to higher concentration before producing photochemical oxidants. Due to the role they play as ozone precursors, reactive hydrocarbons are one of the two criteria pollutants subject to federal ozone requirements. Sources - Motor vehicles are a major source of anthropogenic hydrocarbons (AHC) in the basin. Other sources include evaporation of organic solvents and petroleum refining and marketing operations. Trees are the principal emitters of biogenic or natural hydrocarbons (NHC). Effects - Certain hydrocarbons can damage plants by inhibiting growth and causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions that produce photochemical oxidants.

with typical diesel-fueled engine or vehicle activities based on modeled PM concentration at the point of maximum impact (PMI). The study included various sources of diesel PM emissions, including idling school buses, truck stops, low and high volume freeways, and other sources. High volume freeways were estimated to cause 800-1,700 per million potential excess cancers, while low volume freeways were estimated to cause about 100–200 per million potential excess cancers. Please see further discussion concerning risk levels below in the Analysis Methodology section.

Besides diesel PM, several other pollutants emitted by vehicle exhausts are a public health concern. The U.S. Environmental Protection Agency (USEPA) has identified six pollutants of highest priority: diesel particulate matter (DPM), acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene. The latter five pollutants are part of the total organic gases emitted by vehicles.

c. Local Regulatory Framework. Air quality regulations in El Dorado County are subject to both federal and State standards. The 1990 Amendments to the Federal Clean Air Act mandated that the USEPA manage and control air quality by establishing the National Ambient Air Quality Standards (NAAQS)**.** In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (ARB) and the local and regional air quality management districts and air pollution control districts. The ARB is responsible for research activities, establishing California Ambient Air Quality Standards (CAAQS) for air quality. The ARB also regulates mobile emission sources (i.e., motor vehicles) and, to a much lesser extent, stationary sources. The CAAQS are generally more stringent than corresponding federal standards. Table 4.2-2 illustrates both the federal and State current pollutant regulations.

Table 4.2-2
Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.07 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	35.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)	20.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)
Nitrogen Dioxide	0.10 ppm (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)
Sulfur Dioxide	0.075 ppm (1-hr avg) 0.14 ppm (24-hr avg)	0.25 ppm (1-hr avg) 0.04 ppm (24-hr avg)
Lead	1.5 $\mu g/m^3$ (calendar quarter)	0.15 $\mu g/m^3$ (3-month avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	50 $\mu g/m^3$ (24-hr avg) 20 $\mu g/m^3$ (annual avg)
Particulate Matter ($PM_{2.5}$)	35 $\mu g/m^3$ (24-hr avg) 12 $\mu g/m^3$ (annual avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, www.arb.ca.gov/research/aaqs/aaqs2.pdf, *December 21, 2015*

The ARB established 14 air basins. State law directly created local air quality management districts and air pollution control districts that have primary authority over regulating stationary sources. EDCAQMD works with the Sacramento Metropolitan AQMD, Feather River AQMD, Placer County APCD, and Yolo-Solano AQMD to address regional ozone emissions.

Emission Regulations. Mobile emission sources are regulated through the establishment of federal and State vehicle emission requirements with which auto manufacturers must comply. Motor vehicle emissions are also regulated by the State's vehicle inspection and maintenance program (the "Smog Check Program") and the California Motor Vehicle Emission Control Program. Indirectly, increases in motor vehicle emissions can be mitigated by agencies other than EDCAQMD or ARB through CEQA and determinations of consistency with City and County General Plans. For example, Motor Vehicle Fees impose a $4.00 surcharge fee on vehicles registered within its jurisdiction to fund programs that reduce air pollution from motor vehicles in the county. In addition, toxic air contaminants are regulated by the EPA and ARB, which generally follow maximum or best available control technology to limit emissions.

d. Current Air Quality. Monitoring ambient air pollutant concentrations is conducted by the ARB~~, EDCAQMD, and industry~~. Monitors operated by the ARB ~~and EDCAQMD~~ are part of the State and Local Air Monitoring System (SLAMS). The SLAMS stations provide local and regional air quality information. The ARB operates four monitoring sites at stations in Placerville, Cool, South Lake Tahoe, and Echo Summit. While regular ozone exceedances occur at Placerville and Cool stations, no recent ozone exceedances have been recorded at South Lake Tahoe or Echo Summit. Moreover, two days of 24-hour state exceedance were recorded for PM_{10} (particulate matter with a diameter of 10 micrometers or less) at South Lake Tahoe in 2014 (ARB).

The EDCAQMD is required to ~~monitor air pollutant levels to as~~ensure that the air quality standards are met and, in the event they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified either as being in "attainment" or "non-attainment." EDCAQMD is listed as "attainment" or "unclassified" for all the federal and State ambient air quality standards except for the State 1-hour standard for ozone, State 24-hour PM_{10}, and the Federal 8-hour standard for ozone (ARB, December 2015). As discussed above, ozone emissions were mainly due to on- and off-road mobile emissions and PM_{10} were due to a combination of road dust, residential fuel combustion, construction, demolition, waste burning, and wildfires (El Dorado County APCD – CEQA Guide, 2002).

e. Attainment Plans. The federal Clean Air Act Amendments (FCAAA) of 1990 set a schedule for the attainment of the NAAQS. States are required to prepare a State Implementation Plan (SIP) to develop strategies to bring about attainment of the standards. In addition, the California Clean Air Act of 1988 requires areas that exceed the California ambient air quality standards to plan for the eventual attainment of the State standards. El Dorado County participated in the Sacramento Area Regional Ozone Attainment Plan, which was adopted in 1994 to implement improvement measures for stationary source controls, motor vehicle emission controls, and transportation systems. In December 2008, the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan was adopted by El Dorado County to demonstrate how existing and new control strategies will reduce future emissions to meet the federal Clean Air Act requirements.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to the State CEQA Guidelines, air quality impacts related to the proposed project would be significant if the project would:

1. *Conflict with or obstruct implementation of the applicable air quality plan;*

2. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*

3. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative guidelines for ozone precursors);*

4. *Expose sensitive receptors to substantial pollutant concentrations; and/or*

5. *Create objectionable odors affecting a substantial number of people.*

EDCAQMD Rule 223-2 - Asbestos Hazard Mitigation. EDCAQMD Rule 223-2 requires actions to prevent, reduce, or mitigate asbestos emissions resulting from construction activities. Within El Dorado County, the two asbestos control regulations are (1) Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, and (2) ATCM for Surfacing Applications. Projects are required to submit an Asbestos Dust Mitigation Plan to the Air Pollution Control Officer. This plan is required to describe all dust mitigation measures to be implemented before, during, or after any dust-generating activity. Moreover, applicable Best Management Practices shall be utilized to comply with fugitive dust standards of Rule 223-2 for construction, bulk material handling, carryout and trackout management, and blasting activities.

EDCAQMD Rule 233 – Fugitive Dust Emissions. EDCAQMD Rule 233 prohibits the handling, transporting, or open storage of materials in such a manner that allows or may allow unnecessary amounts of particulate matter from becoming airborne. To reduce the amount of particulate matter entrained in ambient air, projects are required to not cause or allow emissions of fugitive dust to be visible beyond the boundary line of the emission source and to limit the concentration of PM_{10} to 50 micrograms per cubic meter over a 24-hour average. The rule requires project applicants to take reasonable precautions to prevent particulate matter from becoming airborne including, but not limited to, the following:

1. Covering trucks when used for transporting materials likely to give rise to airborne dust.
2. Installing and using hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, and requiring containment methods during sandblasting and other similar operations.
3. Conducting agricultural practices in a way that minimizes the creation of airborne dust.
4. Using water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, and the clearing of land.
5. Applying asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces that can give rise to airborne dust.
6. Paving roadways and maintaining them in a clean condition.

7. Promptly removing earth or other material from paved streets onto which earth or other material has been transported by construction equipment, wind, water, or other means.

The above measures would be enforced by El Dorado County in the context of the grading permit(s) to be issued by the County for the individual projects of the proposed update to the CIP and TIM Fee Program.

Short-Term Emissions Methodology. Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related emissions would indirectly result from the proposed update to the CIP and TIM Fee Program, and such emissions would depend on the characteristics of individual development projects. Furthermore, the EDCAQMD has adopted significance thresholds for construction-related emissions for ROG and NO_X, which are both set at a maximum of 85 pounds per day.

Long-Term Emissions Methodology. The methodology for determining the significance of air quality impacts compares 2015 baseline conditions to the future conditions, as required in CEQA Section 15126.2(a). The air quality analysis also compares expected future conditions with the proposed update to the CIP and TIM Fee Program to expected future conditions if the updated program was not adopted ("No Project" scenario). With respect to long-term impacts, because the project itself does not directly generate the emissions, thresholds associated with "new" or stationary sources do not apply in this case. However, State and federal clean air laws require reducing, from current levels, pollutant emissions that violate national or State ambient air quality standards. Therefore, the project's long-term impacts to air quality will be considered significant if the project results in mobile source emissions that significantly exceed existing levels. In this case, the pollutant of concern is fine particulate matter, as this is a primary pollutant associated with vehicle transportation.

The long-term emissions analysis uses the 2015 on-road mobile source emissions estimate as the baseline existing conditions for determining air quality impacts. Using ARB's Emission Factors (EMFAC2014) model, projected air emissions from mobile sources were calculated using emissions factors and multiplied by vehicle miles travelled (VMT). The EMFAC emissions factors are established by the ARB and accommodate certain mobility assumptions (e.g., vehicle speed, delay times, average trip lengths, and total travel time). Projected vehicle emissions on the transportation network for the year 2035 under the proposed update to the CIP and TIM Fee Program were compared with 2015 existing conditions and with future conditions under the "No Project" scenario in 2035. If ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions after implementation of the proposed update to the CIP and TIM Fee Program do not significantly exceed conditions as defined by the 2035 "No Project scenario, impacts to long-term air quality would not be considered significant.

b. Project Impacts and Mitigation Measures. Implementing the proposed update to the CIP and TIM Fee Program could create both short-term and long-term impacts to air quality. Short-term air quality impacts would be generated during construction of the capital improvements listed in the CIP and TIM Fee Program Update. Long-term emissions would be generated indirectly by on-road vehicles that would utilize the improvements proposed.

Impact AQ-1 Construction activities associated with transportation projects under the proposed CIP and TIM Fee Program Update would create fugitive dust and ozone precursor emissions and have the potential to result in temporary adverse impacts on air quality in El Dorado County. Impacts would be Class II, *significant but mitigable.*

There are three primary sources of short-term emissions that would be generated by constructing future transportation projects under the proposed CIP and TIM Fee Program Update. These sources include: operating construction vehicles (e.g., scrapers, loaders, dump trucks); creating fugitive dust during clearing and grading; and using asphalt or other oil-based substances during the final construction phases, which also generates nuisance odors. The significance of daily emissions, particularly ROG and NO_X emissions, generated by construction equipment utilized to build the transportation improvements would depend on the quantity of equipment used and the hours of operation. The significance of fugitive dust ($PM_{2.5}$ and PM_{10}) emissions would depend upon the following factors: 1) the aerial extent of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved (including the potential removal of underground storage tanks); and 5) whether transporting excavated materials offsite is necessary. The amount of ROG emissions generated by oil-based substances such as asphalt depends upon the type and amount of asphalt utilized. Asbestos can also be of concern during demolition activities; however, demolishing, renovating, or removing asbestos-containing materials is subject to the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations.

Intersection improvements such as signalization, re-striping, or signal coordination are not expected to generate significant short-term emissions impacts. However, other transportation projects may involve grading, paving, or the construction of permanent facilities. The precise quantity of emissions would need to be determined at the time of proposed construction of a given transportation improvement project. Although any individual improvement or project may not generate significant short-term emissions, it is probable that several projects would be under construction simultaneously, generating cumulative construction emissions that would impact air quality. However, by implementing mitigation measures for individual projects, the resulting impacts would be reduced. Impacts would be Class II, significant but mitigable.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy.

AQ-1(a) Require the prime contractor to provide an approved plan demonstrating that heavy-duty (i.e., greater than 50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve, at a minimum, a fleet-averaged 20% NOx reduction compared to the most recent Air Resource Board (ARB) fleet average. Successful implementation of this measure requires the

prime contractor to submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. Usually the inventory includes the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. In addition, the inventory list is updated and submitted monthly throughout the duration of when the construction activity occurs.

AQ-1(b) Stipulate that the prime contractor ensure emissions from all off-road diesel powered equipment used on the project site do not exceed the requirements of the current (at the time of project approval) EDCAQMD Rule 202. As an enforcement component of the measure, the prime contractor is required to agree to a visual survey of all in-operation equipment conducted on a periodic basis. In addition, a summary of the visual results is submitted throughout the duration of the construction activity. Usually, the summary includes the quantity and type of vehicles surveyed as well as the dates of each survey. EDCAQMD and other qualified officials may conduct periodic site inspections to determine compliance. In the case where any equipment found exceeds the opacity requirement, it would require immediate repair and notification of noncompliant equipment to EDCAQMD.

AQ-1(c) Idling times will be minimized by shutting off equipment when it is not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.

AQ-1(d) All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Significance after Mitigation. With the implementation of the above mitigation, impacts related to short-term construction emissions would be less than significant.

Impact AQ-2 Implementation of the proposed CIP and TIM Fee Program Update would reduce on-road vehicle emissions compared to existing conditions and would result in generally similar, though slightly reduced on-road vehicle emissions when compared to the "No Project" scenario in the year 2035. Therefore, long-term operational impacts would be Class III, *less than significant*.

Projected on-road vehicle emissions in the Western Slope of El Dorado County for the year 2035 under the proposed update to the CIP and TIM Fee Program were compared to the "No Project" scenario, which accounts for future growth in 2035 without implementing the new transportation improvements identified in the CIP and TIM Fee Program. Additionally, projected on-road vehicle emissions on the transportation network for the year 2035 under the proposed update to the CIP and TIM Fee Program were compared with the 2015 baseline conditions.

The on-road vehicle source emissions for the proposed update to the CIP and TIM Fee Program were estimated using the EPA-approved EMFAC2014 emission inventory model developed by the ARB for use in California. Table 4.2-3~~Table 4.2-3~~ shows the results of the long-term emissions analysis based on daily VMT for each scenario, which were provided by Kittelson & Associates, Inc.[1]. Using a 2010 baseline, Kittelson & Associates projected VMT for the EIR's 2015 baseline to be 3,877,617. The 2013 BAE Report, which used a 2010 baseline population, projected that the Western Slope population would be 147,360 in 2015 and would increase by 33,494 to a population of 180,854 in 2035. The projected 2035 VMT with the "No Project" scenario is 4,880,843. With the CIP and TIM Fee Program, the projected 2035 VMT is 4,863,521, which is a decrease of 17,322 VMT in 2035 with the transportation improvement projects implemented. When compared to the 2015 baseline, transportation improvement projects identified in the proposed update to the CIP and TIM Fee Program would result in an overall decrease in each pollutant, except for PM_{10}, which would only increase by 0.012 tons per day. The emissions reductions are likely associated with state measures that require vehicles and fuels to improve efficiency in the future, which is accounted for in the model. When compared to the 2035 "No Project" scenario, implementation of the new projects would result in generally similar amounts of on-road vehicle emissions, though the CIP and TIM Fee Program Update would have slightly less overall emissions.

Table 4.2-3
Western Slope Regional Emissions Analysis

Scenario	Analysis Year	ROG (tons/day)	NOx (tons/day)	PM_{10} (tons/day)[1]	PM2.5 (tons/day)
2015 Baseline	2015	1.835	3.193	0.258	0.125
2035 No Project Scenario	2035	0.759	0.747	0.271	0.112
2035 with CIP and TIM Fee Program Update	2035	0.757	0.744	0.270	0.112
Change From No Project (2035 With Program – 2035 No Project)		(0.002)	(0.003)	(0.001)	0.000

( ) denotes negative number
[1] PM_{10} includes tire wear and brake wear emissions
Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. For a conservative estimate, summer emissions were used for ROG and winter emissions were used for NO_X, PM_{10}, and $PM_{2.5}$.

Mitigation Measures. None required.

[1] *VMT developed as part of the Memorandum 2-3: Existing and Future Deficiency and Nexus Assessment, prepared by Kittelson and Associates, 2016.See Appendix C.*

Significance after Mitigation. Since implementation of the CIP and TIM Fee Program Update would result in reduction of emissions when compared to the existing conditions and would result in generally similar, but slightly reduced, on-road vehicle emissions in 2035 when compared to the "No Project" scenario, the long-term operational impacts would be less than significant.

Impact AQ-3 The transportation improvement projects included in the CIP and TIM Fee Program Update may facilitate increased exposure of sensitive receptors to hazardous air pollutants that may cause health risks. Implementation of the proposed update to the CIP and TIM Fee Program would not result in a regional increase in toxic air emissions. Impacts would be Class III, *less than significant.*

Diesel particular matter is classified as the primary airborne carcinogen in the State. The ARB reports that diesel particulate matter represents about 70 percent of the potential cancer risk from vehicle travel on a typical urban freeway. In addition, diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. In addition to the health risks associated with diesel exhaust, the odors associated with diesel exhaust could be a nuisance to nearby receptors. Table 4.2-4~~Table 4.2-4~~ shows the analysis of 2035 on-road mobile source diesel $PM_{2.5}$, PM_{10}, NO_X, ROG, and SO_X (as surrogates for secondary PM_{10}) in the Western Slope of El Dorado County. Emissions from on-road mobile sources of each hazardous air pollutant with the CIP and TIM Fee Program in 2035 would be the same as the "No Project" scenario and less than the 2015 baseline emission levels. Therefore, impacts related to diesel criteria pollutant exposure and associated health risks and nuisance odors at the regional level would be less than significant.

Table 4.2-4
On-Road Mobile Source Toxics Comparison

Vehicle Activity	Diesel $PM_{2.5}$ (tons/day)	Diesel PM_{10} (tons/day)	Diesel NOx (tons/day)	Diesel ROG (tons/day)	Diesel SOx (tons/day)
2015 Baseline	0.042	0.064	1.834	0.087	0.003
2035 No Project Scenario	0.014	0.032	0.438	0.019	0.002
2035 with CIP and TIM Fee Program	0.014	0.032	0.437	0.019	0.002
Change from No Project (2035 with CIP and TIM – 2035 No Project)	0.000	0.000	(0.001)	0.000	0.000

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model.

Mitigation Measures. None required.

Significance after Mitigation. The operational impacts of the proposed update to the CIP and TIM Fee Program on exposure of sensitive receptors to hazardous air pollutants are less than significant.

Impact AQ-4 Re-entrained dust has the potential to increase airborne PM_{10} and $PM_{2.5}$ levels in El Dorado County. The increase in growth expected would result in additional VMT and also has the potential to add to the PM_{10} and $PM_{2.5}$ levels in the area. However, re-entrained dust levels with the CIP and TIM Fee Program Update would be generally similar to the 2015 baseline levels and "No Project" scenario. In addition, implementation of planned El Dorado County control measures would reduce VMT and further reduce such emissions. Impacts would be Class III, *less than significant*.

Re-entrained dust would be generated by roadway activity (e.g., roadway dust kicked up by moving vehicles on paved and unpaved roadways). In addition, dust from construction activity would add to regional dust levels. The effects of road dust (typically measured as PM_{10}) combining with ozone and the hazardous constituents of re-entrained road dust itself (carcinogens, irritants, pathogens) may contribute to respiratory illnesses such as asthma and allergies. Although motor vehicle emission control advances have allowed vehicle tailpipe emissions of some pollutants to decrease over the last 20 years, the number of vehicles in use and the amount of vehicle activity has continued to increase. This would suggest that re-entrained road dust has increased as well.

Re-entrained roadway dust as well as roadway construction dust emissions associated with the proposed update to the CIP and TIM Fee Program are included in the estimated criteria pollutant emissions for $PM_{2.5}$ and PM_{10} discussed in Impacts AQ-1 and AQ-2 above. As discussed, emissions levels for $PM_{2.5}$ and PM_{10} criteria pollutants in the Western Slope of El Dorado County would be generally similar and somewhat slightly reduced with the implementation of the CIP and TIM Fee Program Update in the year 2035 compared to the "No Project" scenario. Although $PM_{2.5}$ emissions are reduced with implementation of the project in 2035 compared to 2015 baseline conditions, PM_{10} increases by only 0.012 tons per day. This slight increase in PM_{10} may be associated with the increase in 2035 VMT compared to 2015 VMT (see Impact AQ-2). However, PM_{10} and $PM_{2.5}$ emissions would be generally similar and would not result in a significant increase in re-entrained dust emissions. Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant.

c. Specific CIP and TIM Fee Program Projects That May Result in Impacts. The proposed projects listed in Section 2.0, *Project Description*, would have the potential to result in air quality impacts. All projects that include a construction component would be included in the analysis and subject to the mitigation under Impact AQ-1. Projects that include roadway and transit features and/or expansions would be included in the analysis under Impacts AQ-2 through AQ-4. As the individual projects are designed and implemented, additional specific analysis as applicable may need to be conducted in order to determine the actual magnitude of impact. Mitigation measures discussed above could apply to these specific projects.

4.3 BIOLOGICAL RESOURCES

4.3.1 Setting

a. Habitats. The Western Slope region of El Dorado County contains a diversity of tree (hardwood, coniferous, and mixed, and riparian forests), shrub (chaparrals, sage), herbaceous (grasslands, pastures) and developed habitat types. Thirty six terrestrial habitat types were mapped using the California Department of Fish and Wildlife (CDFW; formerly referred to as the California Department of fish and Game) California Wildlife Habitat Relationships (CWHR) habitat classification system within the Western Slope region of El Dorado County (CDFW, 2008) (Figure 4.3-1). Because of the programmatic nature of this EIR, the habitat categories presented in Figure 4.3-1 depict a broad illustration of the CWHR types found within the Western Slope region of El Dorado County. A description of each of these habitats adapted from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988) is presented below. Two aquatic habitat types are also designated and are discussed in 4.3.1.b below. Note that these habitat types are generalized and site-specific variation is present throughout the Western Slope region of El Dorado County. Also note that the CWHR classification system maps habitats from a broad perspective, and in many areas it is expected that two or more habitats may intergrade with one another. Habitats that occur within populated areas also show variation owing to greater anthropogenic influences, such as the introduction of non-native plant species and non-native and feral animals.

Tree-Dominated Habitats. The Western Slope region of El Dorado County is home to a variety of conifer, hardwood, and mixed woodlands (Figure 4.3-1). These tree-dominated habitats can support diverse wildlife populations. Riparian habitats are generally the terrestrial areas adjacent to fresh water bodies forming a vegetated corridor from stream edge to floodplain edge. Riparian habitats occur in and along the Cosumnes and American Rivers and its tributaries, as well as along the many creeks, streams, and ravines in the county. Riparian areas are rich in wildlife species, providing foraging, migration, roosting, and nesting/breeding habitat. The following are descriptions of types of tree-dominated habitats that occur within the Western Slope region of El Dorado County.

Closed-Cone Pine-Cypress Forest. This habitat type is typically dominated by a single species of closed-cone pines (*Pinus* sp.) or cypress (*Cupressus* sp.) and the height and canopy closure of these series are variable depending upon site characteristics including soil type, the age of the stand and the floristic composition. Closed-cone pine-cypress forests are considered fire climax or fire-dependent vegetation types. This habitat type is typically found within rocky and infertile soils along the extreme coast or on very shallow infertile soils contain stunted, wind-pruned individuals.

Lodgepole Pine Forest. Lodgepole pine forests typically form open stands of similarly sized trees in association with few other species and with a sparse understory. Lodgepole pine (*Pinus contorta*) overwhelmingly dominates the habitat. Occasional associates include aspen and mountain hemlock (*Tsuga martensiana*). The understory may be virtually absent, consisting of scattered shrubs and herbs, or a rich herbaceous layer at meadow margins. Many lodgepole stands are associated with meadow edges and streams, where the understory consists of

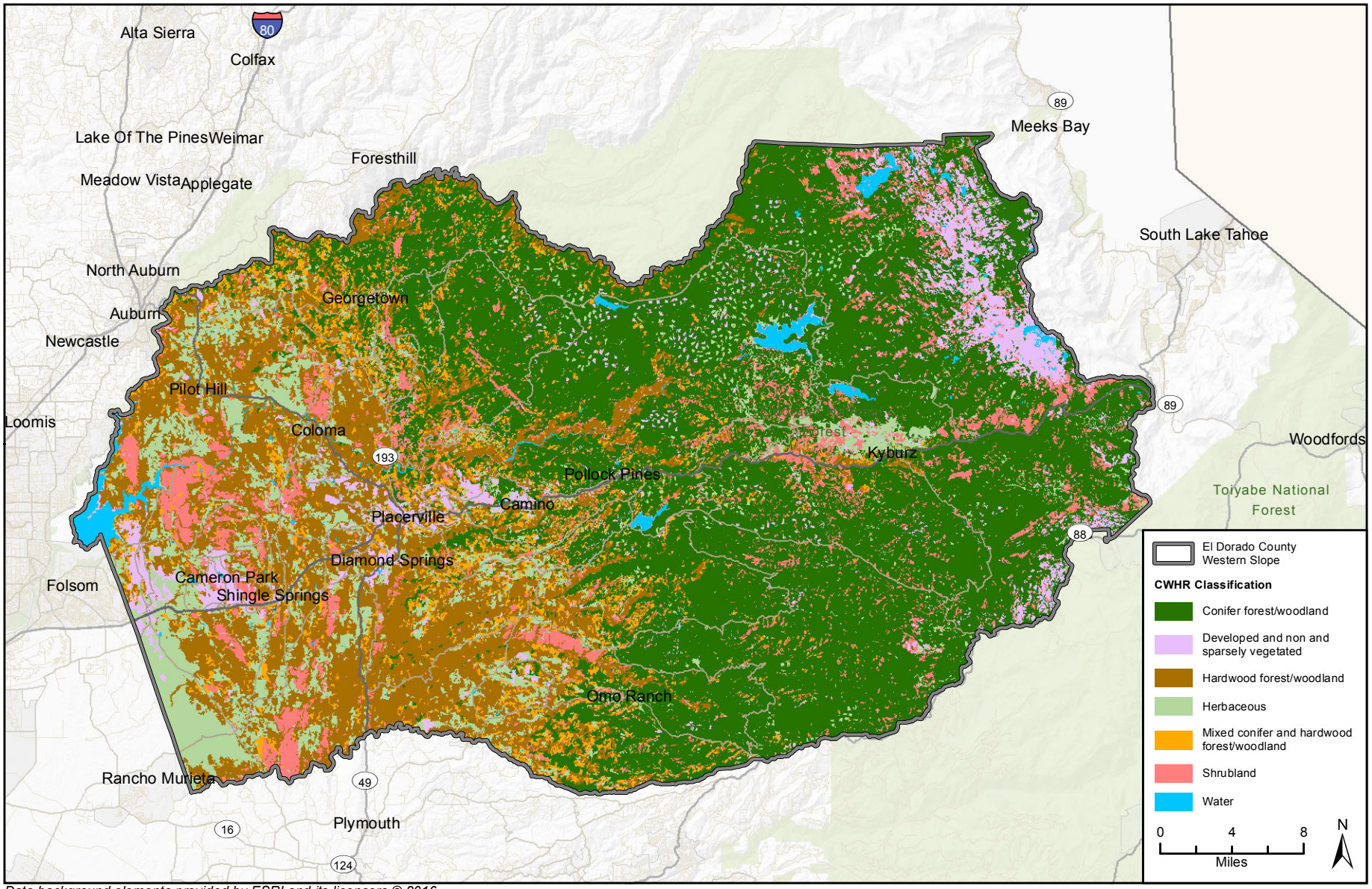
grasses, forbs, and sedges. Lodgepole pine forest typically corresponds to the *Pinus contorta* ssp. *murrayana* Forest Alliance as described by Sawyer et al. (2009).

Blue Oak-Foothill Pine Woodland. This habitat is typically diverse in structure both vertically and horizontally and is composed primarily of a mix of hardwoods, conifers, and shrubs. Shrub distributions tend to be clumped, with interspersed patches of annual grassland. Woodlands of this type generally tend to only have small accumulations of dead and downed woody material, compared with other tree habitats in California. Blue oak (*Quercus douglassii*) and foothill pine (*Pinus sabiniana*) typically comprise the overstory of this habitat, with blue oak usually most abundant. In the Coast Range, associated tree species include coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and California buckeye. In rocky areas, interior live oak sometimes dominates the overstory especially on north-facing slopes at higher elevations. At lower elevations, where blue oaks make up most of the canopy, the understory tends to be primarily annual grasses and forbs. At higher elevations where foothill pines and even interior live oaks sometimes comprise the canopy, the understory usually includes patches of shrubs in addition to the annual grasses and forbs. Shrub species that can be associated with this habitat type include various buckbrush (*Ceanothus* spp.) species and manzanita (*Arctostaphylos* spp.). Other species found in this habitat type can include California coffeeberry (*Rhamnus californicus*), poison-oak (*Toxicodendron diversilobum*) and silver lupine (*Lupinus albifrons*).

Blue Oak Woodland. Generally these woodlands have an over story of scattered trees, although the canopy can be nearly closed. The canopy is dominated by broad-leaved trees 16 feet to 50 feet tall, commonly forming open savanna-like stands on dry ridges and gentle slopes. Blue oak is typically the dominant tree species. Shrubs such as poison oak, California coffeeberry, buckbrush (*Ceanothus cuneatus*), and redberry (*Rhamnus crocea*) are often present but rarely extensive and often occur on rock outcrops. Typical understory is composed of an extension of Annual Grassland vegetation described below.

Valley Oak Woodland. This habitat can range in structure from savanna-like to forest-like stands. The canopies tend to be partially closed and comprised mostly of winter deciduous, broad-leaved species such as valley oak. Dense stands typically grow in valley soils along natural drainages and decrease with the transition from lowlands to uplands. Shrubs are also associated with this habitat in lowland areas, especially along drainages. Valley oak stands with little or no grazing tend to develop a partial shrub layer of bird-disseminated species, such as poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*, and California coffeeberry. Ground cover consists of a well-developed carpet of annual grasses and forbs such as species of wild oat (*Avena* sp.), bromes (*Bromus* sp.), and ryegrass (*Lolium* sp.).

Valley-Foothill Riparian. This habitat type is associated with drainages, particularly those with low velocity flows, flood plains, and gentle topography. This habitat type is generally comprised of a canopy and sub-canopy tree layers dominated by valley oak, cottonwoods (*Populus* sp.), Oregon ash (*Fraxinus latifolia*), white alder (*Alnus rhombifolia*), and boxelder (*Acer negundo*). The understory shrub layer comprises species such as willows (*Salix* spp.) wild grape (*Vitus californica*), wild rose (*Rosa californica*), blackberry (*Rubus* spp.), blue elderberry (*Sambucus cerulean*) and poison-oak.



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California Wildlife Habitat Relationship Classifications within El Dorado County

Figure 4.3-1

Montane Riparian. In El Dorado County, where Montane Riparian occurs along streams in the Sierra Nevada, black cottonwood (*Populus trichocarpa*) is a dominant hardwood along with white alder, Oregon ash, boxelder, bigleaf maple (*Acer macrophyllum*), and dogwood (*Cornus nuttallii*). At high elevations black cottonwood is often replaced by quaking aspen.

Aspen. Aspen stands are typically composed of clones representing one or more genetic lines. Associated subdominant tree species may include willows, alders, black cottonwood, various pines, and Engelmann spruce. In mature communities, aspen is the dominant species in the canopy. Important understory shrubs include sagebrush (*Artemisia tridentate*), snowberry (*Symphoricarpos albus*), and western serviceberry (*Amelanchier alnifolia*). Forbs are usually more abundant than grasses and sedges, and the herbaceous component is typically rich.

Montane Hardwood. In the Sierra Nevada range in El Dorado County, steep, rocky south slopes of major river canyons often are covered extensively by canyon live oak (*Quercus chrysolepis*) and scattered Douglas-fir (*Pseudotsuga menziesii*). Elsewhere, higher elevation overstory associates are typically mixed conifer and California black oak (*Quercus kelloggii*); lower elevation associates are foothill pine, knobcone pine (*Pinus attenuata*), tanoak (*Notholithocarpus densiflorus*), and Pacific madrone (*Arbutus menziesii*). Associated understory vegetation includes currant (*Ribes* spp.), wood rose (*Rosa gymnocarpa)*, snowberry, manzanita, poison-oak, and a few forbs and grasses.

Jeffrey Pine Forest. The structure of the Jeffrey pine forest varies over its distribution. A single tree layer is characteristic of Jeffrey pine (*Pinus jeffreyi*) stands on moderately dry sites. On moist and mesic sites a second tree layer exists which is composed of deciduous hardwood species. Jeffrey Pine habitats are dominant by Jeffrey pine. A sclerophyllous shrub layer is common to most Jeffrey pine stands except on serpentine soils and extremely xeric sites. Jeffrey pine forests occur in mountainous regions such as the Sierra Nevada and ranges in elevation from 500 to 9,500 ft. Jeffrey pine forest typically corresponds to the *Pinus jeffreyi* Forest Alliance as described by Sawyer et al. (2009).

Eucalyptus Forest. This habitat type ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Blue gum eucalyptus (*Eucalyptus globulus*) and red gum eucalyptus (*E. camaldulensis*) are the most common eucalyptus species found in these stands. The understory of these areas tends to have extensive patches of leaf litter but may include species such as poison oak. Trees within this habitat type are typically planted in rows for use as a wind break.

Montane Hardwood-Conifer. In the lower and middle elevation forests of El Dorado County, Montane Hardwood-Conifer habitat is often dominated by hardwoods including California black oak, bigleaf maple, Pacific madrone, and tanoak, along with conifers including ponderosa pine (*Pinus ponderosa*), white fir (*Abies concolor*), incense-cedar (*Calocedrus decurrens*), sugar pine (*Pinus lambertiana*) and Douglas-fir forming the overstory. The sparse understory includes shrubs such as manzanita and currants, and various grasses and forbs.

Sierran Mixed Conifer. Dominant trees in Sierran Mixed Conifer habitat include white fir, Douglas-fir, ponderosa pine, sugar pine, incense-cedar, and California black oak. White fir tends to be the most ubiquitous species (though most often a minor overstory component)

because it tolerates shade. It occurs primarily at middle elevations in El Dorado County. Ponderosa pine dominates at lower elevations and on south slopes. Jeffrey pine commonly replaces ponderosa pine at high elevations, on cold sites, or on ultramafic soils. Red fir is a minor associate at the highest elevations. Deerbrush (*Ceanothus integerrimus*), chinquapin (*Chrysolepis chrysophylla*), squawcarpet (*Ceanothus prostrates*), mountain misery (*Chamaebatia foliolosa*), tanoak, manzanita, currants, and wood rose, are common shrub species in the shrub understory. Grasses and forbs associated with this habitat include over 100 species, including bromes, rushes (*Juncus* spp.), and purple needlegrass (*Nassella pulchra)*.

Subalpine Conifer. Several species dominate canopies of Subalpine Conifer in high elevation El Dorado County, either singly or in mixtures of two or more species. These include Engelmann spruce (*Picea engelmannii*), mountain hemlock (*Tsuga mertensiana*), western white pine (*Pinus monticola*) and lodgepole pine (*Pinus contorta*). A typically sparse shrub understory may include squaw currant (*Ribes cereum)*, purple mountain heather (*Phyllodoce breweri*), and oceanspray (*Holodiscus discolor*). Willows, western huckleberry (*Vaccinium membranaceum*), and alpine laurel (*Kalmia microphylla*) occur on moist sites. Bromes, several species of lupines (*Lupinus* spp.), and a variety of flowering annuals are common in the sparse ground cover.

Douglas Fir. In El Dorado County, moister soils support an overstory of Douglas-fir with a tanoak-dominated understory in lower and middle elevations of El Dorado County's mountains. On drier and ultrabasic derived soils, Douglas-fir attains less dominance and occurs in open stands that include Ponderosa or Jeffrey pine, incense cedar, sugar pine, knobcone pine, and western white pine. Wetter sites also support maple species. The shrub layer is typically composed of species such as canyon live oak, blackberry, rose, and poison-oak. The forbs and grass layer often includes broad-leaf starflower (*Trientalis borealis* ssp. *latifolia*), western rattlesnake plantain (*Goodyera oblongifolia*), and western swordfern (*Polystichum munitum*), and various montane grass species.

Red Fir. Mature red fir stands in El Dorado County occur at higher elevations, and are normally monotypic, with very few other plant species in any layer. Heavy shade and a thick layer of downed woody debris tend to inhibit understory vegetation, especially in dense stands. In some areas in the extreme northwestern portions of the county, red fir is replaced by noble fir.

White Fir. Mature white fir stands in El Dorado County are normally monotypic, with white fir comprising more than 80 percent of trees. Jeffrey pine is sometimes an associate in the Cascades, as are ponderosa pine and lodgepole pine in the Sierra Nevada. As with Red Fir habitat, shade and downed woody material tend to inhibit understory species. Shrub layer associates include sparse greenleaf Manzanita (*Arctostaphylos patula*) and currants. Dense stands, however, have herbaceous species such as western trillium (*Trillium ovatum*), vetch (*Vicia* spp.), and pipsissewa (*Chimaphila umbellate*).

Eastside Pine. Ponderosa pine is the dominant tree, with lesser representation by Jeffrey pine, lodgepole pine, white fir, incense-cedar, Douglas-fir, California black oak and western juniper (*Juniperus occidentalis*). Undergrowth varies depending on site conditions, but typically may include one or more of the following shrubs: sagebrush, manzanita, ceanothus, snowberry, antelope bitterbrush (*Purshia tridentate*), and rubber rabbitbrush (*Ericameria nauseosa)*. Prominent

herbaceous plants include mule's ears (*Wyethia* spp.), arrowleaf balsamroot (*Balsamorhiza sagittata*), and Idaho fescue (*Festuca idahoensis*).

Ponderosa Pine. Ponderosa pine habitat includes pure stands of ponderosa pine, as well as stands of mixed species in which at least 50 percent of the canopy area is ponderosa pine, and is widespread in El Dorado County. Tree associates include white fir, incense-cedar, Jeffrey pine, sugar pine, Douglas-fir, canyon live oak, California black oak, Oregon white oak, Pacific madrone and tanoak. Associated shrubs include manzanita, ceanothus, mountain-misery, Pacific dogwood, California buckthorn (*Rhamnus californica*), poison-oak, gooseberry. The grass and forb layer includes swordleaf fern, lupines, Idaho fescue, bromes, and a variety of other forbs and grasses.

Shrub Dominated Habitats. Shrub-dominated habitats, such as various chaparral communities, are comprised primarily of woody, evergreen shrubs and occur predominantly in the western portion of El Dorado County. Small isolated remnant patches of shrublands also occur dispersed throughout the county. The following are descriptions of shrub-dominated habitats that occur within the Western Slope region of El Dorado County.

Alpine Dwarf-Shrub. This habitat is comprised of primarily low graminoid and forb communities with an admixture of dwarf-shrubs including creambush oceanspray (*Holodiscus discolor*), Greene goldenweed (*Ericameria greenei*) and white mountain heather (*Cassiope martensiana*). The perennial herbs or dwarf shrubs comprising these communities are usually less than 18 inches tall. Coverage may reach 100 percent at lower elevations but becomes increasingly open as elevation increases. On mesic sites, a continuous turf contrasts with patches of bunchgrasses and cushion plants on drier sites. This habitat type is typically found above the timberline in the Sierra Nevadas.

Mixed Chaparral. Mixed Chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Shrub height and crown cover vary with age since last burn, precipitation, aspect, and soil type. At maturity, cismontane Mixed Chaparral typically is a dense, nearly impenetrable thicket. On poor sites, serpentine soils or transmontane slopes, shrub cover may be considerably reduced and shrubs may be shorter. Leaf litter and standing dead material may accumulate in stands that have not burned for several decades.

Chamise-Redshank Chaparral. This habitat type can range from nearly pure stands of chamise (*Adenostoma fasciculatum*) or redshank (*A. sparsifolium*) to a mixture of both. Mature Chamise-Redshank Chaparral is single layered, generally lacking well-developed herbaceous ground cover and over story trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Redshank stands tend to be slightly taller and more open than chamise dominated stands. Fire occurs regularly in Chamise-Redshank Chaparral and influences habitat structure.

Montane Chaparral. Montane chaparral varies markedly throughout California and within El Dorado County. Species composition changes with elevational and geographical range, soil type, and aspect. One or more of the following species usually characterize montane chaparral communities: whitethorn ceanothus (*Ceanothus cordulatus*), snowbrush ceanothus (*C.*

velutinus), greenleaf manzanita, pinemat manzanita, hoary manzanita (*Arctostaphylos canescens*), bitter cherry (*Prunus emarginata*), huckleberry oak (*Quercus vacciniifolia*), chinquapin, Fremont silktassel (*Garrya fremontii*), mountain mahogany (*Cercocarpus montanus*), toyon, and California buckthorn.

Sagebrush. Often Sagebrush habitat is composed of pure stands of big sagebrush, but many stands include other species of sagebrush, rabbitbrush, horsebrush, gooseberry, western chokecherry (*Prunus virginiana* var. *demissa*), mountain mahogany, and bitterbrush. As topography, soil composition, and moisture change through the Sagebrush habitat type, the dominant species of sagebrush changes. On low flats with shallow soils and restricted drainage, low sagebrush is dominant. Where the soil remains saturated through the spring, silver sagebrush (*Artemisia cana*) dominates. Black sagebrush (*A. nova*) dominates sites with soils high in gravel and carbonates. In communities not fully occupied by sagebrush, various amounts of herbaceous understory are found. Idaho fescue, bluebunch wheatgrass (*Pseudoroegneria spicata*), several species of needlegrass, and squirreltail are among the more common grasses found in the habitat.

Herbaceous Dominated Habitats. These habitats are generally comprised of areas dominated by grasses and other non-woody species. Large areas of herbaceous dominated habitats occur in the Western Slope region of El Dorado County in the form of non-native grasslands. Native perennial grasslands do occur, most notably in the central portion of the County and are dominated by perennial bunch grasses were historically abundant within much of California but are now currently patchy in distribution. The following are descriptions of the herbaceous dominated habitats that occur within the Western Slope region of El Dorado County.

Annual Grasslands. This habitat type is composed primarily of non-native annual herbs and forbs and typically lacks shrub or tree cover. The physiognomy and species composition of annual grasslands is highly variable and also varies considerably on a temporal scale. Grazing is a common land use within this habitat type. Common grass species include wild oats (*Avena* sp.), soft chess brome (*Bromus hordeaceous*), ripgut brome (*Bromus diandrus*), and red brome (*Bromus madritensis*). Common forb species can include species of filaree (*Erodium* sp.), and bur clover (*Medicago* sp.). California poppy can also be quite common in this habitat type.

Perennial Grassland. Perennial grassland habitats occur in two forms in California: coastal prairie, found in areas of northern California under maritime influence, and relics in habitats now dominated by annual grasses and forbs. Perennial grassland habitats are dominated by perennial grass species such as California oatgrass (*Danthonia californica*), Pacific hairgrass (*Deschampsia holciformis*), and sweet vernalgrass (*Anthoxanthum odoratum*). Perennial grassland habitat typically occurs on ridges and south-facing slopes, alternating with forest and scrub in the valleys and on north-facing slopes. Perennial grassland habitat of the coastal prairie form occurs along the California coast from Monterey County northward. It is found below 3,280 feet in elevation and seldom more than 62 miles from the coast. Relic perennial grasses within annual grassland habitat occur in patches throughout the state.

Wet Meadow. Wet Meadows occur with a great variety of plant species; therefore, it is not possible to generalize species composition. Species may differ, but several genera are common to Wet Meadows throughout the state. They include *Carex*, *Danthonia*, *Juncus*, *Salix*, and *Scirpus*

species. Associated plants include an abundance of grasses, rushes, sedges and forbs that tolerate saturated and semi-saturated soils for extended periods during the growing season. In El Dorado County, willows and Himalaya blackberry (*Rubus armeniacus*) are the shrubs found in greatest abundance. Fewer species occur as surface water depth increases during spring runoff.

Pasture. Pasture vegetation is a mix of perennial grasses and legumes with typically complete canopy closure. Structurally this habitat type resembles annual grassland habitats. Height of vegetation varies, according to season and livestock stocking levels. Old or poorly drained pastures may have patches of weeds in excess of two feet in height. The mix of grasses and legumes varies according to management practices such as seed mixture, fertilization, soil type, irrigation, weed control, and the type of livestock on the pasture.

Developed and Sparsely/Non-Vegetated Habitats. Developed and sparsely/non-vegetated habitats are abundant in the Western Slope region of El Dorado County. Developed habitats are usually sparsely or non-vegetated and are associated with urban and agricultural areas and are highly disturbed. Species that occur in these areas are typically adapted to anthropogenic disturbance and/or comprised of ornamental species. Sparsely vegetated habitats also tend to be associated with rock outcrops and cliffs. The following are descriptions of developed and sparsely/non-vegetated habitats that occur within the Western Slope region of El Dorado County.

Cropland. This habitat type is characterized by areas in active agriculture and is an entirely man-made habitat. The structure of vegetation can vary in size, shape, and growing pattern. The dominant cropland use is row crops. Typical crops consist of grasses and forbs.

Orchard-Vineyard. This habitat type is characterized by typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Trees such as citrus and olives are evergreen; others such as pit fruit are deciduous. The understory is usually composed of low growing grasses and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows. Vineyards, comprised of grape vines, also share similar characteristics. Currently three subcategories of Orchard-Vineyard habitat classifications that are recognized occur within El Dorado County: *Deciduous Orchard, Evergreen Orchard* and *Vineyard*.

- Deciduous Orchard. Deciduous orchards include trees such as almonds, apples, apricots, cherries, figs, nectarines, peaches, pears, pecans, pistachios, plums, pomegranates, pecans and walnuts. Trees range in height at maturity for many species from 15 to 30 feet, but may be 10 feet or less in pomegranates and some dwarf varieties, or 60 feet or more in pecans and walnuts. Crowns usually touch, and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. In some orchards cover crops of resident species are present year round or are cultivated in the spring and summer. Many orchards are treated in strips down the tree rows with herbicides. The cover crop can be composed of either natural or planted domesticated herbaceous plants, such as legumes.

- Evergreen Orchard. Evergreen orchards include trees such as olives, lemons, oranges, and tangerines. Trees range in height at maturity for many species from 15 to 30 feet, but may be 10 feet or less in some dwarf varieties, 60 feet or more in date palms. Crowns often do not touch, and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory in evergreen orchards usually consists of bare soil due to active managements such as tillage and/or herbicides.

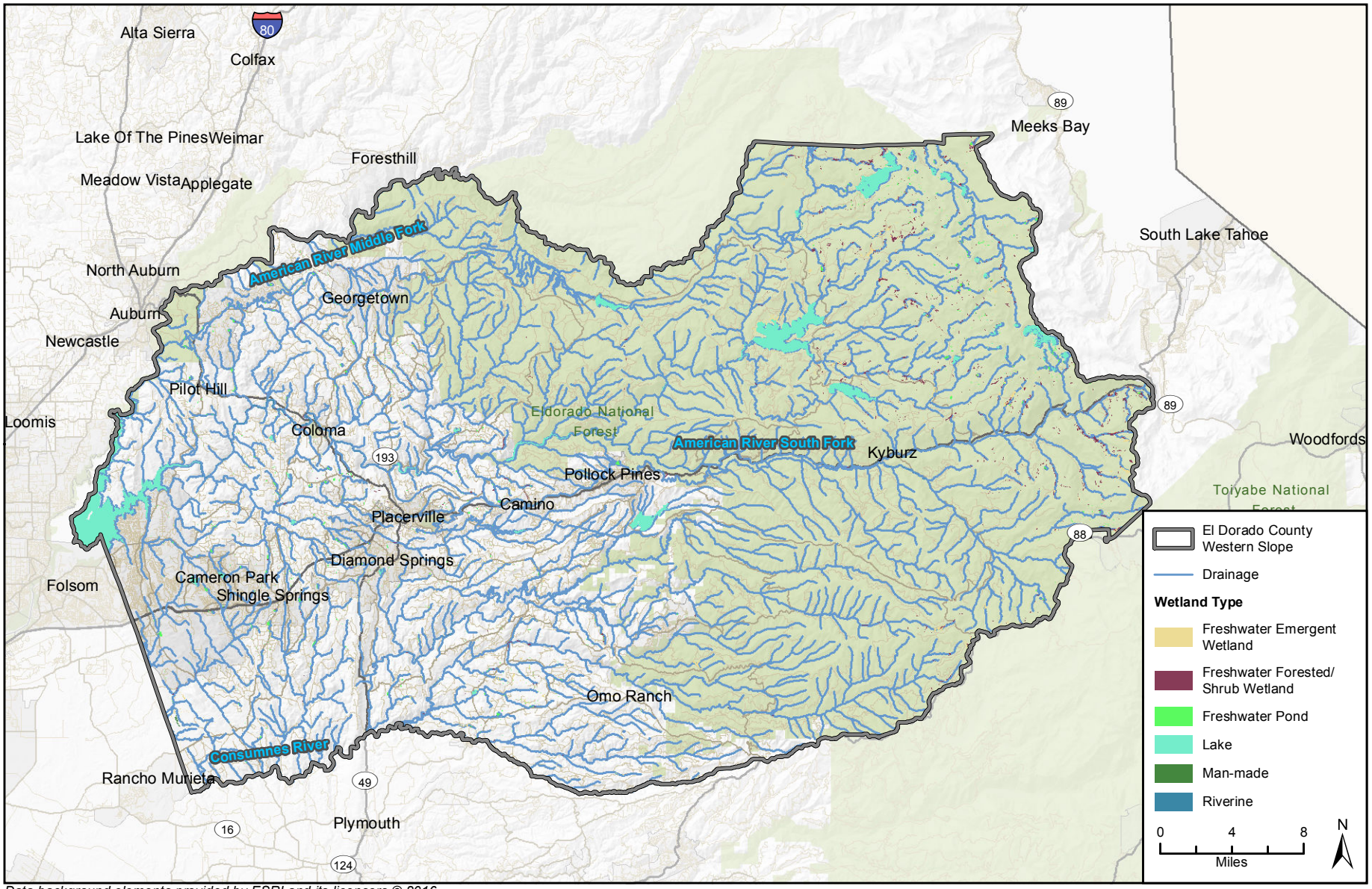
- Vineyard. Vineyards are composed of single species planted in rows, usually supported on wood and wire trellises. Vines are normally intertwined in the rows but open between rows. Rows under the vines are usually sprayed with herbicides to prevent growth of herbaceous plants. Between rows of vines, grasses and other herbaceous plants may be planted or allowed to grow as a cover crop to control erosion. Vineyards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. Most vineyards are in valley or foothill areas. Increasingly, olives are being cultivated on vineyard-like trellises in Northern California, and functionally should be treated as Vineyard in the CWHR habitat-classification system.

Urban. This habitat type is a completely human-made habitat comprising residential, commercial, and industrial developed areas. Plant species within urban habitats typically comprise a mixture of lawns, ornamental and other non-native invasive plant species, and native plants, with extensive developed areas lacking vegetation.

Barren. This habitat type is defined by the absence of vegetation. Any habitat with less than two percent total vegetation cover and less than ten percent cover by tree or shrub species is defined as barren. Structure and composition of the substrate are largely determined by the region of the state as well as surrounding environment. Examples of barren habitats include areas of exposed parent rock and talus slopes.

b. Drainages and Wetlands.

Drainages. El Dorado County contains a major river, the American River (middle and south forks) and the Cosumnes Rivers. The American River runs from the crest of the Sierra Nevada mountain range to its confluence with the Sacramento River in Sacramento, California. The Cosumnes River runs from the western Sierra Nevada and flows into the Central Valley, emptying into the Mokelumne River in the Sacramento-San Joaquin Delta. In addition to these rivers there are numerous streams and tributaries (Figure 4.3-2). The drainages within these watersheds are of high biological importance as they provide valuable foraging habitat, breeding habitat, and movement habitat for a wide variety of species, including sensitive



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U.S. Fish and Wildlife Service, January, 2016.

National Wetlands Inventory Categories and Drainages within El Dorado County

Figure 4.3-2

species such as Steelhead - Central Valley DPS), (*Oncorhynchus mykiss irideus*), foothill yellow-legged frog (*Rana boylii*) and northwestern pond turtle (*Actinemys marmorata* [=*Emys marmorata*]).

Canals and other Manmade Structure. The Western Slope region of El Dorado County also contains a network of manmade waterways that transport water from reservoirs and other waterbodies such as the Cosumnes River through the county for use in irrigation and other uses. These manmade canals can range from being highly modified and lined with manmade materials or consisting of earthen bed and banks.

Wetlands. Wetlands are regarded as important biological resources both because of their rarity and because they serve a variety of functional values. Several types of wetlands exist in the Western Slope region of El Dorado County, including freshwater marshes, vernal pools, and riparian habitats.

Vernal Pools. These seasonal wetlands are small depressions that fill with water during the winter, gradually drying during the spring and becoming completely dry in the summer. These pools are found in only a few places in the world outside of California. Vernal pool vegetation comprises plant species that begin their growth as aquatic or semi-aquatic plants and transition to a dryland environment as the pool dries. Most vernal pool plants are annual herbs. Special status species supported by vernal pools include vernal pool fairy shrimp (*Branchinecta lynchi*). Vernal pools are most prevalent in the western half of El Dorado County in the foothill areas of the County.

In addition to vernal pools, several areas within the Western Slope region of El Dorado County contain wetlands mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS, 2016c). A general description of each of the classifications is provided below. Of those wetland types mapped by the NWI, riverine and lacustrine habitats are also mapped by the CWHR.

Freshwater Emergent Wetlands. Freshwater emergent wetlands include all non-tidal waters dominated by emergent herbaceous plant species, mosses, and/or lichens. Wetlands of this type are also low in salinity. Wetlands that lack vegetation can be included in this class if they are less than 20 acres, do not have an active wave-formed or bedrock shoreline feature, have a low water depth less than 6.6 feet. This wetland type is also mapped by the CWHR. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment. The vegetation may vary in size from small clumps to vast areas covering several kilometers. The acreage of Fresh Emergent Wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture.

Freshwater Forested/Shrub Wetlands. These wetlands include non-tidal waters that are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. Wetlands that lack vegetation can be included in this classification if they also exhibit the same criteria as described for freshwater emergent wetlands. The vegetation found in freshwater forested/shrub wetlands is generally dominated by woody vegetation such as shrubs and trees.

Freshwater Ponds. Freshwater ponds include non-tidal waters with vegetative cover along its edges such as trees, shrubs, emergent herbaceous plants, mosses, and/or lichens. Freshwater ponds can be man-made or natural and typically consist of an area of standing water with variable amounts of shoreline. These wetlands and deepwater habitats are dominated by plants that grow on or below the surface of the water. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat that includes vernal pools. Freshwater ponds (stock ponds and landscaping ponds) are abundant in El Dorado County. Vernal pools predominate in the foothill areas in the western portions of the county, principally on soils underlain by hardpan.

Lakes. Lakes are a lacustrine system that includes wetlands and deepwater habitats that are located in a topographic depression or dammed river channel. These areas tend to be greater than 20 acres. Vegetation cover within this habitat is generally less than 30 percent and often occurs in the form of emergent or surface vegetation. Substrates are composed of at least 25 percent cover of particles smaller than stones. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat that also includes vernal pool complexes. The largest lakes in El Dorado County include Lake Tahoe and Folsom Lake.

Riverine. Riverine habitats are a riverine system that includes all wetlands and deepwater habitats contained in natural or artificial channels that contain periodically or continuously flowing water. This system may also form a connecting link between two bodies of standing water. Substrates generally consist of rock, cobble, gravel or sand. In El Dorado County the main rivers include the American and Cosumnes River as well as their tributaries and creeks found within the watersheds of the county.

c. Special Status Species and Sensitive Communities. For the purpose of this EIR, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA); those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; and plants with a California Rare Plant Rank (CRPR) of 1, 2, 3, and 4, and are defined as:

- List 1A = Plants presumed extinct in California
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened)
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known)
- List 2 = Rare, threatened or endangered in California, but more common elsewhere
- List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA)
- List 4.1 = Plants of limited distribution (watch list), seriously endangered in California

- List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened)
- List 4.3= Plants of limited distribution (watch list), not very endangered in California

Queries of the USFWS Environmental Conservation Online System (ECOS): Information, Planning and Conservation System (IPaC) (USFWS, 2016b), USFWS Critical Habitat Portal (USFWS, 2016a), California Natural Diversity Database (CNDDB) (California Department of Fish and Wildlife, 2016), and California Native Plant Society (CNPS) *Online Inventory of Rare, Threatened and Endangered Plants of California* (CNPS, 2016) were conducted. The queries were conducted to obtain comprehensive information regarding state and federally listed species, sensitive communities and federally designated Critical Habitat known to or considered to have potential to occur within the Western Slope region of El Dorado County.

Sensitive Communities and Critical Habitat. Several natural communities considered sensitive by the CDFW occur within the Western Slope region of El Dorado County. The CNDDB lists five sensitive natural communities that occur within El Dorado County. Federally designated critical habitat for two species also occurs on the Western Slope region of El Dorado County (Figure 4.3-3). These sensitive communities and critical habitats are listed in Table 4.3-1.

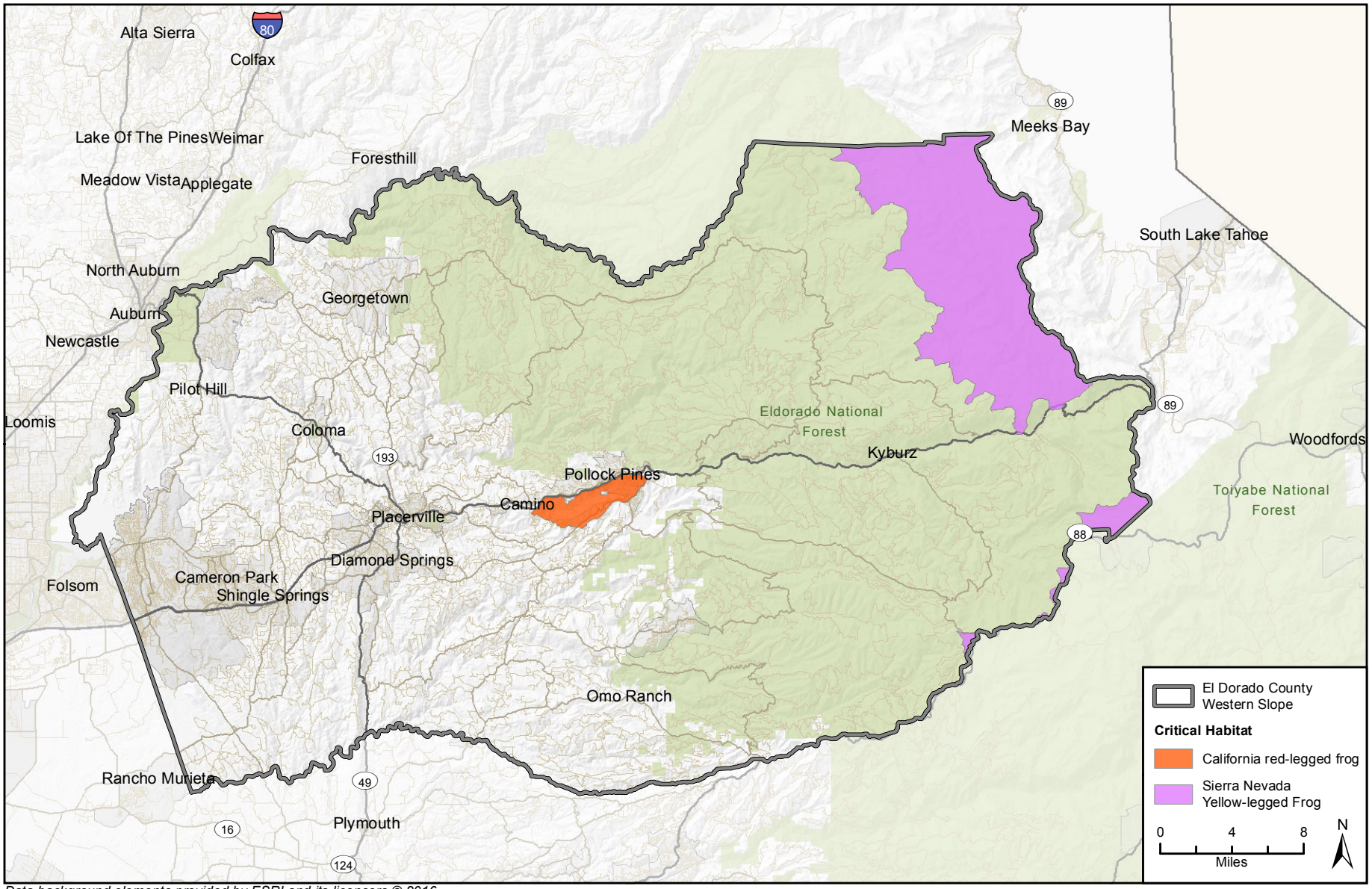
Table 4.3-1
Sensitive Communities and Critical Habitats Documented within the Western Slope Region of El Dorado County

Communities Considered Sensitive by the CDFW
Central Valley Drainage Hardhead/Squawfish Stream
Central Valley Drainage Resident Rainbow Trout Stream
Central Valley Drainage Spring Stream
Sacramento-San Joaquin Foothill/Valley Ephemeral Stream
Sphagnum Bog
Critical Habitat
California red-legged frog (*Rana draytonii*) (Final Designated)
Sierra Nevada yellow-legged frog (*Rana sierra*) (Proposed)

Sources: CNDDB (CDFW, 2016); USFWS, Critical Habitat Portal (2016)

Special Status Plants and Animals. The Western Slope region of El Dorado County is home to several species protected by federal and state agencies. Special-status animal species can be found in a variety of habitat types the county provides. The CNDDB (CDFW, 2016), CNPS (2016), and USFWS ECOS IPaC (2016) together list a number of special status plant and animal species that are known to or with potential to occur within the Western Slope region of El Dorado County. The status and habitat requirements for each of these species are presented in Tables 1 and 2 respectively in Appendix B.

c. Wildlife Movement Corridors. Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be



Data background elements provided by ESRI and its licensors © 2016.
U.S. Fish and Wildlife Service, November, 2015.

Federally Designated Critical Habitat within El Dorado County

Figure 4.3-3

regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

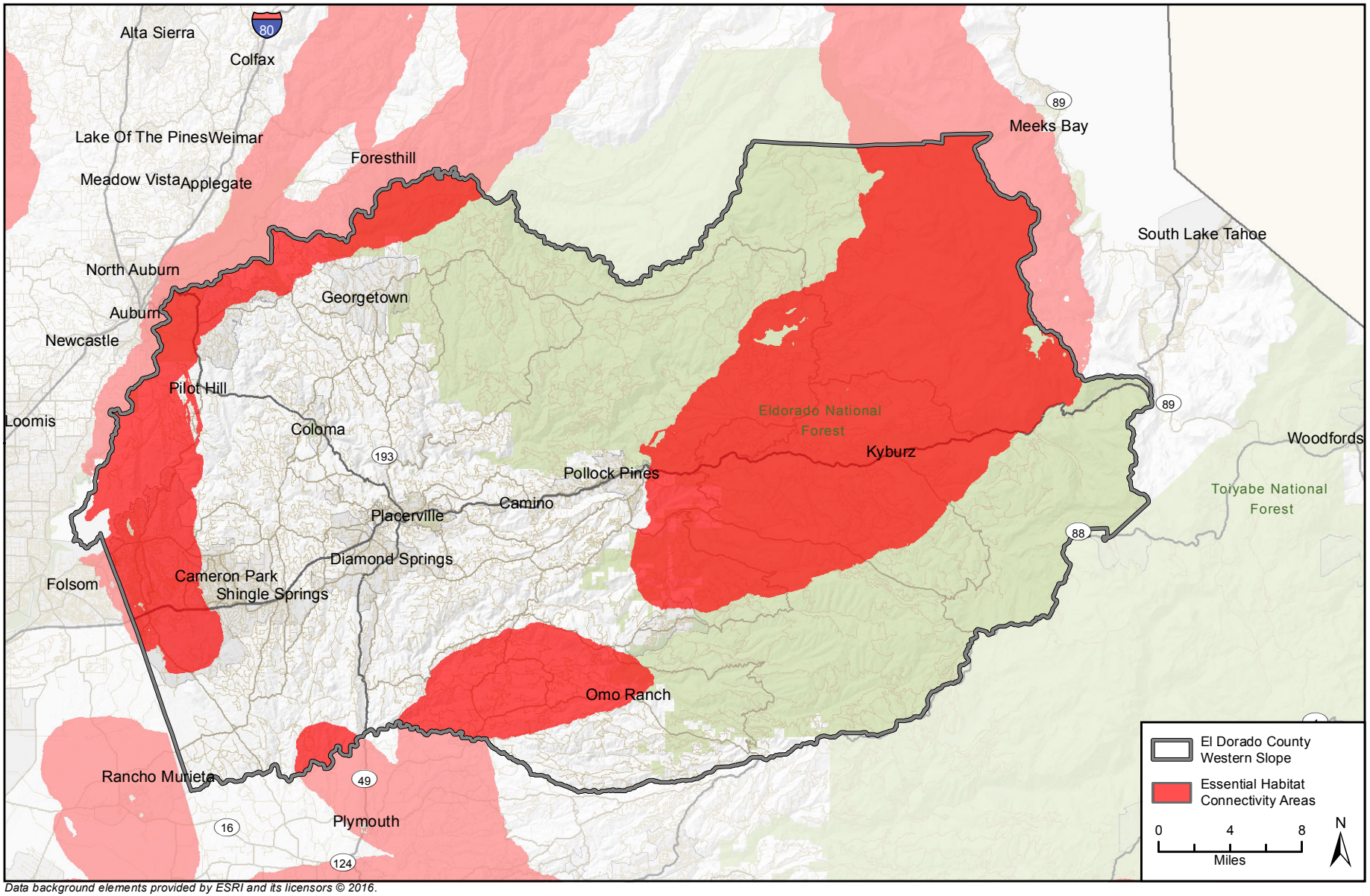
The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. Essential Connectivity Areas (ECA) as mapped in the report *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (2010) represents connectivity at the state level. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance connectivity between areas of high ecological importance. ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve the majority of species in each region. It is important to recognize that even areas outside of Natural Landscape Blocks and ECAs support important ecological values and should not be immediately discounted as lacking conservation value without further review.

Three ECAs are mapped within the Western Slope region of El Dorado County (Figure 4.3-4). One is located along the north fork of the American River in the northwestern portion of the County. A second is located in southern portion of the County between Mt. Aukum and Eldorado National Forest. The third is located in the northern central portion of the County within the Eldorado National Forest.

Small scale corridors important to wildlife movement are also present within the Western Slope region of the County, many of which are not mapped as ECAs. These include the various rivers, creeks, drainages and other topographic features that facilitate movement, such as the Cosumnes River, the South Fork of the American River and other drainages as depicted in Figure 4.3-2. These corridors provide a means to facilitate regional connectivity for a number of wildlife species as a wildlife corridor.

d. Regulatory Framework. Federal, state, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance is the County of El Dorado. The CDFW is a trustee agency for biological resources throughout the state under the California Environmental Quality Act (CEQA) and also has direct jurisdiction under the California Fish and Game Code (CFGC), which includes, but is not limited to, resources protected by the State of California under the California Endangered Species Act (CESA).



Data background elements provided by ESRI and its licensors © 2016.
Additional data provided by Spencer, W.D., et al. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California.

Essential Connectivity Areas

Figure 4.3-4

Federal and State Jurisdictions.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 *et seq.)*. The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS and/or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

United States Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetlands. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge into wetlands or other "waters of the United States" that are hydrologically connected and/or demonstrate a significant nexus to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetlands is met through compensatory mitigation involving creation or enhancement of similar habitats.

California Department of Fish and Wildlife (formerly the California Department of Fish and Game). The CDFW derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et. seq.)* prohibits "take" of state-listed threatened and endangered species. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW additionally prohibits take for species designated as Fully Protected under the CFGC under various sections. Projects that would result in take of any state listed threatened or endangered species are required to obtain an incidental take permit (ITP) pursuant to Fish and Game Code Section 2081. The issuance of an ITP is dependent upon the following: 1) the authorized take is incidental to an otherwise lawful activity; 2) the impacts of the authorized take are minimized and fully mitigated; 3) the measures required to minimize and fully mitigate the impacts of the authorized take are roughly proportional in extent to the impact of the taking on the species, maintain the applicant's objectives to the greatest extent possible, and are capable of successful implementation; 4) adequate funding is provided to

implement the required minimization and mitigation measures and to monitor compliance with and the effectiveness of the measures; and 5) issuance of the permit will not jeopardize the continued existence of a state-listed species.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (CFGC Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Species of Special Concern (SSC) is a category used by the CDFW for those species that are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except those afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are consider sensitive as described under the CEQA Appendix G questions. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFGC Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and each of nine local Regional Water Quality Control Boards (RWQCB) has jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, *Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction*). The local RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction. Additionally, the SWRCB has issued general Water Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (Water Quality Order No. 2013-0001-DWD, NPDES No. CAS000004) as well as the Construction General Permit (Order No. 2012-0006-DWQ, NPDES No. CAS000002) to establish requirements for construction and post construction runoff water quality.

California Department of Transportation - California Streets and Highways Code Section 156.3. Assessments and remediation of potential barriers to fish passage for transportation projects using state or federal transportation funds are required. Such assessments must be conducted

for any projects that involve stream crossings or other alterations and must be submitted to the CDFW.

Local

El Dorado Count Stormwater Quality Ordinance No. 5022. The Storm Water Quality Ordinance establishes the Legal Authority for the entire unincorporated portion of the County to protect the health, safety, and general welfare of the citizens of the County, enhance and protect the quality of Waters of the State in the County by reducing pollutants in storm water discharges to the maximum extent practicable and controlling non-storm water discharges to the storm drain system, and cause the use of Best Management Practices by the County and its citizens that will reduce the adverse effects of polluted runoff discharges on Waters of the State.

El Dorado County General Plan. The Conservation and Open Space Element of the El Dorado County General Plan includes objectives to protect biological resources. Various policies are also included that pertain to, but are not limited to, protection of rare and endangered species, development in environmentally sensitive areas, and protection of riverine and riparian areas. Objectives and policies regarding biological resources that are applicable to the project in El Dorado County pursuant to the CIP and TIM Fee Program Update are listed in Table 4.3-2.

Table 4.3-2
El Dorado County General Plan
Goals, Objectives, Policies and Implementation Measures
With Regards to Biological Resources

Objective 7.3.3	Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.
Policy 7.3.3.1	For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.
Objective 7.3.4	Protection and utilization of natural drainage patterns.
Policy 7.3.4.1	Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.
Policy 7.3.4.2	Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.
Goal 7.4	Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.
Objective 7.4.1	The County shall protect State and Federally recognized rare, threatened, or endangered species and their habitats consistent with Federal and State laws.
Policy 7.4.1.1	The County shall continue to provide for the permanent protection of the eight sensitive plant species known as the Pine Hill endemics and their habitat through the establishment and management of ecological preserves consistent with County Code Chapter 17.71 and the USFWS's Gabbro Soil Plants for the Central Sierra Nevada Foothills Recovery Plan.
Policy 7.4.1.4	Proposed rare, threatened, or endangered species preserves, as approved by the County Board of Supervisors, shall be designated Ecological Preserve (-EP) overlay on the General Plan land use map.

Table 4.3-2
El Dorado County General Plan
Goals, Objectives, Policies and Implementation Measures
With Regards to Biological Resources

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.
Policy 7.4.1.6	All development projects involving discretionary review shall be designed to avoid disturbance or fragmentation of important habitats to the extent reasonably feasible. Where avoidance is not possible, the development shall be required to fully mitigate the effects of important habitat loss and fragmentation. Mitigation shall be defined in the Integrated Natural Resources Management Plan (INRMP) (see Policy 7.4.2.8 and Implementation Measure CO-M). The County Agricultural Commission, Plant and Wildlife Technical Advisory Committee, representatives of the agricultural community, academia, and other stakeholders shall be involved and consulted in defining the important habitats of the County and in the creation and implementation of the INRMP.[1]
Policy 7.4.1.7	The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.
Objective 7.4.2	Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.
Policy 7.4.2.2	Where critical wildlife areas and migration corridors are identified during review of projects, the County shall protect the resources from degradation by requiring all portions of the project site that contain or influence said areas to be retained as non-disturbed natural areas through mandatory clustered development on suitable portions of the project site or other means such as density transfers if clustering cannot be achieved. The setback distance for designated or protected migration corridors shall be determined as part of the project's environmental analysis. The intent and emphasis of the Open Space land use designation and of the nondisturbance policy is to ensure continued viability of contiguous or interdependent habitat areas and the preservation of all movement corridors between related habitats. The intent of mandatory clustering is to provide a mechanism for natural resource protection while allowing appropriate development of private property. Horticultural and grazing projects on agriculturally designated lands are exempt from the restrictions placed on disturbance of natural areas when utilizing "Best Management Practices" (BMPs) recommended by the County Agricultural Commission and adopted by the Board of Supervisors when not subject to Policy 7.1.2.7.
Objective 7.4.4	Protect and conserve forest and woodland resources for their wildlife habitat, recreation, water production, domestic livestock grazing, production of a sustainable flow of wood products, and aesthetic values.
Policy 7.4.4.2	Through the review of discretionary projects, the County, consistent with any limitations imposed by State law, shall encourage the protection, planting, restoration, and regeneration of native trees in new developments and within existing communities.
Policy 7.4.4.4	For all new development projects (not including agricultural cultivation and actions pursuant to an approved Fire Safe Plan necessary to protect existing structures, both of which are exempt from this policy) that would result in soil disturbance on parcels that (1) are over an acre and have at least 1 percent total canopy cover or (2) are less than an acre and have at least 10 percent total canopy cover by woodlands habitats as defined in this General Plan and determined from base line aerial photography or by site survey performed by a qualified biologist or licensed arborist, the County shall require one of two mitigation options: (1) the project applicant shall adhere to the tree canopy retention and replacement standards; or (2) the project applicant shall contribute to the County's Integrated Natural Resources Management Plan (INRMP) conservation fund.

Table 4.3-2
El Dorado County General Plan
Goals, Objectives, Policies and Implementation Measures
With Regards to Biological Resources

Policy 7.4.4.5	Where existing individual or a group of oak trees are lost within a stand, a corridor of oak trees shall be retained that maintains continuity between all portions of the stand. The retained corridor shall have a tree density that is equal to the density of the stand.

[1] *The County is in the process of updating the biological resources policies and implementation measures in the General Plan and the Oak Resources Management Plan. These updates are in draft form and undergoing separate environmental review and, therefore, are not yet approved and adopted. The analysis in this EIR only includes currently approved and adopted county policies as it would be speculative to include policies and measures that have not been formally adopted by the County Board of Supervisors. Information about the proposed changes/updates to the biological resources policies and implementation measures can be found at: http://www.edcgov.us/Government/LongRangePlanning/Environmental/BioPolicyUpdate.aspx*

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. It should be noted that the following analysis is programmatic, and encompasses the broader scope of the CIP and TIM Fee Program Update because final designs (which also includes project components such as potential staging areas, project access, etc.) are not developed for the specific CIP improvement projects. Thus specific impacts to biological resources are unknown. Data used for this analysis include aerial photographs, topographic maps, the CNDDB, the CNPS online inventory of rare and endangered plants, and accepted scientific texts to identify species. Federal special status species inventories maintained by the USFWS were reviewed in conjunction with the CNDDB and CNPS online inventory. Other data on biological resources were collected from numerous sources, including relevant literature, maps of natural resources, and data on special status species and sensitive habitat information obtained from the CNDDB (2016), CDFW Biogeographic Information and Observation System (BIOS) (CDFW, 2016), the California Wildlife Habitat Relationships (CWHR) (CDFW, 2008), the California Native Plant Society (CNPS) online *Inventory of Rare, Threatened, and Endangered Plants of California* (2016), and the U.S. Fish and Wildlife Service (USFWS) ECOS IPaC (2016b). The USFWS Critical Habitat Mapper (2016a) and National Wetlands Inventory (NWI; 2016c) were also queried.

Evaluation Criteria. The following thresholds are based on Appendix G of the *State CEQA Guidelines*. Impacts would be significant if the CIP and TIM Fee Program Update improvement projects would result in any of the following:

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

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

3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

4. *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.*

5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

The following section presents a programmatic-level discussion of the potential for impacts to sensitive biological resources from implementation of the CIP and TIM Fee Program Update improvement. Impacts related to conflicts with an adopted Habitat Conservation Plan or Natural Community Conservation Plan are discussed in Section 4.10, *Less than Significant Environmental Factors*.

b. Project Impacts and Mitigation Measures.

Impact B-1 Implementation of transportation improvements proposed by the CIP and TIM Fee Program Update may result in impacts to special status plant and animal species. Impacts would be Class II, *significant but mitigable*.

For the purposes of this analysis, special status plant and animal species include those described under 4.3.1.c above, as well as locally important species including protected trees. Most of the traffic improvement projects (as contained in Table 2-1 in Section 2.0, *Project Description*) consist of minor expansions of existing facilities that would likely not involve construction in environmentally sensitive habitat areas. As mentioned above and presented in Appendix B, there are 165 special-status species known to occur or with potential to occur within the Western Slope region of El Dorado County. Most special-status species have very limited ranges within the subject counties and have specific habitat requirements. Special-status species may also tend to be associated with sensitive habitats, such as riparian habitats and drainages.

Because of the broad-scale nature of the CIP and TIM Fee Program Update, a precise, project-level analysis of the specific impacts of individual transportation projects on special status species is not possible at this time and the level of analysis is maintained at the entire Western Slope of El Dorado County level. That said, some special status species may be encountered at the locations where projects administered under the CIP and TIM Fee Program would occur. Thus, it is assumed that some resources will not be avoided and that potentially significant impacts would occur.

Direct impacts to special status species include injury or mortality occurring during implementation and/or operation of projects under the CIP and TIM Fee Program. Direct impacts also include habitat modification and loss such that it results in the mortality or otherwise alters the foraging and breeding behavior substantially enough to cause injury. Indirect impacts could be caused by the spread of invasive non-native species that out-compete native species and/or alter habitat towards a state that is unsuitable for special status species. For example, the spread of certain weed species can reduce the biodiversity of native habitats, potentially eliminating special status plant species and reducing the availability of suitable forage and breeding sites for special status animal species. Indirect impacts could also result from increased access by humans and domestic animals, particularly in areas where trails may

be planned. Increased human and domestic animal (especially dogs) presence foster the spread of non-native invasive plant species and disrupt the normal behaviors of animal species.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.3-3. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

B-1 (a) **Biological Resources Screening and Assessment.** Prior to final design approval of individual projects, the sponsor agency shall have a qualified biologist conduct a field reconnaissance of the environmental limits of the project in an effort to identify any biological constraints for the project, including special status plants, animals, and their habitats, as well as protected natural communities including wetland and terrestrial communities. If the biologist identifies protected biological resources within the limits of the project, the sponsor agency shall first prepare alternative designs that seek to avoid and/or minimize impacts to the biological resources. If the project cannot be designed without complete avoidance, the sponsor agency shall coordinate with the appropriate regulatory agency (i.e. USFWS, NMFS, CDFW, USACE) to obtain regulatory permits and implement project - specific mitigation prior to any construction activities. If restoration is necessary to mitigate impacts, sensitive plants and habitat, impacts should be mitigated at a minimum ratio of 1:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration and a restoration plan shall be prepared and submitted to the jurisdiction overseeing the project for approval.

B-1(b) **Non-Listed Special Status Animal Species Avoidance and Minimization**. Depending on the species identified in the BRA (under Mitigation Measure B-1(a)), measures shall be selected from among the following to reduce the potential for impacts to non-listed special status animal species that may be discovered during construction activity:

- For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction and if species are collected, relocation of the species to suitable site shall be completed.
- Pre-construction clearance surveys shall be conducted prior to start of construction (including staging and mobilization). If necessary, all non-listed special-status species shall be relocated from the site either through direct capture or

through passive exclusion (e.g., American badger). A report of the pre-construction survey shall be submitted to the lead agency for their review and approval prior to the start of construction.

- A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities.
- Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.

Significance After Mitigation. Mitigation measures B-1(a) and B-1(b) would assure that impacts to special status species would be less than significant because the measures require that specific analyses and studies are performed to identify and evaluate project impacts to special status species potentially affected by traffic improvement projects implemented under the CIP and TIM Fee Program Update. Compliance with the above mitigation measures and all existing state, local and/or federal regulations would reduce impacts to a less than significant level. It should be noted that reliance on independent agency regulatory review and/or permitting is permissible mitigation (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214,243*: Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899,945-946).

Impact B-2 Implementation of transportation improvements proposed by the CIP and TIM Fee Program Update may result in impacts to sensitive habitats, including federally protected wetlands. This impact would be Class II, *significant but mitigable*.

Because of the programmatic nature of the CIP and TIM Fee Program Update, a precise, project-level analysis of the specific impacts associated with individual transportation projects on sensitive habitats is not possible at this time. However, traffic improvement projects implemented under the CIP and TIM Fee Program Update (as listed in Table 2-1 in Section 2.0, Project Description) may have the potential to impact sensitive habitats. The extent and severity of the impacts is not known at this time, but some examples of potential impacts include, but are not limited to, construction and reconstruction/maintenance of bridges. These types of projects would have potential to impact riparian areas, as well as water bodies.

In addition, projects in the vicinity of rivers and creeks may involve development along riparian corridors. Riparian areas provide wildlife habitat, and movement corridors, enabling both terrestrial and aquatic organisms to move along river systems between areas of suitable habitat. Construction of the proposed facilities could have both direct impacts associated with the disturbance of riparian flora and fauna and indirect impacts caused by increased erosion and sedimentation. This could adversely affect downstream water quality.

Direct impacts to sensitive habitats include loss of habitat during construction of the project. Indirect impacts include habitat degradation caused by the introduction of invasive plant

species incidentally from construction equipment and through selection of invasive landscape plants, as well as erosion of disturbed areas.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.3-3. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

B-2(a) **Jurisdictional Delineation**. Prior to approval of individual projects, the sponsor agency shall retain a qualified biologist to perform an assessment of the project area to identify wetlands, riparian, and other sensitive aquatic environments. If wetlands are present the qualified biologist shall perform a wetland delineation following the 1987 Army Corps of Engineers Wetlands Delineation Manual and any current and applicable regional supplements to the Delineation Manual. The wetland delineation shall be submitted to the USACE for verification.

B-2(b) **Wetlands, Riparian, or Other Sensitive Aquatic Environments**. If wetlands, riparian, or other sensitive aquatic environments are found within the project limits, the sponsor agency shall design or modify the project to avoid direct and indirect impacts on these habitats, if feasible. Additionally, the sponsor agency shall minimize the loss of riparian vegetation by trimming rather than removal where feasible. Techniques to avoid impacts to environmentally sensitive areas should include the use of orange construction barrier fencing and temporary fencing to identify environmentally sensitive areas and stabilizing exposed soils/slopes after construction activity with erosion control treatments.

B-2(c) **Restoration of Habitat**. If wetlands or riparian habitat are disturbed as part of an individual project, the sponsor agency shall compensate for the disturbance to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site -specific information and determined through coordination with state, federal, and local agencies as part of the permitting process for the project. The sponsor agency shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created and monitored over a minimum period of time.

Significance After Mitigation. Mitigation measures B-2(a) through (c) would assure that substantial adverse changes to wetland resources would be less than significant because measures would be taken to either avoid the impacts or minimize the impacts. Compliance with

the above mitigation measures and existing state, local and/or federal regulations would reduce impacts to a less than significant level. It should be noted that reliance on independent agency regulatory review and/or permitting is permissible mitigation (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214,243*: Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899,945-946).

Impact B-3 **Implementation of transportation improvements proposed by the CIP and TIM Fee Program Update may impact wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This impact would be Class II, *significant but mitigable*.**

Because of the programmatic nature of the CIP and TIM Fee Program Update, a precise, project-level analysis of the specific impacts of individual transportation projects on wildlife movement and nurseries is not possible at this time. In general, the traffic improvement projects envisioned in the CIP and TIM Fee Program Update involve expansion of existing facilities in urbanized or already developed areas, rather than the construction of new or extension of existing infrastructure into undeveloped portions of the county.

Direct impacts to wildlife include increased noise and human presence during construction, as well as increased trash that may attract predators to the project site and discourage wildlife use of surrounding natural habitat. Indirect impacts include invasion of natural habitats by non-native species and increased presence of humans and domestic animals over the long-term. In addition, transportation improvement projects could include new segments of fencing or walls that could hinder wildlife movement. Projects with potential to be located within waterways such as bridge replacement projects would have potential to hinder fish passage depending upon the design of the bridge and its components as well as depending upon the methods utilized for construction within creeks and rivers. For instance, if dewatering of project areas within creeks and rivers is necessary, fish passage could temporarily be disrupted.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.3-3. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measure, or one of equal or greater efficacy:

B-3 **Design Measures**. Prior to design approval of individual projects that contain movement habitat such as the use of long segments of fencing and lighting, the sponsor agency shall incorporate economically viable design measures, as applicable and necessary and as determined by a qualified biologist, to allow wildlife or fish to move through the transportation corridor, both during construction activities and post construction. Such measures may include appropriately spaced breaks in a center barrier, the use of hoods to direct light away from natural habitat, using low intensity lighting, or other measures that are designed to allow wildlife to move through the transportation corridor. If the project

cannot be designed with these design measures (i.e. due to traffic safety, etc.) the sponsor agency shall coordinate with the appropriate regulatory agency (i.e. USFWS, NMFS, CDFW) to obtain regulatory permits and implement alternative project-specific mitigation prior to any construction activities.

Significance after Mitigation. With implementation of the above mitigation measure, and adherence to existing State, local and/or federal regulations, potential impacts to wildlife movement and nursery sites would be reduced to a less than significant level. It should be noted that reliance on independent agency regulatory review and/or permitting is permissible mitigation (*Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App.4th 214,243*: Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899,945-946).

c. Specific CIP and TIM Fee Projects That May Result in Impacts. Table 4.3-3 identifies those projects that may create biological resource impacts, as discussed in Section 4.3.2.b. Because of the programmatic nature of the CIP and TIM Fee Program Update, specific impacts to biological resources are not known at this time. The impacts for the individual projects listed below are those that have potential to occur given this level of analysis. Additional specific analyses will need to be conducted as the individual projects are implemented and final designs completed in order to determine the actual magnitude of impact, if any. Implementation of Mitigation Measure B-1 would confirm the impacts listed below for each individual project based on final design and conditions on site at the time of project implementation. Upon implementation of mitigation measure B-1, a given project may be determined to not necessarily have impacts on biological resources. As such, mitigation measures discussed above could apply to these specific projects.

Table 4.3-3
CIP and TIM Fee Program Update Projects
that May Result in Biological Resources Impacts

Project Name	Project ID	Project	Impact	Description of Potential Impact
Ice House Road	77131	Ice House Road at Jones Fork Silver Creek - Bridge Maintenance Project	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Ice House Road Rehab Phase 2	72191	Ice House Road Rehab Phase 2	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Headington Road Extension	71375	2-lane extension between El Dorado Road and Missouri Flat Road	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Country Club Drive	71360	2-lane from Bass Lake Road to Tierre de Dios Drive	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors

Table 4.3-3
CIP and TIM Fee Program Update Projects
that May Result in Biological Resources Impacts

Project Name	Project ID	Project	Impact	Description of Potential Impact
Country Club Drive	71361	2-lane from Tong Road to Bass Lake Road	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Country Club Drive	71362	2 lane from Silva Valley Parkway to Tong Road.	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Saratoga Way	71324/ GP147	4-lane from Iron Point Road to El Dorado Hills Boulevard	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Latrobe Road Connection	66116	2 lane connection between White Rock Road and Golden Foothill Parkway/Latrobe Road	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
New York Creek Trail East	72308	Phase 2 construct trail with El Dorado Hill CSD	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Bucks Bar Road at North Fork Cosumnes	77116	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Green Valley Road at Indian Creek	77127	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Green Valley Road at Mound Springs Creek	77136	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Greenstone Road at Slate Creek	77137	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Hanks Exchange at Squaw Hollow Creek	77135	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Mount Murphy Road at South Fork American River	77129	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors

Table 4.3-3
CIP and TIM Fee Program Update Projects
that May Result in Biological Resources Impacts

Project Name	Project ID	Project	Impact	Description of Potential Impact
Newtown Road at South Fork Weber Creek	77122	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors
Oak Hill Road at Squaw Hallow Creek	77134	Bridge Replacement	B-1, B-2, B-3	Direct and indirect impacts to special-status species, sensitive habitats including wetlands, and breeding/nursery habitat or migratory/dispersal corridors

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4.4 CULTURAL RESOURCES

4.4.1 Setting

a. **Prehistoric Background.** The Western Slope of El Dorado County is located on the western slope and foothills of the Sierra Nevada Mountains. Canyons of the Middle Fork and South Fork of the American River and the Cosumnes River and their tributaries are also prevalent, as are intermountain valleys. This ecological diversity and abundance of fresh water allowed the area to support diverse prehistoric peoples. Evidence suggests Native American inhabitation of the county dates to as early as 10,000 to 12,000 years ago. However, the best documented evidence for human occupation in the general region is found among sites dating between 4,750 and 2,500 years before present. These sites often contain mortar fragments indicating the importance of acorns and other seeds as a food source. Angling hooks and pottery artifacts also indicate a varied and efficient subsistence system. Additionally, obsidian, shell beads and ornaments, quartz crystals and other exotic materials often found suggest a great deal of trade was taking place. First appearing in the archaeological record around 1,400 years before present and extending to proto-historic times, there are indications that intensive fishing, hunting and acorn gathering supported large, dense populations. Prehistoric artifacts, features and sites are found throughout the county, although larger sites and more dense midden and artifact deposits tend to occur at lower elevations in the Sierra foothills (El Dorado County, 2003).

Before the arrival of large numbers of people of European descent beginning in the mid-19th century, three main groups of Native Americans inhabited El Dorado County. The Nisenan (Southern Maidu) occupied the northern portion of the county in an area stretching from the current Folsom Reservoir to just west of Lake Tahoe and about as far south as several miles south of present-day U.S. Highway 50. Eastern Miwok peoples lived in a region generally south of U.S. 50, stretching from near Latrobe in the west to the vicinity of Strawberry in the east. The higher elevation areas to the west and south of Lake Tahoe were occupied by the Washoe people (El Dorado County, 2003). Culturally, the Nisenan and Miwok possessed a wide range of political, economic, and technological systems that clearly differentiated the two groups. However, they shared many basic traits with one another, particularly in terms of settlement and subsistence patterns. The Washoe adopted somewhat different economic, subsistence, settlement, and technological systems, largely because they inhabited ecological zones so different from much of the Nisenan and Miwok. For example, while the Nisenan and Miwok relied heavily on the acorn as a staple food, the Washoe exploited a wide variety of flora including camas bulbs, bitterroot, tule, cattail, wild rye, and pine nuts (El Dorado County, 2003).

b. Historic Background. Before the discovery of gold in Coloma in 1848 Euroamerican explorations and incursions were taking place in the El Dorado County area, however, the discovery marked the start of the intensive immigration to the region. Early mining camps were almost exclusively temporary settlements consisting only of tents and portable structures. Soon large centers such as Placerville, El Dorado and Diamond Springs developed into permanent towns with schools, stores, homes, substantial homes and formal roadways. These continue to serve as the economic and cultural centers in the county. Evidence of more than a century of placer and hard rock mining can include tailing piles, ditches, dams, prospect pits, mine shafts, roads, rail grades, mills, etc., and can be found throughout the county. In addition to the

physical remains of its Gold Rush history, county place names such China Diggins', Irish Creek, Frenchtown, Negro Hill, New York Creek, and Chili Bar reflect the influence of the wide range of ethnic groups and immigrant populations that contributed to the cultural foundations of the region (El Dorado County, 2003).

While gold mining was the primary economic pursuit of the 1840s and 1850s, many immigrants soon began to seek out other enterprises such as logging, farming and ranching. Many of these pursuits initially focused on supporting the mining industry. However, as the most easily exploited gold deposits began to play out, ranching, agriculture and especially logging developed into a stable and widespread economy. As timber harvesting became more widespread and industrialized through the 19th century it brought with it more substantial logging related sites including lag chutes, mills and narrow gauge rail grades such as the Camino Michigan-California line, the Diamond Caldor Line and the Camino, Placerville and Lake Tahoe line.

With the increasing popularity of Lake Tahoe as a recreational destination and the formation of the Eldorado National Forest in 1910, the lesser known routes such as the Mormon Emigrant Trail, the Carson Emigrant Trail and the Pony Express Trail evolved into more developed roadways. Small settlements such as Kyburz and Strawberry sprang up to serve the new and growing flow of travelers. Some buildings in these towns and the roadways represent some of the more prominent transportation related cultural resources in the county.

c. Paleontological Resources Background. Paleontological resources, also known as fossils, are the remains, traces or imprints of once living organisms preserved in rocks or sediment. Paleontological resources are commonly found in sedimentary rock units. Paleontological sites are normally discovered in cliffs, ledges, steep gullies, or along wave-cut terraces where vertical rock sections are exposed. Fossil material may be exposed by a trench, ditch, or channel caused by construction.

Paleontologists examine invertebrate fossil sites differently than vertebrate fossil sites. Invertebrate fossils in microscopic form such as diatoms, foraminifera, and radiolarians can be so prolific as to constitute major rock material in some areas. Invertebrate fossils normally are marine in origin, widespread, abundant, fairly well preserved, and predictable as to fossil sites. Therefore, the same or similar fossils can be located at any number of sites throughout northern California.

d. Existing Cultural and Historic Resources. Information was obtained from the State Office of Historic Preservation and the El Dorado County General Plan (El Dorado County, 2003) to compile a listing of recognized significant resources. The statewide Historical Resources Inventory (HRI) is not available for public review according to the *California Historical Information System Information Center Rules of Operation Manual* (Section III.A). The HRI would be consulted after the determination of the project area under project-level analysis of CIP and TIM Fee transportation projects.

Table 4.4-1 presents sites of designated historical resources in El Dorado County. Included in the table are sites listed on the National Register of Historic Places (NRHP), sites designated as California State Historic Landmarks, and those that are considered points of historic interest by

the State. Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, the resources listed in the following table include primarily those whose locations are available to the general public.

Table 4.4-1
El Dorado County Historic Resources

Resource Name	Location	National Register	State Landmark	Point of Historic Interest
Baldwin Estate	South Lake Tahoe	X		
Bayle Hotel	Pilot Hill	X		
Coloma Road (Coloma)	Coloma		X	
Coloma Road (Rescue)	Rescue		X	
Combellack Blair House	Placerville	X		
Condemned Bar	Folsom		X	
Confidence Hall	Placerville	X		
Crawford Ditch	Pleasant Valley	X		
Diamond Springs	Diamond Springs		X	
Eddy Tree Breeding Station	Placerville	X		
El Dorado (Mud Springs)	El Dorado		X	
El Dorado-Nevada House Pony Express Route	El Dorado		X	
Episcopal Church of our Savior	Placerville	X		
Fountain-Tallman Soda Works	Placerville	X		
Friday's Station Pony Express Route			X	
Georgetown	Georgetown		X	
Gold Discovery Site	Coloma		X	
Greenwood	Greenwood		X	
Hangman's Tree	Placerville		X	
Hattie Mines and Stampmill, Hangtown's Gold Bug	Placerville			X
Hattie, Priest and Silver Pine Mines and Stampmill	Placerville	X		
Heller Estate	South Lake Tahoe	X		
Hoboken House	Georgetown	X		X
Lombardo Ranch	Placerville		X	
Marshal Monument	Coloma		X	
Marshall's Blacksmith Shop	Kelsey		X	
Methodist Episcopal Church	Placerville			X
Methodist Episcopal/ Episcopal Church of our Savior	Placerville		X	
Moore's Pony Express Route	Kyburz		X	
Mormon Island	Folsom		X	
Mormon Tavern Pony Express Route	Clarksville		X	
Negro Hill	Folsom			X
Newhall Estate Entrance Pillars	South Lake Tahoe		X	
Old Dry Diggins Old Hangtown Placerville	Placerville	X		X

Table 4.4-1
El Dorado County Historic Resources

Resource Name	Location	National Register	State Landmark	Point of Historic Interest
Pearson's Soda Works	Placerville		X	
Placerville Pony Express Route	Placerville		X	
Pleasant Grove House Pony Express Route	Rescue		X	
Pope Estate	South Lake Tahoe	X		
Salmon Falls	Folsom		X	
Shingle Springs	Shingle Springe		X	
Site of California's First Grange Hall	Pilot Hill		X	
Smith Flat House	Placerville			X
Spanish Hill Mine Complex	Placerville			X
Sportsman's Hall Pony Express Route	Cedar Grove		X	
Stable Building	Placerville			X
Strawberry Valley House Pony Express Route	Kyburz		X	
Studebaker's Shop	Placerville		X	
Sugar Pine Point State Park	Homewood	X		
Tahoe Meadows	South Lake Tahoe	X		
Tragedy Springs	Eldorado National Forest			X
Vikingsholm	South Lake Tahoe	X		
Wakamatsu Tea and Silk Farm Colony	Gold Hill		X	
Webster's Pony Express Route	Kyburz		X	
Willow School	Somerset			X
Yank's Station Pony Express Route	Meyers		X	

Source: California State Parks Office of Historic Preservation.
http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=9

Table 4.4-2 lists in-service bridges in the Caltrans Bridge Inventory including some previously determined eligible for NRHP listing, as well as others that require evaluation.

Table 4.4-2
Caltrans Historic Bridge Inventory

Bridge Number	Bridge Name	Location	Historical Significance	Year Built
LOCAL AGENCY BRIDGES				
25C0004	South Fork American River	0.1 Mi E of SR 49	2. Bridge is eligible for NRHP	1915
25C0025	Camp Creek	0.5 MI SE MT Akum Rd	2. Bridge is eligible for NRHP	1930
25C0092	EID Canal	0.8 MI SE of SR 50	4. Significance not determined	1940
25C0099	Rock Creek	5.5 MI NE of SR 193	2. Bridge is eligible for NRHP	1936
25C0116	Weber Creek	1.1 MI N/E Missouri Flat	2. Bridge is eligible for NRHP	1935
STATE AGENCY BRIDGES				
25 0033	South Fork American River	03-ED-193-R24.65	4. Significance Not Determined	1994
25 0039	Oglesby Canyon	03-ED-050-37.33	4. Significance Not Determined	1934
25 0045	Eagle Creek	03-ED-089-17.13	4. Significance Not Determined	1939
25 0152	Blue Tent Creek	03-ED-049-28.90	4. Significance Not Determined	1985

Source: Caltrans Historic Bridge Inventory website, (Caltrans, 2015).
Historic significance designations: *1 – Listed on the National Register of Historic Places.*
2 – Eligible for National Register listing.
3 – May be eligible for National Register listing.
4 – Unevaluated. (Generally, Category 4 bridges constructed before 1960 are associated with properties that have not yet been evaluated, such as railroads, canals, or potentially eligible historic roads.)
5 – Ineligible for National Register listing

e. Regulatory Setting.

Federal.

National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. §§ 470 et seq.). NHPA is a federal law created to avoid unnecessary harm to historic properties. The NHPA includes regulations that apply specifically to federal land-holding agencies, but also includes regulations (Section 106) that pertain to all projects funded, permitted, or approved by any federal agency that have the potential to affect cultural resources. Provisions of NHPA establish a National Register of Historic Places (the NRHP is maintained by the National Park Service), the Advisory Council on Historic Preservation, State Historic Preservation Office (SHPO), and federal grants-in-aid programs.

American Indian Religious Freedom Act of 1978 (42 U.S.C. §§ 1996 and 1996a). The American Indian Religious Freedom Act of 1978 and Native American Graves and Repatriation Act of 1990 (25 U.S.C. §§ 3001 et seq.) establish that traditional religious practices and beliefs, sacred sites, and the use of sacred objects shall be protected and preserved.

Secretary of the Interior's Standards. The Secretary of the Interior is responsible for establishing professional standards and providing guidance related to the preservation and protection of all cultural resources listed in or eligible for listing in the NRHP.

State.

California Register of Historical Resources. The California Register of Historical Resources (California Register) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The California Register helps government agencies identify, evaluate, and protect California's historical resources, and indicates which properties are to be protected from substantial adverse change (Pub. Resources Code, Section 5024.1(a)). The California Register is administered through the State Office of Historic Preservation (SHPO) that is part of the California State Parks system.

A cultural resource is evaluated under four California Register criteria to determine its historical significance. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria set forth in the *State CEQA Guidelines* at Section 15064.5(a)(3):

1) *It is associated with events that have made a significant contribution to the broad pattern of California's history and cultural heritage;*
2) *It is associated with the lives of persons important in our past;*
3) *It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or*
4) *It has yielded, or may be likely to yield, information important in prehistory or history.*

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource according to SHPO publications. The California Register also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association." Archaeological resources can sometimes qualify as "historical resources" [*State CEQA Guidelines*, Section 15064.5(c)(1)].

Two other programs are administered by the state: California Historical Landmarks and California "Points of Historical Interest." California Historical Landmarks are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value. California Points of Historical Interest are buildings, sites, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value.

Native American Consultation. Prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, Government Code Sections 65351, 65352.3 and 65352.4 (implemented under Senate Bill (SB) 18 of 2004) require a city or county to consult with local Native American tribes that are on the contact list maintained by the Native American Heritage Commission. The purpose is to preserve or mitigate impacts to places, features, and objects

described in Public Resources Code Sections 5097.9 and 5097.993 (Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property) that are located within a city's or county's jurisdiction. The proposed project requires a general plan amendment; therefore the County of El Dorado has initiated consultation by mailing letters to Native American groups/individuals listed by the Native American Heritage Commission in accordance with applicable law.

In addition, under Assembly Bill 52 of 2014 (AB 52), a lead agency must consult with a California tribe "that is traditionally and culturally affiliated with the geographic area of the proposed project" where the tribe has requested that it be given notice of projects in that area. AB 52 also expands the scope of cultural resources to include "tribal cultural resources." Thus, projects that "may cause a substantial adverse change in the significance of a tribal cultural resource… may have a significant effect on the environment." (Pub. Resources Code, § 21084.2. See also Pub. Resources Code, §§ 21074, 21080.3.1, 21080.3.2, 21082.3, 21084.3.)[1] Tribal consultation has occurred consistent with SB 18 and AB 52 for this project and began during the NOP Scoping Process. The County received correspondence from the Native American Heritage Commission and has set up to meet with the Shingle Springs Band of Miwok Indians and the Wilton Rancheria who requested consultation.

Human Remains. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. *CEQA Guidelines* Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

Public Resources Code Section 5097.5. California Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

California Environmental Quality Act (CEQA). The *State CEQA Guidelines* Section 15064.5 definition of a "historical resource" is presented in Section 4.5.3(a) (Methodology and Significance Thresholds) below. CEQA requires that historical resources and unique

[1] *Note, however, that thresholds of significance for this new standard are not due to be promulgated in Appendix G of the Guidelines until July 1, 2016. (Pub. Resources Code, § 21083.09.)*

archaeological resources be taken into consideration during the CEQA review process (Public Resources Code, Section 21083.2). If feasible, adverse effects to the significance of historical resources must be avoided, or significant effects mitigated [*CEQA Guidelines* Section 15064.5(b)(4)].

If the cultural resource in question is an archaeological resource, *CEQA Guidelines* Section 15064.5(c)(1) requires that the lead agency first determine if the resource is a historical resource as defined in Section 15064.5(a). If the resource qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (California Office of Historic Preservation 2001a:5). If the archaeological resource does not qualify as a historical resource but does qualify as a "unique archaeological resource," then the archaeological resource is treated in accordance with Public Resources Code Section 21083.2 [see also *CEQA Guidelines* Section 15069.5(c)(3)]. "Unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.*
- *Has a special and particular quality such as being the oldest of its type or the best available example of its type.*
- *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

Treatment options under Public Resources Code Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource").

Local.

2004 County General Plan. The 2004 General Plan Conservation and Open Space Element provides the following goals, policies and objectives pertaining to cultural resources applicable to this project.

Table 4.4-3
Local General Plan Goals, Objectives, Policies and Implementation Measures

El Dorado County	
Goal 7.5	Ensure the preservation of the County's important cultural resources
Objective 7.5.1	Creation of an identification and preservation program for the County's cultural resources.
Policy 7.5.1.3	Cultural resource studies (historic, prehistoric, and paleontological resources) shall be conducted prior to approval of discretionary projects. Studies may include, but are not limited to, record searches through the North Central Information Center at California State University, Sacramento, the Museum of Paleontology, University of California, Berkeley, field surveys, subsurface testing, and/or salvage excavations. The avoidance and protection of sites shall be encouraged.

Table 4.4-3
Local General Plan Goals, Objectives, Policies and Implementation Measures

Policy 7.5.1.6	The County shall treat any significant cultural resources (i.e., those determined California Register of Historical Resources/National Register of Historic Places eligible and unique paleontological resources), documented as a result of a conformity review for ministerial development, in accordance with CEQA standards.
Objective 7.5.2	Maintenance of the visual integrity of historic resources.
Policy 7.5.2.1	Create Historic Design Control Districts for areas, places, sites, structures, or uses which have special historic significance.
Policy 7.5.2.3	New buildings and reconstruction in historic communities shall generally conform to the types of architecture prevalent in the gold mining areas of California during the period 1850 to 1910.
Policy 7.5.2.5	In cases where the County permits the demolition or alteration of an historic building, such alteration or new construction (subsequent to demolition) shall be required to maintain the character of the historic building or replicate its historic features.
Policy 7.5.2.6	The County, in cooperation with the State, shall identify the viewshed of Coloma State Park and establish guidelines to be used for development within the viewshed. In addition, the County shall continue to support the relocation of State Route 49 to bypass the Park in order to protect its visual and physical integrity.
Objective 7.5.3	Recognition of the value of the County's prehistoric and historic resources to residents, tourists, and the economy of the County, and promotion of public access and enjoyment of prehistoric and historic resources where appropriate.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. According to Appendix G of the *State CEQA Guidelines*, impacts related to cultural resources from the proposed project would be significant if the project would:

1) *Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5;*

2) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;*

3) *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature of paleontological or cultural value;*

4) *Disturb any human remains, including those interred outside of formal cemeteries*

The significance of a cultural resource and subsequently the significance of any impact is determined by among other things, consideration of whether or not that resource can increase our knowledge of the past. The determining factors are site content and degree of preservation. A finding of archaeological significance follows the criteria established in the *State CEQA Guidelines*.

CEQA Guidelines Section 15064.5 (Determining the Significance of Impacts to Archaeological Resources) states:

> *(3) […] Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852) including the following:*
>
> *(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;*
>
> *(B) Is associated with the lives of persons important in our past;*
>
> *(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or*
>
> *(D) Has yielded, or may be likely to yield, information important in prehistory or history.*
>
> *(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.*
>
> *(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.*

Historical resources are "significantly" affected if there is demolition, destruction, relocation, or alteration of the resource or its surroundings. Generally, impacts to historical resources can be mitigated to below a level of significance by following the Secretary of the Interior's *Guidelines for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* [Guidelines § 15064.6(b)]. In some circumstances, documentation of an historical resource by way of historic narrative photographs or architectural drawings will not mitigate the impact of demolition below the level of significance [Guidelines § 15126.4(b)(3)]. Preservation in place is the preferred form of mitigation for a "historical resource of an archaeological nature" as it retains the relationship between artifact and context, and may avoid conflicts with groups associated with the site [Guidelines § 15126.4 (b)(3)(A)]. Historic resources of an archaeological nature and "unique archaeological resources" can be mitigated to below a level of significance by:

- *Relocating construction areas such that the site is avoided;*
- *Incorporation of sites within parks, greenspace, or other open space;*
- *"Capping" or covering the site with a layer of chemically stable soil before building; or*
- *Deeding the site into a permanent conservation easement. [Guidelines § 15126.4 (b)(3)(B)]*

If an archaeological resource does not meet either the historic resource or the more specific "unique archaeological resource" definition, impacts do not need to be mitigated [Guidelines § 15064.5(e)]. Where the significance of a site is unknown, it is presumed to be significant for the purpose of the EIR investigation.

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with the projects anticipated under the CIP and TIM Fee Program Update. Table 4.4-4 in Section 4.4.2.c. summarizes specific CIP and TIM Fee Program Update projects that could result in the types of impacts discussed below.

Impact CR-1 Implementation of proposed transportation improvements under the CIP and TIM Fee Program Update could disturb known and unknown cultural resources. Impacts to archaeological and paleontological resources would be Class II, *significant but mitigable* and impacts to historical resources would be Class I, *significant and unavoidable.*

Archaeological and Paleontological Resources. It is known that paleontological resources and archaeological resources are present throughout El Dorado County. Therefore, it is possible to encounter known and unknown archaeological and paleontological resources or unique geologic features as a result of implementation of transportation improvement projects pursuant to the CIP and TIM Fee Program. Many of the traffic improvements consist of expansions of existing facilities that would not involve construction in previously undisturbed areas. However, depending on the location and extent of the improvement and ground disturbance, known and/or unknown cultural resources could be impacted. Representative projects that may disrupt previously undisturbed areas are listed in Table 4.4-4. The projects listed in this table were chosen based on potential to include new infrastructure. It is possible that some of the proposed roadway or bridge widening or extension projects, beyond those listed in Table 4.4-4, would adversely impact archaeological and paleontological resources. In particular, construction activities may disturb the resources, thereby exposing them to potential vandalism, or causing them to be displaced from the original context and integrity. Specific analysis will be required as individual projects are implemented. Impacts to cultural resources would be potentially significant.

Historic Resources. With regard to known significant historic resources, the location and nature of the proposed CIP and TIM Fee Program Update projects listed in Section 2.0 *Project Description* were evaluated relative to the location of the historic properties listed in tables 4.4-1 and 4.4-2. It has been determined that none of the proposed improvement projects would affect any Nationally registered resources, California Historical Landmarks, or Points of Historic Interest. In each case, the proposed improvements are not located adjacent to a designated historic resource. However, bridge replacement projects proposed under the CIP and TIM Fee Program Update could potentially cause adverse change to historic bridges listed in the Caltrans Historic Bridge Inventory. Bridge repair or replacement could result in the permanent loss of historic structures. Similarly, while proposed transportation projects would not impact known historic structures, projects included in the 2016 CIP and TIM Fee Program Update listed in Table 4.4-4 would involve reconstruction or demolition of transportation infrastructure or other structures that are over 50 years old (such as Caltrans historic bridges as listed in Table 4.4-3 and eligible historic structures), and which may be considered historically significant as determined by site-specific evaluation. Such reconstruction or demolition could result in the permanent loss of historic structures. Impacts would be potentially significant.

In conclusion, the nature of potential impacts to archaeological and paleontological resources cannot be fully evaluated at this point since the specific project site for each improvement project has not yet been defined. However, many of the projects included in the CIP and TIM Fee Program Update will require an independent review at which time the significance of the impact can be precisely determined. As discussed above, the proposed transportation improvements included in the CIP and TIM Fee Program Update may impact known and/or

unknown cultural resources. Impacts to archaeological and paleontological resources would be potentially significant.

As discussed above, impacts to historic resources would be potentially significant because future transportation improvements could directly or indirectly impact historic structures. The nature of potential impacts cannot be fully evaluated at this point because the precise characteristics of future infill are not known. Nonetheless, the potential for historic structures to be impacted remains.

Mitigation Measures. In general, prior to commencement of any action, development on lands subject to federal jurisdiction or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared. Historic resources are also protected under the regulations of the National Historic Preservation Act and the Department of Transportation Act of 1966. County sponsored projects would be subject to the most current (at the time of project approval) local ordinance requirements, including General Plan provisions that protect cultural resources. In order to provide protection of cultural resources, the lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.4-4. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

CR-1(a) Improvement projects involving earth disturbance, the installation of pole signage or lighting, or construction of permanent above ground structures or roadways shall ensure that the following elements are included in the project's individual environmental review:

1. Prior to construction, a map defining the project site shall be prepared on a project by project basis for improvements which involve earth disturbance, the installation of pole signage or lighting, or construction of permanent above ground structures. This map will indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known archaeological, paleontological or historical resources are located within the impact zone.
2. A preliminary study of each project area, as defined in the Area of Potential Effects (APE), shall be completed to determine whether or not the project area has been studied under an earlier investigation, and to determine the impacts of the previous project.
3. If the results of the preliminary studies indicate additional studies are necessary; development of field studies and/or other documentary research shall be developed and completed (Phase I studies). Negative results would result in no additional studies for the project area.

4. Based on positive results of the Phase I studies, an evaluation of identified resources shall be completed to determine the potential eligibility/ significance of the resources (Phase II studies).
5. Based on the evaluations of the Phase II studies, if necessary Phase II mitigation studies shall be coordinated with the Office of Historic Preservation (OHP), as the research design will require review and approval from the OHP. In the case of prehistoric or Native American related resources, the Native American Heritage Commission and/or local representatives of the Native American population shall be contacted and permitted to respond to the testing/mitigation programs.

CR-1(b) If development of the proposed improvement requires the presence of an archaeological, Native American, or paleontological monitor, the County shall ensure that a Native American monitor, certified archaeologist, and/or certified paleontologist, as applicable, has an opportunity to monitor the grading and/or other initial ground altering activities. The schedule and extent of the monitoring will depend on the grading schedule and/or extent of the ground alterations. This requirement can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review.

CR-1(c) The project sponsor shall ensure that materials recovered over the course of any given improvement are adequately cleaned, labeled, and curated at a recognized repository. This requirement can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review.

CR-1(d) The project sponsor shall ensure that mitigation for potential impacts to significant cultural resources includes one or more of the following:

- Realign the project right-of-way (avoidance; the most preferable method).
- Cap the site and leave it undisturbed.
- Address structural remains with respect to the most current (at the time of project approval) National Register of Historic Places (NRHP) guidelines (Phase III studies).
- Relocate structures per current (at the time of project approval) NRHP guidelines.
- Create interpretative facilities at the site.
- Develop measures to prevent vandalism.

These measures can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review.

CR-1(e) The project sponsor shall ensure that mitigation for potential impacts to significant historical structures examine preservation alternatives designed to prevent impacts such as adjacent construction and or rehabilitation.

Significance After Mitigation. Implementation of the above measures would reduce potential impacts to archaeological and paleontological resources to a less than significant level because measures would be taken to either avoid the impacts, minimize the impacts, or recover the resources. However, impacts related to historic structures would remain significant and unavoidable (Class I) because transportation projects may result in the permanent loss of historic structures.

Impact CR-2 Implementation of proposed transportation improvements could disturb unknown human remains during construction activity. Impacts would be Class II, *significant but mitigable*

Indications are that humans have occupied El Dorado County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during project implementation. Construction activity associated with the transportation improvements envisioned by the CIP and TIM Fee Program Update would primarily be within existing right of ways (ROW). However, implementation of projects such as roadway widenings and extensions may result in the discovery of human remains. Therefore, impacts are potentially significant.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.4-4. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measure, or one of equal or greater efficacy:

CR-2 **Implement Stop-Work and Consultation Procedures Mandated by Public Resources Code 5097**. In the event of discovery or recognition of any human remains during construction or excavation activities, the sponsor agency shall cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the following steps are taken:

- The El Dorado County Coroner has been informed and has determined that no investigation of the cause of death is required.

- If the remains are of Native American origin, the following steps will be taken:

  - The coroner will contact the Native American Heritage Commission who will assign a Most Likely Descendant (MLD). The coroner will make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.

  - The sponsor agency or its authorized representative will retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:

    - The Native American Heritage Commission is unable to identify a MLD.

    - The MLD identified fails to make a recommendation.

    - The sponsor agency or its authorized representative rejects the recommendation of the MLD, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Significance After Mitigation. Implementation of the above measure would reduce potential impacts to disturbance of unknown human remains to a less than significant level.

c. Specific 2015 RTP Projects That May Result in Impacts. Table 4.4-4 identifies representative projects with the potential to cause or contribute to direct or indirect impacts to cultural resources such as those discussed in Section 4.4.2.b above. These projects were chosen based on their scope and potential to include the development of new transportation infrastructure. While many projects have the potential to impact cultural resources, those requiring substantial ground disturbance in undisturbed areas have greater potential to impact prehistoric archaeological resources. Projects located in urban infill or previously disturbed areas have a greater potential to impact historic built environment resources, as well as historic archaeological resources in older developed areas. Additional specific analysis will be required

as individual projects are implemented to determine the actual magnitude of impact. Mitigation measures discussed above would apply to these specific projects.

Table 4.4-4
CIP and TIM Fee Program Update
Projects that May Result in Cultural Resources Impacts

Project Name	Project ID	Project	Description of Potential Impact
Mount Murphy Road	77129	Mount Murphy Road at South Fork American River Bridge Replacement	CR-1 Cause a substantial adverse change to a historical resource.
Happy Valley Cutoff at Camp Creek	77140	Happy Valley Cutoff at Camp Creek Bridge Replacement	CR-1 Cause a substantial adverse change to a historical resource.
Hazel Valley Road at EID Canal	77125	Hazel Valley Road at EID Canal Bridge Replacement	CR-1 Cause a substantial adverse change to a historical resource.
Green Valley Road At Weber Creek	77114	Green Valley Road at Weber Creek Bridge Replacement	CR-1 Cause a substantial adverse change to a historical resource.
Newton Road at South Fork of Weber Creek	77122	Newton Road at South Fork of Weber Creek Bridge Replacement	CR-1 Cause a substantial adverse change to a historical resource.
Headington Rd. Extension	71375	2-lane connector between El Dorado Rd. and Missouri Flat Rd	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
Country Club Dr.	GP126	2-lane from Bass Lake Rd to Tierre de Dios Dr.	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
Country Club Dr.	GP125	2-lane Tong Rd. to Bass Lake Rd.	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
Country Club Dr.	71335	2-lane Silva Valley Parkway to Tong Rd.	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
Saratoga Way Extension	71324/ GP147	4-lane Iron Point Rd. to El Dorado Hills Blvd.	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
Latrobe Rd Connection	66116	2-lane connection between White Rock Rd. and Golden Foothill Parkway/Latrobe Rd.	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
New York Creek Trail East	72308	Phase 2 of a project to construct a trail with the El Dorado Hills Community Service District	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity
White Rock Rd.	72374	Road widening 2-lane to 4-lane from Post St. to South of Silva Valley Pkwy.	CR-1 disturb known and unknown cultural resources; CR-2 disturb unknown human remains during construction activity

4.5 GEOLOGY

4.5.1 Setting

a. Regional Geology. California's geomorphic provinces are naturally defined geologic regions that display unique features based on geology, faults, topographic relief or climate. El Dorado County falls within the Sierra Nevada geomorphic province. The Sierra is a granitic batholith that has undergone tilting and erosion nearly 400 miles long. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope that disappears under sediments of the Great Valley to the west. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, are modified by glacial sculpturing. The metamorphic bedrock contains gold-bearing veins in the northwest trending Mother Lode (California Geological Survey, 2002).

b. Faulting and Seismicity. Generally defined, an earthquake is an abrupt release of accumulated energy in the form of seismic waves when movement occurs along a fault. The severity of an earthquake generally is expressed in two ways—magnitude and intensity. The energy released, measured on the Moment Magnitude (MW) scale, represents the size of an earthquake. The Richter Magnitude (M) scale has been replaced in most modern building codes by the MW scale because the MW scale provides more useful information to design engineers. The intensity of an earthquake is measured by the Modified Mercalli Intensity (MMI) scale, which emphasizes the current seismic environment at a particular site and measures groundshaking severity according to damage done to structures, changes in the earth surface, and personal accounts. Table 4.5-1 (Modified Mercalli Intensity Scale) identifies the level of intensity according to the MMI scale and describes that intensity with respect to how it would be received or sensed by its receptors.

Table 4.5-1
Modified Mercalli Intensity Scale

Modified Mercalli Intensity	Description
I	Not felt except by a very few under especially favorable conditions
II	Felt by a few people at rest, especially in upper floors of buildings
III	Felt noticeably indoors, but not always recognized as a quake; vibration like a passing truck
IV	Felt indoors by many and outdoors by few. Sensation like heavy truck striking building
V	Felt by nearly everyone. Some breakage of windows, dishes, and plaster
VI	Felt by all; some heavy furniture moved; falling plaster; damage small
VII	Damage negligible in buildings of good design and construction
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings; Walls, monuments, chimneys fall
IX	Damage considerable; buildings shift off foundations
X	Most masonry and frame structures destroyed; railroad rails bent
XI	Few structures remain standing; bridges destroyed
XII	Damage total; lines of sight and level are distorted; objects thrown into the air

Source: US Geological Survey. http://earthquake.usgs.gov/learn/topics/mercalli.php

Faults are categorized as active, potentially active, and inactive. A fault is classified as active if it has moved during the Holocene time (during the last 11,000 years). A fault is classified as potentially active if it has experienced movement within Quaternary time (during the last 1.8 million years). Faults that have not moved in the last 1.8 million years are generally considered inactive.

In 1972, the California State Legislature enacted the Alquist-Priolo Earthquake Fault Zoning Act (California Pubic Resources Code Section 2622), which requires the State Geologist to delineate Earthquake Fault Zones around all known traces of potentially and recently active faults in California. The Alquist-Priolo Act requires withholding of construction permit approval until geologic investigation has determined that the building site is not threatened by surface fault displacement. The Earthquake Fault Zones are usually one-quarter mile or less in width. The California Division of Mines and Geology (CDMG) has prepared maps which identify Alquist-Priolo Earthquake Fault Zones in El Dorado County. El Dorado County is not mapped due to its location being relatively distant from any known faults that meet the criteria of the mapping program (El Dorado County Multi-Jurisdiction Hazard Mitigation Plan 2004).

c. History of Earthquakes. Figure 4.5-1 demonstrates the minimum number of times during the period 1800 to 1999 that various areas of the state have been subject to damaging shaking from earthquakes. El Dorado County lies within the portion of the State that has no record of damaging shaking events during that period.

d. Ground-shaking. There is one fault zone on land under the County's jurisdiction, the Rescue Lineament Bear Mountain Fault Zone. This fault zone cuts across the western end (near the Sacramento County border) of the County trending north to south. However, there has been no appreciable movement on this fault and no record of damages sustained. According to the El Dorado Hazard Mitigation Plan (2004) and as shown in Figure 4.5-2, the County has the lowest potential for seismic groundshaking in the state.

e. Liquefaction. Liquefaction (the loss of soil bearing strength during a strong earthquake) is a potential occurrence in several areas with younger soils as well as in areas where the groundwater table is less than 50 feet deep. The severity of ground deformation due to liquefaction is dependent on the density and depth of the liquefied material. Shallower materials experience the most severe effects. Liquefaction potential is also determined from soil type and the duration and intensity of ground mobilization as a result of increased pore water pressure induced by significant groundshaking. Given that groundshaking associated with seismic events in El Dorado County would generally be low to moderate in intensity, the risk of liquefaction is also generally low.

f. Landslides. The topography of El Dorado County displays a wide range of landforms ranging from vertical cliffs to gently undulating foothills. In general, the greater the existing slope the greater the overall threat of landslide. The El Dorado County Geohazards Maps indicate general developable areas that have slopes in excess of 30%. In general, areas with potential landslide hazard in El Dorado County is limited to certain areas near cliff-like features or on very steep slopes, none of which are often subject to development. There have been reported incidents of landslides and general slope failure in isolated portions of the County, but this is a very uncommon occurrence with no defined history of significant damages. Although portions of the privately owned and potentially developable land of El Dorado County can

include areas where landslide could occur, it is not common to most areas. Overall, the hazard is much less than can be expected to occur in much of the more densely developed portions of the state (El Dorado County Multi-Jurisdiction Hazard Mitigation Plan 2004).

g. Expansive, Compressible/Collapsible Soils. Soils with relatively high clay content are expansive due to the capacity of clay minerals to take in water and swell (expand) to greater volumes. Expansive soils exhibit clay like characteristics and swell when wetted and shrink when dried. Wetting can occur naturally in a number of ways, (e.g., absorption from the air, rainfall, groundwater fluctuations, lawn watering and broken water or sewer lines). In hillside areas, as expansive soils expand and contract, gradual downslope creep may occur, eventually causing landsliding. Expansive soils are also often prone to erosion. Foundations of structures placed on expansive soils may swell during the wet season and shrink during the succeeding dry season, potentially resulting in foundation damage. Collapsible and compressible soils occur in areas where fine-grained soils have accumulated relatively rapidly and not been buried with associated consolidation. El Dorado County generally contains little to no swelling clay; therefore, soil expansion would be unlikely to occur (SACOG, 2016).

h. Soil Erosion. Erosion is a natural process where soil is removed by water, wind or gravity from one location to another. The process of removal and deposition changes the topography toward a condition of equilibrium. Grading, either by natural agents such as erosion or the activities of man, has the potential for creating unstable slopes. Grading activities remove the natural vegetative cover that protects the soil from erosion agents.

The potential for erosion of soils increases as a function of the steepness of the slope. The areas in El Dorado County in excess of 30% slopes would be considered as having a high potential for erosion. The vast majority of development in El Dorado County is not in proximity to steep slopes in excess of 30%. Erosion problems are generally limited to restricted areas where grading has oversteepened slopes, or deposited fill in areas where it has not stabilized or where improper grading practices have not included provisions to implement effective Best Management Practices (BMPs), seed applications or other slope protection methods or otherwise protect fresh slopes from eroding. There have also been other examples of burned areas being eroded prior to reestablishment of vegetation to protect the slopes from degrading. Otherwise, compared to many areas of the State such as the coastal mountains, erosion has proven to be a modest hazard in El Dorado County.

i. Regulatory Setting. The California Building Code (CBC), the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, the El Dorado County General Plan, and the El Dorado Grading Ordinance prescribe measures to safeguard life, health, property and public welfare from geologic hazards. Each of these is described below:

California Building Code. California law provides a minimum standard for building design through the California Building Code (CBC) (C.C.R. Title 24). Chapter 23 of the CBC contains specific requirements for seismic safety. Chapter 29 regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching as

specified in California Division of Occupational Safety and Health (Cal/OSHA) regulations (C.C.R. Title 8).

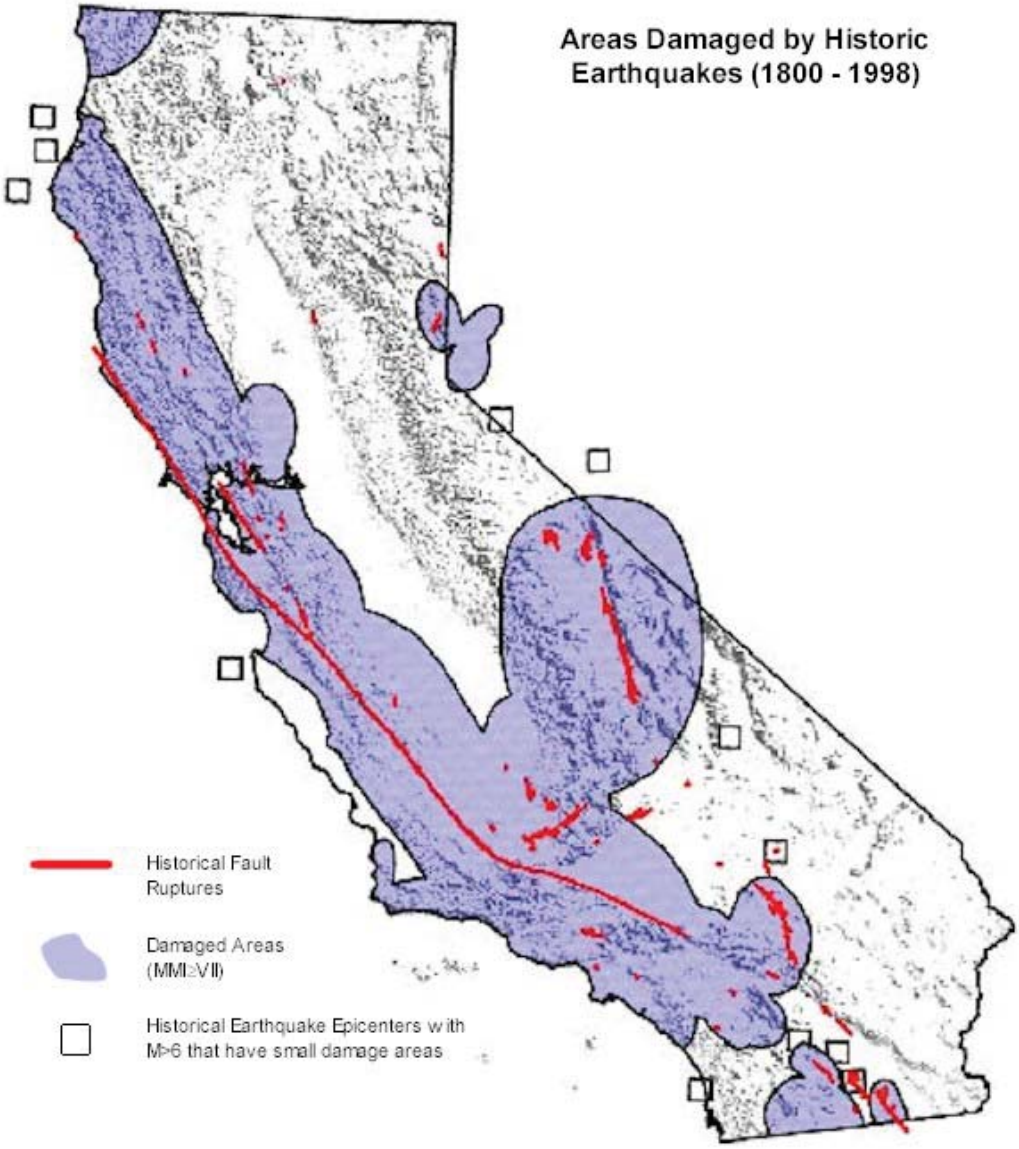
Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act was signed into law in 1972 (14 C.C.R. §§ 3600, et seq.). The purpose of this Act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of fault rupture. Under the Act, the State Geologist is required to delineate "Earthquake Fault Zones" along known active faults in California (14 C.C.R. §3601). Cities and counties affected by the zones must regulate certain development projects within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting (14 C.C.R. §3603).

Seismic Hazards Mapping Act. The California Geologic Survey, formerly the California Department of Conservation, Division of Mines and Geology (CDMG), provides guidance with regard to seismic hazards. Under CDMG's Seismic Hazards Mapping Act (1990), seismic hazard zones are to be identified and mapped to assist local governments in land use planning (California Public Resources Code §§ 2690, et seq.). The intent of these maps is to protect the public from the effects of strong ground shaking, liquefaction, landslides, ground failure, or other hazards caused by earthquakes. In addition, CDMG's Special Publications 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," provides guidance for the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations.

El Dorado County General Plan Public Health, Safety, and Noise Element. Policy 6.3.2.5 of the El Dorado County General Plan Public Health, Safety, and Noise Element requires a geotechnical study for developments that may be subject to geological hazards. If hazards are identified, applicants shall be required to mitigate or avoid identified hazards as a condition of approval. If no mitigation is feasible, the project would not be approved.

County Grading, Erosion, and Sediment Control Ordinance. The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. The Grading Ordinance, which has incorporated the recommended standards for drainage Best Management Practices (BMPs) from the High Sierra Resource Conservation and Development Council BMP guidelines handbook, prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions. The Grading Ordinance also requires all drainage facilities, aside from those in subdivisions that are regulated by the County's Subdivision Ordinance, be approved by the County Department of Transportation. Pursuant to the ordinance, the design of the drainage facilities in the County must comply with the County of El Dorado Drainage Manual.

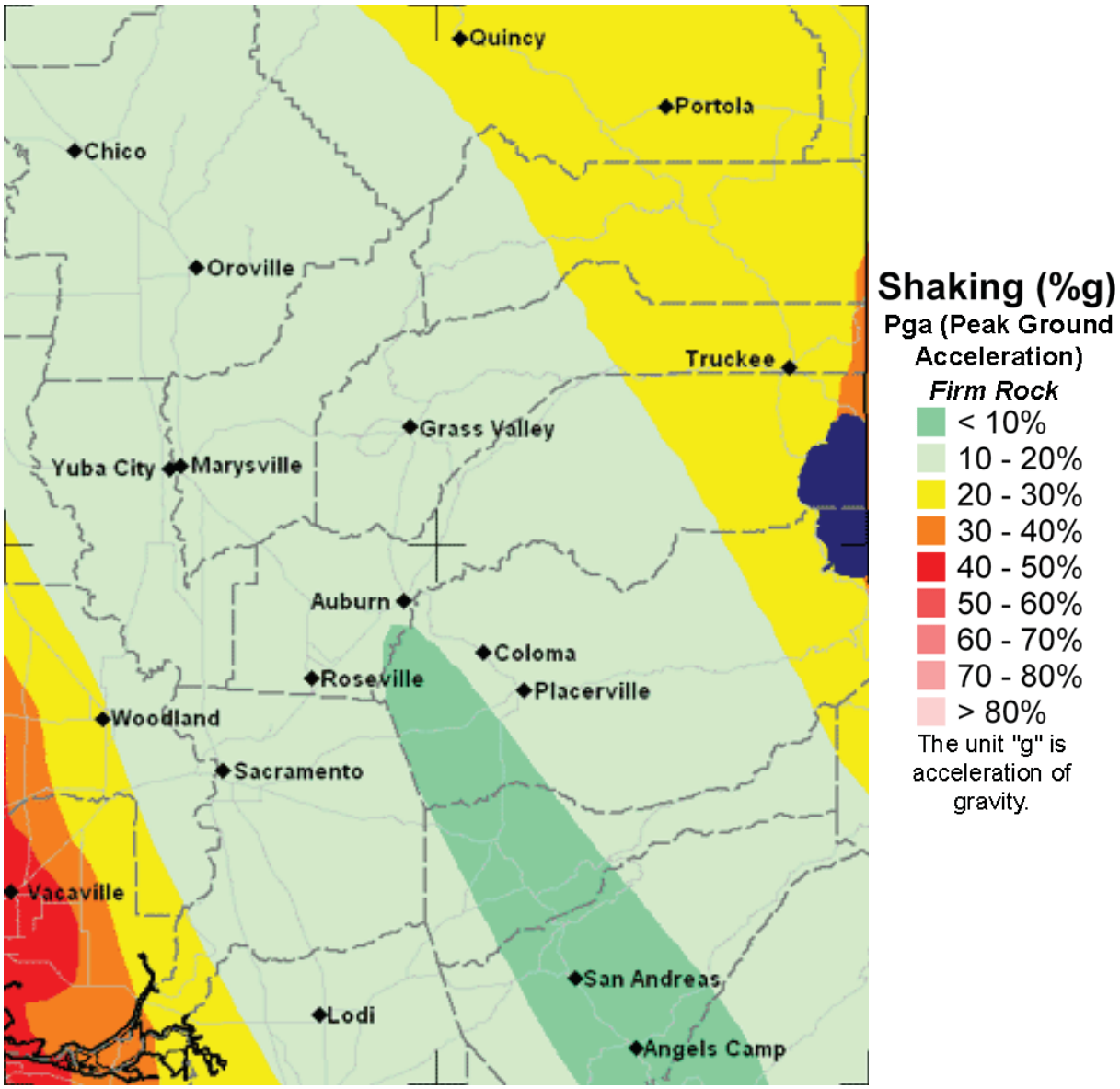
EDCAQMD Rule 223-2 - Asbestos Hazard Mitigation. Naturally Occurring Asbestos is found in serpentine, other ultramafic and volcanic rock. When rock containing NOA is broken or crushed during earth-moving activity as a result of development, asbestos may become released and become airborne, causing a potential health hazard. EDCAQMD Rule 223-2 requires actions to prevent, reduce, or mitigate asbestos emissions resulting from construction



Number of Times Areas of the State has Experienced Significantly Damaging Earthquakes

Source: El Dorado County Multi-Jurisdiction Hazard Mitigation Plan 2004

Figure 4.5-1



Peak Acceleration with 10 Percent Probability of Exceedance in 50 years (El Dorado County and Vicinity)

Source: El Dorado County Multi-Jurisdiction Hazard Mitigation Plan 2004

Figure 4.5-2

activities. Within El Dorado County, the two asbestos control regulations are (1) Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, and (2) ATCM for Surfacing Applications. Projects are required to submit an Asbestos Dust Mitigation Plan to the Air Pollution Control Officer. This plan is required to describe all dust mitigation measures to be implemented before, during, or after any dust-generating activity. Moreover, applicable Best Management Practices shall be utilized to comply with fugitive dust standards of Rule 223-2 for construction, bulk material handling, carryout and trackout management, and blasting activities.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. In accordance with the State CEQA Guidelines, a project would result in a significant impact if it would:

1. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides;*
2. *Result in substantial soil erosion or the loss of topsoil;*
3. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;*
4. *Be located on expansive soil, creating substantial risks to life or property; or*
5. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

Because the location of each of the proposed CIP and TIM Fee projects is different in geologic character, determination of significance is based on an individual study at the time of the project permit application and environmental review. Therefore, for the purposes of this EIR, proposed transportation modifications that are located in areas of moderate to high geologic or soil hazard are considered potentially significant.

Impacts related to soils capable of supporting septic tanks are discussed in Section 4.10, *Less than Significant Environmental Factors.*

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with some of the projects anticipated under the proposed update to the CIP and TIM Fee Program. Table 4.5-2 in Section 4.5.2.c summarizes the specific projects that could result in the impacts discussed in this section.

Impact G-1 Some projects under the proposed CIP and TIM Fee Program Update could be at risk from seismic activity. Although fault rupture and seismically induced liquefaction do not pose a substantial threat in El Dorado County, ground-shaking may affect some projects. This is considered a Class II, *significant but mitigable* impact.

According to Figure HS-2 of the El Dorado County General Plan, potentially impacted roadway improvements include those near the western county boundary that coincide with the Bear Mountain Fault, and may need to incorporate special design features to withstand seismic activity from the Bear Mountain Fault. It is expected that future earthquakes would be low in intensity in the county, but very infrequent earthquakes could cause strong ground-shaking. Bridge-type structures are most susceptible to risk from seismic activity, although roadways may also be damaged. Construction or modification of bridges over bodies of water are included under the proposed update to the CIP and TIM Fee Program. Potential impacts from ground-shaking to these projects and other similar type projects would be significant but mitigable.

As discussed above, given that groundshaking risk is generally considered low, proposed transportation improvements under the proposed update to the CIP and TIM Fee Program would be subject to low liquefaction risk.

The likelihood for landslides in El Dorado County is low due to the low risk of groundshaking and seismic activity, but nevertheless may occur on transportation improvement projects located adjacent to slopes or in areas susceptible to forest and brush fires. The identification of on-site geologic hazards would require preparing project-specific geotechnical evaluations for proposed projects under the proposed update to the CIP and TIM Fee Program. Due to the programmatic nature of the CIP and TIM Fee Program, such detailed evaluation would only be required upon review of a given project. The project-specific geotechnical evaluations prepared prior to implementing transportation projects would identify and evaluate geologic hazards for that particular project site. Generally, the analysis would recommend preparing sites for development to avoid the identified geologic hazards. Nonetheless, because projects under the proposed update to the CIP and TIM Fee Program would potentially be exposed to landslide hazards, potential impacts would be significant but mitigable.

Some traffic improvements would potentially require the grading of existing natural slopes. Existing residential and commercial uses are currently adjacent to a number of the proposed traffic improvements for the CIP and TIM Fee Program Update and therefore caution would be exercised during slope grading to ensure that the stability of the landform would not in any way compromise the structural integrity of the existing residential dwellings, especially during a seismic event. Compliance with applicable California Building Code (CBC) and El Dorado County Municipal Code requirements related to slope grading would ensure that the proposed slope grading would not impact the structural stability of any adjacent dwellings or structures. El Dorado County may require the preparation of a geotechnical report on a project-by-project basis to ensure that any impact resulting from slope grading would be less than significant.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

G-1 **Geotechnical Standards**. The project sponsor shall ensure that bridge-related projects are designed and constructed to the latest

(at the time of project approval) geotechnical standards. In most cases, this will necessitate site-specific geologic and soils engineering investigations performed by a qualified geotechnical expert to satisfy or exceed state and/or code requirements for high groundshaking zones. This can be accomplished through the placement of conditions on the project by the project sponsor during individual environmental review.

G-2 **Slope Stabilization.** If a project involves cut slopes over 15 feet in height, the County shall ensure that specific slope stabilization studies are conducted. If stabilization is necessary, possible stabilization methods include buttresses, retaining walls and soldier piles which should be implemented prior to construction and/or operation of the transportation improvement project.

Significance After Mitigation. Mitigation measure G-1 would require site-specific geologic and soils engineering investigations be performed by a qualified geotechnical expert to identify design requirements to avoid or minimize impacts related to groundshaking Implementation of the above measure would reduce potential impacts to a less than significant level.

Impact G-2 **Implementation of proposed transportation improvements under the proposed update to the CIP and TIM Fee Program could be subject to soil erosion. However, with adherence to existing regulations, impacts would be Class III, *less than significant.***

As discussed above, the vast majority of development in El Dorado County does not occur in areas subject to steep slopes in excess of 30%, and therefore unlikely to be subject to soil erosion risk. For proposed transportation improvements under the proposed update to the CIP and TIM Fee Program that could potentially occur on steep slopes, erosion control and/or engineered slope protection methods can be implemented to reduce the possibility of erosion and accomplished on critical slopes being affected by erosion. Proper investigation of the soils underlying proposed areas of grading in conformance with the mandates of the Uniform Building Code would assist in delineating potential areas of concern and provide information to the project engineer which would allow for the design of remedial measures. Concurrent testing, in conformance with the recommendations of the Uniform Building Code and the project engineer would ensure a grading project has the highest possible potential for avoiding future problems with stability or erosion.

Furthermore, proposed transportation improvements under the proposed update to the CIP and TIM Fee Program that occur in the vicinity of steep slopes would be subject to the County Grading, Erosion, Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code), Stormwater Quality Ordinance No. 5022 (Chapter 8.79 of the County Code), and/or the state's Construction General Permit Storm Water Pollution Prevention Plan (SWPPP) requirements or the County Erosion and Sediment Control Plan (ESCP) depending on the acres disturbed by each individual transportation project. These requirements, discussed in

Section 4.7, *Hydrology and Water Quality*, establish provisions for public safety and environmental protection associated with grading activities. With adherence to existing regulations related to erosion, impacts would be less than significant.

Mitigation Measures. No mitigation is necessary as impacts would be less than significant.

Significance after Mitigation. Impacts would be less than significant with adherence to applicable grading plans, ordinances, and/or County codes.

Impact G-3 Some projects under the proposed update to the CIP and TIM Fee Program may be located on unstable soils. This is considered a Class II, *significant but mitigable* impact.

Unstable soils encompass a range of geologic hazards such as liquefaction, landslides, and expansive soils. It is not expected that projects under the proposed update to the CIP and TIM Fee Program would be susceptible to liquefaction because groundshaking is usually low in intensity in El Dorado County. In addition, as discussed above in the Setting, soil expansion is also low in risk.

Although impacts from liquefaction and expansive soils are not expected, impacts related to landslides as a result of non-seismic related soil instability are considered potentially significant, and each project in a landslide hazard area would require a more thorough evaluation as it is proposed. The identification of on-site geologic hazards would require preparing project-specific geotechnical evaluations for proposed projects under the proposed update to the CIP and TIM Fee Program. However, as discussed above, the likelihood for landslides in El Dorado County is low but nevertheless may occur on transportation improvement projects located adjacent to slopes or in areas susceptible to forest and brush fires. As discussed in Section 4.10, *Less than Significant Environmental Factors*, transportation improvements under the CIP and TIM Fee Program Update would not expose people to new wildland fire hazards. However, forest and brush fires may result in soil instability that could result in landslides in areas adjacent to transportation projects. Because projects under the proposed update to the CIP and TIM Fee Program would potentially be exposed to landslide hazards, potential impacts would be significant but mitigable.

Mitigation Measures. The lead agency shall perform initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement Mitigation Measure G-2 above, or one of equal or greater efficacy.

Significance After Mitigation. Implementation of Mitigation Measure G-2 would reduce potential impacts to a less than significant level.

c. Specific Transportation Improvement Projects That May Result in Impacts. All projects that occur near steep slopes or on unstable soils could result in impacts and therefore are not specifically identified in table format here. This would include all bridge replacement, rehabilitation, and maintenance projects associated with the proposed update to the CIP and

TIM Fee Program. As discussed above in Impact G-1, bridge-type structures are most susceptible to risk from seismic activity. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above would apply to these specific projects. All proposed transportation improvements under the proposed update to the CIP and TIM Fee Program are listed in Table 2-1 in Section 2.0 Project Description. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above would apply to these specific projects.

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4.6 GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE

This section discusses potential impacts related to greenhouse gas emissions and climate change. Air quality impacts are discussed in Section 4.2, *Air Quality.*

4.6.1 Setting

a. Climate Change and Greenhouse Gases. Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC, 2013), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20th century (IPCC, 2013).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Observations of CO_2 concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH_4 and N_2O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified

timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 2007).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34°C cooler (CalEPA, 2006). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

Carbon Dioxide. The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (United States Environmental Protection Agency [U.S. EPA], 2014). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the second half of the 20th century. Concentrations of CO_2 in the atmosphere have risen approximately 40 percent since the industrial revolution. The global atmospheric concentration of CO_2 has increased from a pre-industrial value of about 280 parts per million (ppm) to 391 ppm in 2011 (IPCC, 2007; Oceanic and Atmospheric Administration [NOAA], 2010). The average annual CO_2 concentration growth rate was larger between 1995 and 2005 (average: 1.9 ppm per year) than it has been since the beginning of continuous direct atmospheric measurements (1960–2005 average: 1.4 ppm per year), although there is year-to-year variability in growth rates (NOAA, 2010). Currently, CO_2 represents an estimated 74 percent of total GHG emissions (IPCC, 2007). The largest source of CO_2 emissions, and of overall GHG emissions, is fossil fuel combustion.

Methane. Methane (CH_4) is an effective absorber of radiation, though its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. It has a GWP approximately 25 times that of CO_2. Over the last 250 years, the concentration of CH_4 in the atmosphere has increased by 148 percent (IPCC, 2007), although emissions have declined from 1990 levels. Anthropogenic sources of CH_4 include enteric fermentation associated with domestic livestock, landfills, natural gas and petroleum systems, agricultural activities, coal mining, wastewater treatment, stationary and mobile combustion, and certain industrial processes (U.S. EPA, 2014).

Nitrous Oxide. Concentrations of nitrous oxide (N_2O) began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA, 2010). N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions. The GWP of nitrous oxide is approximately 298 times that of CO_2 (IPCC, 2007).

Fluorinated Gases (HFCS, PFCS, and SF_6). Fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfurhexafluoride (SF_6), are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and are phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while PFC emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the IPCC has evaluated.

b. Greenhouse Gas Emissions Inventory. Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigatonne) CO_2e in 2010 (IPCC, 2014). CO_2 emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO_2 was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while nitrous oxide and fluorinated gases account for six and two percent respectively (IPCC, 2014).

Total U.S. GHG emissions were 6,525.6 MMT CO_2e in 2012 (U.S. EPA, 2014). Total U.S. emissions have increased by 4.7 percent since 1990; emissions decreased by 3.4 percent from 2011 to 2012 (U.S. EPA, 2014). The decrease from 2011 to 2012 was due to a decrease in the carbon intensity of fuels consumed to generate electricity due to a decrease in coal consumption, with increased natural gas consumption. Additionally, relatively mild winter conditions, especially in regions of the United States where electricity is important for heating, resulted in an overall decrease in electricity demand in most sectors. Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2012, the transportation and industrial end-use sectors accounted for 28.2 percent and 27.9 percent of CO_2 emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16.3 percent and 16.4 percent of CO_2 emissions, respectively (U.S. EPA, 2014).

Based upon the California Air Resources Board (ARB) California Greenhouse Gas Inventory for 2000-2013, California produced 459.3 MMT CO_2e in 2013 (ARB, 2015). The major source of GHG in California is transportation, contributing 37 percent of the state's total GHG emissions. Industrial sources are the second largest source of the state's GHG emissions (CARB, 2015). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. The ARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO_2e (ARB, 2014). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

c. Potential Effects of Climate Change. Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental

record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC, 2013).

According to the CalEPA's *2010 Climate Action Team Biennial Report*, potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA, 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality. Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Energy Commission [CEC], 2009).

Water Supply. Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. Many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR], 2008; CCCC, 2009).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based upon historical data and modeling, DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR, 2008).

Hydrology and Sea Level Rise. As discussed above, climate change could potentially affect: the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. According to The Impacts of Sea-Level Rise on the California Coast, prepared by the California Climate Change Center (CCCC) (CCCC, 2009), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys, and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO], 2013). As a result, sea levels averaged over the last decade were about 8 inches higher than those of 1880 (WMO, 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea–level rise of 11-38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7-23 inches, when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding, and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture. California has a $30 billion annual agricultural industry that produces half of the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (CCCC, 2006).

Ecosystems and Wildlife. Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0-4.5°F (0.6-2.5°C) in the next 50 years, and 2.2-10°F (1.4-5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan, 2006).

d. Regulatory Setting. The following regulations address both climate change and GHG emissions.

International Regulations. The United States is, and has been, a participant in the United Nations Framework Convention on Climate Change (UNFCCC) since it was produced in 1992. The UNFCCC is an international environmental treaty with the objective of, "stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." This is generally understood to be achieved by stabilizing

global GHG concentrations between 350 and 400 ppm, in order to limit the global average temperature increases between 2 and 2.4°C above pre-industrial levels (IPCC, 2007). The UNFCCC itself does not set limits on GHG emissions for individual countries or enforcement mechanisms. Instead, the treaty provides for updates, called "protocols," that would identify mandatory emissions limits.

Five years later, the UNFCCC brought nations together again to draft the *Kyoto Protocol* (1997). The Kyoto Protocol established commitments for industrialized nations to reduce their collective emissions of six GHGs (CO_2, CH_4, N_2O, SF_6, HFCs, and PFCs) to 5.2 percent below 1990 levels by 2012. The United States is a signatory of the Kyoto Protocol, but Congress has not ratified it, and the United States has not bound itself to the Protocol's commitments (UNFCCC, 2007). The first commitment period of the Kyoto Protocol ended in 2012. Governments, including 38 industrialized countries, agreed to a second commitment period of the Kyoto Protocol beginning January 1, 2013 and ending either on December 31, 2017 or December 31, 2020, to be decided by the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its seventeenth session (UNFCCC, 2011).

In Durban (17th session of the Conference of the Parties in Durban, South Africa, 2011), governments decided to adopt a universal legal agreement on climate change. Work began on that task immediately under a new group called the Ad Hoc Working Group on the Durban Platform for Enhanced Action. Progress was also made regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted (UNFCCC, 2011; United Nations, 2011).

In December 2015, the 21st session of the Conference of the Parties (COP21) adopted the Paris Agreement. The deal requires all countries that ratify it to commit to cutting greenhouse gas emissions, with the goal of peaking greenhouse gas emissions "as soon as possible" (Worland, 2015). The agreement includes commitments to (1) achieve a balance between sources and sinks of greenhouse gases in the second half of this century; (2) to keep global temperature increase "well below" 2°C (3.6°F) and to pursue efforts to limit it to 1.5°C; (3) to review progress every five years; and (4) to spend $100 billion a year in climate finance for developing countries by 2020 (UNFCCC, 2015). The agreement includes both legally binding measures, like reporting requirements, as well as voluntary or non-binding measures while, such as the setting of emissions targets for any individual country (Worland, 2015).

Federal Regulations. The United States Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act.

The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. The first annual reports for these sources were due in March 2011.

On May 13, 2010, the U.S. EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 tons CO_2e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will require a permit after that date. On November 10, 2010,

the U.S. EPA published the "PSD and Title V Permitting Guidance for Greenhouse Gases." The U.S. EPA's guidance document is directed at state agencies responsible for air pollution permits under the Federal Clean Air Act to help them understand how to implement GHG reduction requirements while mitigating costs for industry. It is expected that most states will use the U.S. EPA's new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other large pollution point sources.

On January 2, 2011, the U.S. EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 tons CO_2e per year. Under Phase 1, no sources were required to obtain a Title V permit solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. At that time, new sources were subject to GHG Title V permitting if the source emits 100,000 tons CO_2e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 tons CO_2e per year.

On July 3, 2012, the U.S. EPA issued the final rule that retains the GHG permitting thresholds that were established in Phases 1 and 2 of the GHG Tailoring Rule. These emission thresholds determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

California Regulations. California Air Resources Board (ARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires ARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its greenhouse gas emission standards for motor vehicles beginning with the 2009 model year. Pavley I took effect for model years starting in 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction from 2009 levels by 2012 and 30 percent by 2016. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (ARB, 2011).

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are

strategies that could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture. In April 2015 Governor Brown issued EO B-30-15, calling for a new target of 40percent below 1990 levels by 2030.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires ARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of statewide GHG emissions.

After completing a comprehensive review and update process, ARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by ARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, recycling, and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted over the last five years. Implementation activities are ongoing and ARB is currently the process of updating the Scoping Plan.

In May 2014, ARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan update defines ARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 goals set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (ARB, 2014).

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

ARB Resolution 07-54 establishes 25,000 MT of GHG emissions as the threshold for identifying the largest stationary emission sources in California for purposes of requiring the annual reporting of emissions. This threshold is just over 0.005 percent of California's total inventory of GHG emissions for 2004.
Senate Bill (SB) 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing ARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy"

(SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

In April 2011, Governor Brown signed SB 2X requiring California to generate 33 percent of its electricity from renewable energy by 2020. On April 29, 2015, Governor Brown issued an executive order to establish a statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030. According to ARB, reducing GHG emissions by 40 percent below 1990 levels in 2030 ensures that California will continue its efforts to reduce carbon pollution and help to achieve federal health-based air quality standards. Setting clear targets beyond 2020 also provides market certainty to foster investment and growth in a wide array of industries throughout the State, including clean technology and clean energy. ARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan is expected to be completed and adopted by ARB in 2016 (ARB 2015).

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Local Regulations and CEQA Requirements. Pursuant to the requirements of SB 97, the California Resources Agency has amended the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance for analyzing and mitigating GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, they give lead agencies the discretion to set quantitative or qualitative thresholds for assessing and mitigating GHGs and climate change impacts.

The general approach to developing a Threshold of Significance for GHG emissions is to identify the emissions level at which a project would not be expected to substantially conflict with existing California legislation adopted for the purpose of sufficiently reducing statewide GHG emissions to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant. To date, the Bay Area Air Quality Management District (BAAQMD), the South Coast Air Quality Management District (SCAQMD), the San Luis Obispo Air Pollution Control District (SLOAPCD), and the San Joaquin Air Pollution Control District (SJVAPCD) have adopted quantitative significance thresholds for GHGs. The El Dorado County Air Quality Management District (EDCAQMD), in which the CIP and TIM Fee Program Update is located, has not established CEQA significance criteria to determine the significance of impacts that would result from projects such as those included in the proposed update to the CIP and TIM Fee Program.

Local Climate Action Plans. In March 2008, the Environmental Vision for El Dorado County Resolution No. 29-2008 was adopted, which set goals to reduce global impact, improve air quality, and reduce dependence on landfills, promote alternative energies, increase recycling, and encourage local governments to adopt green and sustainable practices. The vision addresses the following topics: transportation, traffic, and transit; planning and construction; waste; energy; air quality; water quality; education, outreach, and awareness; and

agriculture. While there are no specific threshold targets listed in the resolution, goals are set for each topic to address positive environmental change. Moreover, the Sacramento Area Council of Governments (SACOG) Land Use & National Resources Committee was developed to consider issues related to land use, air quality, and the Sacramento Emergency Clean Air Transportation (SECAT) Program. The committee provides recommendations to the Board of Directors regarding topics including AB 32 implementation and greenhouse gas inventory.

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds. Pursuant to SB 97's requirements, the California Resources Agency, in March, 2010, adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. These guidelines are used to evaluate cumulative significance of GHG emissions from the proposed project.

According to the adopted *CEQA Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would:

1. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or*

2. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project contributes to an impact in a manner that is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when connected with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional or State GHG reduction plan (such as a Climate Action Plan). To date, neither the County nor the EDCAQMD has developed or adopted permanent GHG significance thresholds.

Construction Emissions. Although construction activity is addressed in this analysis, the California Air Pollution Control Officier Association (CAPCOA) does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the *CEQA and Climate Change* white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA, 2008). Additionally, neither the County nor EDCAQMD has adopted any construction-related GHG standards. Construction-related emissions are speculative because such emissions depend on the specific characteristics of individual development projects. However, because implementing some transportation projects would generate temporary GHG emissions, primarily due to the operation of construction equipment and truck trips, a qualitative analysis is provided below.

Methodology for Estimating GHG Emissions. Vehicle miles travelled (VMT) estimates for the Western Slope of El Dorado County were obtained from Kittelson and Associates, Inc., who modeled the CIP and TIM Fee Projects into the County traffic model. Emissions estimates used the EMFAC 2014 model emissions rates provided by the ARB. The EMFAC 2014 model generates an output of carbon dioxide (CO_2) emissions, which were used as the overall indicator of GHG emissions, per the recommendations of the ARB SB 375 Regional Targets Advisory Committee. In order to calculate the CO_2 emissions within EMFAC 2014, VMT for the Western Slope of El Dorado County was obtained for the 2015 baseline, 2035 without the project, and 2035 with the project. The CO_2 emissions associated with vehicle starts are accounted for in the EMFAC 2014 model based on the distribution of vehicle starts by vehicle classification, vehicle technology class, and operating mode. EMFAC 2014 adds these vehicle starts to the running emissions to compute total on-road mobile source emissions. The CO_2 emissions for the vehicle classes were then extracted from the EMFAC 2014 output and reported. CO_2 emissions reported herein account for State regulations, including Pavley I and the Low Carbon Fuel Standard, both AB 32 Scoping Plan measures. Per capita emissions rates were calculated by dividing total CO_2 emissions for each scenario by the Western Slope population in each respective year.

b. Project Impacts and Mitigation Measures. Implementation of the proposed update to the CIP and TIM Fee Program could generate GHG emissions that could exceed existing levels and potentially conflict with applicable plans and policies.

Impact GHG-1 Construction of the transportation improvement projects included in the proposed update to the CIP and TIM Fee Program would generate temporary short-term GHG emissions. Impacts would be Class II, *significant but mitigable*.

Construction activities associated with transportation improvement projects included in the proposed update to the CIP and TIM Fee Program would generate temporary short-term GHG emissions, primarily due to truck trips and operating construction equipment. Construction-related emissions are speculative at this level because such emissions depend on the characteristics of individual development projects. During construction, preparing and grading sites typically emit the most GHG, due to the use of grading equipment and soil hauling. The precise construction timing and construction equipment for individual projects is not specifically known at this time. Nonetheless, construction activities would result in GHG emissions. Impacts would be potentially significant.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial study conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measure, or one of equal or greater efficacy:

GHG-1 The project sponsor shall ensure that applicable GHG-reducing diesel particulate and NO_X emissions measures for off-road construction vehicles are implemented during construction. The measures shall be noted on all construction plans and the project

sponsor shall perform periodic site inspections. Applicable GHG reducing measures include the following:

- Configure on-site construction parking to minimize traffic interference and to ensure emergency vehicle access;
- Provide temporary traffic control during appropriate phases of construction activities to improve traffic flow;
- Use best efforts to minimize truck idling to not more than two minutes during construction;
- Apply non-toxic soil stabilizers (according to manufacturers' specifications) to all inactive areas;
- During construction, replace ground cover in disturbed areas as quickly as possible;
- When feasible, during the period of construction, install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip;
- When feasible, during the period of construction, reduce traffic speeds on all unpaved roads to 15 mph or less;
- When feasible, pave all construction access roads onto the site from permanent roadways;
- On Caltrans projects, the most current (at the time of project approval) Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust Palliative shall be incorporated into project specifications when appropriate;
- When feasible, avoid project designs requiring significant amounts of material, such as excavated soil and construction debris, to be transported from the site to disposal facilities; and
- When feasible, employ a balanced cut/fill ration on construction sites, thus reducing haul-truck trip emissions.

Significance after Mitigation. With the implementation of the above mitigation measures, impacts related to short-term GHG emissions would be less than significant.

Impact GHG-2 Implementing the CIP and TIM Fee Program Update would decrease per capita GHG emissions from the transportation sector compared to both the 2015 baseline and future "No Project" scenario. Impacts would be Class III, *less than significant*.

GHG emissions on the transportation network were projected for the year 2035 assuming implementation of the CIP and TIM Fee Program and were compared to both the 2015 baseline and to GHG emissions projected under the future 2035 "No Project" scenario. (The "No Project" scenario assumes that the new identified transportation improvements in the CIP and TIM Fee Program Update are not implemented, but current CIP projects would still be implemented.) As discussed above, GHG emissions for the proposed update to the CIP and TIM Fee Program

were calculated using the ARB's EMFAC 2014 model and were based on the VMT that would be generated (refer to Section 4.8, *Transportation and Circulation*).

As previously discussed, the AB 32 Scoping Plan outlines the main State strategies for reducing GHGs to meet the 2020 target. Many of these strategies contribute to reducing transportation-related emissions at the regional and local levels. The projections discussed below include reductions in emissions resulting from applying Pavley fuel efficiency standards and low carbon fuel standards. Table 4.6-1 summarizes the per-capita transportation-related emissions from all vehicles classes for the 2015 baseline, 2035 "No Project" scenario and 2035 with the CIP and TIM Fee Program.

Table 4.6-1
Per Capita Carbon Dioxide Equivalent Comparison

Scenario	VMT	CO2e Emissions (lbs/day)	Population	Per Capita CO_2e Emissions (lbs/day)
2015 Baseline	3,877,617	3,983,002	147,360	27.03
2035 No Project Scenario	4,880,843	2,886,554	180,854	15.96
2035 with CIP and TIM Fee Program	4,863,521	2,876,310	180,854	15.90
Change from No Project (2035 with CIP and TIM Fee Program – 2035 No Project Scenario)				0.06

The on-road mobile source CO_2 emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. Population figures for 2015 and 2035 were obtained from the BAE Report, 2013.

As shown in Table 4.6-1, implementing the CIP and TIM Fee Program would not increase GHG emissions above the existing or the "No Project" scenario. The 2015 per capita GHG emissions for the plan area were estimated to be 27.03 pounds per day. With the proposed update to the CIP and TIM Fee Program, the 2035 per capita GHG emissions for the plan area were modeled to be 15.90 pounds per day, a reduction of 41 percent from 2015. In addition, GHG emissions under the "No Project" scenario were modeled to be 15.96 pounds per day. The CIP and TIM Fee Program would reduce per GHG emissions by 0.06 pounds per day, which is likely a result of the reduction in VMT in 2035 compared to the "No Project" scenario.

Despite population growth, GHG emissions with the CIP and TIM Fee Program and the "No Project" scenario in 2035 reduce transportation-related GHG emissions compared to the 2015 baseline. This is likely a result of the GHG reductions associated with Pavley fuel efficiency standards and low carbon fuel standards discussed above, which reduce transportation-related emissions independent of reductions in vehicle or fuel usage. It is important to note that transportation-related GHG emissions would continue to occur throughout the County regardless of whether the proposed update to the CIP and TIM Fee Program is adopted or not. However, as demonstrated above, the CIP and TIM Fee Program would contribute to an overall reduction in transportation-related emissions when compared to both the 2015 baseline and future year 2035 "No Project" scenario. Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts would be less than significant.

Impact GHG-3 Implementing the proposed update to the CIP and TIM Fee Program would be consistent with the goals of applicable GHG reduction plans and policies, including the adopted Environmental Vision for El Dorado County Resolution No. 29-2008 as well as AB 32. Impacts would be Class III, *less than significant*.

As discussed above, the Environmental Vision for El Dorado County Resolution No. 29-2008 was adopted to set goals for implementing positive environmental change. The transportation and traffic goals were to reduce carbon emissions and greenhouse gases; promote carpooling and reduce vehicle miles traveled; promote pedestrian and bicycling commuting; expand transit opportunities; utilize clean-fueled vehicles for county employees; and promote programs and designs that reduce traffic congestion. As discussed above, the proposed update to the CIP and TIM Fee Program would reduce traffic and thus decrease greenhouse gas emissions.

One of the goals of AB 32 is to reduce statewide GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05). ARB's Scoping Plan outlines the main State strategies for reducing GHGs to meet the 2020 deadline and encourages local governments to similarly implement these strategies to meet the 2020 targeted emissions level.

As discussed in Impact GHG-2 above, the proposed update to the CIP and TIM Fee Program would reduce per capita GHG emissions related to mobile sources from 2015 by 41 percent. In addition, the proposed update to the Program would incrementally reduce GHG emissions compared to the "No Project" scenario. As such, the proposed update to the CIP and TIM Fee Program would reduce per capita vehicle-related GHG emissions. Therefore, implementation of the proposed update to the CIP and TIM Fee Program would help the region achieve GHG emissions reductions consistent with AB 32 targets.

Furthermore, the projects and policies identified in the proposed update to the CIP and TIM Fee Program are designed to align transportation planning to reduce VMT and transportation-related GHG emissions. Since the proposed update to the CIP and TIM Fee Program is consistent with the goals of AB 32, it would not conflict with the goals of local reduction plans designed to meet the same state goals. Impacts would be less than significant.

Mitigation Measures. None required.

Significance after Mitigation. Impacts are less than significant.

c. Specific Projects That May Result in Impacts. The proposed projects in Table 2-1 (in Section 2.0, *Project Description*) would have the potential to emit GHGs. However, the proposed update to the CIP and TIM Fee Program would reduce VMT and per capita transportation-related GHG emissions. Since the per capita emissions with the CIP and TIM Fee Program would be below the baseline and future "No Project" scenario, emissions resulting from all planned CIP and TIM Fee Program projects would remain less than significant.

4.7 HYDROLOGY AND WATER QUALITY

4.7.1 Setting

a. Regional Hydrology. The State Department of Water Resources (DWR) subdivides the state into ten hydrological regions for planning purposes, corresponding to the state's major drainage basins. El Dorado County is located entirely within the Sacramento River Hydrological Region (HR) (Department of Conservation 2007).

The Sacramento River HR covers approximately 17.4 million acres (27,200 square miles). It extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta. The Sacramento Valley, which forms the core of the region, is bound to the east by the crest of the Sierra Nevada and southern Cascades and to the west by the crest of the Coast Range and Klamath Mountains. The Sacramento River HR is the main water supply for much of California's urban and agricultural areas (DWR 2003). In the Western Slope of El Dorado County, there are two major watersheds which eventually connect into the Sacramento River system downstream. The two major watersheds each which drain into one of three major rivers: the Middle Fork American River, the South Fork American River, and the Cosumnes River.

American River Watershed: The American River Watershed originates in the high Sierra Nevada, west of Lake Tahoe, and drains west until it ultimately discharges into the Sacramento River near the city of Sacramento. Major rivers and tributaries draining the watershed include the North, Middle, and South Forks of the American River; the Rubicon River, and Silver Fork Creek. The Middle Fork of the American River forms the northern border of El Dorado County and is thus in the northern border of the Western Slope area. The Southern Fork combines with the Silver Fork just to the west of Kyburz in the Western Slope and flows west, generally to the north of US 50 before flowing into Folsom Lake. Several major reservoirs in this watershed provide water storage and flood control, including Folsom Lake, Lake Natoma, Lake Clementine, Hell Hole Reservoir, Stumpy Meadows Reservoir, Caples Lake, Silver Lake, Loon Lake, Union Valley Reservoir, and Ice House Reservoir (SACOG, 2016).

Cosumnes River Watershed: Major surface waters in this watershed include the Cosumnes River and Laguna Creek. The Cosumnes River originates on the western slopes of the central Sierra Nevada, passing through the southern portion Western Slope (the South Fork of the river forms the southern boundary of El Dorado County), and converges with the Mokelumne River in San Joaquin County before draining to the Sacramento-San Joaquin River Delta. Laguna Creek is a major tributary to the lower Cosumnes River. (SACOG, 2016).

Groundwater provides about 31 percent of the water supply for urban and agricultural uses in the Sacramento River HR, and has long been developed in both the alluvial basins and the hard rock uplands and mountains. There are 88 basins/subbasins delineated in the Sacramento River HR. These basins underlie 5.053 million acres (7,900 square miles, about 29 percent of the entire region). The reliability of the groundwater supply varies greatly. The Sacramento Valley is recognized as one of the foremost groundwater basins in the state, and wells developed in the sediments of the Valley provide excellent supply in most years to irrigation, municipal, and domestic uses. Many of the mountain valleys of the region also provide significant groundwater supplies to multiple uses (DWR 2003).

b. Water Quality. Water quality is a concern because of its potential effect on human health, enterprise, aquatic organisms, and ecosystem conditions. Quality is determined by factors such as native condition of groundwater and surface water and sources of contamination (natural and human induced).

Surface Water Quality. Generally, surface water quality is considered sufficient for municipal, agricultural, wildlife, and recreational uses. Beneficial use impairments can result from several factors but are generally a result of pollutant discharges from point and non-point sources. Point sources include discharges of treated effluent from municipal wastewater treatment plants and wastewater discharges from industrial and commercial facilities. Non-point source pollutants are generally a result of storm water runoff from urban, construction, and agricultural areas. Water quality is expected to reflect the land uses in the watershed. Land uses within and surrounding proposed transportation improvements under the proposed update to the CIP and TIM Fee Program includes open space, urban, and agricultural uses. Open space uses include grazing, timber harvesting, mining, and recreation and typically contribute sediment, nutrients, and minerals. Urban and agricultural land uses include residential and commercial development and small to large-lot farms and typically contribute sediment, hydrocarbons, metals, pesticides, nutrients, bacteria, and trash (SACOG, 2016).

The State Water Resources Control Board (SWRCB), in compliance with the Clean Water Act (CWA), Section 303(d), has prepared a list of impaired water bodies in the State of California. Table 4.7-1shows the water bodies in El Dorado County that are listed as impaired by the State Water Resources Control Board.

Table 4.7-1
El Dorado County Water Bodies Listed as Impaired

Water Body	Impairment Constituent
American River, North and South Forks	Mercury
Cosumnes River, Lower	Escherichia coli (E. coli), Invasive Species, Sediment Toxicity
Cosumnes River, Upper	Invasive Species
Oxbow Reservoir	Mercury

Source: California Environmental Protection Agency (CalEPA), State Water Resources Control Board, 2010 Integrated Report, 303(D) Listed Waters. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

Groundwater Quality. The quality of water in underground basins and water-bearing soils is considered generally good in El Dorado County. Constituents of concern to public water purveyors include total dissolved solids (TDS), radon, and various species of arsenic, nitrogen, iron, manganese, and chromium. These pollutants may result from both anthropogenic and natural inputs. Table 4.7-2 describes the general water quality concerns in specific basins that could affect groundwater in El Dorado County.

Table 4.7-2
El Dorado County Groundwater Basin Water Quality

Water Body	Impairment Constituent	Number of Wells Tested for Contaminants	Constituents with MCL Exceedances (Contaminated Wells)
South Fork American River	Good - Excellent	144	Primary inorganics (2), Radiological (1), nitrates (1), VOCs and SVOCs (8)
Cosumnes	Good	26	Pesticides (1)

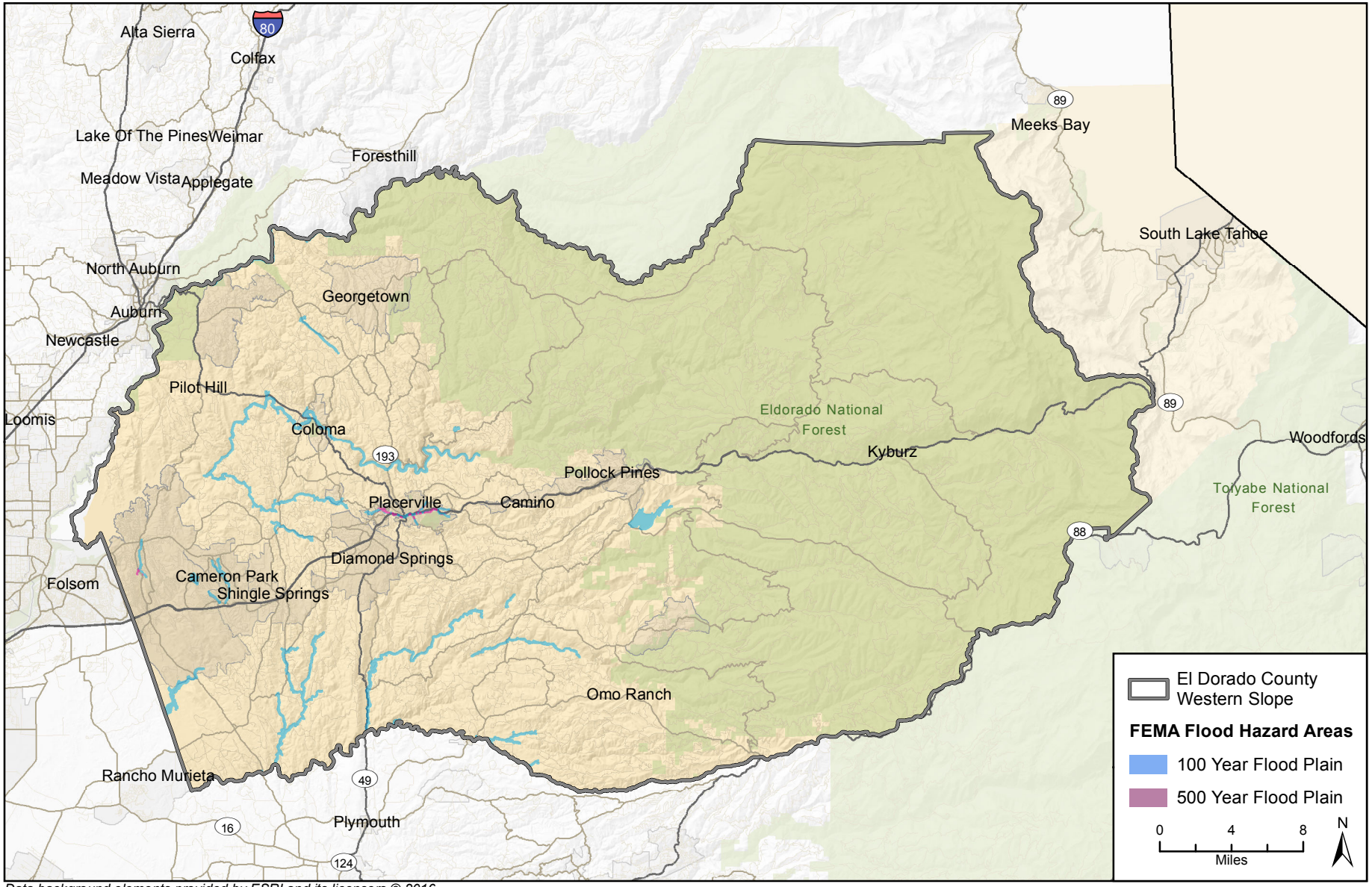
Source: California Environmental Protection Agency (CalEPA), State Water Resources Control Board, 2010 Integrated Report, 303(D) Listed Waters. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

d. Flood Hazards. Because of a lack of extensive low-lying areas and a great deal of upland areas, the majority of El Dorado County is not subject to flooding. The primary flood-prone areas on the west slope of the County are the following: South Fork, American River from Kyburz to Riverton and below Chili Bar Dam; Coloma Canyon Creek between Greenwood and Garden Valley; Weber Creek from Placerville to the American River, including Cold Springs, Dry Creek and Spring Creek Tributaries; Shingle Creek from Shingle Springs to the Amador County line; Deer Creek from Cameron Park to Sacramento County line; Big Canyon Creek form El Dorado to the Consumnes River, including the State, Little; Indian, and French Creek tributaries; New York Creek; Middle Fork of the Cosumnes River within the Somerset-Fairplay vicinity, and its confluence with the North Fork of the Cosumnes River; Cedar Creek from Omo Ranch to the Cosumnes River (El Dorado Multi-Jurisdictional Hazard Mitigation Plan, 2004). The FEMA Flood Hazard areas are shown below in Figure 4.7-1.

e. Tsunami. As an inland region separated from the Pacific Ocean by mountains and the Central Valley, El Dorado County is at no risk from tsunamis.

f. Dam Inundation/Seiches. El Dorado County has a significant number of large and small dam structures with impoundments. A dam failure can occur as the result of an earthquake, as an isolated incident because of structural instability, or during heavy runoff that exceeds spillway design capacity. According to the El Dorado County Hazard Mitigation Plan, El Dorado County does not have a history of major dam failure. Nine dams located within the County have been identified as having the potential of inundating habitable portions of the County in the unlikely event of dam failure: Echo Lake Dam, Union Valley Dam, Ice House Dam, Chili Bar Reservoir, Stumpy Meadows Dam, Weber Creek Dam, Slab Creek Dam, Loon Lake Auxiliary Dam, and Blakely Dam. In addition to these nine dams, the Caples Lake Dam and the Cameron Park Lake/Warren Hollister dam have been identified by the County as having considerable potential to inundate inhabited areas in the unlikely event of dam failure.

A seiche is an earthquake-generated waver in an enclosed body of water, such as a lake, reservoir, or bay. A small (0.4-foot) wave surge was reported in Lake Tahoe during the 1966 Truckee earthquake, which had a Richter Scale magnitude of between 6.0 and 6.9.



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FEMA, August, 2015.

El Dorado County FEMA Flood Zones

Figure 4.7-1

g. Mudflows. When water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt, mudflows can develop. Mudflows are rivers of rock, earth, and other debris saturated with water that flow at varying speeds and distances (FEMA 2010c). No state or federal mapping of mudflows exists. Any development constructed adjacent to unstable slopes would be potentially susceptible to mudflows. Current state and local design standards require slope stabilization that would reduce the possibility for mudflows. El Dorado County's foothills contain hillsides with moderate to severe slopes. Depending on site conditions, these slopes could become unstable and be subject to mudflow events during periods of heavy precipitation or ground shaking (SACOG, 2016).

h. Regulatory Setting. Development throughout El Dorado County is subject to various local, state, and federal regulations and permits regarding water quality and the use of water resources.

Federal.

Clean Water Act. The primary goals of the Federal Clean Water Act, 33 USC §§ 1251, *et seq*. (CWA) are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. As such, the CWA forms the basic national framework for the management of water quality and the control of pollutant discharges. The CWA sets forth a number of objectives in order to achieve the above-mentioned goals. The CWA objectives include regulating pollutant and toxic pollutant discharges; providing for water quality which protects and fosters the propagation of fish, shellfish and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources pollution.

The CWA provides the legal framework for several water quality regulations including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge programs, and wetlands protection.

Section 303(d) of the CWA requires identification and listing of water-quality limited or "impaired" water bodies where water quality standards or receiving water beneficial uses are not met. Once a water body is listed as "impaired," total maximum daily loads (TMDLs) must be established for the pollutants or flows causing the impairment. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. In general, where urban runoff is identified as a significant source of pollutants causing the impairments and is subject to load allocating, the implementation of and compliance with the TMDL total maximum daily loads requirements is administered through a combination of individual Industrial Stormwater Permits, the General Industrial and General Construction Stormwater Permits, and the NPDES program. The Environmental Protection Agency (EPA) has delegated the responsibility for administration of portions of the CWA to state and regional agencies, including the state of California. Accordingly, the primary regulations resulting from the CWA (i.e., NPDES program) are discussed in the state and local regulation discussions that follow.

Under Section 404 of the CWA, the Department of the Army, acting through the U.S. Army Corps of Engineers (USACOE), has authority to permit the discharge of dredged or fill material

in waters of the U.S. The USACOE thereby has jurisdiction over the following categories of waters:

- Traditionally navigable waters and adjacent wetlands;
- Non-navigable tributaries of traditionally navigable waters that are relatively permanent, and wetlands that directly abut such tributaries; and
- Other waters that have a significant nexus with traditionally navigable waters.

Proposed activities are regulated through a permit review process (U.S. EPA, 2013). An individual permit is required for potentially significant impacts to jurisdictional waters. Individual permits are reviewed by the USACOE, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines, regulations promulgated by EPA.

No discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment, or (2) the nation's waters would be significantly degraded. Thus, an application for a Section 404 permit must show that steps have been taken to avoid impacts to wetlands, streams and other aquatic resources; that potential impacts have been minimized; and that compensation will be provided for all remaining unavoidable impacts.

State.

Porter-Cologne Water Quality Control Act (California Water Code). The state of California is authorized to administer federal law or state-enacted laws regulating water pollution within the state. The Porter-Cologne Water Quality Control Act (Water Code §§ 13000, *et seq*.) includes provisions to address requirements of the CWA. These provisions include NPDES permitting, dredge and fill programs, and civil and administrative penalties. The Porter-Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the state. Additionally, the Porter-Cologne Act states that the quality of all the waters of the state (including groundwater and surface water) must be protected for the use and enjoyment by the people of the state.

The State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) are agencies within the umbrella structure of the California Environmental Protection Agency (CalEPA). The SWRCB has the principle responsibility for the development and implementation of California water quality policy and must develop programmatic water quality control procedures to be followed by the RWQCBs. The Central Valley Regional Water Quality Control Board (CVRWQCB) (Region 5) is the region that regulates water quality permitting for the Western Slope of El Dorado County. The CVRWQCB adopted a Water Quality Control Plan (Basin Plan) for the Sacramento River Basin on 1975. The Basin Plan designates beneficial uses and establishes water quality objectives for groundwater and surface water within the Basin. The plan was updated and revised in October 2011.

Water Code § 13050 defines what is considered pollution, contamination, or nuisance. Briefly defined, pollution means an alteration of water quality such that it unreasonably affects the beneficial uses of water (which may be for drinking, agricultural supply, or industrial uses).

Contamination means an impairment of water quality to the degree that it creates a hazard to the public health. Nuisance is defined as anything that is injurious to health, is offensive to the senses, or is an obstruction to property use, and which affects a considerable number of people.

Basin Plan. The CVRWQCB is required to formulate and adopt Basin Plans for all areas within Region 5 under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives within the Basin Plans. Federal Regulations to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.88.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions, and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the CVRWQCB has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the SWRCB, California Office of administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

Antidegradation Policy. All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

Construction Discharge Permit. The SWRCB has issued a statewide NPDES General Permit for stormwater discharges associated with construction activities (known as the Construction General Permit [SWRCB Order No. 2009-0009-DWQ (As amended by 2010-0014-DWQ and 2012-006-DWQ]). Any project that disturbs an area one acre or more or is part of a larger common plan of development requires a Notice of Intent (NOI) to discharge under the Construction General Permit. The Construction General Permit includes measures to eliminate or reduce pollutant discharges through implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes the implementation and maintenance of best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the site during construction. The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., non-visible pollutants). Any construction activities under the project that disturb one acre or

more or is part of a larger common plan of development would be covered under the Construction General Permit.

The RWQCB issues combined NPDES Permits under the CWA and California Water Code to all point source dischargers of waste to surface waters. To ensure protection of water quality, NPDES Permits may contain effluent limitations for pollutants of concern, pollutant monitoring frequencies, reporting requirements, schedules of compliance (when necessary), mandates for operating conditions, BMPs, and administrative requirements. NPDES Permits apply to publicly owned treatment works (POTWs) discharges, industrial wastewater discharges, and municipal, industrial, and construction site stormwater discharges.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits. The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

El Dorado County is covered under two SWRCB Regional Boards. The West Slope Phase II MS4 NPDES Permit is administered by the CVRWQCB (Region Five). The Lake Tahoe Phase I Municipal NPDES Permit is administered by the Lahontan RWQCB (Region Six). The current West Slope Phase II MS4 Permit (SWRCB Order No. 2013-0001-DWQ) was adopted by the SWRCB on February 5, 2013. The Permit became effective on July 1, 2013 for a term of five years and focuses on the enhancement of surface water quality within high priority urbanized areas.

Pursuant to the requirements of the Phase II MS4 Permit, the unincorporated portion of the West Slope of El Dorado County adopted the West Slope Development and Redevelopment Standards and Post Construction Storm Water Plan Requirements for qualifying development and re-development projects on June 30, 2015. Additionally, on May 19, 2015, El Dorado County Board of Supervisors formally adopted the Stormwater Quality Ordinance No. 5022 (County Code Chapter 8.79) which establishes the Legal Authority for the entire unincorporated portion of the County to protect the health, safety, and general welfare of the citizens of the County, enhance and protect the quality of Waters of the Sate in the County by reducing pollutants in stormwater discharges the MEP and controlling non-stormwater discharges to the storm drain system, and cause the use of BMPs by the County and its citizens that will reduce the adverse effects of polluted runoff discharges on Waters of the State.

Projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface must implement one or more of the following:

- Stream setbacks and Buffers
- Soil Quality Improvement and Maintenance
- Tree Planting and Preservation
- Porous Pavement
- Green Roofs

- Vegetated Swales
- Rain Barrels and Cisterns

Projects that create and/or replace 5,000 square feet or more of impervious surface must implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management. All regulated projects, including those that result in the creation, addition, or replacement of exterior impervious surface area on a site on which past development has occurred, are required to implement LID measures to reduce runoff, treat storm water and provide hydromodification measures.

Industrial Storm Water General Permit. Storm water discharges associated with qualifying industrial sites must comply with the regulations contained in the SWRCB's Industrial Storm Water General Permit Order No. 2014-0057-DWQ. The SWRCB, OAL and EPA recently approved the Amendments to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provisions of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan). Together they are collectively termed as the "Trash Amendments". The Trash Amendments will require the implementation of a consistent statewide approach for reducing environmental issues associated with trash in state waters through the installation of trash capture devices and institutional programs and will be incorporated into all NPDES permitting programs. The implementation of the Trash Amendments is currently anticipated to begin in January 2017 and final compliance shall be achieved within ten to 15 years.

Clean Water Act Section 404 Permit. If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act (as described above under Federal Regulations) may be needed from the USACOE. If a Section 404 permit is required by the USACOE, the CVRWQCB will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Wildlife (DPFW) for information on Streambed Alteration Permit requirements.

Clean Water Act Section 401 Permit - Water Quality Certification. If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for a project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the CVRWQCB prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements - Discharges to Waters of the State. If the USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by CVRWQCB. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

Dewatering Permit. If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under SWRCB General Water Quality Order (Low Risk General Order) 2003-0003 or the CVRWQCB's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

Low or Limited Threat General NPDES Permit. If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a NPDES permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for Dewatering and Other Low Threat Discharges to Surface Waters (Low Threat General Order) or the General Order for Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water (Limited Threat General Order). A complete application must be submitted to the CVRWQCB to obtain coverage under these General NPDES permits.

Local.

El Dorado County Stormwater Quality Ordinance. Section 8.79. of the El Dorado County Municipal Code contains the Stormwater Quality Ordinance and lists requirements to reduce pollutants in stormwater. Any construction work within the County is subject to implementation of appropriate Best Management Practices (BMPs) to prevent potential discharge from the site of pollutants, soil, or construction wastes or debris, including contaminants from construction materials, tools, and equipment to a stormwater facility.

El Dorado County Multi-Jurisdiction Hazard Mitigation Plan 2004. The El Dorado County Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) serves as the implementation program for the coordination of hazard planning and disaster response efforts within the County, including flood hazard and dam inundation risk. The geographic scope of the Plan includes all unincorporated areas of El Dorado County, the Cities of Placerville, and South Lake Tahoe, as well as the area encompassed by the boundaries of all of the participating jurisdictions.

Flood Damage Prevention Ordinance (1986). The County has enacted a floodplain ordinance that is compatible with FEMA guidelines in order to regulate development within the 100-year floodplain. This ordinance is applied in conjunction with the County's Zoning Ordinance. Under the Flood Damage Prevention Ordinance, development within the 100-year floodplain may occur; however, certain engineering and zoning standards apply in order to reduce injury and loss of life, to reduce structural damage caused by flooding, and to reduce public expenditures for additional flood control structures. Development within the floodway is also prevented unless no increase in flood elevation would result from the development.

Multi-Hazard Functional Emergency Operations Plan (1993). The County's Emergency Operations Plan contains dam failure plans for those dams that qualify for mapping. The individual dam facility plans located at the County Department of Emergency Services include a description of the dams, direction of flood waters, responsibilities and actions of individual jurisdictions, and evacuation plans. The Emergency Operations Plan also contains response plans for floods resulting from periods of high rainfall or rapid snowmelt, which can cause flooding in the 100-year floodplain.

County Grading, Erosion, and Sediment Control Ordinance. The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 110.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. The Grading Ordinance, which has incorporated the recommended standards for drainage Best Management Practices (BMPs) from the High Sierra Resource Conservation and Development Council BMP guidelines handbook, prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions. Erosion and Sediment Control Plans (ESCPs) are also required for projects that require grading permits and BMP implementation. The Grading Ordinance also requires all drainage facilities, aside from those in subdivisions that are regulated by the County's Subdivision Ordinance, be approved by the County Development Agency. Pursuant to the ordinance, the design of the drainage facilities in the County must comply with the County of El Dorado Drainage Manual.

Storm Water Management Plan for Western El Dorado County. Section 4.5 of the Storm Water Management Plan (SWMP) describes how the County will comply with State Water Resources Control Board's storm water discharge permit requirements for long-term post-construction practices that protect water quality and control runoff flow, to be incorporated into development and significant redevelopment projects. The County will comply with permit requirements by incorporating existing County Development Standards to minimize the discharge of pollutants of development and redevelopment projects.

However, the Post-Construction Requirements in the Phase II MS4 Permit Requirements of Order No. 2013-0001-DWQ supersedes the Post-Construction Requirements found in Section 4.5 of the SWMP. All qualifying projects will be subject to Post-Construction Requirements found in Section E.12 of Order No. 2013-0001-DWQ.

County Design and Improvement Standards Manual. Among the key provisions of the County's Design and Improvement Standards Manual administered by the County Community Development Agency are minimum lot sizes and general development standards for varying slope conditions. These standards are set to minimize the environmental effects of construction.

County Drainage Manual. The County's Drainage Manual prescribes planning and design criteria for drainage facilities within the County. Storm drainage planning and design in El Dorado County shall adhere to the criteria presented in the Drainage Manual, as well as in the Design and Improvement Standards Manual and in the Grading, Erosion, and Sediment Control Ordinance.

El Dorado County General Plan Conservation and Open Space Element. Goal 7.3 of the Conservation and Open Space Element includes policies to prevent erosion and protect water quality via BMPs and erosion control programs for projects requiring grading permits.

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds. Under Appendix G of the CEQA Guidelines, a project would have a significant impact if it would:

1. *Violate any water quality standards or waste discharge requirements;*
2. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;*
3. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;*
4. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;*
5. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;*
6. *Otherwise substantially degrade water quality;*
7. *Place housing within a 100-year flood hazard areas structures which would impede or redirect flood flows;*
8. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows;*
9. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;*
10. *Be subject to inundation by seiche, tsunami, or mudflow.*

Impacts related inundation by seiche, tsunami and mudflow are less than significant and are discussed in Section 4.10, *Less than Significant Environmental Factors.*

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with some of the proposed transportation improvements under the proposed update to the CIP and TIM Fee Program.

Impact W-1 Implementation of proposed transportation improvements under the CIP and TIM Fee Program Update could result in soil erosion and contaminants in runoff, which could degrade surface and groundwater quality. This impact is considered Class II, *significant but mitigable.*

Implementation of proposed transportation improvements facilitated by the CIP and TIM Fee Program Update would result in both short-term and long-term impacts to water quality. Due to the programmatic nature of the CIP and TIM Fee Program Update, a precise, project-level analysis of the specific water quality impacts of individual transportation projects is not possible at this time. However, the general nature of water quality impacts is described below.

Certain transportation improvements, such as road widening and expansion projects, would increase overall impervious surface area throughout the Western Slope of El Dorado County. These projects may generate significant adverse impacts to surface water quality. Pollutants and chemicals associated with urban activities would run off new roadways and other impervious surfaces flowing into nearby bodies of water during storm events. These pollutants would include, but are not limited to: heavy metals from auto emissions, oil, grease, debris, and air pollution residues. Such contaminated urban runoff may remain largely untreated, thus resulting in the incremental long-term degradation of water quality. As discussed above, projects that create and/or replace impervious surface would be subject to Phase II MS4 Post Construction Storm Water Plan Requirements to reduce impacts to water quality. The degree of implementation measures would vary according to the square footage of impervious surface affected by each individual transportation project. Upon construction of each individual transportation project, adherence to MS4 permit requirements would reduce impacts related to surface runoff to a less than significant level.

Short-term adverse impacts to surface water quality may also occur during the construction periods of individual improvement projects because areas of disturbed soils would be highly susceptible to water/wind erosion and downstream sedimentation. Without effective erosion and storm water control, soils exposed during construction activities may result in surface water contamination. In addition, grading and vegetation removal in proximity to creeks for construction, widening, and repair of bridges could result in an increase in erosion and sedimentation of river banks. This could affect both water quality and the stability of slopes along the creeks. Regulations under the federal CWA require that a NPDES storm water permit be obtained for projects that would disturb one acre or more or are part of a larger common plan of development. Acquisition of the General Construction permit is dependent on the preparation of a SWPPP by a qualified professional that contains specific actions, termed BMPs to control the discharge of pollutants, including sediment, into the local surface water drainages. Many transportation projects and improvements, especially roadway extensions in the more urban areas of the Western Slope, such as those projects on or in close proximity to US 50, would be subject to these regulations.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

W-1(a) **Application Plans**. Fertilizer/pesticide application plans for any new right-of-way landscaping shall be prepared to minimize deep percolation of contaminants. The plans shall specify the use of products that are safe for use in and around aquatic environments.

W-1(b) **Post-construction Measures.** For any widening or roadway extension project, the improvement shall design post-construction measures per the Phase II MS4 Permit in place at the time of project approval to direct runoff into subsurface percolation basins and traps or other methods that would allow for the

removal of urban pollutants, fertilizers, pesticides, and other chemicals and encourage groundwater recharge to the MEP. Qualifying projects shall also be designed to meet the MS4 Hydromodifcation Management requirements in place at the time of project approval to the MEP.

W-1(c) **Stormwater Pollution Prevention Plan (SWPPP).** For any project that would disturb one acre or more or is part of a larger common plan of development, a SWPPP shall be developed per State and County standards prior to the initiation of grading and implemented for all construction activity on the project site. The SWPPP shall include specific BMPs designed by a qualified professional to control the discharge of material from the site and into the creeks and local storm drains. BMP methods may include, but would not be limited to, the use of temporary retention basins, straw bales, sand bagging, mulching, erosion control blankets and soil stabilizers. For any project disturbing less than one acre, and ESCP shall be prepared per County standards in place at the time of project approval.

Significance After Mitigation. Mitigation Measures W-1(a)-(c) would assure that water quality impacts from eroded sediments and contaminants in runoff would be less than significant because measures would be taken to minimize the potential for contaminated runoff to reach surface waters, consistent with regulations under the federal CWA. Implementation of the above measures as well as adherence to all applicable permits and local requirements in place at the time of project approval would reduce potential impacts to a less than significant level.

Impact W-2 **Implementation of proposed transportation improvements facilitated by the CIP and TIM Fee Program Update could be subject to flood hazards due to storm events and/or dam failure. Impacts are considered Class II, *significant but mitigable.***

Transportation improvements included in the CIP and TIM Fee Program Update could be subject to flooding hazards due to storm events and/or dam failure. Due to the programmatic nature of the proposed update to the CIP and TIM Fee Program, a precise, project-level analysis of the specific flooding hazard impacts of individual transportation projects is not possible at this time. However, the general nature of these hazards, and their potential impacts, are described below.

Transportation improvements proposed by the CIP and TIM Fee Program Update that would be located in low-lying areas and in proximity to waterways and/or dam inundation zones may be subject to the hazard of flooding. Figure 4.7-1 delineates areas determined to be within the 100 and 500-year floodplain (FEMA, Map Number 06017C0725E, 06017C0750E, September 2008). Some traffic improvement projects, such as bridge-related projects, would be within the floodplain and may subject to flood hazards. In addition, a segment of US 50 south of Deer Creek is within Zone A, where no base flood elevations have been determined.

Part of US 50 is within a dam inundation area at Cameron Park. The El Dorado County Hazard Mitigation Plan identifies the Cameron Park Lake/Warren Hollister Dam as having considerable potential to inundate inhabited areas in the unlikely event of dam failure. The proposed traffic improvements would not introduce new residences within the dam inundation area, but US 50 would likely be used as a route for emergency response or transportation. Thus, contingency and emergency response plans would be reviewed, updated, and compared with future traffic improvements within the dam inundation area to ensure emergency response would not be hindered by the proposed traffic improvements.

Transportation improvements proposed by the CIP and TIM Fee Program Update that would be located within the 100-year floodplain would be subject to the Flood Damage Prevention Ordinance, under which certain engineering and zoning standards would apply in order to reduce injury and loss of life, to reduce structural damage caused by flooding, and to reduce public expenditures for additional flood control structures. Development within the floodway is also prevented unless no increase in flood elevation would result from the development. Nevertheless, the effects of flooding could include temporary inundation of a facility that impedes its use, or causes long-term damage to the facility. Flooding may also cause immediate damage to roadways and bridges, particularly during high-velocity flood events that wash away or erode facilities. This would typically occur adjacent to rising rivers or streams. Any facility within the flood zone of a stream would be subject to impacts. Bridge projects as part of the CIP and TIM Fee Program may be susceptible to impacts from rising rivers or streams. In addition, erosion caused by flooding can damage paved facilities, and bridge supports can be undermined or washed away. Flood hazards can also endanger occupants of habitable structures. Impacts would be potentially significant.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

W-2(a) **Minimizing Flood Risk**. If a project is located in an area with high flooding potential due a storm event or dam inundation, the structure shall be elevated at least one foot above the 100-year flood zone elevation and bank stabilization and erosion control measures shall be implemented along creek crossings.

W-2(b) **Flood Risk Communication Strategy**. For projects within a dam failure inundation hazard zone, a comprehensive flood risk communication strategy shall be developed, which would include an evacuation plan and/or an Emergency Action Plan and promote dam failure risk awareness and safety.

Significance After Mitigation. Implementation of the above measures would reduce potential impacts to a less than significant level.

Impact W-3 Implementation of Transportation Improvements Facilitated by the proposed CIP and TIM Fee Program Update could

potentially impact drainage systems, but not to a degree that would result in alteration of the course of a stream or river that would result in erosion, or increase the amount of surface runoff. Impacts are considered Class III, ***less than significant****.*

Implementation of the proposed transportation improvements under the CIP and TIM Fee Program Update may alter the existing drainage pattern in specific areas, including the alteration of a course of a stream or river, which would create the potential for erosion, siltation, or flooding on- or off-site. Impacts related to drainage systems are discussed further in in Section 4.10, Less than Significant Environmental Factors under Hydrology and Water Quality. Generally, each transportation system improvement project would require a specific level of design review to ensure that the engineering does not result in substantial alterations in the natural drainage systems. The United States Army Corps of Engineers (Corps) is responsible for issuing permits for the placement of fill, or discharge of material into, waters of the United States. These permits are required under Sections 401 and 404 of the Clean Water Act. Projects that involve instream construction, such as bridges, trigger the need for these permits and related environmental reviews by the Corps. Subsequent environmental review, design review, and the Clean Water Act permitting requirements would ensure that the impacts are reduced to a less than significant level. Additionally, a general WDR permit was adopted by the SWRCB in May of 2004 (Water Quality Order 2004-0004-DWQ) for projects resulting in the discharge of fill to waters of the State that are not waters of the United States. Compliance with these requirements during project-specific design and implementation would ensure that these projects would have a less-than significant impact on these water quality issues.

Mitigation Measures. None required, as no significant impacts were identified.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Specific Transportation Improvements that May Result in Impacts. All projects that require new construction or landscaping may result in impacts as discussed in Section 4.7.2.b above; and therefore, are not specifically identified in table format here. All proposed transportation improvements under the proposed update to the CIP and TIM Fee Program are listed in Table 2-1 in Section 2.0 Project Description. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above would apply to these specific projects.

4.8 NOISE

4.8.1 Setting

a. Overview of Sound Measurement. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important because sounds that occur over a long period of time are more likely to annoy people or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, Leq is summed over a one-hour period.

Sound pressure is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dBA sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while noise levels along arterial streets are generally in the 50 to 60+ dBA range. Normal conversational levels are in the 60-65 dBA range and ambient noise levels greater than that can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

The actual time period in which noise occurs is also important. Noise that occurs at night tends to be more disturbing than when it occurs during daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed (Ldn). Ldn is the time average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 PM and 7:00 AM to account for the fact that people are generally more sensitive to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is identical to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 PM to 10:00 PM). Thus, both the Ldn and CNEL noise measures represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

b. Vibration. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be

heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

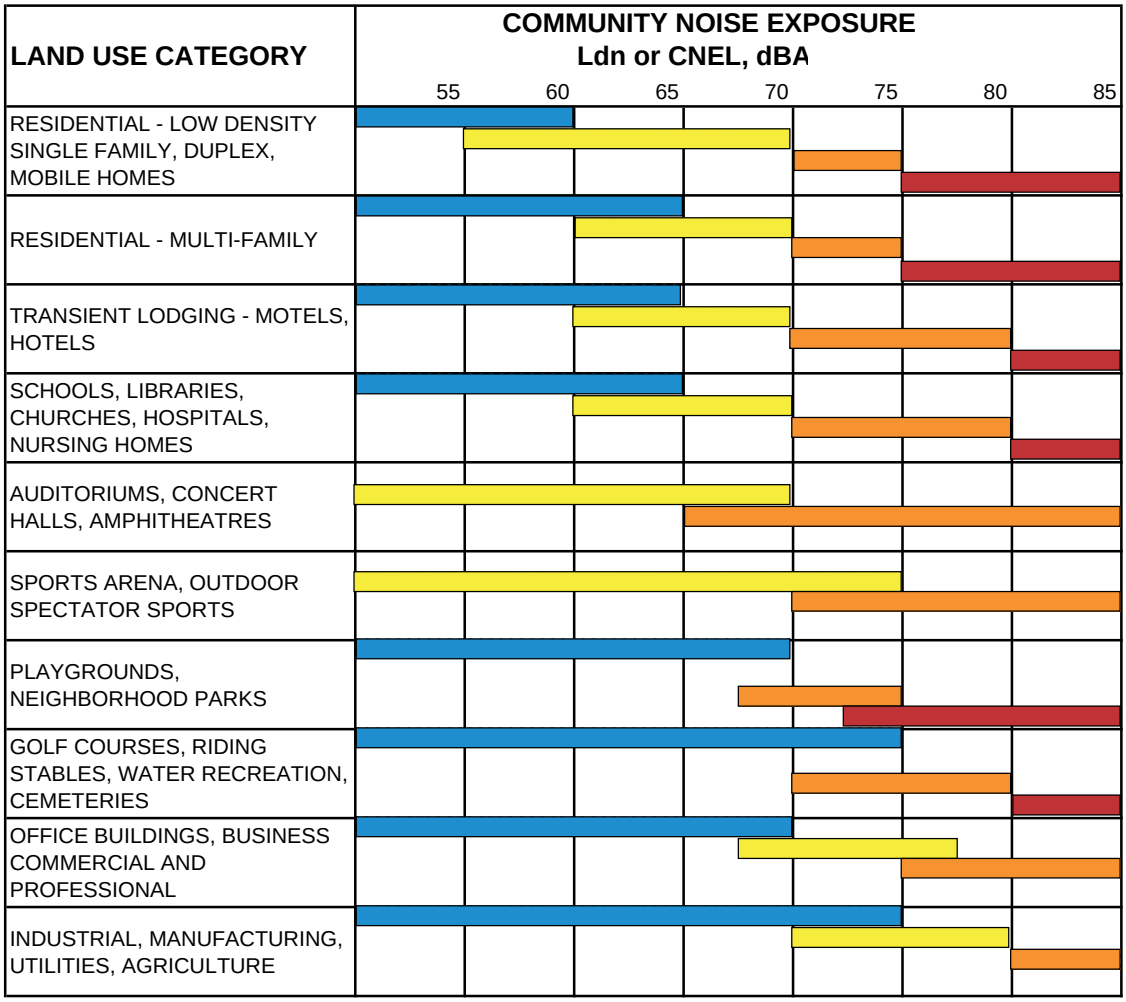
There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, groundborne vibration levels rarely affect human health. Instead, most people consider groundborne vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of groundborne vibration can damage fragile buildings or interfere with equipment that is highly sensitive to groundborne vibration (e.g., electron microscopes).

In contrast to noise, groundborne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 RMS or lower which is well below the threshold of perception for humans (human perception is around 65 RMS). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

c. Land Use Compatibility. The State Office of Noise Control established guidelines to provide the community with a noise environment deemed to be generally acceptable. Figure 4.8-1 depicts ranges of noise exposure levels considered compatible with various types of land uses. Where a land use is denoted as "normally acceptable" for the given Ldn noise environment, the highest noise level in that range should be considered the maximum desirable for conventional construction that does not incorporate any special acoustic treatment. The acceptability of noise environments classified as "conditionally acceptable" or "normally unacceptable" will depend on the anticipated amount of time that will normally be spent outside the structure and the acoustic treatment to be incorporated in structural design.

With regard to noise-sensitive residential uses, the recommended exterior noise limits are 60 dBA CNEL for single-family residences and 65 dBA CNEL for multi-family residences. The recommended maximum interior noise level is 45 dBA CNEL, which could normally be achieved using standard construction techniques if exterior noise levels are within the levels described above.



NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

Guidelines for the Preparation and Content of Noise Elements of the General Plan, California Office of Planning and Research, 2003.

Noise Compatibility Matrix Figure 4.8-1

d. Noise Control Measures. Noise can be controlled at its source, along its transmission path, at the receiver, or through a combination of these measures. Federal and State regulations provide certain controls on noise sources, like motor vehicles. The Public Health, Safety, and Noise Element of the El Dorado County General Plan recommends a maximum exterior noise level of 60 dBA Ldn and a maximum interior noise level of 45 dBA Ldn for noise-sensitive land uses, which include hospitals, schools, churches, and residential areas.

e. Noise Sources. Ambient noise levels in the Western Slope of El Dorado County vary widely depending upon proximity to noise generators, such as highways, airports, rail, construction, and industrial activities. The major noise sources in the Western Slope are described below.

Motor Vehicle Traffic. Motor vehicles are a substantial source of noise in much of El Dorado County. Roadways, in particular federal and State highways, are a major source of ambient noise, especially because most developed communities are located adjacent to these transportation corridors. The noisiest road corridor, US 50, runs horizontally through the middle of the Western Slope of El Dorado County. In 2014, U.S. 50 experienced 90,000 daily vehicles on the western segment between the Sacramento/El Dorado County Line and Latrobe Road (California Department of Transportation, 2014). Noise levels along the US 50 corridor exceed 65 dBA CNEL within varying distances from the centerline of the freeway. Other road corridors in the Western Slope that produce relatively high noise levels include State Route 49, which runs north to south through the western part of El Dorado County, and State Route 88, which follows along the southeastern border of El Dorado County.

The Public Health, Safety, and Noise Element of the El Dorado County General Plan includes a noise abatement policy for U.S. 50. Policy 6.5.1.5 states that setbacks should be used for noise abatement for residential projects located along U.S. 50. Noise walls are discouraged within the foreground viewshed of U.S. 50, in favor of less intrusive noise mitigation along other high volume roadways.

Aircraft Operation. There are eight airports that are sources of noise in the Western Slope of El Dorado County. A summary of the three public airports' existing operations is provided below (information available at: http://www.airnav.com/airport/):

- Cameron Airpark Airport: 70% local general aviation, 28% transient general aviation, and 2% air taxi and an average of 99 flights/day;
- Georgetown Airport: 67% transient general aviation, 31% local general aviation, and 2% military and an average of 62 flights/day; and
- Placerville Airport: 52% transient general aviation, 45% local general aviation, 2% military, and 2% air taxi and an average of 163 flights/day.

The remaining five airports (Dubey Airport, Akin Airport, Perryman Airport, Swansboro Airport, and Bacchi Valley Industries Airport) in the County are private airports that do not contribute much air traffic or noise in the area. For Cameron Airport and Georgetown Airport, the County recognizes the Airport Land Use Compatibility Plan (ALUCP) for development

within the Airport Noise Zones, which take precedence over County noise standards (El Dorado County General Plan, 2004).

In addition to airplanes, helicopter flights occur throughout the Western Slope of El Dorado County. These flights typically follow major and primary arterials with the exception of police patrol activities. There are three heliports in the Western Slope of El Dorado County: High Hill Ranch Heliport, Pacific Gas and Electric Company Camp 5 Heliport, and Fresh Pond Heliport. Although single-event noise exposure resulting from helicopter operations may be considered a nuisance, the relatively low frequency and short duration of these operations do not substantially affect average daily noise levels anywhere in the County (http://www.dot.ca.gov/hq/planning/aeronaut/helipads/dataplates /pdfs/ Barton_Memorial_Hospital_HP.pdf).

f. Regulatory Setting.

State of California General Plan Guidelines. The State of California General Plan Guidelines (California Governor's Office of Planning and Research 2003) identifies guidelines for the Noise Elements of city and county General Plans, including a sound level/land-use compatibility chart that categorizes, by land use, outdoor Ldn ranges in up to four categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable). These guidelines provide the State's recommendations for city and county General Plan Noise Elements, as shown in Figure 4.8-1 above. Compliance with the guidelines by the cities and counties is not required, but nonetheless is common because many General Plan Noise Elements are based on these guidelines. The Noise Element Guidelines in Figure 4.8-1 identify the normally acceptable range for low-density residential uses as less than 60 dB, and the conditionally acceptable range as 55–70 dB. The normally acceptable range for high-density residential uses is identified as Ldn values below 65 dB, and the conditionally acceptable range is identified as 60–70 dB. For educational and medical facilities, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 60–70 dB are considered conditionally acceptable. For office and commercial land uses, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 67.5–77.5 are categorized as conditionally acceptable. These overlapping Ldn ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land-use compatibility at specific locations.

County. El Dorado County General Plan adopted in 2004 includes a Public Health, Safety, and Noise Element. Acceptable noise levels are included to protect noise-sensitive developments, which include hospitals, schools, churches, and residential areas. The maximum allowable noise exposure for transportation noise sources in residential and other noise-sensitive developments is 60 Ldn for outdoor areas and 45 Ldn for interior spaces. During construction, the maximum allowable noise exposure in residential community regions is 75 dB between the hours of 7 a.m. and 7 p.m., 65 dB between 7 p.m. and 10 p.m., and 60 dB between 10 p.m. and 7 a.m (El Dorado County General Plan, 2004).

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds. The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term noise associated with proposed transportation system improvements. Temporary construction noise was estimated based upon levels presented in the May 2006 Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment*. With the proposed CIP and TIM Fee Program Update, long-term noise level increases would be introduced by new noise sources or movement of existing noise sources to sensitive receptors as a result of the improvement project. Long-term traffic-related noise was estimated using a modification of the Federal Highway Traffic Noise Model.

Pursuant to the State CEQA guidelines, potentially significant impacts would result if the project would result in:

1. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
2. *Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;*
3. *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*
4. *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*
5. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of persons residing or working in the project area to excessive noise levels; and/or*
6. *For a project within the vicinity of a private airstrip, exposure of persons residing or working in the project area to excessive noise levels.*

Impacts related to noise produced by public and private airports and airstrips would be less than significant and are discussed in Section 4.10, *Less than Significant Environmental Factors.*

b. Project Impacts and Mitigation Measures. This section describes generalized impacts associated with the projects anticipated in the proposed update to the CIP and TIM Fee Program. Table 2-1 in Section 2.0 lists the specific projects that could result in the impacts discussed in this section.

Impact N-1 Construction activity associated with transportation improvement projects envisioned by the proposed CIP and TIM Fee Program Update would create temporary noise level increases and vibration in discrete locations along existing roadways in the Western Slope of El Dorado County. Impacts would be Class II, *significant but mitigable.*

Noise. Operating equipment during the construction of transportation improvement projects would temporarily increase noise in the immediate vicinity of individual construction sites. As shown in Table 4.8-1, average noise levels associated with using heavy equipment at construction sites can range from about 76 to 89 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and the phase of construction. The

highest noise levels generally occur during excavation and foundation development, which involve using such equipment as backhoes, bulldozers, shovels, and front-end loaders.

Table 4.8-1
Typical Construction Noise Levels (in dBA)

Equipment	Typical Level 25 Feet from the Source	Typical Level 50 Feet from the Source	Typical Level 100 Feet from the Source	Typical Level 200 Feet from the Source	Typical Level 800 Feet from the Source
Air Compressor	87	81	75	69	57
Backhoe	86	80	74	68	56
Concrete Mixer	91	85	79	73	61
Grader	91	85	79	73	61
Paver	95	89	83	77	65
Saw	82	76	70	64	52
Scraper	95	89	83	77	65
Truck	94	88	82	76	64

Source: Typical noise level 50 feet from the source was taken from FTA, May 2006. Noise levels at 25 feet, 100 feet, 200 feet, and 800 feet were extrapolated using a 6 dBA attenuation rate for the doubling of distance. Noise levels are measured in Leq for the expected duration that each piece of equipment is expected to operate. Each noise level assumes the piece of equipment is operating at full power for the expected duration to complete the construction activity. The duration varies widely between each piece of equipment. Noise levels also depend on the model and year of the equipment used. The noise levels assume simultaneous construction activities associated with the respective phase of construction and equipment being used.

Noise levels from point sources such as construction sites typically attenuate at a rate of about 6 dBA per doubling of distance. Therefore, only areas within approximately 300 feet of construction sites would be expected to be exposed to unacceptable noise levels over 75 dBA (the County's maximum allowable noise exposure in residential community regions during construction). Nevertheless, some transportation projects may be within 300 feet of residential communities and therefore construction activity associated with transportation improvement projects envisioned by the CIP and TIM Fee Program Update could create temporary noise level increases affecting nearby sensitive receptors. Impacts would be significant but mitigable.

Vibration. Construction-related vibration has the potential to damage structures, cause cosmetic damage (e.g., crack plaster), or disrupt the operation of vibration-sensitive equipment. Vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. Heavy construction operations can cause substantial vibration near the source. As shown in Table 4.8-2, the highest impact caused by equipment such as pile drivers or large bulldozers can generate vibrations of 1.518 to 0.089 inches per second of peak particle velocity (PPV) at a distance of 25 feet. Similar to construction noise, vibration levels would be variable depending on the type of construction project and related equipment use.

Typical project construction activities, such as the use of jackhammers, other high-power or vibratory tools, compactors, and tracked equipment, may also generate substantial vibration (i.e., greater than 0.2 inches per second PPV) in the immediate vicinity, typically within 15 feet of the equipment. Through the use of scheduling controls, typical construction activities would be restricted to hours with least potential to affect nearby properties. Thus, perceptible vibration can be kept to a minimum and not result in human annoyance or structural damage.

Some specific construction activities result in higher levels of vibration. Pile driving has the potential to generate the highest vibration levels and is the primary concern for structural damage when it occurs within 50 feet of structures. Vibration levels generated by pile driving activities would vary depending on project conditions, such as soil conditions, construction methods and equipment used. Depending on the proximity of existing structures to each construction site, the structural soundness of the affected buildings and construction methods, vibration caused by pile driving or other foundation work with a substantial impact component such as blasting, rock or caisson drilling, and site excavation or compaction may be high enough to be perceptible within 100 feet and damage existing structures within 50 feet. Impacts would be significant but mitigable.

Table 4.8-2
Construction Equipment Vibration Levels

Equipment		Peak Particle Velocity (PPV) at 25 Feet (Inches per Second)	Root Mean Square (RMS) at 25 Feet (Vdb)
Pile Driver (Impact)	Upper Range	1.518	112
	Typical	0.644	104
Pile Driver (Sonic)	Upper Range	0.734	105
	Typical	0.170	93
Vibratory Roller		0.210	95
Clam Shovel Drop (Slurry Wall)		0.202	94
Hydrol Mill (Slurry Wall)	In Soil	0.008	66
	In Rock	0.017	75
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.

Mitigation Measures. County noise and vibration general plan policies and ordinance requirements in place at the time of project approval would apply to construction activity associated with the proposed CIP and TIM Fee Program Update implementation. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.8-3. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

N-1(a) The project sponsor shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures shall be implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on

construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.

N-1(b) If a particular project within 800 feet of sensitive receptors requires pile driving, the County or project sponsor shall require the use of pile drilling techniques instead, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.

N-1 (c) Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).

N-1(d) Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation.

N-1(e) Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled.

Significance After Mitigation. With implementation of local noise control requirements and the mitigation measures described above, impacts would be reduced to a less than significant level.

Impact N-2 Implementation of the proposed update to the CIP and TIM Fee Program would increase traffic-generated noise levels in El Dorado County on highways and roadways that could expose sensitive receptors to noise in excess of normally acceptable levels. This is a Class II, *significant but mitigable,* impact.

Overall traffic levels on highways and roadways in El Dorado County are projected to increase due to regional growth through the year 2035 (refer to Section 4.9, *Transportation and Circulation*). The 2016 Regional Transportation Plan-Sustainable Communities Strategy (RTP-SCS) includes many roadway modification projects with the purpose of increasing roadway capacity. Such projects would not in themselves introduce new traffic, but rather are intended to relieve current or projected future traffic congestion. However, in some cases, widening and extension projects would accommodate additional traffic volumes. Although many of the

planned widening and extension projects are in areas where sensitive noise receptors would not be affected, several would move traffic closer to noise-sensitive land uses. Such projects include the construction of new connector roads, as well as improvements to roads that would allow increased traffic volumes (see Table 4.8-3). It should be noted that while traffic may increase in certain locations, the expected total system-wide vehicle miles traveled (VMT) in the County in 2035 would be reduced from 4,880,843 VMT without the CIP and TIM Fee Program to 4,863,521 VMT with the CIP and TIM Fee Program, a reduction of 17,322 VMT. As the VMT decreases, overall noise associated with VMT would also decrease. Nevertheless, because certain CIP and TIM Fee projects could result in increased noise levels at sensitive receptors, impacts would be potentially significant.

Mitigation Measures. The lead agency shall perform an initial review to determine the appropriate level of CEQA analysis necessary for each project identified in the CIP, including, but not limited to, those projects identified in Table 4.8-3. Should that initial review conclude that the project would result in the potentially significant impact described herein, El Dorado County (or the project sponsor) shall implement the following mitigation measures, or one of equal or greater efficacy:

N-2(a) The project sponsor shall complete detailed noise assessments using applicable guidelines at the time of project approval (e.g., the California Department of Transportation Traffic Noise Analysis Protocol for roadway projects). The noise survey shall be sufficient to indicate existing and projected noise levels, to determine the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards. This shall be accomplished during the project's individual environmental review as necessary.

N-2(b) Where new or expanded roadways or transit are found to expose receptors to noise exceeding normally acceptable levels, the individual project sponsor shall consider various sound attenuation techniques. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including open grade paving, solid fences, walls, and, landscaped berms. Determination of appropriate noise attenuation measures will be assessed on a case-by-case basis during a project's individual environmental review pursuant to the regulations of the applicable lead agency.

Significance After Mitigation. Implementation of the recommended programmatic measures N-2(a-b) would reduce potential impacts to a less than significant level.

c. Projects That May Result in Impacts. Table 4.8-3 identifies those projects that may create impacts. The individual projects involve construction activities and/or would accommodate additional vehicle traffic, or locate traffic noise sources near receptors such that they could create significant noise impacts, but would not necessarily do so. Additional specific analyses will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above would apply to these specific projects.

Table 4.8-3
CIP and TIM Fee Program Update Projects with Potential Impacts

Location/Agency	Project Description	Impact	Description of Potential Impact
Cameron Park Drive	Road widening - North of Palmer Drive to Hacienda Drive	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Country Club Drive	Extension - El Dorado Hills Blvd. to Silva Valley Parkway	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Country Club Drive	Extension - Silva Valley Parkway to Tong Road	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Country Club Drive	Extension - Tong Road to Bass Lake Road/Old Bass Lake Road	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Green Valley Road	Road widening – County line to Sophia Parkway	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Green Valley Road	Road widening – east of Francisco Drive to east of Silva Valley Road	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Headington Road	Road extension – Missouri Flat Road to El Dorado Road	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Latrobe Connection	Golden Foothill Parkway to County line	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Saratoga Way	Extension – Phase 1/Phase 2	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
Silva Valley Parkway/Serrano Parkway	Traffic circulation improvement	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/Bass Lake Road	Interchange improvements	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/Cambridge Road	Interchange improvements	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/El Dorado Hills Boulevard	Interchange improvements – Phase 2B	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/El Dorado Road	Interchange improvements	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation

Table 4.8-3
CIP and TIM Fee Program Update Projects with Potential Impacts

Location/Agency	Project Description	Impact	Description of Potential Impact
U.S. 50/Missouri Flat Road	Interchange improvements – Phase 1B.2	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/Ponderosa Road	Interchange improvements	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/Silva Valley Parkway	Interchange improvements – Phase 2 (on ramps and auxiliary)	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
White Rock Road	Road widening (2 to 4 lanes) – Monte Verde Drive to U.S. 50/Silva Valley Parkway	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
U.S. 50/Camino Area	Local road improvements (County Share)	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation
White Rock Road	Road widening (2 to 4 lanes) – Manchester Drive to Sacramento County line	N-1, N-2	Potential impacts to nearby noise-sensitive receptors during construction and operation

4.9 TRANSPORTATION AND CIRCULATION

4.9.1 Setting

a. Freeway, Highway, and Arterial Network. The Western Slope of El Dorado County regional road system is a network of highways and roads, connecting cities and unincorporated communities, providing rapid and efficient goods movement throughout the county. The transportation system is coordinated by the El Dorado County Transportation Commission (EDCTC), the El Dorado County Transit Authority (EDCTA), the Sacramento Area Council of Governments (SACOG), the Tahoe Regional Planning Agency (TRPA), and the state and federal agencies that fund and manage the facilities. The regional road network is illustrated on Figure 2-1 in Section 2.0, *Project Description*.

Most travel in the Western Slope of El Dorado County is in automobiles due to the low-density development patterns, steep grades, and the historic low demand for bicycle and pedestrian infrastructure. Nearly 87 percent of all commute trips were made by automobile (El Dorado County General Plan, 2015). The primary transportation corridor is US Highway 50 (US 50), which extends through the Western Slope of the County from Sacramento County on the west to the Lake Tahoe Basin to the east. US 50 serves all the major urban areas, including El Dorado Hills, Cameron Park, Diamond Springs, the City of Placerville, Camino, and eventually connecting to South Lake Tahoe in the Tahoe Basin. US 50 is a major commute and shipping route with high occupancy vehicle lanes from Cameron Park to the Sacramento/El Dorado County line.

Other contributors to the roadway system include state highways, county arterials, and local public and private roads. Caltrans operates and maintains the state highways in the Western Slope of El Dorado County, which include State Routes 49, 153, and 193. State Route 49 runs north to south throughout the Sierra Nevada foothills on the western side of the County. State Route 153 provides access from State Route 49 to Marshall Monument in Coloma. State Route 193 also meets State Route 49 in Placerville and Cool, as it runs north from Placerville to Georgetown and west to Cool.

Operations. A variety of performance measures can be used to assess transportation systems. Depending on the type of performance evaluation required, performance measures may be very specific and focus on specific intersections or roadway segments, or performance measures may be aggregated to evaluate the overall operation of a regional transit system. A regional travel model typically only contains information on the number of lanes and link capacity on roadway segments and lacks information detailed enough to calculate accurate intersection capacity. Because of the programmatic nature of the proposed update to the CIP and TIM Fee Program, the performance measures discussed herein focus on vehicles miles traveled (VMT) as the metric to determine whether the project would achieve reduction goals. However, the overall goal of the CIP and TIM Fee Program Update is to ensure that the CIP, as well as a 20-Year TIM Fee Program, maintains the required level of service (LOS) for the County's roadway network, in accordance to General Plan policies, ~~and~~ Measure Y, and Measure E. Measure Y, also known as "The Control Traffic Congestion Initiative," was passed by voters in 1998 and again in 2008 to require applicants or developers to mitigate a new project's traffic impacts either by adding conditions to the project to construct the necessary

road improvements, or by ensuring that construction of the necessary road improvements is in the 10-year CIP for residential projects[1]. -Measure E, also known as the "Initiative to Reinstate Measure Y's original intent – no more paper roads,"~~,~~ was passed by the voters on June 7, 2016. Measure E removed the second option of paying TIM fees and relying on the inclusion of road improvements in the 10-year CIP for residential projects to mitigate their impacts.

Vehicle Miles Traveled (VMT). VMT is a measurement of miles traveled by vehicles in a specified region for a specified time period. This EIR evaluates total weekday daily VMT within El Dorado County under baseline conditions and how total daily VMT would change during future year conditions with and without implementation of the proposed CIP and TIM Fee Program Update. Increased daily VMT is anticipated with regional growth that would occur with or without the project and does not necessarily reflect deficient traffic operations. Rather, it shows how many miles would be traveled daily county-wide under different scenarios. The daily VMT under 2015 conditions was 3,877,617 and is projected to increase to 4,880,843 in 2035 as a result of planned growth consistent with the General Plan.

Level of Service (LOS). LOS is a qualitative indication of congestion on a transportation facility. LOS is based on motorists' perception of traffic operations. LOS is a letter grade ranging from LOS A to LOS F, with LOS A equating to very little congestion and LOS F occurring when the travel demand exceeds capacity. The following criteria are established by the County to determine whether the vehicular traffic on a roadway facility exceeds the standard operating conditions. The following is summarized from the Technical Memorandum 2-3: Existing and Future Deficiency and Nexus Assessment, prepared by Kittelson and Associates, Inc., 2016 (contained in Appendix C).

County Roadways. Circulation Policy TC-Xd of the El Dorado County General Plan provides level of service standards for County-maintained roads and state highways as follows:

> *Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table.*

Roadways in the community regions are evaluated against an LOS E standard, while those in the rural regions and rural centers are analyzed against LOS D.

State Facilities. County Policy TC-Xd is applicable not only to the County roadways, but also to the state facilities. As such, traffic conditions for state facilities within the unincorporated areas of the County shall not be worse than LOS E in the community regions and LOS D in the rural center and rural regions, except to the locations specified in Table TC-2.

US Highway 50. Table 4.9-1 presents the County's LOS thresholds used for US 50. These standards are generally consistent with the concept LOS established by Caltrans, the County, and Table TC-2 of the 2004 El Dorado County General Plan. However, Caltrans' concept LOS as published in the 2014 *US 50 Transportation Concept Report and Corridor System Management Plan,*

[1] *Non-residential projects roadway impacts may be mitigated if the traffic mitigation are in the 20-year CIP for construction.*

Caltrans District 3, for some segments of US Highway 50, such as through the City of Placerville and up to Echo Summit are more restrictive than the LOS identified for those segments in the County's General Plan Table TC-2. The County's LOS for the segments where the rural region boundary encompasses US Highway 50 in the westerly portion of the county, such as the segment between Shingle Springs Road and El Dorado Road, is more restrictive than Caltrans' urban LOS E.

Table 4.9-1
US 50: Level of Service Thresholds

Location Description	Begin Post Mile	End Post Mile	Level of Service Threshold (County/Caltrans)
Sacramento/El Dorado County Line to Latrobe Road	0	0.857	LOS E/E
Latrobe Road to Silva Valley Parkway	0.857	2.40	LOS E/E
Silva Valley Parkway to Cambridge Road	2.40	4.962	LOS D/E
Cambridge Road to Shingle Springs Drive	4.962	8.564	LOS E/E
Shingle Springs Drive to El Dorado Road	8.564	14.011	LOS D/E
El Dorado Road to Canal Street	14.011	17.52	LOS E/E
Canal Street to Mosquito Road	17.52	18.517	LOS F/D
Mosquito Road to Point View Drive	18.517	20.296	LOS E/E
Point View Drive to Old Highway, Camino	20.296	23.957	LOS D/E and D
Old Highway, Camino to Old Carson Road	23.957	34.219	LOS E/E
Old Carson Road to Ice House Road	34.219	39.772	LOS D/D
Ice House Road to Echo Lake Road	39.772	65.619	LOS F/D

Source: US 50 Transportation Concept Report and Corridor System Management Plan, Caltrans District 3, June 2014, 2004 El Dorado County General Plan, July 2004.

State Route 49. In the State Route 49 Transportation Concept Report (Caltrans, 2000), the concept LOS is F south of the community of El Dorado and through the City of Placerville. All other segments have a concept LOS E. Since the County adopted exceptions for this roadway, the County's LOS standard for rural community (LOS D) was used as the operational criteria for segments from Amador/El Dorado County Line to Union Mine Road and from SR 193 (south) to SR 193 (north).

State Route 193. In the State Route 193 Transportation Concept Report (Caltrans, 2011), the concept LOS through El Dorado County is LOS D. This Caltrans concept LOS is consistent with the County standard.

State Route 153. The State Route 153 Transportation Concept Report (Caltrans, 2011) established a concept LOS of E for SR 153 within El Dorado County. Since the roadway runs through a defined rural community, the County's LOS D standard was used as the operational standard for this analysis.

State Route 88. The State Route 88 Transportation Concept Report (Caltrans, 2013) established a concept LOS of C for SR 88 for the section closest to the Western Slope. State Route 88 is located in the southeastern part of the County.

b. Transit Service. Existing mass transit services in the Western Slope of El Dorado County are provided by the El Dorado County Transit Authority (EDCTA). EDCTA provides three primary modes of public transportation: Demand Response, Local Fixed Route, and Commuter Service. Demand Response includes Dial-A-Ride, subscription Dial-A-Ride,

transportation for clients of Mother Lode Rehabilitation Enterprises, Inc., and the Senior Day Care Center. Over the 2014/2015 fiscal year, Demand Response transportation generated 59,774 trips and 366,869 miles (EDCTA, 2015). Local Fixed Route includes connecting bus service on weekdays between Placerville, Pollock Pines, Camino, El Dorado, Diamond Springs, Cameron Park, and Shingle Springs. Over the 2014/2015 fiscal year, Local Fixed Route transportation generated 154,553 trips and 269,176 miles (EDCTA, 2015). Commuter Service includes direct service to downtown Sacramento during commute times, reverse commutes from Sacramento to El Dorado County, and the Iron Point Connector route. Over the 2014/2015 fiscal year, Commuter Service transportation generated 149,465 trips and 340,446 miles (EDCTA, 2015).

c. Air Transportation. There are three public use airports in the Western Slope of El Dorado County: Cameron Airpark, Georgetown Airport, and Placerville Airport. In addition to general public uses, these airports are used by military and government agencies for training flights, search and rescue missions, and fire suppression support. The five private airports in the Western Slope of El Dorado County are Dubey Airport, Akin Airport, Perryman Airport, Swansboro Airport, and Bacchi Valley Industries Airport.

d. Bicycle/Pedestrian Facilities. In the Western Slope of El Dorado County, bicycles are mainly used for commuting to school and for recreation. Bicycle facilities in El Dorado County generally fall into three distinct categories. Class I Bikeway (~~Bicycle Trail~~Bike Path) facilities are dedicated ~~lanes~~ paths physically separated from traffic lanes. Class I ~~lanes~~ paths provide a safe and reliable means of transportation for those wishing to bicycle or walk to their destinations. Where no parallel sidewalk is provided and where appropriate, Class I Bikeways are used by both pedestrians and bicyclists. Class II Bikeway (~~Bicycle~~ Bike Lane) facilities are separated from adjacent traffic ~~by striped lanes with optional striping scenarios to allow on-street parking~~ by pavement markings (bicycles travel in the same direction as adjacent traffic). Class III Bikeway (~~Bicycle~~ Bike Route) facilities are identified by green and white "Bike Route" signs, which may be supplemented with arrows and/or "Bikes May Use Full Lane" signage~~guide signing and have no special lane designation. These routes are means to connect segments of Class I or Class II bikeways~~. The El Dorado County Bicycle Transportation Plan ~~/Pedestrian Plan~~ was adopted in 2010 to provide a blueprint for the development of a bicycle transportation system on the Western Slope. The proposed bikeway system is over 280 miles and includes strategies to develop Class I Bikeways along the Sacramento-Placerville Transportation Corridor ("El Dorado Trail").

e. Regulatory Setting.

El Dorado County General Plan. The Transportation and Circulation Element of the El Dorado County General Plan includes goals, policies and objectives related to transportation in the County. Objectives and policies regarding transportation that are applicable to the CIP and TIM Fee Program Update are listed in Table 4.9-2.

Table 4.9-2
El Dorado County Transportation and Circulation Element
Goals, Objectives, Policies and Implementation Measures

Policy TC-Xa	1. Traffic from ~~single-family~~ residential ~~subdivision~~ development projects of five or more units or parcels of land shall not result in, or worsen, Level of Service F (gridlock, stop-and-go) traffic congestion during weekday, peak-hour periods on any highway, road, interchange, or intersection in the unincorporated areas of the cCounty. ~~This applies to residential development projects of five or more units or parcels.~~ 2. The County shall not add any additional segments of U.S. Highway 50, or any other highways and roads, to the County's list of roads from the original Table TC-2 of the 2004 General Plan that are allowed to operate at Level of Service F without first getting the voters' approval. ~~or by a 4/5ths vote of the Board of Supervisors.~~ 3. ~~Developer-paid traffic impact fees combined with any other available funds fully pay for~~ aAll necessary road capacity improvements shall be fully completed to prevent ~~to fully offset and~~ mitigate ~~all direct and new development's traffic impacts~~ cumulative traffic impacts from new development from reaching ~~i~~Level of Service F during peak hours upon any highways, arterial roads, and their intersections during weekday, peak-hour periods in unincorporated areas of the county before any form of discretionary approval can be given to a project. 4. County tax revenues shall not be used in any way to pay for building road capacity improvements to offset traffic impacts from new development projects. Non-county tax sources of revenue, such as federal and state grants, may be used to fund road projects. -Exceptions are allowed if county voters first give their approval. 5. The County shall not create an Infrastructure Financing District unless allowed by a ~~2/3~~rd ~~s~~two-thirds majority vote of the people within that district. 6. Mitigation fees and assessments collected for infrastructure shall be applied to the geographic zone from which they were originated and may be applied to existing roads for maintenance and improvement projects. 7. Before giving approval of any kind to a residential development project of five or more units or parcels of land, the County shall make a finding that the project complies with the policies above. -If this finding cannot be made, then the County shall not approve the project in order to protect the public's health and safety as provided by state law to assure that safe and adequate roads and highways are in place as such development occurs. .
Policy TC-Xb	To ensure that potential development in the County does not exceed available roadway capacity, the County shall: 1. Every year prepare an annual Capital Improvement Program (CIP) specifying expenditures for roadway improvements within the next 10 years. At least every five years prepare a CIP specifying expenditures for roadway improvements within the next 20 years. Each plan shall contain identification of funding sources sufficient to develop the improvements identified; 2. At least every five years, prepare a Traffic Impact Mitigation (TIM) Fee Program specifying roadway improvements to be completed within the next 20 years to ensure compliance with all applicable level of service and other standards in this plan; and 3. Annually monitor traffic volumes on the county's major roadway system depicted in the Circulation Diagram.

Table 4.9-2
El Dorado County Transportation and Circulation Element
Goals, Objectives, Policies and Implementation Measures

Policy TC-Xd	Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table. Level of Service will be as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council) and calculated using the methodologies contained in that manual. Analysis periods shall be based on the professional judgment of the Department of Transportation which shall consider periods including, but not limited to, Weekday Average Daily Traffic (ADT), AM Peak Hour, and PM Peak hour traffic volumes.
Policy TC-Xe	For the purposes of this Transportation and Circulation Element, "worsen" is defined as any of the following number of project trips using a road facility at the time of issuance of a use and occupancy permit for the development project: 1. A 2 percent increase in traffic during the a.m. peak hour, p.m. peak hour, or daily, or 2. The addition of 100 or more daily trips, 3. The addition of 10 or more trips during the a.m. peak hour or the p.m. peak hour.
Policy TC-Xf	At the time of approval of a tentative map for a single family residential subdivision of five or more parcels that worsens (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall ~~do one of the following: (1)~~ condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element based on existing traffic plus traffic generated from the development plus forecasted traffic growth at 10-years from project submittal~~; or (2) ensure the commencement of construction of the necessary road improvements are included in the County's 10-year CIP~~. For all other discretionary projects that worsen (defined as a project that triggers Policy TC-Xe [A] or [B] or [C]) traffic on the County road system, the County shall ~~do one of the following: (1)~~ condition the project to construct all road improvements necessary to maintain or attain Level of Service standards detailed in this Transportation and Circulation Element~~; or (2) ensure the construction of the necessary road improvements are included in the County's 20-year CIP~~. ~~In nutshell, On November 3, 1998, Policy TC-Xf was also amended to clarify when residential subdivision (five or more parcels) and commercial projects would be required to mitigate their roadway impacts. Policy TC-Xf deems development projects that worsen (as defined in Policy TC-Xe) traffic on the County road system to be mitigated, if the necessary road improvement traffic mitigation measures are included within: the 10-Year CIP (for residential projects of five or more parcels), and the 20-Year CIP (for all other discretionary projects).~~
Policy TC-Xh	All subdivisions shall be conditioned to pay the traffic impact fees in effect at the time a building permit is issued for any parcel created by the subdivision.
Implementation Measures TC-A and TC-B	Requires the adoption of a prioritized 10-Year and 20-Year Capital Improvement Program (CIP) as well as a 20-Year TIM Fee Program. Measure TC-B also requires the 20-Year growth forecast to be updated every five years. The growth forecast is needed to update the CIP and TIM Fee Program. Project costs are reviewed and adjusted annually as well as every five years. Routinely verifying and updating growth forecasts allows the County to account for new information and adjust its assumptions and plans accordingly.

4.9.2 Impact Analysis

a. Methodology and Significance Thresholds. Thresholds of significance are used to determine whether implementation of the proposed update to the CIP and TIM Fee Program would result in significant traffic and circulation impacts. The thresholds of significance outlined in this section are derived from the policies and practices of El Dorado County and guidance from Caltrans regarding state highways.

The proposed CIP and TIM Fee Program Update implements improvements for the overall transportation system in the Western Slope of El Dorado County. Traffic projections for the proposed update to the CIP and TIM Fee Program were obtained from analysis prepared by Kittelson & Associates, Inc. In addition to current 2015 baseline conditions, the traffic analysis included projections for 2035 with and without the CIP and TIM Fee Program. The analysis provided herein is based on both VMT and LOS projections for the year 2035. VMT is used for the region as a performance indicator to determine potential impacts and related benefits (i.e., reduction in VMT) associated with the CIP and TIM Fee Program Update's transportation improvements. In addition, to be consistent with the County's General Plan, the EIR analyzes whether the proposed CIP and TIM Fee Program Update achieves the County's standards for LOS on Western Slope roadways in the year 2035.

It is important to emphasize that population growth, urbanization, and the volume of average daily traffic generated in El Dorado County will increase by 2035. This will occur with or without implementation of the CIP and TIM Fee Program as a result of a range of demographic and economic factors independent of transportation policies or land use decisions implemented by the County. In light of this, the analysis below describes operational changes among the 2015 baseline VMT, 2035 "No Project scenario," and 2035 with the CIP and TIM Fee Program implementation. The evaluation below describes the full effect of the CIP and TIM Fee Program and includes future growth that would occur with or without program implementation. The environmental impacts and mitigation measures are based on physical changes resulting from the CIP and TIM Fee Program implementation, rather than on future regional growth that would occur regardless of whether the plan is adopted and implemented.

The criteria for determining whether the proposed update to the CIP and TIM Fee Program would have significant environmental impacts related to transportation and traffic were based in part on the environmental checklist in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.). According to the State CEQA Guidelines, significant impacts to transportation and traffic would occur if the project would:

1. *Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;*
2. *Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;*
3. *Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

4. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;*
5. *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or*
6. *Result in inadequate emergency access.*

The last three criteria are related to project specific analyses that would occur in the future as projects within the CIP and TIM Fee Program undergo environmental review. Thus, they are not used herein to determine whether significant traffic/transportation impacts would occur as a result of the proposed update to the CIP and TIM Fee Program.

Transit Performance Standards. The El Dorado County Transit Authority (EDCTA) reports trends in operating data and performance measures every six months. These transit performance standards focus on overall system operations and include the following (Triennial Performance Audit, 2010):

- Demand response service is to operate at a minimum of 90 percent on time (no more than 10 minutes late).
- Community bus service is expected to operate no less than 85 percent on time (no more than 5 minutes late).
- Commuter services are to operate with a target of 90 percent on time (no more than 5 minutes late).

The proposed update to the CIP and TIM Fee Program also includes transit service improvements (see Table 2-1 in Section 2.0, *Project Description*). These projects may include actions that could have environmental effects depending on the scope of improvements and the location. Because details associated with these improvements are unknown at this time, it is assumed the improvements would improve services with respect to the identified transit performance standards, but would be evaluated further on a project-specific basis as they are proposed.

Bicycle ~~and Pedestrian~~ Facilities Standards. The El Dorado County Bicycle Transportation Plan (2010 Update) describes the current bikeway network, creates uniformity in policies ~~and design~~, identifies funding opportunities, and recommends programs to expand or improve the bikeway infrastructure. The recommended bikeway networks identify attractors (i.e., destinations that residents would want to access via bicycle such as parks and schools) and both existing and proposed future bikeways. The proposed update to the CIP and TIM Fee Program would not have significant impacts to bicycle ~~and pedestrian~~ facilities if it is consistent with the aforementioned plans. Moreover, a significant and adverse impact would occur if new or expanded facilities cause a physical change to the environment.

b. Project Impacts and Mitigation Measures.

Impact T-1 Total daily vehicle miles traveled on freeways and roadways in 2035 would increase when compared to existing (2015) baseline conditions. However, implementation of the proposed update to the CIP and TIM Fee Program would reduce overall VMT in 2035 when compared to 2035 conditions under the "No Project"

scenario. Impacts related to total daily freeway and roadway vehicle miles traveled would be Class III, *less than significant*.

In addition to a 2015 baseline, the study analyzes two projections for the year 2035. The first projection is the "No Project" scenario, which accounts for future growth in 2035 including current CIP projects but without implementation of the CIP and TIM Fee Program Update. The second projection includes implementation of the CIP and TIM Fee Program through 2035, accounting for future growth and all transportation projects envisioned by the CIP and TIM Fee Program Update.

Table 4.9-3 shows daily VMT for the 2015 baseline, 2035 "No Project scenario," and 2035 with CIP and TIM Fee Program Update. As shown, both 2035 daily VMT scenarios would increase VMT above 2015 conditions. This increase is largely a result of population growth anticipated throughout the region by 2035, consistent with the growth envisioned by the County's General Plan. Growth projections indicate that population in the Western Slope of El Dorado County is expected to increase by approximately 33,494 people, an increase of approximately 19%, between 2015 and 2035. As such, the increase in VMT is not necessarily attributed to the proposed update to the CIP and TIM Fee Program when compared to existing conditions. To evaluate the incremental impact of the CIP and TIM Fee Program, future conditions in the year 2035 were evaluated with and without the project. As shown in Table 4.9-3, the 2035 with CIP and TIM Fee Program VMT would decrease by 16,530 when compared to VMT from the 2035 "No Project scenario."

As shown in Table 4.9-4, the CIP and TIM Fee Program would result in less total vehicle miles traveled when compared to conditions without the project, and the impacts would be less than significant.

Table 4.9-3
Total Daily VMT

2015 Baseline	2035 No Project Scenario	2035 with CIP and TIM Fee Program
3,877,617	4,880,843	4,863,521

VMT = Vehicle Miles Traveled

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts related to overall freeway and roadway VMT would be less than significant without mitigation.

Impact T-2 **With implementation of the proposed CIP and TIM Fee Program Update, LOS conditions at all roadways in the Western Slope of the county would operate at an acceptable Level of Service (LOS) in the year 2035. Thus, the project would be consistent with the General Plan LOS standards. This is a Class III, *less than significant* impact.**

As discussed above in the Setting and in Section 2.0, *Project Description*, the CIP provides strategic direction for capital projects over a current year, 5, 10, and 20 year horizon while the TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, and transit, to deal with future growth during a defined time period (currently based on 20 years of growth). The TIM Fee funded improvements are a part of the CIP and the proposed TIM Fee Update would provide funding for traffic improvements necessary for all roadways in the County to operate at an acceptable LOS under 2035 General Plan 20 year time horizon conditions, in accordance with the 2004 General Plan.

As part of the CIP and TIM Fee Program Update, the roadway deficiency analysis was prepared and contained in Memorandum 2-3: Existing and Future Deficiency and Nexus Assessment (Memo 2-3), prepared by Kittelson and Associates, 2016 (see Appendix C for full Memo), which is utilized to demonstrate the Mitigation Fee Act (MFA) nexus justification for the proposed transportation improvement concepts to be advanced. As shown in Table 4.9-4, the deficiency analysis in Memo 2-3 found that under existing conditions (year 2015), all state facilities and local roadway segments analyzed were shown to operate within County standards except for one local roadway, the Green Valley Road segment west of Sophia Parkway. However, under the year 2035 conditions (which assumes 2035 General Plan land use and the existing year 2015 roadway network), three segments of US 50 and eight local roadway segments were projected to exceed LOS standards and thus would experience deficient operations (not meeting the County's LOS standards). Based on these deficiencies, Memo 2-3 recommended transportation improvements necessary to improve LOS conditions at each of the roadways. These improvements were thus recommended for inclusion as part of the TIM Fee Program to be added to the CIP project list. Therefore, the CIP and TIM Fee Program Update transportation projects as summarized in Table 2-1 of Section 2.0, *Project Description*, would be necessary in order to improve LOS conditions at the 11 segments (eight local roads and three State Highway segments) projected to exceed LOS standards within the 20-Year timeframe (through 2035). As demonstrated in Memo 2-3, with implementation of these improvement projects, LOS conditions would be improved to acceptable levels and therefore impacts would be less than significant. In fact, the proposed CIP and TIM Fee Program Update would improve operations at projected deficient roadway segments through the year 2035 to acceptable levels of service.

Table 4.9-4
Roadways with LOS Deficiencies

Facility Type	Year 2015	Year 2035 with General Plan Amendments (No CIP Projects)	Year 2035 with General Plan Amendments + CIP and TIM Fee Program Update
State Highways	None	1. US 50 (El Dorado/ Sacramento County Line to Latrobe Road) 2. US 50 (Latrobe Road to Bass Lake Road) 3. US 50 (Bass Lake Road to Cambridge Road)	None

Table 4.9-4
Roadways with LOS Deficiencies

Facility Type	Year 2015	Year 2035 with General Plan Amendments (No CIP Projects)	Year 2035 with General Plan Amendments + CIP and TIM Fee Program Update
Local Roads	1. Green Valley Road (west of Sophia Parkway)	1. Cameron Park Drive (south of Hacienda Drive) 2. Green Valley Road (west of Sophia Parkway) 3. Green Valley Road (east of Francisco Drive to east of Silva Valley Parkway) 4. Latrobe Road (north of Golden Foothill Parkway) 5. Missouri Flat Road (south of China Garden Road) 6. White Rock Road (west of Windfield Way) 7. White Rock Road (at El Dorado/Sacramento County Line) 8. White Rock Road (east of Latrobe Road)	None

Source: Kittelson and Associates, 2016. Memorandum 2-3. Table 6.See Appendix C for full report.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact T-3 The proposed update to the CIP and TIM Fee Program would generally be consistent with applicable alternative transportation plans and policies. This is a Class III, *less than significant* impact.

Transit. As discussed above, the EDCTA developed transit performance standards related to system operations. However, there are no specific infrastructure expansion projects that would allow a project-level analysis of potential impacts at this time. Transit projects included in the proposed update to the CIP and TIM Fee Program would be consistent with applicable plans and policies because the transit improvements would likely improve access to transit services and improve access to alternative modes of transportation. Pedestrian and bicycling connectivity with transit are essential in order for transit trips to replace personal vehicle trips. Transit improvements or service expansions in the CIP and TIM Fee Program may contribute to a growth in transit use and contribute to an expected reduction in VMT across El Dorado County with the improvement projects. Thus, impacts would be less than significant.

Bicycle and Pedestrian Facilities. The proposed update to the CIP and TIM Fee Program contains multiple projects designed to improve bicycle and pedestrian facilities. Further, the CIP and TIM Fee Program includes goals and policies that support bicycle and pedestrian facilities, and funded roadway projects may include bikeways and pedestrian facilities. No new or expanded facilities that would result in significant adverse physical changes to the environment are required to ensure consistency between the proposed update to the CIP and TIM Fee Program and bicycle and pedestrian plans. Since the CIP and TIM Fee Program is consistent with applicable plans and policies, the impacts would be less than significant.

Aviation. The proposed update to the CIP and TIM Fee Program encourages the use of alternative modes of transportation, and supports aviation services within El Dorado County. The CIP and TIM Fee Program does not contain any projects designed to improve or expand existing infrastructure at Placerville Airport, Georgetown Airport, or Cameron Airpark. Thus, the project would not conflict with aviation transportation planning and impacts would be less than significant.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Specific CIP and TIM Fee Program Projects That May Result in Impacts. The analysis within this section discusses the potential transportation and circulation related impacts associated with the transportation improvement projects envisioned by the proposed update to the CIP and TIM Fee Program (as shown in Table 2-1 in Section 2.0, *Project Description*). The projects that comprise the program are evaluated herein in their entirety and all are intended to improve traffic circulation rather than cause adverse impacts. No specific projects that are likely to have an adverse impact on traffic/transportation system would be implemented; thus, none are specified within this section.

4.10 LESS THAN SIGNIFICANT ENVIRONMENTAL FACTORS

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires an EIR to briefly describe any possible significant effects that were determined not to be significant. The environmental factors discussed below represent the remainder of checklist questions as listed in Appendix G of the CEQA Guidelines that were not discussed in the other impact sections of the EIR (sections 4.1 through 4.9).

4.10.1 Agriculture and Forestry

Proposed transportation improvements under the CIP and TIM Fee Program Update would involve improvements to existing roadways. With the exception of road widenings and extensions, the location of the proposed transportation improvements are already disturbed and paved. While some areas adjacent to CIP projects in the Western Slope of El Dorado County may occur in the vicinity of agricultural land used for grazing, choice agricultural land, or federally-owned forestland, no significant impact would occur to agricultural or forestland resources as a result of the proposed transportation improvements (as listed in Table 2-1 in Section 2.0, Project Description) and therefore no impact would occur.

4.10.2 Biological Resources

The County is in the process of updating its biological resources policies and implementation measures in the General Plan and Oak Resources Management Plan. The County is also in the process of implementing an Integrated Natural Resources Management Plan. When the proposed transportation improvements under the CIP and TIM Fee Program Update become discretionary projects and undergo individual environmental review, they would be subject to all policies established by the aforementioned plans. Therefore, proposed transportation improvements under the CIP and TIM Fee Program Update would not conflict with a currently adopted Habitat Conservation Plan, Natural Community Conservation Plan (HCP/NCCP), or other approved local, regional, or state habitat conservation plan, as there are no adopted habitat or natural community conservation plans in the region (see Section 4.3, *Biological Resources*) that cover activities proposed by the CIP and TIM Fee Program Update. Thus, proposed transportation improvements under the CIP and TIM Fee Program Update would not conflict with an adopted HCP/NCCP. Therefore, no impacts would result.

4.10.3 Geology

Proposed transportation improvements under the CIP and TIM Fee Program Update would not include projects that would require the use of septic tanks or alternative waste water disposal systems. Therefore, impacts related to soils incapable of adequately supporting the use of septic tanks would be less than significant.

4.10.4 Hazards and Hazardous Materials

Proposed transportation improvements under the CIP and TIM Fee Program Update could facilitate the transport of hazardous materials on roadways or railways in the Western Slope of El Dorado County but would not directly result in a transport-related hazard. Compliance with

existing laws and regulations, such as the federal Resource Conservation and Recovery Act (RCRA) and the state Hazardous Waste Control Act and California Vehicle Code, would ensure that the transport of hazardous materials, the handling of acute hazardous substances within proximity to schools, and the release of hazardous materials would be adequately controlled such that impacts would be less than significant.

With respect to hazardous materials sites listed under Government Code Section 65962.5, the majority of proposed transportation improvements under the CIP and TIM Fee Program Update (as listed in Table 2-1 in Section 2.0, Project Description) involve modification of existing transportation facilities, rather than construction of new facilities, and would not occur on known hazardous sites. With regard to future projects that would develop new facilities, because of the programmatic nature of the project, it is not possible to determine with accuracy whether future projects located on previously undisturbed land would contain hazardous materials. However, such projects would be required to address any on-site environmental issues, including any potential hazardous materials and mitigate such impacts accordingly. Impacts would be less than significant.

Proposed transportation improvements under the CIP and TIM Fee Program Update would not directly expose people to or create a new airport safety hazard, nor would they conflict with airport land use plans and would adhere to all land use regulations set in place by those plans. Impacts related to airport facilities would be less than significant.

Transportation improvements under the CIP and TIM Fee Program Update would not expose people to new wildland fire hazards, as projects would occur in existing urbanized areas, not adjacent to wildlands. Transportation improvements would also improve the ability for fire protection services to adequately respond to wildfires; therefore, impacts would be less than significant.

Finally, the proposed transportation improvements under the CIP and TIM Fee Program Update would have no adverse impact on adopted emergency response plans or emergency evacuation plan; rather, by improving circulation in the County with the proposed transportation improvement projects, the project could have a beneficial impact on emergency response and evacuation. Impacts would be less than significant.

4.10.5 Hydrology and Water Quality

Proposed transportation improvements under the CIP and TIM Fee Program Update do not include projects that would require new water connections or the use of groundwater supplies. The majority of transportation improvements involve modification of existing infrastructure. As such, although there may be some landscaping necessary, a substantial increase in landscaped areas, and thereby a substantial increase in water demand, is not anticipated for these projects besides road widenings.. Furthermore, landscaped areas would also be designed to meet the West Slope Phase II MS4 NPDES Permit's Post Construction stormwater measures for qualifying projects that create or replace impervious surfaces. These measures would provide groundwater recharge and stormwater treatment opportunities. Therefore, proposed transportation improvements under the CIP and TIM Fee Program Update would not have significant impacts related to groundwater supply or depletion

As an inland region separated from the Pacific Ocean by mountains, the Western Slope of El Dorado County is at no risk from tsunamis. Earthquake-induced seiches also do not pose a risk to areas within the Western Slope of El Dorado County. Therefore, impacts related to tsunamis and seiches would be less than significant.

While the potential for mudflows may exist in the foothills of the Western Slope of El Dorado County, best management practices (BMPs) included in Erosion and Sediment Control Plans (ESCPs) or Storm Water Pollution Prevention Plans (SWPPPs), Municipal Separate Storm Sewer Systems (MS4) Post-Construction requirements and engineered/geotechnical reports required for each project would reduce the exposure of people or structures to mudflows. Runoff and floodplain control measures include maintaining the existing drainage pattern and keeping flood flows unimpeded.

Furthermore, the transportation improvements facilitated by the proposed CIP and TIM Fee Program Update would be subject to the California Building Code (CBC), which has strict requirements for locating structures in areas subject to seismic activity, landslides, and mudflow events. Compliance with the CBC and any applicable BMPs, ESCPs or SWPPPs and engineered/geotechnical designs, which protect against these events, would ensure that the impacts and risks of mudflows would be less than significant.

4.10.6 Land Use

Generally, the location of proposed transportation improvements under the CIP and TIM Fee Program Update occur either on existing roadways or in developed areas. The transportation improvements would generally consist of the construction of vehicle travel lane improvements and striping, and modification or replacement of bridge projects. No roads or access points would be permanently closed or obstructed as part of the transportation improvements. Therefore, proposed transportation improvements under the CIP and TIM Fee Program Update would not physically divide an established community. The proposed improvements are intended to improve LOS at identified facilities to acceptable levels.

The County is in the process of updating its biological resources policies and implementation measures in the General Plan and Oak Resources Management Plan. When proposed transportation improvements under the CIP and TIM Fee Program Update become discretionary projects and undergo individual environmental review, they would be subject to all policies established by the aforementioned plans. Based on oak woodlands data and the County's CIP data, a total of 312 acres of oak woodlands are located within transportation improvement widening or realignment areas. Quantification of the number of individual native oak trees located in widening or realignment areas is infeasible. Impacts to oak resources under the County Road Project Exemption could result in the loss and fragmentation of wildlife habitat without mitigation. This exemption is specific to widening and realignment of existing County roads. Since these are existing roads, oak woodlands habitats are already fragmented by the linear nature of the roads. Widening or realignment would incrementally increase oak woodlands loss but would not increase fragmentation, dependent upon the improvement proposed. The effect of this exemption is expected to remove a potential of 312 acres of 246,808 acres oak woodlands (0.1% of the total oak woodlands acreage in the ORMP Area). The loss of this small amount of habitat is considered less than significant. Therefore, impacts associated

with applicable land use, habitat conservation plan, or natural community conservation plan that would directly occur as a result of proposed transportation improvements under the CIP and TIM Fee Program Update would be less than significant.

4.10.7 Mineral Resources

According to Figure CO-1 of the El Dorado County General Plan, there are mineral resources present in El Dorado County zoned MRZ-2a and MRZ-2b. However, proposed transportation improvements under the CIP and TIM Fee Program Update are not in the vicinity of any known mineral resources. Therefore, there would be no impacted related to the loss of available known mineral resources or locally-important mineral resource recovery sites.

4.10.8 Noise

If any of the proposed transportation improvements under the CIP and TIM Fee Program Update are located within an airport land use plan zone and/or applicable noise contour, the project would be subject to the policies of the Airport Land Use Commission pertaining to noise exposure, which would ensure that noise attenuation features are implemented into the project as necessary. Impacts would be less than significant.

4.10.9 Population/Housing

Proposed transportation improvements under the CIP and TIM Fee Program Update would primarily involve the construction of improvements to existing roadways and infrastructure such as bridges. No development of any residential or commercial uses would occur and the project would therefore not induce population growth. None of the transportation improvements included in the CIP and TIM Fee Program Update would displace any existing housing or residents. The proposed transportation improvements are intended to improve the congestion and associated levels of service (LOS) of the plan area to meet the 2004 General Plan standards under 2035 General Plan 20 year horizon. The proposed transportation improvements would address the current and anticipated deficiencies in the overall circulation system based on growth conditions in 2035. The improvements are not intended to cause growth but rather are intended to accommodate the growth envisioned under by the General Plan. Therefore, proposed transportation improvements under the CIP and TIM Fee Program Update would have a less than significant impact on population and housing.

4.10.10 Public Services

Proposed transportation improvements under the CIP and TIM Fee Program Update would involve the construction of roadway improvements. The transportation improvements would not include, nor would they facilitate, the intensification of land uses within the Western Slope of El Dorado County. As described above, the improvements are not intended to cause growth but rather are intended to accommodate the growth envisioned under by the General Plan and would not directly result in an increase of population. Thus, the proposed transportation improvements would adequately accommodate public services upon completion and would have a less than significant impact related to police, fire, schools, parks or other public services and facilities.

4.10.11 Recreation

Proposed transportation improvements under the CIP and TIM Fee Program Update would involve the construction of roadway improvements and would not include, nor facilitate, the intensification of land uses within the plan area. As described above, the improvements are not intended to cause growth but rather are intended to accommodate the growth envisioned under by the General Plan and would not directly result in an increase of population. Thus proposed transportation improvements under the CIP and TIM Fee Program Update would not result in increased use of existing neighborhood or regional parks or other recreational facilities that would cause physical deterioration of such facilities. Furthermore, no construction or expansion of any recreational facilities would occur. Therefore, no impact to recreation would occur.

4.10.12 Utilities and Service Systems

For operational activities, the proposed transportation improvements under the CIP and TIM Fee Program Update would not require substantial water supplies, would have minimal, if any, wastewater discharges, and would not typically result in the generation of solid waste. There may be some water use associated with landscaping, but any landscaping would be anticipated to be low-water use and drought tolerant species consistent with County requirements. Thus, for operational activities, the proposed transportation improvements under the CIP and TIM Fee Program Update would not exceed existing water supplies or wastewater treatment requirements, require construction or expansion of water or wastewater treatment facilities, exceed the capacity of an existing landfill or conflict with regulations pertaining to solid waste. nor would water or wastewater service be required. Impacts would be less than significant.

Construction activities may generate temporary quantities of solid waste that would need to be disposed of at local landfills. Construction activities would not result in substantial wastewater generation. Construction of individual transportation projects may utilize water for dust mitigation and for site preparation. However, water use would be temporary (only during the time of construction) and the quantity would not be substantial. Solid waste generated by construction activities would also be temporary in nature and reduced by compliance with the California Green Building Code, which requires that construction operations recycle a minimum of 50% of waste generated. Further, this demand would not exceed that already anticipated by the respective areas in which these projects would be located. This is primarily because the proposed transportation improvements under the CIP and TIM Fee Program Update would not result in new population growth. Therefore, impacts to Utilities and Service Systems would be less than significant.

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5.0 LONG-TERM EFFECTS

5.1 GROWTH-INDUCING IMPACTS

Section 15126(g) of the *State CEQA Guidelines* requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove obstacles to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant environmental effects. A project's growth-inducing potential is therefore considered significant if growth generated by the project could result in unavoidable significant effects in one or more environmental issue areas.

5.1.1 Removal of an Impediment to Growth

The majority of the transportation improvements identified in Western Slope Roadway CIP and TIM Fee Program Update are located in existing urbanized areas primarily along US 50; however, there are projects envisioned in outlying areas. Such transportation improvements can be perceived as removing obstacles to growth by either creating additional traffic capacity (e.g., road widening or road extensions) or improving access to undeveloped areas (e.g., bikeway or road extensions). These improvements would not necessarily remove obstacles to growth. Rather, they are designed to accommodate growth and support the transportation needs associated with the growing population in El Dorado County. The nature and magnitude of impacts related to such growth are speculative, and would be largely a function of local agency control, prevailing community attitudes, and future market conditions. The environmental impacts of any additional growth would depend upon the type, location, design, density and magnitude of the proposed new development. As outlined in the General Plan Transportation and Circulation Element, the CIP anticipates allocating funds towards initiatives which support alternative means of transportation for residents such as busses and bicycle infrastructure. Focusing efforts on alternative modes of transportation will accommodate growth, mitigate potential traffic and related air quality issues, and stimulate the local economy. Further, all transportation improvement projects are anticipated by the County's General Plan. Therefore, the CIP and TIM Fee Program Update is consistent with projected and anticipated and planned growth as envisioned by the County's General Plan.

5.1.2 Economic and Population Growth

Implementation of the proposed CIP and TIM Fee Program Update would create short-term economic growth in the County as a result of construction-related job opportunities. Accommodating growth with funding for proper planning and infrastructure will help the County of El Dorado sustain and effectively manage existing transportation networks without compromising the health and safety of future generations. Implementation of the CIP and TIM Fee Program Update would also generate additional employment opportunities for bicycle pathways, sidewalks, roadway, vehicle, and landscape maintenance, and transportation facility clean-up. The potential employment increase may subsequently increase the demand for support services and utilities, which could generate secondary employment opportunities. This additional economic growth would likely raise the existing revenue base for the County. Although such growth may incrementally increase economic activity in the County, significant

physical effects are not expected to result from economic growth generated by the proposed improvement projects. The proposed transportation projects under the CIP and TIM Fee Program Update are designed and intended to accommodate anticipated growth. The projects would be phased to accommodate and respond to growth as it occurs under the adopted General Plan. As a result, the CIP and TIM Fee Program Update is not expected to induce growth beyond that anticipated by 2035. Rather, it is intended to accommodate growth projected to occur during the planning period. It is important to note that employment, population and household growth would occur within the County regardless of whether the CIP and TIM Fee Program Update is implemented.

5.2 IRREVERSIBLE EFFECTS

Section 15126(e) of the CEQA Guidelines requires a discussion of significant irreversible environmental changes that would occur as a result of a proposed project.

The CIP and TIM Fee Program Update include projects for a 20-year planning horizon. Because the proposed improvements would be located primarily in areas where transportation facilities already exist (or in areas where transportation facilities have already been planned), most are not generally expected to dramatically alter development patterns in the County. Instead, the CIP and TIM Fee Program Update would provide a foundation for local, regional, and state officials in making decisions aimed at achieving a coordinated, balanced, and ecologically sound transportation system.

In the absence of the planned capital improvements under the CIP and TIM Fee Program Update, traffic conditions throughout the County would continue to worsen as the County's population grows. The increasing traffic may also worsen safety problems on some county roads. However, implementation of the CIP and TIM Fee Program Update would involve certain tradeoffs as implementing it would create impacts in other issue areas that would not occur without the planned improvements.

Many of the potential adverse impacts that could occur from implementing the CIP and TIM Fee Program Update are short-term in nature, due mostly to construction of the proposed transportation projects. Typical construction-related impacts can involve the following issues: noise, air quality, aesthetics, and hydrology/water quality. In addition, though construction projects would not be carried out in a wasteful manner, all construction activity would require the use of energy and materials.

Long-term environmental impacts are associated with increased paving, and the related impacts to aesthetics (visual resources), biological resources, and cultural resources (historic resources), as discussed in their respective sections of this EIR. In addition, the CIP and TIM Fee Program Update would result in an overall increase in the urbanized character of the region. Mitigation measures have been prescribed to minimize these impacts. However, impacts in certain instances (e.g. cultural resources or historic resources) would remain significant.

6.0 ALTERNATIVES

As required by Section 15126(d) of the *State CEQA Guidelines,* this EIR examines a range of reasonable alternatives to the proposed project that could feasibly achieve similar goals and objectives. A primary objective is to maintain the required LOS of El Dorado County's roadway network. As discussed in Section 2.0, *Project Description*, based on General Plan requirements and previous County Board of Supervisors direction, the CIP and TIM Fee Program Update is intended to fulfill the following goal and objectives:

Goal: *Consistent with the County's General Plan Policy TC-Xb and Implementation Measures TC-A and TC-B, develop and maintain a 10- and 20-Year CIP as well as a 20-Year TIM Fee Program that maintains the required level of service (LOS) of the County's roadway network.*

Objectives:

- *Plan a balanced transportation system that meets the needs of current and future County residents and visitors;*
- *Manage and plan for an increase in vehicle trips on local and state roads and highways throughout the County to facilitate a safe, efficient flow of vehicle traffic;*
- *Finance and construct necessary roadway improvements to provide a safe and reliable transportation network to accommodate growth pursuant to the County General Plan while maintaining acceptable level of service standards as required by the General Plan;*
- *Develop a legally-defensible 20 year Capital Improvement Program (CIP) that is consistent with the General Plan and supports its implementation.*
- *Develop a legally-defensible Traffic Impact Mitigation (TIM) Fee Program that supports CIP implementation and is consistent with the Mitigation Fee Act (AB 1600).*
- *Reduce the TIM Fees to the extent possible while still achieving the objectives above.*

The analysis of alternatives focuses on the various transportation scenarios that incorporate different assumptions regarding the combinations of future transportation system improvements.

An alternative location for the Western Slope Roadway CIP and TIM Fee Program Update as a whole is not possible. The alternatives presented in this EIR are analyzed by physical impacts as well as their respective ability to meet the project goals and purpose. This alternatives analysis includes the following alternatives to the proposed CIP and TIM Fee Program Update:

Alternative 1: 2035 No Project. The No Project alternative represents the continued implementation of the currently approved CIP and TIM Fee Program without any update to the project list. No further transportation projects would be added to the existing CIP project list and no updated TIM Fee projects would be implemented. Further, no CIP or TIM Fee projects on the existing CIP list would be removed from the current project list. Implementation of the No Project alternative would lead to a net increase in the amount of transportation improvement projects constructed throughout the Western Slope. The No Project alternative would not remove 28 projects currently on the CIP list and not add three new CIP projects (thus a net increase of 24 projects compared to the proposed CIP and TIM Fee Program Update). In addition, the actual TIM Fees would be the same as the current fees (thus no adjustment).

Analysis of this alternative is based on the estimated year 2035 population projections envisioned under the current General Plan (which includes the 2015 amendments).

Alternative 2: No Project - No Build. The No Project - No Build alternative assumes there would be no update to the CIP or TIM Fee Program and no further construction of any CIP projects that are planned within the currently approved CIP and TIM Fee Program. Therefore, no further transportation improvement projects would be constructed within the Western Slope of El Dorado County and the physical conditions of transportation facilities would remain as is under the 2015 baseline. Analysis of this alternative is based on the estimated year 2035 population projections envisioned under the current General Plan (which includes the 2015 amendments).

Alternative 3: No Parallel Capacity Projects. The No Parallel Capacity Projects alternative assumes that the proposed parallel facility projects would be removed from the project list and not implemented under the Western Slope Roadway CIP and TIM Fee Program Update. "Parallel Capacity Project" refers to an alternate roadway that serves the same corridor as another (typically primary) roadway. Thus, for the No Parallel Capacity Projects alternative, the following five projects would not be included on the CIP list: Saratoga Way Extension, Country Club Drive Extension (three segments), Country Club Drive Realignment, Diamond Springs Parkway, Latrobe Connection, and Headington Road Extension.

Alternative 4: Historical Growth: The Historical Growth alternative assumes that growth in the Western Slope through the year 2035 would occur in a similar manner as the historical growth based on actual building permit data compiled by the County from 2000 to 2011 for residential development in the Western Slope area. The historical growth data indicated that there was a 1.03% growth rate in that time frame. Both the proposed CIP and TIM Fee Program Update and the Historical Growth alternative assume the same growth rate of 1.03% per year. However, the distribution of that growth between 2000 and 2011 included approximately 58% of development occurring in the Community Regions and approximately 42% occurring in the Rural Regions and Rural Centers. Thus, under this alternative, the distribution of growth in the Western Slope would occur in a different manner as opposed to the estimated distribution under the proposed CIP and TIM Fee Program Update which assumes the distribution of growth would be approximately 75% in the Community Regions and 25% in the Rural Region and Rural Centers.

Each alternative is described in greater detail and analyzed below to determine whether environmental impacts would be similar to, less than, or greater than those under the Western Slope Roadway CIP and TIM Fee Program Update. As required by CEQA, this section also includes a discussion of the "environmentally superior alternative" among those studied.

The State CEQA Guidelines require that an EIR identify any alternatives that were considered but rejected as infeasible during the scoping process and a brief explanation justifying the determination.

6.1 ALTERNATIVE 1: 2035 NO PROJECT

6.1.1 Description

The 2035 No Project alternative is defined as a continuation of the currently approved CIP and TIM Fee Program, with no new projects suggested by the proposed CIP and TIM Fee Program Update added to the CIP list and no projects currently on the approved CIP list being removed. The alternative is based on 2035 population projections (under the General Plan with 2015 amendments) and focuses on currently approved projects under the currently approved CIP and TIM Fee Program with no update to the CIP project list or the TIM Fee project list. The proposed CIP and TIM Fee Program Update would remove 28 projects from the CIP and TIM Fee Program project list and add four projects. Therefore, implementation of the No Project alternative would result in a net increase of 24 projects constructed. While more projects would be implemented, these projects would not be designed to meet the changing transportation needs of the Western Slope. Relative to the CIP and TIM Fee Program Update, the No Project alternative would have increased construction impacts and would not perform as well in meeting the project goals. Specifically, it would lead to an increase in VMT, and a corresponding increase in congestion.

6.1.2 Impact Analysis

a. Aesthetics. Implementation of this alternative would result in greater visual impacts as compared to the proposed project. The continued implementation of the current CIP and TIM Fee Program would result in the construction of more transportation improvement projects than the proposed project, and therefore, greater impacts to aesthetics of the Western Slope. Overall aesthetic impacts associated with implementation of this alternative would be greater than the proposed project, and thus the mitigation measures identified for the proposed project would be necessary for projects in the existing CIP and TIM Fee Program under Alternative 1 in order to ensure all impacts are reduced to a less than significant level.

b. Air Quality. Implementation of this alternative would result in greater construction related air quality impacts, as more projects would be built. However, because the projects would not be updated to meet the changing needs of the Western Slope, VMT under this alternative would be greater than for the proposed plan as shown in Table 4.9-3 in Section 4.9, *Transportation and Circulation*. Therefore, operational emissions for PM_{10}, ROG and NO_x would be greater for this alternative when compared to the proposed CIP and TIM Fee Program Update, as shown in Table 6-1. The CIP and TIM Fee Program Update is intended to maintain an acceptable LOS on the County's roadway network. The CIP and TIM Fee Program Update would therefore improve the overall efficiency of the transportation network. Additionally, the increase in VMT resulting from implementation of this alternative would lead to a slight increase in on-road mobile sources of toxic emissions. As shown in Table 6-2, emissions of Diesel NOx would be greater under this alternative than under the proposed CIP and TIM Fee Program Update while all other emissions remain similar. Thus, overall air quality impacts would be greater under this alternative when compared to the proposed program updates. Mitigation measures identified in Section 4.2, *Air Quality* would be required to reduce or avoid potentially significant impacts.

Table 6-1
Regional Emissions Analysis: No Project Alternative

Scenario	Analysis Year	ROG (tons/day)	NOx (tons/day)	PM_{10} (tons/day)[1]	PM2.5 (tons/day)
2015 Baseline	2015	1.835	3.193	0.258	0.125
2035 No Project Scenario	2035	0.759	0.747	0.271	0.112
2035 with CIP and TIM Fee Program	2035	0.757	0.744	0.270	0.112

[1] *PM_{10} includes tire wear and brake wear emissions*

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. For a conservative estimate, summer emissions were used for ROG and winter emissions were used for NOx, PM10, and PM2.5.

Table 6-2
On-Road Mobile Source Toxics Comparison: No Project Alternative

Vehicle Activity	Diesel $PM_{2.5}$ (tons/day)	Diesel PM_{10} (tons/day)	Diesel NOx (tons/day)	Diesel ROG (tons/day)	Diesel SOx (tons/day)
2015 Baseline	0.042	0.064	1.834	0.087	0.003
2035 No Project Scenario	0.014	0.032	0.438	0.019	0.002
2035 with CIP and TIM Fee Program	0.014	0.032	0.437	0.019	0.002

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model.

c. Biological Resources. Implementation of this alternative would result in greater impacts to biological resources as more overall projects, including roadway extensions, widening projects and bridge repair and replacement projects would occur under this alternative. This would result in greater amounts of ground disturbance and greater impacts to special status plants, animals, sensitive habitats than anticipated if the proposed CIP and TIM Fee Program Update were implemented. Impacts related to wildlife movement may also be increased, as more development would occur. Therefore, impacts to sensitive plant and animal species, sensitive habitats and wildlife movement would be greater under this alternative and impacts would remain significant but mitigable. All related mitigation measures referenced in Section 4.3, *Biological Resources* would apply.

d. Cultural Resources. Implementation of this alternative would involve greater amounts of ground disturbance than would occur under the CIP and TIM Fee Program Update. Therefore, the No Project alternative would increase the potential to impact unknown cultural resources. Impacts related to unknown cultural resources would remain significant but mitigable. All related mitigation measures referenced in Section 4.4, *Cultural Resources*, would apply. Because this alternative would include more roadway improvement projects than the CIP and TIM Fee Program Update, potential impacts to historic structures, specifically bridges, would be increased. . Impacts related to cultural resources would be greater under this alternative than what could occur as a result of the CIP and TIM Fee Program Update. Impacts to historic structures would remain significant and unavoidable.

e. Geology. The No Project alternative would result in a net increase in the number of projects relative to the CIP and TIM Fee Program Update. Therefore, there would be greater exposure of new structures to hazardous conditions, including ground shaking and unstable soils. Conversely, if inadequate structures are not replaced, the potential for these existing structures and people using these structures to be damaged or injured by geologic hazards could be greater than under the proposed CIP and TIM Fee Program Updates. Therefore, the overall impact of this alternative would be greater than those expected under the proposed project but impacts would remain significant but mitigable. All related mitigation measures referenced in Section 4.5, *Geology,* would be required.

f. Greenhouse Gases Emissions/Climate Change. Implementation of this alternative would result in greater impacts associated with GHG emissions during construction activities as more projects would be constructed than under the proposed CIP and TIM Fee Program Update. Additionally, implementation of this alternative would lead to an increase in VMT, which would lead to an increase in vehicular GHG emissions compared to the CIP and TIM Fee Program Update. As shown in Table 6-3, GHG emissions under the No Project Scenario would be higher when compared to GHG emissions with the CIP and TIM Fee Program Update. This is primarily a result of the transportation efficiency benefits associated with the CIP and TIM Fee Program Update that wouldn't occur under the No Project Alternative. As both construction related emissions and long-term GHG emissions would be higher under this alternative, the overall impact of this alternative would be greater than what would occur under the proposed CIP and TIM Fee Program Update and mitigation measures related to construction emissions referenced in Section 4.6, *Greenhouse Gas Emissions/Climate Change*, would be required.

Table 6-3
Per Capita Carbon Dioxide Equivalent Comparison:
No Project Alternative

Scenario	Per Capita CO_2e Emissions (lbs/day)
2015 Baseline	27.03
2035 No Project Scenario	15.96
2035 with CIP and TIM Fee Program	15.90

The on-road mobile source CO_2 emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. Population figures for 2015 and 2035 were obtained from the BAE Report.

g. Hydrology and Water Quality. Because the amount of future construction activity would be increased under this alternative, the potential for water quality impacts resulting from erosion would be increased. Further, under this alternative, the increase in impermeable, paved surfaces would likely be greater than anticipated under the CIP and TIM Fee Program Update. Overall, incremental increases in hydrology and water quality impacts, as well as incremental reductions in groundwater recharge, would be greater than the proposed CIP and TIM Fee Program Update. This alternative would also have more projects that could be subject to flooding. Impacts would be greater, but would remain significant but mitigable and all related mitigation measures referenced in Section 4.7, *Hydrology and Water Quality*, would be required.

h. Noise. Because noise is a site specific issue, noise studies would be prepared for each project to determine whether impacts would occur. From a program perspective, the greater amount of projects under the No Project alternative would result in more construction activity. This would increase temporary noise impacts compared to the proposed CIP and TIM Fee Program Update. Construction noise impacts may be significant but mitigable. Implementation of the No Project alternative would result in an increase in VMT from the CIP and TIM Fee Program Update as shown in Table 4.9-3 in Section 4.9, *Transportation and Circulation.* An increase in VMT would result in an overall increase in operational traffic generated noise. Overall, impacts associated with traffic generated noise would be greater than the CIP and TIM Fee Program Update. All related mitigation measures specified in Section 4.8, *Noise*, would be required.

i. Transportation and Circulation. By continuing the implementation of the currently approved CIP and TIM Fee Program, the No Project alternative does not change transportation improvement projects to reflect the changing needs of the Western Slope. Therefore, while the more projects would be constructed under the No Project alternative (a net increase of 24), VMT throughout the Western Slope would be greater as compared to the proposed CIP and TIM Fee Program Update. VMT for the No Project Alternative is shown in Table 4.9-3 in Section 4.9, *Transportation and Circulation*, and would result in a net increase of 17,322 daily VMT. Implementation of the No Project alternative would improve LOS conditions in most locations of the Western Slope compared to the proposed project as there would be more roadway capacity overall. There may be some specific locations that may operate worse under the No Project alternative compared to the CIP and TIM Fee Program Update but like the proposed project, this alternative would generally meet County goals related to achieving acceptable LOS standards in the Western Slope. Nevertheless, overall, impacts to transportation and circulation would be slightly greater under the No Project scenario alternative than the proposed project.

6.2 ALTERNATIVE 2: NO PROJECT-NO BUILD

6.2.1 Description

The No Project - No Build alternative assumes there would be no update to the CIP or TIM Fee Program and no further construction of any CIP projects that would have occurred within the currently approved CIP and TIM Fee Program. Therefore, no further transportation improvement projects would be constructed within the Western Slope of El Dorado County and the physical conditions of transportation facilities would remain as is under the 2015 baseline. However, it is assumed that development would still occur at the same rate of 1.03% per year. Analysis of this alternative is based on the estimated year 2035 population projections envisioned under the current General Plan (which includes the 2015 amendments).

By stopping all construction, the No Project-No Build alternative would keep transportation and roadway infrastructure in the current 2015 baseline condition. Therefore, implementation of the No Project-No Build alternative would have reduced construction related impacts. However, without new transportation infrastructure or improvement of existing infrastructure, impacts associated with long-term emissions and traffic congestion would be increased throughout the Western Slope.

a. Aesthetics. Implementation of this alternative would result in no visual impacts as compared to the proposed project, because none of the new proposed interchanges, bridges, and roadway extensions and widenings would be constructed. Because there would be no further construction of transportation improvement projects, no mitigation would be required as there would be no impact.

b. Air Quality. Implementation of this alternative would result no construction related air quality impacts, as no projects would be built. However, VMT under this alternative would be greater than for the proposed plan as discussed below. Therefore, operational emissions for PM_{10}, ROG and NO_x would be greater for this alternative when compared to the proposed CIP and TIM Fee Program Update, as shown in Table 6-4. The CIP and TIM Fee Program Update is intended to maintain an acceptable LOS on the County's roadway network. The CIP and TIM Fee Program Update would therefore improve the overall efficiency of the transportation network. Additionally, the increase in VMT resulting from implementation of this alternative would lead to a slight increase in on-road mobile sources of toxic emissions. As shown in Table 6-5, emissions of Diesel NOx would be greater under this alternative than under the proposed CIP and TIM Fee Program Update while all other emissions remain similar. Thus, overall air quality impacts would be greater under this alternative when compared to the proposed program updates.

Table 6-4
Regional Emissions Analysis: No Project – No Build Alternative

Scenario	Analysis Year	ROG (tons/day)	NOx (tons/day)	PM_{10} (tons/day)[1]	PM2.5 (tons/day)
2015 Baseline	2015	1.835	3.193	0.258	0.125
2035 No Project - No Build Scenario	2035	0.759	0.746	0.271	0.112
2035 with CIP and TIM Fee Program	2035	0.757	0.744	0.270	0.112

[1]PM_{10} includes tire wear and brake wear emissions

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. For a conservative estimate, summer emissions were used for ROG and winter emissions were used for NOx, PM10, and PM2.5.

Table 6-5
On-Road Mobile Source Toxics Comparison: No Project – No Build Alternative

Vehicle Activity	Diesel $PM_{2.5}$ (tons/day)	Diesel PM_{10} (tons/day)	Diesel NOx (tons/day)	Diesel ROG (tons/day)	Diesel SOx (tons/day)
2015 Baseline	0.042	0.064	1.834	0.087	0.003
2035 No Project – No Build Scenario	0.014	0.032	0.438	0.019	0.002
2035 with CIP and TIM Fee Program	0.014	0.032	0.437	0.019	0.002

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model.

c. Biological Resources. Implementation of this alternative would result in no impacts to biological resources as no more projects would be constructed. This would result in less ground disturbance and fewer impacts to special status plants, animals, sensitive habitats than

anticipated if the proposed CIP and TIM Fee Program Update were implemented. Impacts related to wildlife movement would also be reduced, as no further development of roadway infrastructure would occur. Therefore, there would be no impacts to sensitive plant and animal species, sensitive habitats and wildlife movement under this alternative because there would be no construction.

d. Cultural Resources. Implementation of this alternative would involve no ground disturbance because there would be no further construction. Therefore, potential impacts to unknown cultural resources would be eliminated. Further, because this alternative would eliminate roadway improvement projects under the CIP and TIM Fee Program, potential impacts to historic structures, specifically bridges, would be eliminated.

e. Geology. The No Project – No Build alternative would eliminate all new projects under the CIP and TIM Fee Program. Therefore, there would be less exposure of structures to hazardous conditions, including ground shaking and unstable soils. Therefore, the overall impact of this alternative would be less than that expected under the proposed project. However, if inadequate structures are not replaced, the potential for these existing structures and people using these structures to be damaged or injured by geologic hazards could be greater than under the proposed CIP and TIM Fee Program Updates.

f. Greenhouse Gases Emissions/Climate Change. Implementation of this alternative would result in fewer impacts associated with GHG emissions during construction activities as no further projects would be constructed than under the current CIP and TIM Fee Program and no updated program would be adopted. However, implementation of this alternative would lead to an increase in VMT, which would lead to an increase in vehicular GHG emissions compared to the CIP and TIM Fee Program Update. As shown in Table 6-6, GHG emissions under the No Project Scenario would be higher when compared to GHG emissions with the CIP and TIM Fee Program Update. This is primarily a result of the transportation efficiency benefits associated with the CIP and TIM Fee Program Update that wouldn't occur under the No Project-No Build Alternative. As long-term GHG emissions would be higher under this alternative, the overall impact of this alternative would be greater than what would occur under the proposed CIP and TIM Fee Program Update.

Table 6-6
Per Capita Carbon Dioxide Equivalent Comparison:
No Project – No Build Alternative

Scenario	Per Capita CO_2e Emissions (lbs/day)
2015 Baseline	27.03
2035 No Project Scenario	15.96
2035 with CIP and TIM Fee Program	15.90

The on-road mobile source CO_2 emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. Population figures for 2015 and 2035 were obtained from the BAE Report.

g. Hydrology and Water Quality. Because there would be no further construction activity, the potential for water quality impacts resulting from erosion would be reduced. Further, under this alternative, there would be no further increase in impermeable, paved surfaces. Overall, incremental increases in hydrology and water quality impacts, as well as incremental reductions in groundwater recharge, would be less than the proposed CIP and TIM Fee Program Update. This alternative would also not construct any future projects that could be subject to flooding.

h. Noise. From a program perspective, the elimination of all construction would eliminate the occurrence of construction related noise impacts. Additionally, implementation of the No Project – No Build alternative would reduce traffic generated noise in certain areas by eliminating roadway widening and extension projects. This would reduce the roadway's ability to accommodate additional traffic volumes and/or reduce the relocation of traffic noise sources closer to sensitive receptors. However, implementation of the No Project – No Build alternative would also result in an increase in VMT from the CIP and TIM Fee Program Update as shown in Table 4.9-3 in Section 4.9, *Transportation and Circulation.* An increase in VMT would result in an overall increase in operational traffic generated noise. Overall, impacts associated with traffic generated noise would be greater than the CIP and TIM Fee Program Update.

i. Transportation and Circulation. This alternative would not include any of the projects that have been funded or may be funded in the future under the proposed plan, including new highway and intersection projects, new bikeway and pedestrian projects, new roadway widening or extension projects, and bridge replacement and repair projects. Many of these projects are intended to reduce automobile trips and address traffic congestion, and in many cases would serve as mitigation measures to reduce potential impacts associated with planned long-term development.

Under the No Project-No Build alternative the overall 2035 VMT would be 4,880,051, compared to the 4,863,521 under the proposed CIP and TIM Fee Program Update. This would be the result of the elimination of roadway improvement and capacity increasing projects planned as part of the CIP and TIM Fee Program, as well as elimination of certain types of maintenance of the existing roadway infrastructure. Capacity increasing projects are intended to reduce congestion on major arterials and highways. Without capacity increasing projects, VMT would increase and roads would be more congested. Further, the elimination of all transportation improvement projects under the No Project – No Build alternative, roadways in the Western Slope would fail to operate at an acceptable LOS under 2035 General Plan 20 year time horizon conditions. As shown in Table 4.9-4 in Section 4.9, *Transportation and Circulation*, implementation of the No Project – No Build alternative (which is the same conditions for the Year 2035 with General Plan Amendments (No CIP Projects)) would result in LOS deficiencies at eleven roadway segments (eight local roadway segments and three segments on US 50). Thus, congestion under this alternative would be worse than under the proposed CIP and TIM Fee Program Update. Overall, impacts to transportation and circulation would be greater under the No Project – No Build scenario alternative than the proposed project and project goals to maintain LOS standards within the County would not be met.

6.3 ALTERNATIVE 3: NO PARALLEL CAPACITY FACILITIES

6.3.1 Description

The No Parallel Capacity alternative involves the elimination of all the parallel capacity projects from the CIP and TIM Fee Program Update. These projects include roadway expansion projects which are intended to generally provide alternative routes to US 50 or other major County roadways. The parallel capacity facilities that would be removed under this alternative include the following (as listed in Table 2-1):

- 72377 Country Club Drive Ext. - East of El Dorado Hills Blvd. to West of Silva Valley Parkway
- 71335 Country Club Drive Extension - West of Silva Valley Parkway to Tong Road
- GP125 Country Club Drive Extension - Tong Road to Bass Lake Road/Old Bass Lake Road
- GP126 Country Club Drive Realignment - Bass Lake Road/Old Bass Lake Road to Tierre de Dios Drive
- 71324/GP147 Saratoga Way Extension - Phase 1/Phase 2
- 66116 Latrobe Connection
- 71375 Headington Road Extension - Missouri Flat Road to El Dorado Road
- 72375/72334 Diamond Springs Parkway - SR-49 Realignment (Phase 1A) and New 4 Lane (Phase 1B)

Elimination of these projects would result in a reduced number of projects in the CIP and TIM Fee Program Update as well as a reduction in the area of ground disturbance resulting from roadway expansion projects. It should also be noted that the removal of the Latrobe Connection would also result in the employment cap at the El Dorado Hills Business Park remaining in place as this project is necessary to remove that condition (see discussion in Section 4.0 for discussion regarding the employment cap). While implementation of this alternative would result in increased traffic on US 50 within the Western Slope of El Dorado County, it would also result in a reduction in VMT.

6.3.2 Impact Analysis

a. Aesthetics. Implementation of this alternative would result in fewer visual impacts as compared to the proposed CIP and TIM Fee Program Update. This alternative would result in fewer roadway expansion projects, which would result in less visual change to the landscape. However, with this alternative, as with the proposed CIP and TIM Fee Program Update, transportation improvement projects would be constructed, and the gradual transformation toward a more urban character would continue. Overall, aesthetic impacts under this alternative would be incrementally less than the proposed project and impacts would remain less than significant.

b. Air Quality. Implementation of this alternative would result in reduced short-term construction-related air quality impacts as compared to the proposed project because parallel capacity projects would be eliminated. However, implementation of other improvement projects within this alternative would still result in significant but mitigable impacts from

temporary construction-related emissions, and all mitigation measures AQ-1(a) through AQ-4(d) identified in Section 4.2, *Air Quality* would be required.

VMT under this alternative would be less than for the proposed project. Therefore, operational emissions for $PM_{2.5}$, PM_{10}, ROG and NO_x would be less for this alternative when compared to the proposed CIP and TIM Fee Program Update, as shown in Table 6-7. Additionally, the reduction in VMT resulting from implementation of this alternative would lead to a decrease in on-road mobile sources of toxic emissions. As shown in Table 6-8, emissions of Diesel NOx would be less under this alternative than under the proposed CIP and TIM Fee Program Update while all other emissions remain similar. Thus, overall air quality impacts would be less under this alternative when compared to the proposed program updates. All mitigation measures identified in Section 4.2, *Air Quality,* would still be required to reduce or avoid potentially significant impacts.

Table 6-7
Regional Emissions Analysis: No Parallel Capacity Alternative

Scenario	Analysis Year	ROG (tons/day)	NOx (tons/day)	PM_{10} (tons/day)[1]	PM2.5 (tons/day)
2015 Baseline	2015	1.835	3.193	0.258	0.125
2035 with CIP and TIM Fee Program	2035	0.757	0.744	0.270	0.112
2035 with No Parallel Capacity Facilities	2035	0.751	0.739	0.268	0.111

[1]PM_{10} includes tire wear and brake wear emissions

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. For a conservative estimate, summer emissions were used for ROG and winter emissions were used for NOx, PM10, and PM2.5.

Table 6-8
On-Road Mobile Source Toxics Comparison: No Parallel Capacity Alternative

Vehicle Activity	Diesel $PM_{2.5}$ (tons/day)	Diesel PM_{10} (tons/day)	Diesel NOx (tons/day)	Diesel ROG (tons/day)	Diesel SOx (tons/day)
2015 Baseline	0.042	0.064	1.834	0.087	0.003
2035 with CIP and TIM Fee Program	0.014	0.032	0.437	0.019	0.002
2035 with No Parallel Capacity Facilities	0.014	0.032	0.433	0.019	0.002

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model.

c. Biological Resources. This alternative would result in a reduction in the amount of ground disturbance because of the reduced number of parallel capacity roadway extension projects. While this alternative may result in less impact to special status plants and animals, and sensitive habitats, and wildlife movement as compared to the CIP and TIM Fee Program Update, impacts would remain potentially significant but mitigable, due to the implementation of other CIP and TIM Fee projects included within this alternative. All related mitigation measures discussed in Section 4.3, *Biological Resources,* would apply.

d. Cultural Resources. This alternative would result in an overall decrease in the amount of ground disturbance by eliminating the parallel capacity projects, which include roadway

extension projects. However, due to ground disturbing activities associated with other CIP and TIM Fee projects included in this alternative, the potential impacts related to unknown cultural resources would remain significant but mitigable and all related mitigation measures identified in Section 4.5, *Cultural Resources*, would apply. This alternative would include all bridge replacement and repair projects included in the proposed CIP and TIM Fee Program Update and would therefore have the potential to impact historically significant structures. Impacts to historical resources would remain significant but mitigable and all related mitigation measures identified in Section 4.4, *Cultural Resources*, would apply.

e. Greenhouse Gas Emissions/Climate Change. Construction-related emissions of GHGs with this alternative would be less than those associated with the proposed CIP and TIM Fee Program Update because of the elimination of the parallel capacity projects. Additionally, implementation of this alternative would result in a lower VMT when compared to the proposed plan, as fewer roadway extension projects would occur. The reduction in VMT would lead to a reduction in GHG emissions under this alternative in comparison to GHG emissions under the proposed project, as shown in Table 6-9. Because long-term GHG emissions are expected to be lower under this alternative, the overall impact would be less. All mitigation measures included in Section 4.5, *Greenhouse Gas Emissions/Climate Change,* would be applicable

Table 6-9
Per Capita Carbon Dioxide Equivalent Comparison:
No Parallel Capacity Alternative

Scenario	Per Capita CO_2e Emissions (lbs/day)
2015 Baseline	27.03
2035 with CIP and TIM Fee Program	15.90
2035 with No Parallel Capacity*	15.79

The on-road mobile source CO_2 emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. Population figures for 2015 and 2035 were obtained from the BAE Report, 2013.

f. Geology. The No Parallel Capacity alternative would eliminate all parallel capacity projects in the CIP and TIM Fee Program Update, reducing exposure of new structures to hazardous conditions, including ground shaking and unstable soils. However, while this alternative would eliminate parallel capacity projects, it would still include projects that could expose new structures to geologic hazards, such as bridges, interchanges, and bicycle and pedestrian facilities. Therefore, the overall impact of this alternative would be similar to that expected under the proposed project and impacts would remain significant but mitigable. All related mitigation measures referenced in Section 4.6, *Geology,* would be required.

g. Hydrology and Water Quality. By eliminating the parallel capacity projects, the amount of future ground disturbance would be reduced under this alternative. Therefore, the potential for water quality impacts resulting from erosion would be reduced from the proposed CIP and TIM Fee Program Update. Additionally, by reducing the amount of new impermeable roadway surface, this alternative would reduce incremental reductions in groundwater recharge that would occur under the proposed CIP and TIM Fee Program Update. However, this alternative would have a similar amount of projects that could be subject to flooding.

Overall, impacts to hydrology and water resources would be less under the No Parallel Capacity alternative, however, impacts would remain significant but mitigable and all related mitigation measures included in Section 4.7, *Hydrology and Water Quality*, would be required.

h. Noise. Implementation of this alternative would eliminate parallel capacity projects under the proposed CIP and TIM Fee Program Update; therefore, construction related noise generated from these transportation improvements would be reduced from the proposed project. However, temporary noise impacts from construction of projects remaining in this alternative would remain significant but mitigable and mitigation measures N-1(a) through N-1(e) would apply. Traffic generated noise from roadway operation would depend on traffic volume and speed. The reduced VMT anticipated under this alternative would indicate more direct trips (i.e. no trips diverted from US 50 to parallel roadways) which may reduce noise levels over what would be expected to occur with the proposed project. Overall, impacts associated with traffic-generated noise would be slightly less than the proposed CIP and TIM Fee Program Update. Impacts would be significant but mitigable and all related mitigation measures N-2(a) through N-2(b) identified in Section 4.8, *Noise*, would be required.

i. Transportation and Circulation. The No Parallel Capacity alternative would result in fewer transportation improvement projects as compared to the proposed CIP and TIM Fee Program Update. The elimination of the parallel capacity projects would lead to an expected 2035 VMT of 4,829,554 as opposed to the expected VMT of the proposed CIP and TIM Fee Program Update of 4,863,521, a reduction of 33,967 VMT on a typical weekday. The purpose of the parallel capacity projects was to provide alternative transportation routes to US 50 through El Dorado County in attempt to reduce highway congestion. Therefore, while overall VMT would be reduced under this alternative, it is likely more trips would be routed onto US 50 which would result in an increase in highway congestion. As such, this alternative may not achieve the program's goal to ensure that all roadways in the County have an acceptable LOS as the congestion on US 50 would increase as a result of this alternative. Thus, although this alternative would result in a decrease in overall VMT, impacts under the No Parallel Capacity alternative would be greater than anticipated for the proposed project.

6.4 ALTERNATIVE 4: HISTORICAL GROWTH

6.4.1 Description

The Historical Growth alternative assumes that growth in the Western Slope through the year 2035 would occur in a similar manner as the historical growth based on actual building permit data compiled by the County from 2000-2011 for residential development in the Western Slope area. The historical growth indicated that there was a 1.03% growth rate in that time frame. Both the proposed CIP and TIM Fee Program Update and the Historical Growth alternative assume the same growth rate of 1.03% per year. However, the distribution of that growth is different. Historically, the distribution of growth included approximately 58% occurring in the Community Regions and approximately 42% occurring in the Rural Regions and Centers (BAE, 2013). Thus, under this alternative, the distribution of growth in the Western Slope would occur in a similar manner as the trends from 2000 – 2011 rather than the estimated distribution under the proposed CIP and TIM Fee Program Update which assumes the distribution of growth would be approximately 75% in the Community Region and 25% in the Rural Region Centers.

Therefore, while the overall population growth of the County through the year 2035 would be similar under this alternative to the proposed project, the development would occur in a manner that is less dense than the currently adopted General Plan (with 2015 amendments) and thus would result in a different traffic pattern as development would occur in a more sprawling manner in the rural areas of the Western Slope rather than in the Community Regions. Therefore, to reflect the transportation demands of the changed distribution of growth that would be necessary to ensure LOS on local roadways and highways is acceptable, the transportation projects under the CIP and TIM Fee Program Update would be reprioritized, meaning some projects (likely some of those in the rural areas) would move up in priority on the CIP list as necessary, but overall would be generally similar to those proposed in Table 2-1 (see Section 2.0, *Project Description*).

a. Aesthetics. Although some of the transportation projects under this alternative would be reprioritized, overall the impacts associated with development of these projects would result in similar impacts as under the CIP and TIM Fee Program Update. No additional scenic vistas, scenic resources or visual character changes would occur under this alternative and no additional new sources of light or glare beyond those identified for the proposed project would be added within the Western Slope under this alternative. Overall, aesthetic impacts under this alternative would be similar to the CIP and TIM Fee Program Update and any mitigation measures for the proposed project would also be necessary for Alternative 4 in order to ensure all impacts are reduced to a less than significant level.

b. Air Quality. Implementation of this alternative would result in a similar impact related to short-term construction-related air quality impacts as compared to the proposed project because generally the same transportation projects would be necessary under this alternative as those included in the proposed CIP and TIM Fee Program Update. Temporary air quality impacts from construction activities associated with transportation projects under this alternative would remain significant but mitigable and mitigation measures AQ-1(a) through AQ-1(d) in Section 4.2, *Air Quality* would apply.

Transportation improvements and land use patterns under Alternative 4 would result in a slight reduction in VMT when compared to the proposed project (4,831,076 VMT in the year 2035 under Alternative 4 compared to 4,863,521 VMT under the proposed CIP and TIM Fee Program Update). However, potential air quality impacts from on-road vehicle emissions would remain less than significant. Localized increases in toxic air emissions, resulting from future development consistent with Alternative 4 would also be expected to result in similar exposures to sensitive receptors. Table 6-10 shows that regional air emissions under this alternative would be slightly lower for ROG, NOx, PM_{10} and $PM_{2.5}$ as with the proposed CIP and TIM Fee Program Update. Table 6-11 shows that regional air emissions under this alternative would be generally similar for Diesel PM_{10} and $PM_{2.5}$, ROG, and Sox as with the proposed CIP and TIM Fee Program Update, with the exception to Diesel NOx, which is reduced by four thousandth of a ton per day. Impacts would continue to be less than significant. Overall, air quality impacts would be similar, though slightly less than under this alternative when compared to the proposed CIP and TIM Fee Program Update.

Table 6-10
Regional Emissions Analysis: Historical Growth Alternative

Scenario	Analysis Year	ROG (tons/day)	NOx (tons/day)	PM_{10} (tons/day)[1]	PM2.5 (tons/day)
2015 Baseline	2015	1.835	3.193	0.258	0.125
2035 with CIP and TIM Fee Program	2035	0.757	0.744	0.270	0.112
2035 with Historical Growth Alternative	2035	0.751	0.740	0.268	0.111

[1] *PM_{10} includes tire wear and brake wear emissions*
Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. For a conservative estimate, summer emissions were used for ROG and winter emissions were used for NOx, PM10, and PM2.5.

Table 6-11
On-Road Mobile Source Toxics Comparison: Historical Growth Alternative

Vehicle Activity	Diesel $PM_{2.5}$ (tons/day)	Diesel PM_{10} (tons/day)	Diesel NOx (tons/day)	Diesel ROG (tons/day)	Diesel SOx (tons/day)
2015 Baseline	0.042	0.064	1.834	0.087	0.003
2035 with CIP and TIM Fee Program	0.014	0.032	0.437	0.019	0.002
2035 with Historical Growth Alternative	0.014	0.032	0.433	0.019	0.002

Source: The on-road mobile source criteria pollutant emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model.

c. Biological Resources. This alternative would result in no significant changes to the transportation roadway improvements proposed under CIP and TIM Fee Program Update except that the projects would be reprioritized. This alternative would result in similar impacts to special status plants and animals, sensitive habitats, and wildlife movement as compared to the CIP and TIM Fee Program Update. Impacts to sensitive plant and animal species, sensitive habitats, and wildlife movement would remain significant and but mitigable; therefore, all related mitigation measures discussed in Section 4.3, *Biological Resources,* would apply.

d. Cultural Resources. Like the proposed CIP and TIM Fee Program Update, this alternative would result in ground disturbance from roadway improvement projects, including roadway expansion and widening. Therefore, development and transportation projects may still result in disturbance of archaeological and paleontological resources, potential impacts related to unknown cultural resources would remain significant but mitigable, and all related mitigation measures identified in Section 4.4, *Cultural Resources,* would apply. In regard to historic resources, bridge replacement projects under this alternative would potentially create an adverse change to historic bridges listed in the Caltrans Historic Bridge Inventory. Potential impacts to historic resources would remain significant and unavoidable. Overall, impacts related to cultural resources would be similar under this alternative when compared to the CIP and TIM Fee Program Update.

e. Geology. This alternative would include the same roadway improvement projects as the proposed CIP and TIM Fee Program Update, just reprioritized; and therefore, would result in similar impacts related to hazardous conditions. The overall impact of this alternative would be similar to that expected under the proposed project and impacts would remain significant

but mitigable. All related mitigation measures included in Section 4.5, *Geology*, would be required.

f. Greenhouse Gas Emissions/Climate Change. Construction-related GHG emissions under this alternative would be similar to the proposed project because the number of transportation projects constructed would not be changed. However, operationally, VMT would be slightly less than the proposed project under this alternative and thus as shown in Table 6-12, the slight reduction in VMT under the Previous General Plan alternative would result in GHG emissions that are slightly less than those under the CIP and TIM Fee Program Update. Therefore, impacts to GHG emissions would be less than the proposed CIP and TIM Fee Program Update. All mitigation measures included in Section 4.6, *Greenhouse Gas Emissions/Climate Change*, would be applicable.

Table 6-12
Per Capita Carbon Dioxide Equivalent Comparison
Historical Growth Alternative

Scenario	Per Capita CO_2e Emissions (lbs/day)
2015 Baseline	27.03
2035 with CIP and TIM Fee Program	15.90
2035 with Historical Growth Alternative	15.80

The on-road mobile source CO_2 emissions estimates for the proposed update to the CIP and TIM Fee Program were calculated using ARB's EMFAC2014 emission inventory model. Population figures for 2015 and 2035 were obtained from the BAE Report, 2013.

g. Hydrology and Water Quality. Implementation of this alternative includes a similar number of overall transportation projects being implemented as the proposed CIP and TIM Fee Program Update even though the projects would be reprioritized as more growth would occur in the rural areas. The construction and maintenance of transportation projects under this alternative would have a similar potential for water quality impacts resulting from erosion. Further, under this alternative, the increase in impermeable, paved surfaces would be generally similar to that under the CIP and TIM Fee Program Update. Overall, incremental increases in hydrology and water quality impacts, as well as incremental reductions in groundwater recharge, would be the same as the proposed CIP and TIM Fee Program Update. This alternative would also have the same number of projects that could be subject to flooding. Thus, impacts would remain significant but mitigable and all related mitigation measures referenced in Section 4.7, *Hydrology and Water Quality*, would be required.

h. Noise. Implementation of this alternative would include the same projects under the proposed CIP and TIM Fee Program Update; therefore, construction related noise generated from these transportation improvements would be similar to temporary noise levels to the proposed project. Impacts would remain significant and mitigation measures N-1(a) through N-1(e) would apply. Additionally, under this alternative, roadway widening and extension projects included in the proposed CIP and TIM Fee Program Update would still be implemented which would accommodate additional traffic volumes and/or relocate noise sources closer to receptors. Conversely, VMT would be slightly decreased from the proposed

CIP and TIM Fee Program Update. However, the slight reduction in VMT would not be expected to result in a significant reduction in vehicle noise. Overall, noise impacts would be similar with this alternative when compared to the proposed CIP and TIM Fee Program Update. Impacts associated with traffic generated noise would remain significant and mitigation measures N-2(a) and N-2(b) would be required.

i. Transportation and Circulation. The Historical Growth alternative would generally include the same transportation improvement projects identified for the proposed project. However, the projects would likely be reprioritized as more growth would be anticipated to occur in rural areas. However, this alternative would result in less VMT when compared to the proposed project. Under the Historical Growth alternative, 2035 VMT is expected to be 4,831,076[1] as opposed to the 4,863,521 under the proposed CIP and TIM Fee Program Update, a reduction of 32,445 VMT on a typical weekday. Based on expected VMT, potential impacts to transportation and circulation would be slightly less under the Historical Growth alternative. In addition, because the transportation projects would be implemented similar to the proposed project, this alternative would achieve the County's goal to ensure that all roadways have an acceptable LOS. Impacts under the Historical Growth alternative would be similar but slightly less than those associated with the proposed CIP and TIM Fee Program Update.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

This section compares the impacts of the three alternatives under consideration to those of the proposed project. Table 6-13 shows whether each alternative would have impacts that are less than, similar to, or greater than the proposed project for each of the issue areas studied.

The No Project Alternative (Alternative 1) would not be considered environmentally superior overall. This alternative would result in a net increase of transportation projects and therefore would result in the more construction-related impacts and impacts associated with ground disturbance compared to the CIP and TIM Fee Program Update. In addition, total VMT, emissions of air pollutants, GHG emissions, and traffic congestion impacts would be greater with this alternative as compared to the CIP and TIM Fee Program Update.

The No Project – No Build Alternative (Alternative 2) would not be considered environmentally superior overall. Although it would entail the fewest projects (as it would not construct any projects) and therefore result in the fewest construction-related impacts and impacts associated with ground disturbance, many of the transportation improvements under the CIP and TIM Fee Program Update would not occur. As a consequence, total VMT, emissions of air pollutants, GHG emissions, and traffic congestion impacts would be greater with this alternative as compared to the CIP and TIM Fee Program Update. Further implementation of this alternative and achievement of maintaining required LOS throughout the County may not be feasible as no projects would be built to accommodate growth in the County.

Alternative 3, the No Parallel Capacity alternative, would be considered environmentally superior overall. It would entail the elimination of all parallel capacity projects. Therefore,

[1] VMT for this alternative is consistent with the VMT used in the TGPA/ZOU Recirculated Partial Draft Environmental Impact Report (RDEIR), January 2015.

impacts related to ground disturbing activities such as biological and cultural impacts and water quality impacts would be reduced. Impacts to aesthetic resources would also be less because of the reduction in the amount of new roadways in the County. Further, construction impacts relating to air quality and GHG emissions, as well as construction generated noise, would be less than the proposed CIP and TIM Fee Program Update due to an overall reduction in VMT. Operational air quality and GHG emissions and traffic generated noise would also be slightly less than the proposed CIP and TIM Fee Program Update as a result of decreased VMT. However, by eliminating the parallel capacity projects, more traffic would be routed to US 50 going through the County, therefore potentially increasing highway congestion.

Under Alternative 4, the Historical Growth alternative, growth would be distributed in a manner in which there would be less residential development in the existing urban areas of the County, and more growth would be concentrated in the rural areas. However, the project list included under the CIP and TIM Fee Program Update would not change (the project list would just be reprioritized). This alternative would perform generally similar to the proposed project under most categories and is considered to be environmentally equivalent to the proposed project. VMT may be slightly reduced under this alternative, overall a reduction of 32,445 VMT from 4,863,521 and thus impacts related to air quality emissions, GHG emissions, and traffic congestion would be slightly improved. Additionally, since this alternative would not reduce or increase the amount of transportation improvement projects, there would be no change to the amount of habitat impacted or aesthetic and cultural resources impacted and impacts to geologic hazards, hydrology and water quality, and noise would not be changed.

Based on the information presented herein, the No Parallel Capacity alternative (Alternative 3) is determined to be the environmentally superior alternative when considering overall environmental impact relative to the project goals of the CIP and TIM Fee Update. However, as discussed above, elimination of parallel capacity projects would route more traffic onto US 50. Despite reducing overall VMT within the County, by eliminating alternative routes and routing more traffic to US 50, this alternative would not achieve the goal to maintain the required LOS on certain portions of the County's roadway network. Therefore, implementation of this alternative and achievement of maintaining required LOS throughout the County may not be feasible.

Table 6-13
Alternative Comparison

Issue	Alternative 1: 2040 No Project Scenario	Alternative 2: No Project – No Build	Alternative 3: No Parallel Capacity	Alternative 4: Historical Growth Alternative
Aesthetics	=/-	+	=/+	=
Air Quality	-	-	=/+	=/+
Biological Resources	=/-	+	=/+	=
Cultural Resources	=/-	+	=/+	=
Geology	=/-	=/-	=/+	=
Greenhouse Gases	-	-	=/+	=/+
Hydrology	=/-		=/+	=
Noise	=/-	=/-	=/+	=/+
Transportation and Circulation	=/-	-	-	=/+
Overall	**-**	**=/-**	**=/+**	**=/+**

+ Superior to the proposed project (reduced level of impact)
- Inferior to the proposed project (increased level of impact)
= / + slightly superior to the proposed project in one or more aspects, but not significantly superior
= / - slightly inferior to the proposed project in one or more aspects, but not significantly inferior
= Similar level of impact to the proposed project

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7.0 REFERENCES AND PREPARERS

7.1 REFERENCES

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7.2 LIST OF PREPARERS

This EIR was prepared by Rincon Consultants, Inc. as a subcontractor of Kittelson & Associates, Inc., under contract to El Dorado County. Persons involved in data gathering analysis, project management, and quality control include:

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Chirag Safi, Senior Engineer

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8.0 COMMENTS AND RESPONSES / REVISIONS to the DRAFT PROGRAM EIR

The Draft Program EIR and this Comments and Responses / Revisions to the Draft Program EIR document collectively comprise the Final Program EIR for the El Dorado County Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program. Any changes made to the text of the Draft Program EIR correcting information, data or intent, other than minor typographical corrections or minor working changes, are noted in the Final Program EIR as changes from the Draft Program EIR. Corrections or additional text discussed below are also shown in ~~strikethrough~~ (for deleted text) and underline (for added text) format in the Final Program EIR.

8.1 SUMMARY OF REVISIONS TO THE DRAFT PROGRAM EIR

The changes incorporated into this Final Program EIR correct minor errors or clarify information. These edits, in addition to other minor or technical edits found in the text of the Final Program EIR (including in the Appendices), do not result in presentation of new substantial adverse environmental effects and do not affect the conclusions of the EIR. The page numbers of the changes to the Draft Program EIR are listed in Section 8.2 Comments and Responses following the response to a comment that suggests or warrants a change/edit to the Draft Program EIR. The Final Program EIR (including the Appendices) reflects the final, corrected EIR text.

In addition to revisions to the Draft Program EIR that were suggested by the comments received (as listed in Section 8.2), edits have been made to the Final Program EIR as suggested by County staff to clarify information in the EIR and/or provide more updated data than was available prior to the release of the Draft EIR. These changes do not result in presentation of new substantial adverse environmental effects and do not affect the conclusions of the EIR. One of the changes reflected in this Final EIR includes an update to Appendix C contained in full in this Final EIR. The updated Appendix C contains slight updates to the Technical Memorandum 2-3: Traffic Deficiency Analysis (prepared by Kittelson & Associates, Inc. in March 2016 and updated in September 2016). This updated Technical Memorandum 2-3 includes minor edits to text and tables such as providing updated 2015 traffic volumes, updated project costs based on upon new economic data that became available after the release of the Draft EIR, updated formatting (colors used in tables), and it contains the full Appendix E of the Technical Memorandum (which was not included in the Draft EIR). None of these changes results in any changes to project description or to the EIR analysis (specifically the impact analysis contained in Section 4.9, *Transportation and Circulation* of the Draft EIR).

8.2 COMMENTS AND RESPONSES

In accordance with Section 15088 of the CEQA Guidelines, El Dorado County, as the lead agency, has reviewed the comments received on the Draft Program EIR for the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program and has prepared written responses to the written and verbal comments received. The Draft Program EIR was circulated for a 45-day public review period that began May 19, 2016

and concluded on July 5, 2016. The comment letters included herein were submitted by public agencies and local residents.

Each comment that El Dorado County received is included in this section. Responses to these comments have been prepared to address the environmental concerns raised by the commenters and to indicate where and how the Final Program EIR addresses pertinent environmental issues.

The comment letters have been numbered, and each issue within a comment letter, if more than one, has a number assigned to it (for example, letter 1, comment 2 is referenced as 1.2). Each comment letter is reproduced in its entirety with the issues of concern numbered in the right margin. The commenters are listed in Table 2-1.

The focus of the responses to comments is the disposition of environmental issues that are raised in the comments, as specified by Section 15088 (b) of the CEQA Guidelines. Detailed responses are not provided to comments on the merits of the proposed project.

Table 8-1
Commenters on the Draft Program EIR

Letter No.	Commenter	Agency/Organization	Date Received	Page Number
1	Eric Fredericks	California Department of Transportation	July 5, 2016	8-3
2	Kara Perry	Shingle Springs Band of Miwok Indians	May 26, 2016	8-9
3	Marco Guerrero	United Auburn Indian Community	July 5, 2016	8-11
4	Rusty Everett	Preserve El Dorado Hills	July 5, 2016	8-13
5	Ellen Van Dyke	El Dorado County Citizen	June 22, 2016	8-23
6	Lindell Price	El Dorado County Citizen	July 5, 2016	8-27
7	Lindell Price	El Dorado County Citizen	July 5, 2016	8-31
8	Stanley Price	El Dorado County Citizen	July 5, 2015	8-38
9	Stanley Price	El Dorado County Citizen	July 5, 2016	8-42

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
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SACRAMENTO, CA 95833
PHONE (916) 274-0635
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www.dot.ca.gov/dist3

Letter 1

Serious drought.
Help save water!

July 5, 2016

032016-ELD-0024
03-ELD-Various

Ms. Claudia Wade
County of El Dorado
Community Development Agency
Planning Services
2850 Fairlane Court
Placerville, CA 95667

Western Slope Capital Improvement Plan (CIP) and Traffic Impact Mitigation (TIM) Fee Program – Draft Environmental Impact Report (DEIR)

Dear Ms. Wade:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review for the project referenced above. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system. We review this project for impacts to the State Highway System (SHS) in keeping with our mission, vision and goals for sustainability/livability economy, and safety/health. We provide these comments consistent with the state's smart mobility goals that support a vibrant economy, and build communities, not sprawl.

The proposed project includes the major five-year update of the CIP and TIM Fee Program. The CIP identifies and prioritizes future transportation investments that will be required to meet the County's existing and future transportation needs for the next twenty-years. The TIM Fee Program collects development fees to offset the costs of impacts to the transportation system created by new development. The TIM Fee update ensures that the TIM Fees are appropriate and reasonable based on current market conditions and costs of construction/investment. The project compasses the Western Slope of El Dorado County. The following comments are based on the DEIR.

1.1

Transportation and Circulation

The Transportation and Circulation section of the EIR relies heavily on the Memo 2-3 Caltrans previously reviewed and commented on.

1. We understand that the Missouri Flat Master Circulation & Financing Plan Phase II (MC&FP II) is in progress and that it will address circulation issues in the area. However, the MC&FP II relies heavily on the Diamond Springs Parkway study, and we anticipate that is going to show the same results.
2. Subsequent analysis to Memo 2-3 has been completed (Diamond Springs Parkway Phase 1B, April 2016) for the Missouri Flat Interchange area. The analysis indicates that improvements will be needed at the interchange area to prevent ramp traffic from interfering with mainline traffic. These improvements should be incorporated into the CIP. The study also shows excessive southbound queuing north of Plaza Drive and Forni Road could have impacts on the operations of the interchange. These impacts should be addressed.
3. Are the proposed revisions to the General Plan (Table 2-2, page 2-11), to reduce some of the four-lane and six-lane future facilities shown on Table 2-4 (page 2-14) to major two-lane facilities? If so, have the traffic impacts been analyzed?
4. Please indicate the scope of improvements included in the United States Highway 50 (US 50)/Bass Lake Road Interchange Improvements – Phase 1 and Phase 2 project, (No. 58, Table 2-1, page 2-9) listed in the Proposed CIP Project List.
5. We would like to see the County find a method to preserve the ultimate footprint of the Bass Lake Road interchange, especially should the major development projects in the vicinity of the interchange be approved.

1.1 cont'd
1.2
1.3
1.4
1.5

Travel Forecasting and Modeling

The use of a comparison between the previous model and current model outputs to eliminate potential projects, such as Missouri Flat Road Interchange, is not the most effective way to analyze future deficiencies.

We agree with the traffic analysis methodology, traffic analysis assumptions, and associated analysis results for US 50 for the existing and future scenarios.

1.6

Please provide our office with copies of any further actions regarding this project.

If you have any questions regarding these comments or require additional information, please contact Eileen Cunningham, Intergovernmental Review Coordinator, at (916) 274-0639 or eileen.cunningham@dot.ca.gov.

Sincerely,

ERIC FREDERICKS, Chief
Transportation Planning – South Branch

c: Scott Morgan, State Clearinghouse

Letter 1

COMMENTER: Eric Fredericks, Chief, Transportation Planning – South Branch, California Department of Transportation

DATE: July 5, 2016

RESPONSE:

Response 1.1

The commenter states that based on the analysis contained in the Diamond Springs Parkway Phase 1b (completed in April 2016), the Missouri Flat Interchange area will require improvements to prevent ramp traffic from interfering with mainline traffic, and that these improvements should be analyzed in the EIR and incorporated into the CIP.

As stated in Section 1.0, Introduction (page 1-1, 1-2 of the Draft EIR), this Program EIR presents a region-wide assessment of the impacts of the proposed CIP and TIM Fee Program Update. Analysis of site-specific impacts of individual traffic improvements is not the intended use of this EIR. Many specific traffic improvements are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each traffic improvement will be undertaken as necessary by the appropriate sponsor agency (including the County and/or Caltrans) prior to each traffic improvement being considered for discretionary approval. Where subsequent environmental review is required, such review would focus on project-specific significant effects specific to the project, or its site. This Program EIR assesses impacts to the program as whole and provides an assessment of anticipated typical impacts that may be associated with construction and/or operation of transportation projects. If necessary, this Program EIR offers reasonable mitigation measures that the County or another sponsor agency for individual transportation projects can implement during the project level review in order to reduce impacts as necessary.

The TIM Fee Program update analysis completed, at a minimum, a planning-level analysis for all local and Highway 50 infrastructure. Diamond Springs Parkway has been designated as a County priority, and therefore the County has begun the project-specific analysis for Diamond Springs Parkway Phase 1A and 1B. This site-specific analysis is not part of the Major CIP and TIM Fee Update.

As part of the project specific analysis for Diamond Springs Parkway Phase 1B, the County has prepared a Transportation Analysis Report (TAR) to identify project-specific impacts. The TAR has a horizon year of 2040, which exceeds the horizon year of the analysis for the Major CIP and TIM Fee Program Update (year 2035). The TAR assumes full buildout of a number of development projects in the area, including The Crossings at El Dorado, Diamond Dorado Retail Center, Creekside Plaza, Piedmont Oaks Estates, and more. In total, the TAR assumes about 80 additional households and 1,240 additional employees near the interchange above the 2035 land use forecast. The land use assumptions were extended beyond 2035, as required by Caltrans, to ensure that the infrastructure project (Diamond Springs Parkway) was properly sized to accommodate all foreseeable growth in the area (approved and pending projects). As demonstrated by the TAR and noted by the commenter, the increase in land use leads to

congestion and queuing at the Missouri Flat Road interchange. Future studies of the Missouri Flat Road Interchange will identify the improvements needed to accommodate the future travel demand beyond 2035 at this location.

The land use assumptions used for the TAR far exceed the County's historical growth rate, which is the basis for the Major CIP and TIM Fee Program Update analysis. On April 8, 2014, the Board of Supervisors directed staff to base the analysis for the Major CIP and TIM Fee Program Update on the County's historical growth rate of 1.03% per year, with 75% of the residential growth in the Community Regions and 25% in the Rural Regions and Rural Centers. The traffic analysis for the Major CIP and TIM Fee Program Update included a micro-simulation evaluation of the 2035 peak hour LOS for the Missouri Flat Road interchange. This analysis is included in Attachment E of Technical Memorandum 2-3 (Appendix C of the Final EIR). The analysis demonstrates that the interchange will be able to accommodate the projected travel demand through 2035 without further improvements. All four intersections are projected to operate at LOS D or better during both peak hours. Therefore, there is no nexus for including interchange improvements at this location in the TIM Fee Program.

Future updates to the CIP and TIM Fee Program will include analysis of the Missouri Flat Road interchange. When the analysis demonstrates that improvements are needed, the interchange project can be added to the TIM Fee Program.

Response 1.2

The commenter states that the study conducted for Diamond Springs Parkway Phase 1b (completed in April 2016) also shows that southbound queuing north of Plaza Drive and Forni Road could have impacts on operations of the Missouri Flat Interchange and these impacts should also be addressed in the EIR.

See Response 1.1.

Response 1.3

The commenters asks if proposed revisions to the General Plan (Table 2-2, page 2-11), to reduce some of the four-lane and six-lane future facilities to two-lane facilities, are proposed by the CIP and TIM Fee program. The commenter requests that if this change is proposed that impacts be analyzed. Lane reductions for both four-lane and six-lane roads is proposed on several roadways as part of the summary of revisions to the General Plan.

The proposed changes listed in Table 2-2 of the Draft EIR are changes proposed to the General Plan's Figure TC-1, rather than physical projects. The Future Deficiency analysis, as discussed in Technical Memorandum 2-3 (Appendix C of the Draft and Final EIR) shows that certain facilities could be reduced in scope (i.e. from four lanes to two lanes) based on the revised growth forecast from 3% to 1.03%. Table 2-4 of the Draft EIR lists roadways that do not require additional capacity through 2035. However, the Future Facility designation (beyond 2035) will be maintained in the General Plan Circulation Map. The changes listed in Table 2-2 are proposed text changes to Figure TC-1 and are not new or separate physical projects. Rather, these text changes are necessary to update the figure based on existing conditions and/or in

order to be consistent with the proposed CIP and TIM Fee projects that are included and analyzed within the Draft EIR. No changes to the Draft EIR are warranted and no additional analysis is necessary.

Response 1.4

The commenter requests that the scope of improvements for the U.S. 50/Bass Lake Road Interchange Improvements – Phase 1 and Phase 2 be indicated in the EIR.

The Bass Lake Road Interchange Improvements for both Phase 1 and Phase 2 are listed on Table 2-1 page 2-9 of Section 2.0 *Project Description* in the Draft EIR as a proposed TIM Fee Program project. However, similar to Response 1.1, these projects have not yet been designed and are not yet defined to a level that warrants being indicated in the EIR. As discussed in Response 1.1, many specific traffic improvements are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each traffic improvement will be undertaken as necessary by the appropriate sponsor agency (including the County and/or Caltrans) prior to each traffic improvement being considered as part of a County CIP project and/or as a result of traffic impact mitigation requirements for development projects.

Response 1.5

The commenter states that they would like to have the County find a method to preserve the ultimate footprint of the Bass Lake Road interchange.

Comment is noted. However, as discussed in Response 1.1 and 1.4, many specific traffic improvements, including the Bass Lake Road interchange, are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each traffic improvement will be undertaken as necessary by the appropriate sponsor agency (including the County and/or Caltrans) prior to each traffic improvement being considered for discretionary approval.

Response 1.6

The commenter states that the comparison between the previous model and current model outputs to eliminate potential projects is not the most effective way to analyze future deficiencies, such as for the Missouri Flat Road Interchange. The commenter then states that Caltrans agrees with the traffic analysis methodology, traffic analysis assumptions, and associated analysis results for US 50 for the existing and future scenarios.

The comparison of model volumes was not used to analyze future deficiencies. The comparison of model volumes was used to confirm that the previously-analyzed future deficiencies would still exist by 2035 with the revised growth forecast. The County's previous growth forecast assumed a growth rate of approximately 3% per year. However, the analysis for the Major CIP and TIM Fee Program Update is based on the Board-directed growth rate of 1.03% per year. The previous model had been used to conduct operations-level analysis to identify future deficiencies at interchanges on the County's West Slope. The analysis for the Major CIP and TIM Fee Program Update simply confirmed that those deficiencies are still projected to exist by

2035 through a comparison of model volumes. Refer to Technical Memorandum 2-3 (Appendix C of the Draft and Final EIR) for more information about this process.

It should also be noted that the Missouri Flat Road Interchange was selected for operations-level analysis for the Major CIP and TIM Fee Program Update project. As described in Response 1.1, all four intersections are projected to operate at LOS D or better in both peak hours by 2035.

Further, the commenter states that they agree with traffic analysis traffic analysis assumptions, and associated analysis results for US 50, thus validating the approach used in the traffic analysis for the Draft EIR.

Letter 2

---------- Forwarded message ----------
From: **Kara Perry** <KPerry@ssband.org>
Date: Thu, May 26, 2016 at 11:15 AM
Subject: RE: DEIR for the Western Slope Roadway CIP and TIM Fee Program
To: Natalie Porter <natalie.porter@edcgov.us>
Cc: Claudia Wade <claudia.wade@edcgov.us>

Good Morning Natalie,

After reviewing the document, at this time Shingle Springs Rancheria does not have any comments to make. 2.1

Thank you

Kara Perry

Kara Perry
Administrative Assistant
Cultural Resources Department

Phone: (530) 488-4049
Mobile: (530) 363-5123
Fax: (530) 676-6288
Email: kperry@ssband.org

Shingle Springs Band of Miwok Indians | P.O. Box 1340, Shingle Springs, CA 95682 |
www.shinglespringsrancheria.com

Letter 2

COMMENTER: Kara Perry, Administrative Assistant, Shingle Springs Band of Miwok Indians

DATE: May 26, 2016

RESPONSE:

Response 2.1

The commenter states that the Shingle Springs Band of Miwok Indians does not have any concerns with the Western Slope Roadway CIP and TIM Fee Program EIR.

No response is necessary. The comment is noted.

Letter 3

From: **Marcos Guerrero** <mguerrero@auburnrancheria.com>
Date: Tue, Jul 5, 2016 at 1:44 PM
Subject: RE: Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program Update
To: Claudia Wade <claudia.wade@edcgov.us>
Cc: Cindy Johnson <cynthia.johnson@edcgov.us>

3.1

Thank you Ms. Wade, that is what we expected to hear. UAIC has not additional comments or concerns at this time. Please let us know if your project changes.

mg

Letter 3

COMMENTER: Marcos Guerrero, United Auburn Indian Community

DATE: July 5, 2016

RESPONSE:

Response 3.1

The commenter states that the United Auburn Indian Community does not have any concerns with the Western Slope Roadway CIP and TIM Fee Program EIR.

No response is necessary. The comment is noted.

Letter 4

July 5, 2016

Claudia Wade, P.E., Senior Civil Engineer
El Dorado County Community Development Department
Long Range Planning Division
2850 Fairlane Court
Placerville, CA 95667
Email: claudia.wade@edcgov.us

Re: Preliminary Comments on DEIR for the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program Update
State Clearinghouse No. 2016022018

Dear Ms. Wade:

Preserve El Dorado Hills ("Preserve EDH"), a group of property owners living in El Dorado Hills and directly affected by the unacceptable dense traffic already traveling El Dorado Hills Blvd., Latrobe Road, and on-and-off Highway 50, submits these preliminary comments on the Draft Environmental Impact Report ("DEIR") for the Capital Improvement Program/Traffic Impact Mitigation Fee (CIP/TIM) Update Project (the "Project"), because El Dorado County continues to assert that it should mandate comments at this time. Preserve EDH strongly asserts that the public adoption of Measure E guts a primary purpose of preparing the Traffic Impact Mitigation Fee Program, and therefore the structure of the programmatic nature of the Project itself, must be seriously reconsidered, before the environmental impacts can be properly evaluated.

Measure E Consequences

At the outset, Preserve EDH objects to the County's proceeding with comments on the DEIR prior to the County's determination of whether the passage of Measure E on June 7th impacts the project description or environmental analysis of the Project. The whole point of El Dorado County's CIP program, as coordinated with Traffic Impact Mitigation, was in support of the County's interpretation of Measure Y, which permitted developers to utilize the County's Traffic Impact Mitigation calculations to mitigate traffic increases anticipated to be mandated by that new project. Developers could then, upon the showing of contribution to the TIM fee fund, avoid actual construction of roadway improvements as originally intended by Measure Y [Project Description/2.2]. The proponents of Measure E explicitly challenged the County's prior General Plan assumptions that contribution to the Traffic Impact Mitigation fund was properly allowed by the County General Plan. Measure E passed.

4.1

Even El Dorado County acknowledges that Measure E affects public and decision maker analysis of the CIP/TIM Fee Project. As acknowledged on the County's Long Range Planning website and the CIP/TIM Fee Update website (www.edcwesternslopeupdate.com), "there are numerous questions raised by Measure E that need to be resolved before resuming the CIP and TIM Fee Update." County further acknowledges there is no estimate as to when the CIP/TIM Fee Update will resume, or if Measure E will require changes to the Project or environmental

1

analysis. Proceeding with the DEIR comment process at this point is putting the cart before the horse, and depending upon how long the Project is delayed, comments submitted at this time can become stale by the time the Project is actually submitted for approval hearings. 4.1 cont'd

Public Participation Concerns

On June 22, less than two weeks from the close of the DEIR's public review and comment period, the County issued a press release saying on the one hand: "Comments on the DEIR for the County's CIP/TIM Fee Update due July 5, 2016," while on the other hand stating in larger font "Further Progress on CIP/TIM Fee Update on Hold." These conflicting messages have, naturally, created confusion for the public as to whether the comments on the DEIR are in fact due at this time. We are not aware of any clarifying press release or notice sent out by the County, even though the County has been put on notice of the confusion via telephone calls and emails. As of the date of this writing, the County's Long Range planning website and project website maintain these conflicting messages as stated above, with no further clarification.

Because of the County's conflicting statements, some citizens may believe the entire project is on hold and therefore not submit comments at this time. If the County decides there is no need to re-open public comment after its analysis of the Measure E impacts, this group of citizens will have lost its opportunity to participate in the public review and comment process. The intent of CEQA is to encourage public participation and inform the public of proposed governmental approvals. In this case, where the County is talking about possible recirculation, there is no way the public knows how to evaluate the DEIR before them. 4.2

Having received formal protest from the public, the County should extend the time in which to present comments on the DEIR until County staff, its consultants, and attorneys decide how Measure E impacts the Project.

Because Preserve EDH is unsure what type of revisions to this Program the County will propose, we are also identifying, in outline form below, other serious issues which have been improperly addressed in the Draft EIR. Assuming that the County will recirculate the DEIR after adjustments involving the effect of Measure E are made, we will extend these comments as necessary.

Measure Y/Measure E Violations

The CIP/TIM Fee Program is based on the concept that the development community uses TIM fees for suitable mitigation, regardless of whether the improvements to the roadways ever get built. This allows the development community to evade the whole purpose of Measure Y. In 1998, the Measure Y Committee passed an initiative to limit the amount of gridlock traffic in our area. In 2004, as a result of litigation brought by Measure Y advocates, the County implemented General Plan Policy TC-X to carry out Measure Y. In 2008, the County updated its General Plan, adding to Policy TC-X (1) the option of a 4/5 vote by the Board of Supervisors to allow certain roads to operate at unacceptable (LOS F) levels of service; and (2) the option for a developer's payment into the CIP/TIM Fee Program in lieu of actual construction of improvements in order to mitigate for a project's traffic impacts. In doing this, the County tried 4.3

to manipulate around Measure Y to allow for more residential development, regardless of whether roadway improvements were made to key thoroughfares.

On June 7, 2016, the electorate passed Measure E with the goal of reinstating the original intent of Measure Y. With the passage of Measure E, the County's General Plan policies as written result in an unintentional practical fraud on the voters. Transportation projects are identified in the CIP and associated TIM Fee program, but never get completed because the horizon year for completion is constantly being extended through updates to the CIP/TIM Fee Program. In fact, the use of TIM Fees to permit ongoing development violates the whole purpose of Measure Y, as restated by Measure E. What the proponents of Measure Y originally wanted, and the proponents of Measure E have reestablished, is that the County's current system of permitting payment into a TIM Fee Program instead of mandating actual corrections and improvement to the impacted interchange, signal, or other traffic recommendation necessary to return a given roadway to a C or better designation, is unacceptable.

Therefore, the entire structure of the County's CIP/TIM Fee Program, the Project for this EIR, which prior to the adoption of Measure E, permitted utilization of mitigation payments instead of construction improvements to adversely impacted interchanges, must be removed from the Program, and a method must be established by the Transportation Planning Agency to identify which proposed projects' impacts do not reach the "improvement construction" threshold, and which do. See for example Table 4.9-1 for a list of locations which may mandate completion of the improvements, not continued deposit of TIM fees. In turn, to the extent that the construction of these improvements reduces adverse impacts on other key interchanges and roadways, later applications may benefit. But none of this type of analysis is presently available because the County did not anticipate approval of Measure E when it prepared its DEIR.

4.3 cont'd

Based on the foregoing, it is our position that the General Plan and CIP/TIM Fee Program need to be reconstructed. The pending litigation against the County challenging the recent General Plan Amendment has only been further strengthened by the will of the citizens through the passage of Measure E on June 7th.

Additional DEIR Preliminary Comments

The following are preliminary comments on the DEIR analysis, but we submit that the comments will need to be revised/updated after the County has made its decision as to Measure E's impacts to this Project.

Table 4.9-2 and Impact Analysis 4.9.2 restate the County General Plan policies that are called into question by Measure E, because County's CIP system continues to move out, now to 2035, improvements identified for construction by 2015, and then 2025. The adoption of Measure E, which seeks to re-impose Measure Y as originally understood by the Proponents, calls all analysis of roadway segments into question, and requires a re-evaluation of how many projects can use the CIP/TIM fee structure.

Transportation Analysis

Preserve EDH notes that the County has reconstructed the Measure Y General Plan calculations for roadways, which analysis is currently being litigated Rural Communities United. The County determined to use Kimley-Horn's traffic analysis which "reduced" LOS calculations on key interchanges below the mandatory construction thresholds included in Measure Y, instead of adopting the Caltrans analysis of their own freeway system. All of us who live and work in the El Dorado Hills area know what it is like to travel Highway 50, Latrobe Road, El Dorado Hills Blvd., or any of the adjacent streets, and the LOS is unacceptable.

Thus, the summary of Roadways Deficiencies, and Table 6, which incorporates the improperly manipulated data, must be tabulated to reflect the actual on-the-ground impacts of all development which has occurred to date. After the accurate on-the-ground conditions regarding LOS are considered, and the County calculates which street improvements will actually be constructed before 2035 as required by Measure E, then a determination of whether traffic flow will improve or stay the same can be made. County has continued to refuse to incorporate Caltrans's comments to preliminary reviews of the CIP/TIM Fee Program. 4.4

Even failing to recalculate the on-the-ground 2016 conditions and Caltrans negative comments, Table 6 identifies multiple street connections which will exceed acceptable levels in 2035. As a result of Measure E, these connections must be improved by developers now, not allowed to be further deferred through the artifice of contributions to the TIM Fee fund.

These same issues are included in the General Plan Amendments to Transportation Policies which are already under litigation, and therefore both because a final decision of that litigation is pending, and Measure E has now been adopted, all work on the CIP/TIM Fee Program should be postponed pending careful evaluation of the alternative impacts of these determinations.

County Flawed Assumptions to Reduce Traffic and Air Quality Impacts

For example, the County is changing the proposed Latrobe widening in its proposed projects from 6 to four lanes, based on reduced County growth rate. However, as identified in multiple traffic studies, Latrobe is presently operating at unacceptable delay levels. Therefore, such a determination does not do anything to reduce LOS to acceptable levels, or reduce the air quality impacts caused by present stop-and-go traffic. 4.5

Table 4.2-3. Likewise, attainment of the Regional 8-Hour Ozone standards assumes *implementation* of the traffic improvements identified in the plan, after adopting the Kimley-Horn traffic models [which are challenged by Caltrans]. There is no rational basis to assume implementation of the plans identified by the County for completion. The major roadway improvements now showing for completion by 2035 are the same improvements identified in 2015 and 2025, and allowed to clip from one implementation period to the next. Thus, concluding improvements in air quality complying and VMT have no basis in fact. 4.6

4.6.2 GHG Impact Analysis. The same flawed analysis serves as the basis for the County's conclusions that the CIP/TIM Fee Program will not increase GHG emissions above existing or 4.7

No Project. This "not increase emissions" is no longer the acceptable measure of review. The County must show active steps to reduce GHG to the 1990 levels by 2020, as required by the California Air Resources Board's AB 32 Update to its Scoping Plan [2014]. Nothing in the DEIR addresses this standard, or the mitigation steps County will take to ensure compliance. Simply put, paying money into a fund which may eventually pay for a traffic improvement, but also may not, does nothing to achieve required reductions in GHG, which like all vehicle-caused air quality impacts are related to the stop-and-go effect of or below C LOS. The County, in this Draft EIR, like the General Plan EIR already in litigation, improperly adopts recalculated standards which ignore on-the-ground impacts of congested traffic, to claim that the impacts are not as serious as they are experienced by its residents. None of this sleight-of-hand improves the air quality, or reduces Greenhouse Gas emissions.

4.7 cont'd

For all the reasons summarized above, further efforts by El Dorado County to permit payment of mitigation fees instead of actual construction of improvements to our impacted roadways should be terminated.

Sincerely,

Preserve El Dorado Hills

Rusty Everett
1321 Manchester Dr
El Dorado Hills, CA 95762

cc: Rural Communities United
Save Our County

Letter 4

COMMENTER: Rusty Everett, Preserve El Dorado Hills

DATE: July 5, 2016

RESPONSE:

Response 4.1

The commenter expresses concern over the Draft EIR and its relation to Measure E. The commenter states that Measure E may require changes to the Draft EIR and therefore the Draft EIR would not adequately reflect the Major CIP and TIM Fee Program Update that is proposed for adoption.

A discussion of how the proposed Major CIP and TIM Fee Program Update relates to Measure E has been added to Section A. Final EIR Introduction, page A-1 of the Final EIR and states the following

> *Measure E*. During the public review period for the Draft EIR (May 19, 2016 to July 5, 2016) Measure E was approved by the voters on June 7, 2016. Measure E is the "Initiative to Reinstate Measure Y's original intent – no more paper roads". Measure E rescinded the 2008 amendments to Measure Y and made further amendments to the General Plan's policies regarding traffic impact mitigation by new development. It amended Policy TC-Xa to require that road capacity improvements needed to prevent new development's cumulative traffic impacts from reaching LOS F be completed "before any form of discretionary approval can be given to a project." It also amended Policy TC-Xf, which currently provides two methods for the County to mitigate traffic impacts: (1) condition the project to construct necessary road improvements or (2) ensure that the necessary road improvements are scheduled for construction within the County's CIP, which is primarily funded by impact fees collected with each building permit. Measure E eliminated the second option.
>
> Measure E requires that mitigation fees and assessments be applied to the geographic zone from which they originated and that they may be applied to existing roads for maintenance and improvement projects. Measure E also added a policy requiring voter approval before creating an Infrastructure Financing District, a requirement already imposed by state law. In addition, Measure E requires that the County make findings of compliance before approving certain development projects. Finally, a number of statements were included in Measure E under the heading "Implementation."
>
> Policies adopted or amended by Measure E will remain in effect indefinitely unless amended or repealed by voter approval.
>
> On August 9, 2016 the Board held a workshop on the Measure E implementation. On August 30, 2016 an item was taken to the Board to adopt interim guidelines

> to implement Measure E. The item was continued to an undetermined date. Measure E does not change level of service standards as stated in General Plan policy TC-Xd, the land use map diagram or projected growth patterns. As a result, the proposed CIP and TIM Fee Program does not change; however, funding for the Diamond Springs Parkway project has changed. The Draft CIP and TIM Fee Nexus Study have proposed removing the Missouri Flat Master Circulation and Financing Plan (MC&FP) funding from Diamond Springs Parkway and supplementing it with other funding sources. Adoption of Measure E does not create any additional impacts to projects discussed in the EIR and therefore does not require document revision.

As described above, Measure E would not result in any substantial changes to the proposed CIP and TIM Fee Program that necessitate changes to the project description or any of the impact analysis contained in the Draft EIR. One change was made to Table 2-1 in Section 2.0, *Project Description*, for the Diamond Springs Parkway project related to its funding source. This change, on page 2-7 of the Final EIR, is shown below:

Table 2-1
Proposed CIP Project List

	Proposed TIM Fee Program Project	Source	Type
	Constructed, still needed in CIP for Mitigation Monitoring (LTM - Long Term Monitoring)		
	Project		
13	72375~~/72334~~Diamond Springs Parkway - Phase 1A - SR-49 Realignment	~~TIM Update~~2015 CIP	Capacity
14	72334 Diamond Springs Parkway - Phase 1B (~~Widen to~~ New 4 lane roadway) (Only 2 lanes are TIM Fee eligible)	~~2015 CIP~~TIM Update	Capacity

Based on the above, Measure E would not result in new substantial adverse environmental effects and does not affect the conclusions of the EIR.

Response 4.2

The commenter expresses concern regarding the public noticing of the Draft EIR.

The Draft EIR was circulated per CEQA Guidelines Section 15105(a) for 45 days from May 19, 2016 to July 5, 2016, providing the required public comment period. No public notice was released that halted or extended the Draft EIR comment period. A public release was issued on June 17, 2016 after Measure E was passed by voters as it was necessary to conduct a review to determine whether the approval of Measure E would affect the proposed CIP and TIM Fee Program that was analyzed in the Draft EIR. On June 22, 2016, a second public notice was released clarifying that the 45-day review period was not put on hold and that comments would continue to be due on July 5, 2016. The 45-day review period was scheduled to close on July 3, 2016; however, the review period was extended two additional days due to the holiday. The County staff reviewed Measure E and on August 9, 2016 the Board of Supervisors held a workshop of the Measure E implementation. On August 30, 2016, an item was taken to the

Board to adopt interim guidelines to implement Measure E. The item was continued to an undetermined date. Measure E would not change level of service standards as stated in General Plan Policy TC-Xd, the land use map diagram, or projected growth patterns. As a result, Measure E would not substantively change the proposed CIP and TIM Fee Program and does not require an extension of the Draft EIR comment period. See Response 4.1 for discussion of Measure E.

Response 4.3

The commenter states that the entire structure of the CIP and TIM Fee Program and the use of mitigation payment instead of construction improvements has been altered with the passage of Measure E and that a method must be established to identify project impacts that do not reach the improvement construction threshold and those that do. The commenter also states that the CIP and TIM Fee Program is based on the concept that the development community uses TIM Fees for suitable mitigation. The commenter states that the timing of projects continues to move out into the future. The commenter states that none of this analysis was completed in the EIR because Measure E was adopted in the middle the of the Draft EIR comment period. Finally, the commenter states that the adoption of Measure E would require re-evaluation of projects that can and cannot use the CIP and TIM Fee structure.

See Response 4.1. No substantive changes to the CIP and TIM Fee Program would result, and no changes to the environmental analysis of the program as contained in the Draft EIR are warranted.

The CIP and TIM Fee Program primarily focuses on General Plan Policy TC-Xd, which establishes the County's level of service threshold, to determine what roadway improvement projects will be needed as a result of growth (residential and non-residential) through 2035. Measure Y and Measure E require the maximum TIM Fees, which is how the program was established. The CIP and TIM Fee Program analysis methodology does not take into consideration the TIM Fees being used as mitigation for any project. There are separate policies determined as part of the discretionary review process of a development application.

Response 4.4

The commenter expressed concern regarding the presentation of traffic information in Table 6 of the Traffic Study, the relationship between Measure E and the CIP and TIM Fee Program, and why the analysis does not use Caltrans' LOS.

Deficient roadways represented in Table 6 were calculated by Kittelson & Associates, Inc. using standard industry practices (refer to Appendix C of the Draft EIR for complete methodology). Roadway efficiency results were compared to the level of service standards set by the El Dorado County General Plan. Scenarios for the 2035 Amended General Plan and 2035 Amended General Plan with parallel capacity improvements were analyzed to determine potential roadway deficiencies. Then the projects necessary to improve those deficiencies to acceptable levels of LOS were included in the CIP and TIM Fee projects list. The list of projects necessary to make the improvements in LOS is contained in the Draft EIR (Table 2-1). As described in Section 2.0, *Project Description*, the CIP provides strategic direction for these capital projects over a current year, 5, 10, and 20 year horizon. The existing analysis of roadway deficiencies is

adequate and roadway deficiencies have not been recalculated for the Final EIR as Measure E would not alter the deficiency determination for these roadways.

The County's preferred methodology to calculate LOS is contained in the document "*Methodology Used to Calculate LOS for County Roads and State Highways*" (September 2016, available at: http://www.edcgov.us/LongRangePlanning/). As noted in the document, County staff has worked with Caltrans staff to identify and correct the errors in Caltrans' analysis and to document Caltrans' incorrect assumptions and provide evidence of the actual LOS on Highway 50.

Caltrans has reviewed the analysis and the Draft EIR and provided a comment letter on July 5, 2016 (see Letter 1). The letter states, "We agree with the traffic analysis methodology, traffic analysis assumptions, and associated analysis results for US 50 for the existing and future scenarios." As stated, Caltrans agrees with the results of the Draft EIR, therefore no further analysis is necessary.

See Response 4.1 for discussion of Measure E.

Response 4.5

The commenter states that Latrobe Road is currently operating at an unacceptable level of service (LOS) and should not be reduced from six to four lanes. The commenter then states that the determination that the County growth rate will be reduced does not improve the level of service to acceptable levels or reduce air quality impacts.

The commenter is incorrect that Latrobe Road is currently operating at an unacceptable LOS. As shown in Table 4.9-4 of the Draft EIR, the only roadway segment that is currently operating at an unacceptable LOS is Green Valley Road west of Sophia Parkway. The commenter is not specific as to which traffic studies have shown Latrobe Road is operating at an unacceptable LOS. There are no known recent traffic studies that have concluded Latrobe Road is currently operating unacceptably. Table 4.9-4 does indicate that Latrobe Road would operate unacceptably by 2035 without any further improvements to the County's roadway network. However, as stated in Table 2-1, the Latrobe Connection is included in the proposed Major CIP and TIM Fee Program Update. The Latrobe Connection is a new roadway that would extend from the El Dorado Hills Business Park to the west, parallel to Latrobe Road. The Latrobe Connection would provide a parallel route for motorists travelling to/from the business park and the residential neighborhoods along Latrobe Road. The technical analysis demonstrated that this new roadway would relieve the projected 2035 LOS deficiency along Latrobe Road and that further widening is not necessary by 2035. As shown in Table 4.9-4 of the Draft EIR, none of the State highways or roadways in the County would operate at an unacceptable LOS in 2035 with implementation of the General Plan amendments and Major CIP and TIM Fee Program Update.

Response 4.6

The commenter states that projects identified in the CIP and TIM Fee Program never get completed and are continuously extended through updates to the Program. The commenter states that therefore, the EIR cannot conclude that there would be improved air quality from VMT improvements.

The intention of the Major CIP and TIM Fee Program Update is to identify feasible projects that would be implemented during the planning horizon of the document. As a programmatic document, the Draft EIR presents a region-wide assessment of the impacts of the proposed CIP and TIM Fee Program. The Draft EIR analyzes the programmatic effects of all projects that have the potential to occur under the CIP and TIM Fee Program as a whole and concludes that with program implementation, the proposed list of transportation improvement projects would assist in reducing overall air quality related to the VMT improvements.

Response 4.7

The commenter states that the EIR cannot compare estimated emissions to existing or "No Project" emissions. The commenter states that estimated project emissions must be compared to AB 32 and the 2014 Scoping Plan and identify the measures that the County would take to ensure compliance.

The commenter is correct that the proposed project must comply with AB 32 and the related Scoping Plan. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under Executive Order S-3-05), and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions.

As shown in Section 4.6, *Greenhouse Gas Emissions/Climate Change,* Table 4.6-1 of the Draft EIR (page 4.6-11) the 2015 emissions were 3,983,002 pounds per day and 2035 emissions with implementation of the Program would be 2,876,310 pounds per day. This is a decrease of about 41 percent of GHG emissions as compared to existing emissions. Therefore, the proposed Program continues a downward trajectory of reducing GHG emissions, achieving GHG reductions consistent with AB 32 to reduce emissions to 1990 levels by 2020.

As stated in Impact GHG-3 of the Draft EIR, Section 4.6 *Greenhouse Gas Emissions/Climate Change*, projects and policies identified in the proposed update to the CIP and TIM Fee Program are designed to align transportation planning to reduce VMT and transportation-related GHG emissions. The proposed update to the CIP and TIM Fee Program would reduce GHG emissions related to mobile sources from 2015 by 41 percent by 2035. Therefore, implementation of the proposed update to the CIP and TIM Fee Program would help the region achieve GHG emissions reductions consistent with AB 32 targets.

Letter 5

---------- Forwarded message ----------
From: **Ellen Van Dyke** <vandyke.5@sbcglobal.net>
Date: Wed, Jun 22, 2016 at 7:56 AM
Subject: Draft EIR for Western Slope CIP & TIM Fee Update- public comment
To: Brian Veerkamp <bosthree@edcgov.us>, Ron Mikulaco <bosone@edcgov.us>, Shiva Frentzen <bostwo@edcgov.us>, Sue Novasel <bosfive@edcgov.us>, Michael Ranalli <bosfour@edcgov.us>
Cc: Jim Mitrisin <edc.cob@edcgov.us>, Kendall Flint <EDCWesternSlopeUpdate@gmail.com>, Claudia Wade <claudia.wade@edcgov.us>, creighton.avila@edcgov.us

Dear Supervisors:

I received a press release saying the CIP/TIM fee update project was put on hold. Anyone receiving that notice might think, like me, that this included the Draft EIR for the project. Well, that is NOT the case, as the project planner just confirmed the DEIR is moving forward. Members of the public may be sorely disappointed if they miss the deadline for input come July 5th because of that press release.

The press release also indicated that TIM fees would go down once the project was approved, in August. That is a blatant misrepresentation of both the EIR process and the timeline (an EIR is written to inform both the public and the decision makers of the project impacts- there should be *no* assumption of approval prior to the Final EIR, and the FEIR cannot even be started until after the DEIR comment period ends and could take months to complete).

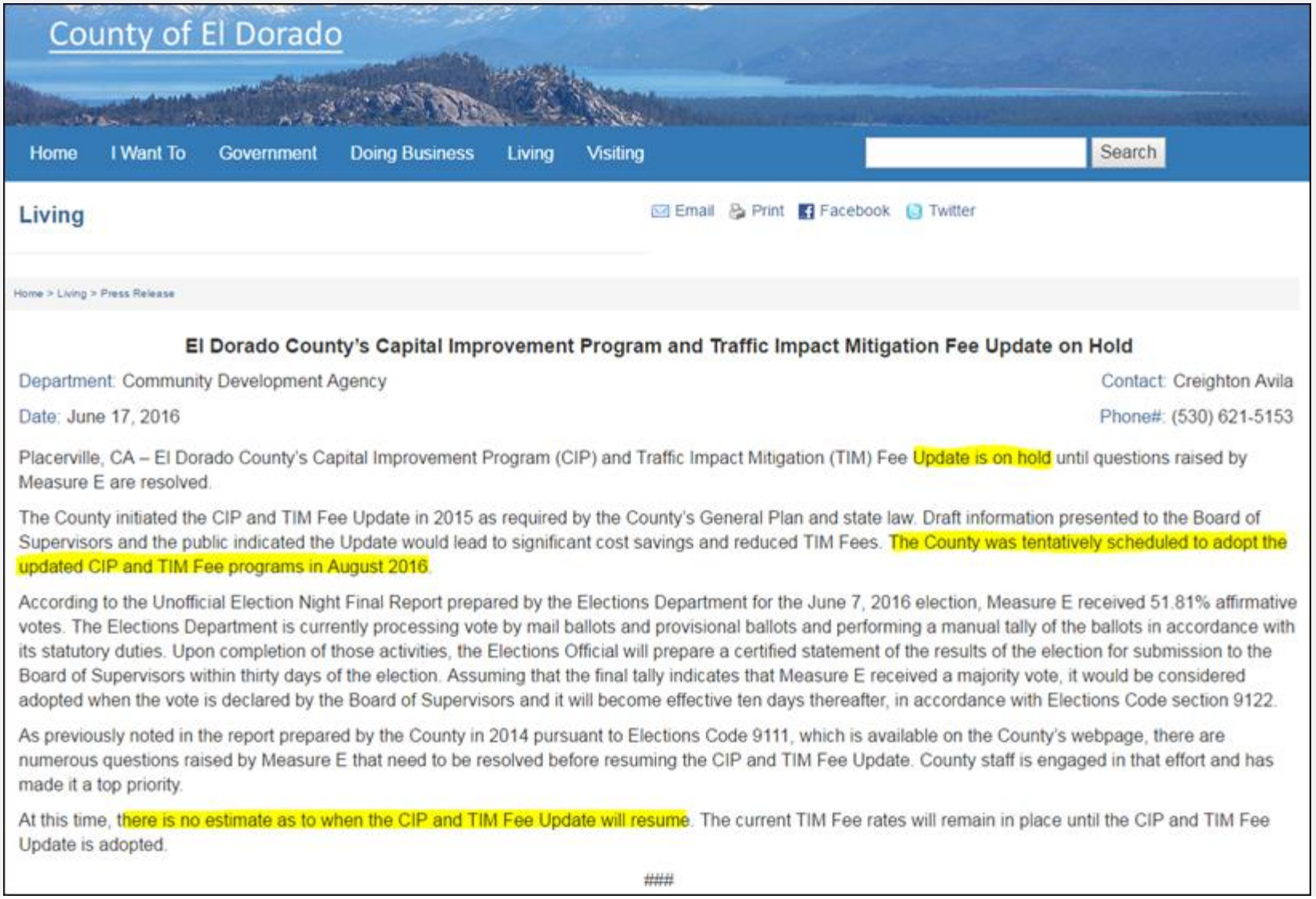
Whether the point was to intentionally misinform the public, or was an innocent case of the left-hand-not-talking-to-the-right-hand, the Board has an obligation to the public to direct the Community Development Agency (CDA) to rectify this. Do NOT waste residents' valuable time having them review an EIR that you believe may change, and do not mislead them on the deadline. <u>If the project is on hold, PUT IT ON HOLD, and either extend or 'pause' the public comment period for the Draft EIR as well</u>.

Please include this in the administrative record for the CIP/TIM Fee Update Draft EIR.

Ellen Van Dyke, Rescue resident

5.1

6/17/2016 CDA Press Release:


County of El Dorado
Home
I Want To
Government
Doing Business
Living
Visiting
Search
Living
Email
Print
Facebook
Twitter
Home > Living > Press Release
El Dorado County's Capital Improvement Program and Traffic Impact Mitigation Fee Update on Hold
Department: Community Development Agency
Contact: Creighton Avila
Date: June 17, 2016
Phone#: (530) 621-5153
Placerville, CA – El Dorado County's Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Update is on hold until questions raised by Measure E are resolved.
The County initiated the CIP and TIM Fee Update in 2015 as required by the County's General Plan and state law. Draft information presented to the Board of Supervisors and the public indicated the Update would lead to significant cost savings and reduced TIM Fees. The County was tentatively scheduled to adopt the updated CIP and TIM Fee programs in August 2016.
According to the Unofficial Election Night Final Report prepared by the Elections Department for the June 7, 2016 election, Measure E received 51.81% affirmative votes. The Elections Department is currently processing vote by mail ballots and provisional ballots and performing a manual tally of the ballots in accordance with its statutory duties. Upon completion of those activities, the Elections Official will prepare a certified statement of the results of the election for submission to the Board of Supervisors within thirty days of the election. Assuming that the final tally indicates that Measure E received a majority vote, it would be considered adopted when the vote is declared by the Board of Supervisors and it will become effective ten days thereafter, in accordance with Elections Code section 9122.
As previously noted in the report prepared by the County in 2014 pursuant to Elections Code 9111, which is available on the County's webpage, there are numerous questions raised by Measure E that need to be resolved before resuming the CIP and TIM Fee Update. County staff is engaged in that effort and has made it a top priority.
At this time, there is no estimate as to when the CIP and TIM Fee Update will resume. The current TIM Fee rates will remain in place until the CIP and TIM Fee Update is adopted.
###

Public comment period as currently noticed on the County's website:
(http://www.edcgov.us/Government/LongRangePlanning/Transportation/TrafficImpactMitigationFeeProgram.aspx)

Long Range Planning (LRP)

Email Print Facebook Twitter

Home > Government > Community Development > Long Range Planning

Traffic Impact Mitigation Fee Program

On **May 19, 2016**, the County released a Notice of Availability (NOA) for the Draft Programmatic Environmental Impact Report (DEIR) for the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program for El Dorado County. The Programmatic DEIR was prepared to determine the nature and the Program's extent of the potential impacts on the environment. The DEIR is available for public and agency review for a 45-day review period. **Comments are due by 5:00 p.m. on Tuesday, July 5, 2016.**

(The documents below are in PDF format and should be viewed with Adobe Reader.)

Letter 5

COMMENTER: Ellen Van Dyke

DATE: June 22, 2016

RESPONSE:

Response 5.1

The commenter expresses concern over the press release notifying citizens that the CIP/TIM Fee Update would be put on hold. The commenter argues that those receiving the press release would think that the Draft EIR was also placed on hold and that the press release cannot state that TIM Fees would decrease once the project was approved.

The Draft EIR was circulated per CEQA Guidelines Section 15105(a) for 45 days from May 19, 2016 to July 5, 2016 providing the appropriate comment period. A public notice was sent on June 22, 2016 to clarify that the Draft EIR comments were still due on July 5, 2016. See Response 4.1 and Response 4.2.

Letter 6

From: **Lindell Price** <lindellprice@gmail.com>
Date: Tue, Jul 5, 2016 at 5:01 PM
Subject: Input on DEIR for CIP & TIM Fee Program, #1
To: Claudia Wade <claudia.wade@edcgov.us>

Claudia Wade,

Comments on the DRAFT ENVIRONMENTAL IMPACT REPORT WESTERN SLOPE ROADWAY CAPITAL IMPROVEMENT PROGRAM AND TRAFFIC IMPACT MITIGATION FEE PROGRAM FOR EL DORADO COUNTY

4.9-4 d.

Safety data (exposure, injury, crime) is not systematically collected for, and correlated with off-road facilities, so delete claim that Class I Bikeways provide a ***safe*** *and* ***reliable*** *means of transportation for those wishing to bicycle or walk to their destinations.*

Per California's Highway Design Manual,

> **1003.4 Trails**
>
> Trails are generally, unpaved multipurpose facilities suitable for recreational use by hikers, pedestrians, equestrians, and off-road bicyclists. While many Class I facilities are named as trails (e.g. Iron Horse Regional Trail, San Gabriel River Trail), trails as defined here do not meet Class I bikeways standards and should not be signed as bicycle paths.

El Dorado County does not have a Pedestrian Plan.

4.9-8

The El Dorado County Bicycle Transportation Plan (2010 Update) is a planning rather than a design document.

6.1

p. ES-1

Project Description

... The TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, **walking, bicycling,** and transit **facilities**, to accommodate travel demand from future land use growth during a defined time period (currently based on 20 years of growth). The TIM Fee funded improvements are a part of the CIP and the proposed TIM Fee Update would provide funding for traffic improvements necessary for all roadways as a result of growth in the county to operate at an acceptable Level of Service (LOS), under 2035 General Plan 20 year time horizon conditions, in accordance with **all elements of** the County's General Plan**, and policies including the Environmental Vision for El Dorado County Resolution No. 29-2008**.

... Typical non-TIM Fee funded improvement projects include bridge replacement/maintenance of off-system bridges, improvements to bicycle lanes/bike routes, sidewalks, pedestrian access and trails, safety improvements such as crosswalks or signage for pedestrians at intersections, drainage improvements, traffic safety improvements such as realignments, and improvements that increase capacity of roadways with existing operational deficiencies, such as road widenings or traffic signal interconnects. **Improvements that reduce the traffic impacts of a**

6.2

development, such as improved pedestrian access to transit, are eligible for TIM Fee funding.

6.2 cont'd

ES-18

Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. **CPTED (Crime Prevention Through Environmental Design) should be applied, to insure that designs do not leave non-motorized travelers, or adjacent properties vulnerable due to being hidden from view. Walls should not block pedestrians or bicyclists from the view of neighboring properties. Access to and visibility of utilitarian non-motorized routes should be maximized to facilitate replacement of vehicle trips with non-motorized trips.**

6.3

3.1 PHYSICAL SETTING

b. Regional Transportation System. The El Dorado County **General Plan and the Environmental Vision for El Dorado County Resolution No. 29-2008,** ~~Transportation and Circulation Element~~ (amended 2015) provides the framework for all decisions concerning the county-wide transportation system ...

A Bicycle Transportation Plan was originally developed in 1979 and most recently updated in 2010 to define the general location and classification of all existing and proposed regional bikeways in El Dorado County. **Very little data has been collected on bicycling in El Dorado County.** However, **it is believed that** bicycles are primarily used by residents in the County for recreation, sport, or exercise rather than transportation. The Plan provides connectivity between cities throughout the County and adjoining counties, including access to parks, bicycling routes, and other recreational areas. The Plan also defines the general location and classification of all existing and proposed regional bikeways in the County. There are three main classification categories for the Bikeway System: Class I Bikeway or **Bike Path** ~~Bicycle Trails~~; Class II Bikeway or ~~Bicycle~~ **Bike** Lanes; Class III Bikeway or ~~Bicycle~~ **Bike** Route. These **Caltrans** classifications clarify specific details related to design and intended use **as specified in Caltrans guidance.**

6.4

Best regards,

Lindell Price
(916) 804-7316 cell phone

Letter 6

COMMENTER: Lindell Price

DATE: July 5, 2016

RESPONSE:

Response 6.1

The commenter provides several suggested text edits to *Transportation and Circulation,* Section 4.9 of the Draft EIR. The following responds to the requested text changes.

The references to *Class I Bikeways providing safe and reliable transportation* was not removed from the Draft EIR because Class I Bikeways are off street, specifically designed for cyclists and pedestrians to be safe separated from motorized transportation.

The reference to Pedestrian Plan has been removed from page 4.9-4 of the Final EIR to read:

> The El Dorado County Bicycle Transportation Plan~~/Pedestrian Plan~~ was adopted in 2010 to provide a blueprint for the development of a bicycle transportation system on the Western Slope. The proposed bikeway system is over 280 miles and includes strategies to develop Class I Bikeways along the Sacramento-Placerville Transportation Corridor ("El Dorado Trail").

The suggestion, *the El Dorado County Bicycle Transportation Plan (2010 Update) is a planning rather than a design document* was not added to the Final EIR because the document's designation as a planning document is stated as part of the document title.

Response 6.2

The commenter suggests several text edits and reference to the Environmental Vision for El Dorado County Resolution No. 29-2008.

The reference to Resolution No. 29-2008 does not include suggested traffic improvements and level of service standards, such as those included in the El Dorado County General Plan. Resolution No. 29-2008 contains goals to decrease the environmental effects of traffic and transportation and reference to the resolution has therefore not been added to the Final EIR.

The request to add a statement about TIM Fee funding and pedestrian access to transit was not added to the Final EIR because it is not relevant to the paragraph that is listing typical non-TIM Fee funded projects. Most of the other text suggestions have been added to the Section 0.0, *Executive Summary* of the Final EIR (none of these changes result in changes to the project or the impact analysis). The Project Description on page ES-1 of the Executive Summary of the Draft EIR has been revised to include the following additional text:

> The TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, and roadway intersection improvements~~, and transit,~~ to

accommodate travel demand from future land use growth during a defined time period (currently based on 20 years of growth). Where appropriate, TIM Fee funds can be used for pedestrian, bicycle, and transit facilities.

Response 6.3

The commenter suggests adding Crime Prevention Through Environmental Design (CPTED) to mitigation measure N-2 relating to impacts from traffic generated noise levels.

CPTED is not relevant to traffic generated noise nor would it reduce noise related to traffic (which is the impact reduced by mitigation measure N-2) and has therefore not been included in the Final EIR.

Response 6.4

The commenter suggests adding reference to Environmental Vision for El Dorado County Resolution No. 29-2008 and removing reference to the El Dorado County General Plan Circulation Element.

Resolution No. 29-2008 was adopted in 2008 and contains several goals to decrease the environmental effects of traffic and transportation. The Traffic and Circulation Element of the County General Plan was updated in 2015 and is the more relevant and updated County transportation document for the specific discussion in Section 3.0, Environmental Setting. Therefore, reference to Resolution No. 29-2008 was not added to the Final EIR. Additionally, there is no evidence to support that "*very little data has been collected on bicycling*" in the County, and this suggestion was not incorporated into the Final EIR. Page 3-2 of the Draft EIR has been revised to include the following text edits:

> The Plan also defines the general location and classification of all existing and proposed regional bikeways in the County. There are ~~three~~four main classification categories for the Bikeway System: Class I Bikeway (Bike Paths) ~~or Bicycle Trails~~; Class II Bikeway ~~or~~ (Bike ~~Bicycle~~ Lanes); Class III Bikeway ~~or Bicycle~~(Bike Routes); and Class IV (Separated Bikeways). These classifications clarify specific details related to design and intended use as specified in the Caltrans Highway Design Manual Chapter 1000 Bicycle Transportation Design and Caltrans Design Information Bulletin 89 for Class IV facilities.

Letter 7

On Tue, Jul 5, 2016 at 7:33 PM, Lindell Price <lindellprice@gmail.com> wrote:

Claudia Wade,

2nd Input on DEIR for CIP & TIM Fee Program. My comments are in italics, with suggested changes in blue and strike out.

1.6 INTENDED USES OF THE EIR

...

• Examine a reasonable range of alternatives that could feasibly attain the basic project objectives, while eliminating and/or reducing some or all of the potentially significant adverse environmental effects.

Insufficient examination of alternatives, and insufficient data (exposure, mode, safety, location, purpose of trip) on utilitarian non-motorized travel in El Dorado County. Alternatives that were insufficiently examined include:

- *Increase connectivity via better connectivity and more parallel routes.*
- *Provide better utilitarian alternatives to vehicle trips through improvements such as better pedestrian access to transit.*
- *A CIP aligned with compact, mixed used, pedestrian friendly, and transit oriented development.*
- *Insufficient incorporation of the* ***Health, Safety and Noise Element of El Dorado County General Plan****.*

7.1

3.1 PHYSICAL SETTING

b. Regional Transportation System. The El Dorado County **General Plan, and the Environmental Vision for El Dorado County Resolution No. 29-2008,** ~~Transportation and Circulation Element~~ (amended 2015) provides the framework for all decisions concerning the county-wide transportation system ...

4.6-14

As discussed above, the Environmental Vision for El Dorado County Resolution No. 29-2008 was adopted to set goals for implementing positive environmental change. The transportation and traffic goals were to reduce carbon emissions and greenhouse gases; promote carpooling and reduce vehicle miles traveled; promote pedestrian and bicycling commuting; expand transit opportunities; utilize clean-fueled vehicles for county employees; and promote programs and designs that reduce traffic congestion. As discussed above, the proposed update to the CIP and TIM Fee Program would reduce traffic and thus decrease greenhouse gas emissions. ...

7.2

4.9 TRANSPORTATION AND CIRCULATION 4.9.1 Setting a. Freeway, Highway, and Arterial Network.

Most travel in the Western Slope of El Dorado County is in automobiles due to the low-density development patterns, **and due to lack of financial investment in bicycle and pedestrian infrastructure.** Nearly 87 percent of all commute trips were made by automobile (El Dorado County General Plan, 2015). The primary transportation corridor is US Highway 50 (US 50), which extends through the Western Slope of the County from Sacramento County on the west to the Lake Tahoe Basin to the east. US 50 serves all the major urban areas, including El Dorado Hills, Cameron Park, Diamond Springs, the City of Placerville, Camino, and eventually connecting to South Lake Tahoe in the Tahoe Basin. US 50 is a major commute and shipping

7.3

route with high occupancy vehicle lanes from Cameron Park to the Sacramento/El Dorado County line.

7.3 cont'd

4.9-4

d. Bicycle/Pedestrian Facilities. In the Western Slope of El Dorado County, bicycles are mainly used for commuting to school and for recreation. Bicycle facilities in El Dorado County generally fall into three distinct categories. Class I Bikeway (~~Bicycle Trail~~ **Bike Path**) facilities are dedicated ~~lanes~~ **paths** physically separated from traffic lanes. Class I ~~lanes~~ **Paths are typically used seasonally and for recreation, because Class I Bikeways seldom provide reliable 24-hour, all weather routes for utilitarian non-motorized travel** ~~provide a safe and reliable means of transportation for those wishing to bicycle or walk to their destinations~~. **Where no parallel sidewalk is provided, Class I Bikeways are used by both pedestrians and bicyclists.** Class II Bikeway (Bicycle Lane) facilities are separated from adjacent traffic by **pavement markings** ~~striped lanes with optional striping scenarios to allow on-street parking~~ (bicycles travel in the same direction as adjacent traffic). Class III Bikeway (Bicycle Route) facilities are identified by green and white "Bike Route" **signs, which may be supplemented with sharrows and/or "Bikes May Use Full Lane" signage.** ~~guide signing~~, ~~and have no special lane designation~~. ~~These routes are means to connect segments of Class I or Class II bikeways.~~ The El Dorado County Bicycle~~/Pedestrian~~ Plan was adopted in 2010 to provide a blueprint for the development of a bicycle transportation system on the Western Slope. The proposed bikeway system is over 280 miles and includes strategies to develop Class I Bikeways along the Sacramento-Placerville Transportation Corridor ("El Dorado Trail"). **El Dorado County does not yet have a Pedestrian Plan.**

7.4

e. Regulatory Setting. El Dorado County General Plan. The Transportation and Circulation Element of the El Dorado County General Plan includes goals, policies and objectives related to transportation in the County. Objectives and policies regarding transportation that are applicable to the CIP and TIM Fee Program Update are listed in Table 4.9-2.

4.9-7

State CEQA Guidelines, significant impacts to transportation and traffic would occur if the project would:

1. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

3. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

7.5

4.9-8

Bicycle~~ and Pedestrian~~ Facilities Standards. The El Dorado County Bicycle Transportation Plan (2010 Update) describes the current bikeway network, creates uniformity in policies~~ and design~~, identifies funding opportunities, and recommends programs to expand or improve the bikeway infrastructure. The recommended bikeway networks identify attractors (i.e., destinations that residents would want to access via bicycle such as parks and schools) and both existing and proposed future bikeways. The proposed update to the CIP and TIM Fee Program would not have significant impacts to bicycle~~ and pedestrian~~ facilities if it is consistent with the

7.6

aforementioned plans. Moreover, a significant and adverse impact would occur if new or expanded facilities ~~cause a physical change to the environment~~ **disrupt the bicycling network** .

7.6 cont'd

El Dorado County does not yet have a Pedestrian Plan. However, El Dorado County's General Plan, and Environmental Vision for El Dorado County Resolution No. 29-2008 include policies for pedestrian safety and access.

Add relevant General Plan goals, policies & obectives to Table 4.9-2

HIGHWAY SAFETY GOAL 6.9: HIGHWAY SAFETY

Provide highways within the County that provide for the safe movement of goods and people throughout the County.

OBJECTIVE 6.9.1: SAFETY HAZARDS REDUCTION PROGRAM Create a program to reduce safety hazards on County roadways especially at locations with a history of frequent accidents. *(Note the need for more data on non-motorized travel safety.)*

Policy 6.9.1.1 The County shall identify those roadways with existing or projected safety problems, prioritize them in terms of the immediacy of the need for improvements, and develop programs for financing needed improvements.

Policy 6.9.1.2 Recognize that substandard road conditions exist in some rural areas of the County and include feasible roadway, pedestrian, and bicyclist safety improvements in the roadway improvement priority list.

Policy 6.9.1.3 New roads connecting to County roads shall be designed to provide safe access as required by the County Design and Improvement Standards Manual.

7.7

OBJECTIVE 6.9.2: EMERGENCIES ON STATE HIGHWAYS The County should coordinate with Caltrans for the efficient movement of traffic on County roads in the event of closures on State highways.

OBJECTIVE 6.7.2: VEHICULAR EMISSIONS

Policy 6.7.2.3 To improve traffic flow, synchronization of signalized intersections shall be encouraged as a means to reduce congestion, conserve energy, and improve air quality.

OBJECTIVE 6.7.3: TRANSIT SERVICE

Expand the use of transit service within the County.

Policy 6.7.3.1 Legally permissible trip reduction programs and the development of transit and ridesharing facilities shall be given priority over highway capacity expansion when such programs and facilities will help to achieve and maintain mobility and air quality.

Policy 6.7.3.2 Transit Service – The County shall promote infill development that is compact, mixed used, pedestrian friendly, and transit oriented in areas identified as Transit Priority Project Areas.

OBJECTIVE 6.7.4: PROJECT DESIGN AND MIXED USES

Encourage project design that protects air quality and minimizes direct and indirect emissions of air contaminants.

Policy 6.7.4.1 Reduce automobile dependency by permitting mixed land use patterns which locate services such as banks, child care facilities, schools, shopping centers, and restaurants in close proximity to employment centers and residential neighborhoods.

Policy 6.7.4.2 Promote the development of new residential uses within walking or bicycling distance to the County's larger employment centers.

Policy 6.7.4.3 New development on large tracts of undeveloped land near the rail corridor shall, to the extent practical, be transit supportive with high density or intensity of use.

Policy 6.7.4.4 All discretionary development applications shall be reviewed to determine the need for pedestrian/bike paths connecting to adjacent development and to common service facilities (e.g., clustered mail boxes, bus stops, etc.).

Policy 6.7.4.5 Specific plans submitted to the County shall provide for the implementation of all policies contained under Objective 6.7.4 herein.

OBJECTIVE 6.7.2: VEHICULAR EMISSIONS

MEASURE HS-Q Develop and implement a program to encourage use of mechanisms to reduce peak-hour vehicle trips consistent with Policy 6.7.2.2. Responsibility: Planning Department and Department of Transportation Time Frame: Develop program within three years of General Plan adoption

MEASURE HS-W Survey and prioritize safety improvements on County roads. Develop financing programs for making necessary improvements. [Policy 6.9.1.1] Responsibility: Department of Transportation Time Frame: Complete survey within three years; Develop financing program within eight years of General Plan adoption. *(Note the need for better safety data on non-motorized travel.)*

7.7 cont'd

4.9-11

Transit.

... Transit projects included in the proposed update to the CIP and TIM Fee Program would be consistent with applicable plans and policies because the transit improvements would likely improve access to transit services and improve access to alternative modes of transportation. **Pedestrian and bicycling connectivity with transit are essential in order for transit trips to replace personnal vehicle trips.**

7.8

Best regards,

Lindell Price
3672 Millbrae Road
Cameron Park, CA 95682

(916) 804-7316 cell phone

Letter 7

COMMENTER: Lindell Price

DATE: June 22, 2016

RESPONSE:

Response 7.1

The commenter states that there was an insufficient examination of alternatives and insufficient data on utilization of non-motorized travel in El Dorado County. The commenter identifies alternatives that in her opinion were insufficiently examined including the following: increased connectivity, more utilitarian alternatives, a non-motorized CIP, and insufficient incorporation of the Health, Safety, and Noise Element of the El Dorado County General Plan.

As required by the CEQA Guidelines (Section 15126.6) "an EIR shall describe a range of reasonable alternatives to the project…which would feasibly obtain most of the basic objectives of the project. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives." The Draft EIR considered four separate feasible alternatives for the proposed project. These alternatives included a no project alternative, no build alternative, no parallel capacity projects alternative, and historical growth alternative. Objectives of the project include developing a balanced transportation system; managing and planning for increased vehicle trips; financing and constructing roadway improvements; developing a 20 year CIP; developing a TIM Fee Program; and reduce TIM Fees. The four feasible alternatives meet these objectives and are therefore considered a reasonable range of alternatives for consideration.

Response 7.2

The commenter suggests several text changes adding El Dorado County Resolution No. 29-2008 to Section 3.0, *Environmental Setting* of the Draft EIR.

Resolution No. 29-2008 was adopted in 2008 and contains several goals to decrease the environmental effects of traffic and transportation. The Traffic and Circulation Element of the County General Plan was updated in 2015 and is the more relevant and updated County transportation document. Therefore, reference to Resolution No. 29-2008 was not added to the Draft EIR. See Response 5.3.

Response 7.3

The commenter suggests several text changes to Section 4.9 *Transportation and Circulation*, relating to the freeway, highway, and arterial network in the County. Page 4.9-1 of the Draft EIR has been revised to include the following text edits:

> Most travel in the Western Slope of El Dorado County is in automobiles due to the low-density development patterns, steep grades, and in the historic low demand for bicycle and pedestrian infrastructure. Nearly 87 percent of all commute trips were made by

automobile (El Dorado County General Plan, 2015). The primary transportation corridor is US Highway 50 (US 50), which extends through the Western Slope of the County from Sacramento County on the west to the Lake Tahoe Basin to the east. US 50 serves all the major urban areas, including El Dorado Hills, Cameron Park, Diamond Springs, the City of Placerville, Camino, and eventually connecting to South Lake Tahoe in the Tahoe Basin. US 50 is a major commute and shipping route with high occupancy vehicle lanes from Cameron Park to the Sacramento/El Dorado County line.

Response 7.4

The commenter suggests several text changes to Section 4.9, *Transportation and Circulation* related to bicycle and pedestrian facilities. Section 4.9, *Transportation and Circulation* page 4.9-4 has been revised to include the following text edits:

> **d. Bicycle/Pedestrian Facilities**. In the Western Slope of El Dorado County, bicycles are mainly used for commuting to school and for recreation. Bicycle facilities in El Dorado County generally fall into three distinct categories. Class I Bikeway (~~Bicycle Trial~~ Bike Path) facilities are dedicated paths physically separated from traffic lanes. Class I ~~lanes~~ paths provide a safe and reliable means of transportation for those wishing to bicycle or walk to their destinations. Where no parallel sidewalk is provided and where appropriate, Class I Bikeways are used by both pedestrians and bicyclists. Class II Bikeway (Bicycle Lane) facilities are separated from adjacent traffic by ~~striped lanes with optional striping scenarios to allow on street parking~~ pavement markings (bicycles travel in the same direction as adjacent traffic). Class III Bikeway (Bicycle Route) facilities are identified by green and white "Bike Route" signs, which may be supplemented with arrows and/or "Bikes May Use Full Lane" signage ~~guide signing and have no special lane designation~~. ~~These routes are means to connect segments of Class I or Class II bikeways.~~ The El Dorado County Bicycle Transportation Plan~~/Pedestrian Plan~~ was adopted in 2010 to provide a blueprint for the development of a bicycle transportation system on the Western Slope. The proposed bikeway system is over 280 miles and includes strategies to develop Class I Bikeways along the Sacramento-Placerville Transportation Corridor ("El Dorado Trail").

Response 7.5

The commenter highlights the State CEQA Guidelines for transportation thresholds on page 4.9-7 of Section 4.9, *Transportation and Circulation*, in the Draft EIR.

No changes were made to the Draft EIR as the commenter does not suggest any changes but rather highlights the transportation thresholds contained in the Draft EIR.

Response 7.6

The commenter suggests several text changes to Section 4.9, *Transportation and Circulation* related to bicycle and pedestrian facilities.

Section 4.9, *Transportation and Circulation,* page 4.9-8 has been revised to include the following text edits:

> Bicycle ~~and Pedestrian~~ Facilities Standards. The El Dorado County Bicycle Transportation Plan (2010 Update) describes the current bikeway network, creates uniformity in policies ~~and design~~, identifies funding opportunities, and recommends programs to expand or improve the bikeway infrastructure. The recommended bikeway networks identify attractors (i.e., destinations that residents would want to access via bicycle such as parks and schools) and both existing and proposed future bikeways. The proposed update to the CIP and TIM Fee Program would not have significant impacts to bicycle ~~and pedestrian~~ facilities if it is consistent with the aforementioned plans. Moreover, a significant and adverse impact would occur if new or expanded facilities cause a physical change to the environment.

Regarding the suggested change to the comparison to the CEQA threshold on page 4.9-8 to remove "a physical change to the environment" and replace with "disrupt the bicycling network", a disruption to the bicycle network would not necessarily be considered a significant impact under CEQA. CEQA analyzes the environmental impacts of a project not the impacts of a project on non-environmental conditions, such as the impacts to a bicycle network. Thus making the change suggested by the commenter would not be warranted.

Response 7.7

The commenter requests that El Dorado County Resolution No. 29-2008 and several General Plan goals, objectives and policies be added to Table 4.9-2.

See response 7.2 for Resolution No. 29-2008. As described in Section 4.9, *Transportation and Circulation*, Table 4.9-2 contains goals, policies, and objectives from the Transportation and Circulation Element of the El Dorado County General Plan. The suggested text edits are from the Health, Safety, and Noise Element, and do not relate to Transportation and Circulation. Therefore, edits have not been made to the Draft EIR.

Response 7.8

The commenter suggests several text changes to Section 4.9, *Transportation and Circulation* related to bicycle and pedestrian facilities. Section 4.9, *Transportation and Circulation* page 4.9-11 has been revised to include the following text edits:

> Transit projects included in the proposed update to the CIP and TIM Fee Program would be consistent with applicable plans and policies because the transit improvements would likely improve access to transit services and improve access to alternative modes of transportation. Pedestrian and bicycling connectivity with transit is essential in order for transit trips to replace personal vehicle trips. Transit improvements or service expansions in the CIP and TIM Fee Program may contribute to a growth in transit use and contribute to an expected reduction in VMT across El Dorado County with the improvement projects. Thus, impacts would be less than significant.

Letter 8

---------- Forwarded message ----------
From: **Stanley Price** <2stanleyprice@gmail.com>
Date: Tue, Jul 5, 2016 at 4:33 PM
Subject: Suggested Changes to the Draft EIR for the CIP and TIP EIR
To: Claudia Wade <claudia.wade@edcgov.us>
Cc: Lindell Price <lindellprice@gmail.com>

Claudia Wade,

Please include my comments and suggested language changes to provide an appropriately focused EIR for the CIP and TIM Fee

Comments:

Additions to the Executive Summary, Objectives, (page 9), and Section 2.5, Project Goals and Objectives (page 54), insert the wording in ALL CAPS:

Plan a balanced transportation system, INCLUDING PEDESTRIAN, BICYCLE, AND TRANSIT, that meets the needs of current and future County residents and visitors;

Manage and plan for an increase in vehicle trips on local and state roads and highways throughout the County to facilitate a safe, efficient flow of vehicle traffic WHILE INCREASING PUBLIC HEALTH THROUGH PROVIDING STATE-OF-THE-ART SAFE WALKING, BICYCLING, AND TRANSIT WITH EVERY ROADWAY IMPROVEMENT;

Finance and construct necessary roadway improvements to provide a safe and reliable transportation network to accommodate ALL MODES AND growth pursuant to the County General Plan while maintaining acceptable level of service standards AND PUBLIC HEALTH as required by the General Plan;

8.1

Page 57, section 3.1.b. Regional Transportation System

Please improve the paragraph as shown by the strikeouts and all cap additions:

A Bicycle Transportation Plan was originally developed in 1979 and most recently updated in 2010 to define the general location and classification of all existing and proposed regional bikeways in El Dorado County. However, bicycles are primarily used by residents in the County for recreation, sport, or exercise rather than transportation DUE TO A COMBINATION OF LOW DENSITY DEVELOPMENT PATTERNS AND LACK OF FINANCIAL INVESTMENT IN BICYCLE AND PEDESTRIAN INFRASTRUCTURE. The Plan provides connectivity between cities throughout the County and adjoining counties, including access to parks, bicycling routes, and other recreational areas. The Plan also defines the general location and classification of all existing and proposed regional bikeways in the County. A MUCH MORE INCLUSIVE SYSTEM IS IN THE EDCTC REGIONAL

8.2

TRANSPORTATION PLAN 5 YEAR UPDATE, 2035. There are three main classification categories for the ~~Bikeway System~~ BICYCLE NETWORK: Class I Bike~~way or Bicycle Trails~~ PATH; Class II ~~Bikeway or~~ ~~Bicycle~~ BIKE Lanes; Class III Bikeway or ~~Bicycle~~ BIKE Route, AND CLASS IV, SEPARATED BIKEWAY. These classifications clarify specific details related to design and intended use.

8.2 cont'd

Comments on Section 6,

Each of the evaluated options should include how the option affects the Public Health of the citizens and visitors to the County. How effectively do the road projects effect the establishment of safe pedestrian networks, and bicycling networks connecting to transit to reduce short vehicle trips. Reduction in VMT and improvement in LOS can be addressed in Section f, Greenhouse Gas Emissions/Climate Change, and Section i, Transportation and Circulation, in each option.

8.3

Sincerely,

Stanley Price
Utilitarian Cyclists
(530) 677-5052

Letter 8

COMMENTER: Stanley Price

DATE: July 5, 2016

RESPONSE:

Response 8.1

The commenter suggests several text changes related to the project objectives in Section 0.0 *Executive Summary* of the Draft EIR.

Bicycle, pedestrian, and transit improvements are all included in developing a balanced transportation system, and additional reference to these modes of transportation is not necessary in the first objective. Increasing public health with bicycle, pedestrian, and transit facilities is not part of the second objective. Accommodating all modes of transportation and addressing public health is not part of the third objective to finance roadway improvements. Thus these changes have not been made to the project objectives in the EIR.

Response 8.2

The commenter suggests several text edits to the Section 3.0, *Environmental Setting*. The Environmental Setting page 3-2 has been revised to include the following text edits:

> A Bicycle Transportation Plan was originally developed in 1979 and most recently updated in 2010 to define the general location and classification of all existing and proposed regional bikeways in El Dorado County. However, bicycles are primarily used by residents in the County for recreation, sport, or exercise rather than transportation due to a combination of low density development patterns, steep grades, and the historic low demand for bicycle and pedestrian infrastructure. The Plan provides connectivity between cities throughout the County and adjoining counties, including access to parks, bicycling routes, and other recreational areas. The Plan also defines the general location and classification of all existing and proposed regional bikeways in the County. The El Dorado County Transportation Commission's Regional Transportation Plan also includes discussions of bicycle facilities. There are four main classification categories for the Bikeway System: Class I Bikeway (Bike Paths) ~~or Bicycle Trails~~; Class II Bikeway ~~or~~ (Bike ~~Bicycle~~ Lanes); Class III Bikeway ~~or Bicycle~~(Bike Routes); and Class IV (Separated Bikeways). These classifications clarify specific details related to design and intended use as specified in the Caltrans Highway Design Manual Chapter 1000 Bicycle Transportation Design and Caltrans Design Information Bulletin 89 for Class IV facilities.

Response 8.3

The commenter states that each alternative should evaluate the public health of the citizens and visitors to the County through establishing pedestrian and bicycle networks.

Evaluating the public health of visitors and County citizens is not required by CEQA and is therefore outside of the purview of this EIR. Impact AQ-3 in Section 4.2, *Air Quality*, discusses the impacts to sensitive receptors to air pollutants that may cause health risks. As stated in the Draft EIR, implementation of the proposed update to the CIP and TIM Fee Program would not result in a regional increase in toxic air emissions. Impacts would be Class III, less than significant. The alternatives section evaluates the environmental impacts of each alternative as related to Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology, Greenhouse Gas Emissions/Climate Change, Hydrology and Water Quality, Noise, and Transportation and Circulation as those are the impacts analyzed within the Draft EIR for the proposed project. Thus the impacts of the alternatives are compared to the proposed project to determine whether the alternatives would reduce impacts compared to the project and would be considered environmentally superior.

Letter 9

---------- Forwarded message ----------
From: **Stanley Price** <2stanleyprice@gmail.com>
Date: Tue, Jul 5, 2016 at 7:17 PM
Subject: Suggested Changes to the Draft EIR for the CIP and TIP EIR
To: Claudia Wade <claudia.wade@edcgov.us>
Cc: Lindell Price <lindellprice@gmail.com>

Claudia Wade,

I suggest and recommend the following Comments and Suggestions:

Section 4, Cultural Resources, 4.2.2 Impact Analysis, b) Project Impacts and Mitigation Measures, on page 130, please change this paragraph to include the ALL CAP CHANGES I have inserted:

Historic Resources. With regard to known significant historic resources, the location and nature of the proposed CIP and TIM Fee Program Update projects listed in Section 2.0 Project Description were evaluated relative to the location of the historic properties listed in tables 4.4-1 and 4.4-2. It has been determined that none of the proposed improvement projects would affect any Nationally registered resources, California Historical Landmarks, or Points of Historic Interest. In each case, the proposed improvements are not located adjacent to a designated historic resource. However, bridge replacement projects proposed under the CIP and TIM Fee Program Update could potentially cause adverse change to historic bridges listed in the Caltrans Historic Bridge Inventory. Bridge repair or replacement could result in the permanent loss of historic structures. Similarly, while proposed transportation projects would not impact known historic structures, projects included in the 2016 CIP and TIM Fee Program Update listed in Table 4.4-4 would involve reconstruction or demolition of transportation infrastructure or other structures that are over 50 years old (such as Caltrans historic bridges as listed in Table 4.4-3, AND OTHER ELIGIBLE STRUCTURES), and which may be considered historically significant as determined by site-specific evaluation. Such reconstruction or demolition could result in the permanent loss of historic structures. Impacts would be potentially significant SUCH AS CLASS I IMPACT.

9.1

Sincerely,

Stanley Price
Utilitarian Cyclists
(530) 677-5052

Letter 9

COMMENTER: Stanley Price

DATE: July 5, 2016

RESPONSE:

Response 9.1

The commenter suggests several text changes in Section 4.4, *Cultural Resources*.

The *Cultural Resources* section page 4.4-11 of the Draft EIR has been revised to include the following text edits:

> Similarly, while proposed transportation projects would not impact known historic structures, projects included in the 2016 CIP and TIM Fee Program Update listed in Table 4.4-4 would involve reconstruction or demolition of transportation infrastructure or other structures that are over 50 years old (such as Caltrans historic bridges as listed in Table 4.4-3 and eligible historic structures), and which may be considered historically significant as determined by site-specific evaluation.

The suggestion to add "such as Class I" was not added in location of the EIR as suggested by the commenter, but rather added at the end of the impact analysis for historic resources as shown below on page 4.4-14. in the Final EIR:

Significance After Mitigation. Implementation of the above measures would reduce potential impacts to archaeological and paleontological resources to a less than significant level because measures would be taken to either avoid the impacts, minimize the impacts, or recover the resources. However, impacts related to historic structures would remain significant and unavoidable (Class I) because transportation projects may result in the permanent loss of historic structures.

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Appendix A

Notice of Preparation and Responses

NOTICE OF PREPARATION
of an Environmental Impact Report for the Western Slope Roadway Capital Improvement Program and Traffic Impact Mitigation Fee Program

Date:	February 5, 2016
To:	State Clearinghouse Responsible Agencies Trustee Agencies Interested Parties
NOP Comment Period:	Written comments must be submitted to the County's Community Development Agency, Long Range Planning Division no later than **March 7, 2016 by 5:00 p.m.**
Project Location:	El Dorado County
Lead Agency Contact Person:	Claudia Wade, P.E. Senior Civil Engineer

This Notice of Preparation (NOP) includes the following sections:

- Section 1.0 Introduction
- Section 2.0 Project Background and History
- Section 3.0 Project Description
- Section 4.0 Potential and Probable Environmental Effects of the Project
- Section 5.0 Project Alternatives

1.0 INTRODUCTION

This Notice of Preparation (NOP) has been issued to notify interested parties of the proposed project description for the County of El Dorado's (County) update of the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee Program. The County will be the lead agency under the California Environmental Quality Act (CEQA) and will prepare a programmatic Environmental Impact Report (Program EIR) to evaluate the environmental effects associated with the proposed project.

This NOP and background documents associated with the updates to the CIP and TIM Fee Program are available for review on the County's **Western Slope Update** webpage at:
http://www.edcwesternslopeupdate.com/

This NOP has been issued to provide opportunity for interested parties and agencies to submit comments on the scope of the EIR relative to the project description. Agencies should comment on such information as it relates to their statutory responsibilities in connection with the proposed project.

The County has determined that the proposed project may have a significant effect on the environment; therefore, an EIR is being prepared. The EIR is intended to be a program-level document that will analyze the effects of the proposed update to the CIP and TIM Fee Program. Program EIRs generally analyze broad environmental effects of the program, with the acknowledgment that site-specific environmental review may be required for future actions (14 CCR 15168(a)). The purpose of a Program EIR is to allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts. Because no specific development projects are being proposed as part of the updates to the CIP and TIM Fee Program, the analysis will not be parcel-specific. Rather, the analysis will focus on the reasonably foreseeable direct and indirect physical environmental effects that could result from the updates to the CIP and TIM Fee Program, which would include a number of new transportation improvement projects that would be added to the County's CIP list.

NOP Comment Period: In accordance with the time limits identified in state law, your response to this NOP must be submitted to the County at the earliest possible date, but **not later than 5:00 p.m. on March 7, 2016** (30 days following the date this notice was first posted). Please submit written comments to the El Dorado County Community Development Agency (including the contact person's full name and address) to:

Claudia Wade, P.E.Senior Civil Engineer
El Dorado County Community Development Agency
Long Range Planning Division
2850 Fairlane Court, Placerville CA 95667

Scoping Meeting: A scoping meeting will be on March 3rd, 2016 at 5:30 pm in the Planning Commission Hearing Room at 2850 Fairlane Court, Placerville, CA 95667.

2.0 PROJECT BACKGROUND AND HISTORY

A Capital Improvement Program (CIP) identifies and prioritizes future transportation investments that will be required to meet the County's existing and future transportation needs for the next 20 years. This can be roadways, intersections, sidewalks, bicycle lanes, traffic calming treatments, transit service improvement projects, and ongoing administrative costs for transportation monitoring programs, including traffic model update costs, traffic study guideline updates and Circulation Element updates. Consistent with state law and General Plan policies (specifically General Plan Policy TC-Xb), the County completes minor updates to its CIP list every year and completes a major update approximately every five years to ensure that the CIP list is appropriate and reasonable based on current market

conditions and costs of construction/investment. Funding for most CIP projects is provided from a variety of sources including state and/or federal grants. However, funding for the portion of the CIP related to new development in the County is financed by the Traffic Impact Mitigation Fee Program which is required by County's General Plan Implementation Measure TC-B (adopted in 2004).

Traffic Impact Mitigation (TIM) Fees are collected by the County to offset the costs of impacts to the transportation system created by new development. Consistent with state law and General Plan policies, the County has minor updates to the TIM fee every year and major updates approximately every five years to ensure they are appropriate and reasonable based on current market conditions and costs of construction/investment. The TIM Fees are based on planned development assumed to occur in the County's adopted General Plan (assumed to occur through the year 2035), the total cost of transportation improvements needed to accommodate this growth, and assumed local/state/federal revenue streams anticipated to be available to the County for transportation improvements. This information allows a nexus between the unfunded improvement costs and projected future development. As part of the TIM Fee Program, a nexus study is completed which results in a calculation that determines the fair share that future development must pay for a particular type of land use development (i.e., residential and/or non-residential uses). The nexus analysis for the updates to the TIM Fee program are based on the incremental land use growth projected to occur in the County between January 1, 2015 and January 1, 2035 (the twenty year growth projection for the General Plan).

The analysis includes a comprehensive review of the existing and projected traffic conditions during various times of the day at key locations in the unincorporated areas of the El Dorado County. Based on General Plan policies, this information was used as part of the proposed update to the TIM Fee Program to identify existing and future deficiencies in the transportation network and the types of projects and costs that would be required to mitigate them. This information along with the General Plan land use growth projections and other anticipated revenue streams was used to determine the proposed fair-share cost contribution. Those transportation improvement projects identified in the analysis that would be necessary to alleviate deficiencies in the County's transportation system (both existing and future) would be added to the CIP list and funding for those specific TIM Fee projects would be provided by development projects.

It should be noted that TIM Fee projects are CIP projects that are driven by new development and are to be funded via TIM Fee revenue. The other (non-TIM Fee) projects are also included in the CIP and funded with a variety of other sources (including, but not limited to, local, state and/or federal grants). Since these other projects do not meet the nexus requirements per the Mitigation Fee Act (Government Code Section 66000 et. seq.) they are not identified as TIM fee projects and are not eligible for TIM fee funding.

For additional discussion of the County's past efforts in preparing and implementing the CIP and TIM Fee Program, please refer to Background Information in the Document Library at the County's **Western Slope Update** webpage at:
http://www.edcwesternslopeupdate.com/

3.0 PROJECT DESCRIPTION

El Dorado County is in the process of updating its Capital Improvement Program (CIP) list and Traffic Impact Mitigation (TIM) Fee. The CIP is the long-range plan for all individual capital improvement projects and funding sources. The CIP provides strategic direction for capital projects over a current year, 5, 10, and 20 year horizon. It is used as a planning tool, and updated annually (as required by the County's General Plan Policy TC-Xb). The TIM Fee Program is used to fund needed improvements including roadway widening, new roadways, roadway intersection improvements, and transit to deal with future growth during a defined time period (currently based on 20 years of growth). The TIM Fee funded improvements are a part of the CIP and the proposed TIM Fee Update would provide funding for traffic improvements necessary for all roadways in the county to operate at an acceptable Level of Service (LOS) under 2035 General Plan 20 year time horizon conditions, in accordance with the County's General Plan.

The majority of new transportation projects proposed to be included on the CIP list would occur in the western, developed area of El Dorado County. For those non-TIM Fee funded improvements, typical projects would include bridge replacement/maintenance, improvements to bicycle lanes/bike routes, sidewalks, pedestrian access and trails, safety improvements such as crosswalks or signage for pedestrians at intersections, drainage improvements, traffic safety improvements such as realignments, and improvements that increase capacity of existing roadways such as road widenings or traffic signal interconnects.

The majority of the TIM Fee funded traffic improvements that would be included on the CIP list are anticipated to be located on or near US Highway 50 (US 50) in the western, developed area of El Dorado County and include roadway expansions and widenings. This area is referred to as the "western slope", the area west of Echo Summit. The improvements are generally along US 50, beginning on US 50 on the western side of El Dorado County at the border of Sacramento and El Dorado counties and would extend along US 50 to Missouri Flat Road where the easternmost traffic improvement, construction of Diamond Springs Parkway, would occur. In addition to improvements located along US 50, two roadway improvements would be located approximately four miles north of US 50 on Green Valley Road, an additional roadway project on Green Valley Road approximately 3.5 miles northeast of the Ponderosa Interchange, and one improvement would be located two miles south of US 50 on the Latrobe Road connector . The location of the proposed traffic improvements are surrounded primarily by commercial and residential land uses, although much of it remains undeveloped land.

The working draft list of transportation improvement projects (both the TIM Fee project and non-TIM Fee CIP projects) associated with the updates to the CIP and TIM Fee Program are provided on the County's **Western Slope Update** webpage at:
http://www.edcwesternslopeupdate.com/

3.1 Project Location

The project area includes the parts of unincorporated El Dorado County that are outside the Tahoe basin, west of Echo Summit. The majority of proposed TIM Fee Program projects would be generally along US 50, beginning on US 50 on the western side of El Dorado County at the border of Sacramento and El Dorado counties and would extend along US 50 to Missouri Flat Road. Non-TIM Fee funded CIP projects would also generally along US 50, however, some of the proposed roadway and bridge repair/maintenance projects would be located more than two miles from US 50.

4.0 PROBABLE ENVIRONMENTAL EFFECTS AND SCOPE OF THE EIR

The EIR for the proposed project will focus on the resource areas/issues germane to this particular project. The EIR will evaluate the potentially significant environmental impacts of the proposed project and will evaluate whether there are feasible mitigation measures that may lessen or avoid such impacts. As the proposed project does not include any specific construction or development, but rather the potential for transportation improvement projects to be constructed in the future, the impact analysis will be programmatic and cumulative in nature. The EIR will also identify and evaluate alternatives to the proposed project. The EIR will evaluate potentially significant environmental effects related to the following environmental issues:

- Aesthetics (Visual Resources)
- Agricultural and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services/Recreation
- Transportation/Traffic
- Utilities/Service Systems

In addition, the EIR will address cumulative impacts, growth inducing impacts, and other issues required by CEQA.

5.0 PROJECT ALTERNATIVES

In accordance with Section 15126.6 of the State CEQA Guidelines, an EIR must "describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project, but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." As required by CEQA, the EIR will evaluate a reasonable range of project alternatives including a No Project Alternative, which will assume no change to the current CIP and TIM Fee Programs. Additional alternatives will be identified during the environmental review process. Once selected, the alternatives will be analyzed at a qualitative level of detail in the Draft EIR for comparison against the impacts identified for the proposed project, consistent with the requirements of CEQA.

1 March 2016

Claudia Wade
El Dorado County
2850 Fairlane Court
Placerville, CA 95667

CERTIFIED MAIL
91 7199 9991 7035 8422 5912

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, WESTERN SLOPE ROADWAY CAPITAL IMPROVEMENT PROGRAM AND TRAFFIC IMPACT MITIGATION FEE PROGRAM PROJECT, SCH# 2016022018, EL DORADO COUNTY

Pursuant to the State Clearinghouse's 5 February 2016 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environment Impact Report* for the Western Slope Roadway Capital Improvement Program and Traffic Impact Mitigation Fee Program Project, located in El Dorado County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan

amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:
http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

> *Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*
>
> *This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality. Impact H-2

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to

restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements – Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100**. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be

covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.

Stephanie Tadlock

Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

El Dorado Hills Area Planning Advisory Committee
1021 Harvard Way
El Dorado Hills, CA 95762

March 03, 2016

El Dorado County Community Development Agency
Development Services Department, Planning Division

Attn: Dave Defanti, Claudia Wade
2850 Fairlane Court
Placerville, CA. 95667

Subject: White Rock Road Expansion as outlined in the CIP/TIM Fee Updates 2/16/16

Dear Board of Supervisors, Planning Commission and County Staff, Long Range Planning Commission,

On Feb 26, 2016 the Long Range Planning CIP/TIM Fee Update was released by **the Long Range Planning Commission.** That update indicated that El Dorado County plans to expand White Rock Road to a four lane highway from the Folsom County Line to the Silva Valley Interchange.

Members of the Latrobe / White Rock subcommittee of El Dorado Hills Area Planning Advisory Committee have been contacted by residents of the communities adjacent to this road voicing their concerns about this expansion.

This subcommittee has contacted residents in this area: the Four Seasons Civic League at Four Seasons, residents of StoneBriar and the Rolling Hills Community. All of these groups have indicated that they have been has voicing their concerns about this expansion of White Rock adjacent to their homes for 10 years. They have appealed to the JPA Connector and the EL Dorado County Board of Supervisors to alleviate the expected heavy traffic caused by the Connector by diverting some of this traffic before it reaches the county line. To date this has not been planned by the JPA Connector.

It is the concern of these communities that that this four lane expansion will only cause a vast increase in traffic, noise and pollution without any benefit to their community or to El Dorado Hills. It will destroy their quality of life and lower the value of their homes.

After due deliberation and consultation with these residents , APAC recommends that any expansion of The El Dorado County portion of White Rock Road begin at the entrance and exit to the Business Park /Town Center West , specifically at Wind rush Way . This section of White Rock Road is a four lane road with a traffic light. When Town Center West and The

Business Park are full developed this will be the main exit and entrance for their traffic. This traffic will not impact of the residential communities that are west of this area.
Recently the Department of Transportation has been adding a right turn lane into Windfield Way at the location in what seems to be an anticipation of heavy traffic.

APAC appreciates having the opportunity to provide comments. If you have any questions please contact Ellison Rumsey, 2016 APAC Chairman at aerumsey@sbcglobal.net or (916 358-5733), or John Raslear, Vice Chair at jjrazzpub@sbcglobal.net or (916-933-2203).
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Sincerely,

John Raslear

John Raslear
2016 APAC Committee Vice Chair
Cc: EDCo Planning Commission
EDCo BOS
APAC read file

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
2379 GATEWAY OAKS DRIVE, STE 150 - MS 19
SACRAMENTO, CA 95833
PHONE (916) 274-0635
FAX (916) 263-1796
TTY 711

Serious drought.
Help save water!

March 4, 2016

032015-ELD-0043
03-ELD-Various

Ms. Claudia Wade
County of El Dorado
Community Development Agency
Long-Range Planning
2850 Fairlane Court
Placerville, CA 95667

Western Slope Capital Improvement Plan (CIP) and Traffic Impact Mitigation (TIM) Fee Program – Notice of Preparation (NOP) of an Environmental Impact Report (EIR)

Dear Ms. Wade:

Thank you for including the California Department of Transportation (Caltrans) in the review for the project referenced above. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system. We review this project for impacts to the State Highway System in keeping with our mission, vision and goals for sustainability/livability economy, and safety/health. We provide these comments consistent with the state's smart mobility goals that support a vibrant economy, and build communities, not sprawl.

The proposed project includes the major five-year update of the CIP and TIM Fee Program. The CIP identifies and prioritizes future transportation investments that will be required to meet the County's existing and future transportation needs for the next twenty-years. The TIM Fee Program collects development fees to offset the costs of impacts to the transportation system created by new development. The TIM Fee update ensures that the TIM Fees are appropriate and reasonable based on current market conditions and costs of construction/investment. The project compasses the Western Slope of El Dorado County. The following comments are based on the NOP EIR.

We recommend that the following projects be included in the CIP/TIM Update.

Missouri Flat Road Interchange

We recommend that the United States Highway 50 (US 50)/Missouri Flat Road Interchange remain in the CIP/TIM Fee project list until the Missouri Flat Area Master Circulation & Financing Plan Phase II (MC&FP Phase II) is completed demonstrating that further improvements

are unnecessary.

Recent analyses of the US 50/Missouri Flat Interchange have identified the need for additional improvements at the interchange to accommodate future growth (Diamond Springs Parkway – Existing Conditions and Traffic Forecasted, Fehr & Peers, August 14, 2015; Piedmont Oak Estates Phase 1, December 19, 2014). We recommend that the analysis uses appropriate counts and/or the Missouri Flat Interchange project should remain in the CIP until the MC&FP Phase II analysis shows no need for interchange improvements.

SR 49 (El Dorado to Diamond Springs) Two-Way Left Turn Lane and Shoulders

The County should consider including a project to add two-way left turn lane and shoulders on State Route (SR) 49 from Forni Road (El Dorado) to Missouri Flat Road (Diamond Springs) in the CIP. This project is cited as a mitigation measure in the El Dorado County Public Safety Facility (GOV15-0003) Draft EIR (Mitigation Measure 4.10-3(d), Page 4.10-41). Within the scope of this project, the County should also consider addressing the lack of pedestrian and bicycle facilities along SR 49 between the communities of El Dorado and Diamond Springs; Caltrans has received numerous complaints regarding these deficiencies.

Bass Lake Road Interchange

The County plans to retain undercrossing structure for US 50/Bass Lake Road. The future concept drawings show four lanes on Bass Lake Road under the US 50/Bass Lake Road Overpass. El Dorado County should coordinate with Caltrans to determine whether Bass Lake Road can be widened without widening the existing structure. US 50/Bass Lake Road Interchange improvement should be developed in cooperation with Caltrans as a locally-funded project and constructed under an approved encroachment permit. Interim improvements should be accompanied by a design year phase, to properly reserve the footprint for a design year project.

Please provide our office with copies of any further actions regarding this project.

If you have any questions regarding these comments or require additional information, please contact Eileen Cunningham, Intergovernmental Review Coordinator, at (916) 274-0639 or eileen.cunningham@dot.ca.gov.

Sincerely,

Eric Fredericks

ERIC FREDERICKS, Chief
Office of Transportation Planning – South Branch

c: Scott Morgan, State Clearinghouse

el dorado county
edctc
TRANSPORTATION COMMISSION

2828 Easy Street Suite 1, Placerville, CA 95667 | 530.642.5260 | www.edctc.org

March 7, 2016

Claudia Wade, P.E.
Senior Civil Engineer
El Dorado County Community Development Agency
Long Range Planning Division
2850 Fairlane Court, Placerville CA 95667

Re: El Dorado County NOP of EIR for Western Slop Roadway CIP and TIM Fee Program

Dear Mrs. Wade:

EDCTC staff has reviewed the Notice of Preparation (NOP) for the El Dorado County Western Slop Roadway CIP and TIM Fee Program EIR. We appreciate this opportunity and the opportunities that have been presented to work on the CIP and TIM fee updates as partners contributing to the improvement of transportation for El Dorado County. EDCTC utilizes the CIP and TIM fee programs to inform long range planning and to establish funding forecasts out into the 20 year planning horizon of the El Dorado County Regional Transportation Plan (RTP). We anticipate this update will continue to provide this project and funding related information for the next update of the RTP scheduled for 2020.

We look forward to continue working on this and many other long range transportation planning efforts.

Sincerely,

Woodrow Deloria

Woodrow Deloria
Senior Planner

Appendix B

Biological Resources

Table 1
Special Status Animal Species Known to Occur or with Potential to Occur within the Western Slope Region of El Dorado County

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CDFW	Habitat Requirements
Amphibians		
Anaxyrus canorus Yesemite Toad	FT/-- G2/S2 SSC	Inhabits wet mountain meadows, willow thickets, and the borders of forests, usually not more than a hundred meters from permanent water. Found only at elevations of 4,800 - 12,000 feet in the Sierra Nevada Mountains. After breeding, males and females move from the breeding pond into meadows where they feed for 2 - 3 months before the snows return.
Hydromantes platycephalus Mount Lyell salamander	--/-- G4/S4 SSC	Occurs in areas with massive rock within mixed conifer, red fir, lodgepole pine, and subalpine habitats from 4,000 to 11,600 feet in elevation. Active on the surface only when free water is available, in the form of seeps, drips, or spray.
Rana boylii Foothill yellow-legged frog	--/-- G3/S2S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
Rana draytonii California red-legged frog	FT/-- G2G3/S2S3 SSC	Semi-permanent or permanent water at least 2 feet deep, bordered by emergent or riparian vegetation, and upland grassland, forest or scrub habitats for refugia and dispersal.
Rana sierrae Sierra Nevada yellow-legged frog	FE/ST G1/S1 SSC	Occurs in aquatic habitat within a few feet of water. Tadpoles may require 2 - 4 years to complete their aquatic development.
Birds		
Accipiter gentilis Northern goshawk	--/-- G5/S3 SSC	Occurs within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Typical nest trees include red fir, lodge pole pine, Jeffrey pine, and aspens are typical nest trees.
Accipiter striatus Sharp-shinned hawk	--/-- G2G3/S1S2 SSC	Occurs in ponderosa pine, black oak, riparian deciduous, mixed conifer & Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 feet of water.
Agelaius tricolor Tricolored blackbird	--/-- G2G3/S2 SSC	Requires open water, protected nesting substrate, and foraging area with insect prey within a few miles of the colony.
Aquila chrysaetos Golden eagle	--/-- G5/S3 FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
Coccyzus americanus Yellow-billed cuckoo	FT/-- G5/S3B SSC	Preferred breeding habitat includes open woodland, parks, and deciduous riparian woodland with thick undergrowth. Require patches of at least 25 acres of dense, riparian forest. Nest in tall cottonwood and willow riparian woodlands 1 to 3 meters above ground.

Table 1
Special Status Animal Species Known to Occur or with Potential to Occur within the Western Slope Region of El Dorado County

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CDFW	Habitat Requirements
Elanus leucurus White-tailed kite	--/-- G5/S3S4 FP	Occurs in rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Requires open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.
Empidonax traillii Willow flycatcher	--/SE G5/S1S2 --	Requires dense riparian habitats associated with rivers, swamps, and lakes. Wintering habitat is not well known, but is considered to be brushy savannah edges, second growth, shrubby clearings and pastures, and woodlands near water.
Haliaeetus leucocephalus Bald Eagle	DL/SE G5/S2 FP	Requires ocean shore, lake margins, & rivers for both nesting & wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.
Riparia riparia Bank swallow	--/ST G5/S2 --	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.
Strix nebulosa great gray owl	--/SE G5/S1 --	Resident of mixed conifer or red fir forest habitat, in or on edge of meadows. Requires large diameter snags in a forest with high canopy closure and a cool sub-canopy microclimate.
Fish		
Hypomesus transpacificus Delta smelt	FT/SE G1/S1 --	Found only in Sacramento and San Joaquin rivers. Occurs in open waters of bays, tidal rivers, channels, and sloughs. Require estuarine habitats for migration, spawning, egg incubation, rearing, and larval and juvenile transport from spawning to rearing habitats.
Oncorhynchus clarkia henshawi Lahontan cutthroat trout	FT/-- G4T3/S2 --	Historically in all accessible cold waters of the Lahonton Basin in a wide variety of water temps & conditions. Cannot tolerate presence of other salmonids. Requires gravel riffles in streams for spawning.
Oncorhynchus mykiss irideus Steelhead - Central Valley DPS	FT/-- G5T2Q/S2 SSC	Populations in the Sacramento and San Joaquin rivers and their tributaries.
Invertebrates		
Branchinecta lynchi Vernal pool fairy shrimp	FT/-- G3/S2S3 --	Endemic to the grasslands of the Central Valley, central Coast Mountains, and South Coast Mountains. Inhabits, small clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.

Table 1
Special Status Animal Species Known to Occur or with Potential to Occur within the Western Slope Region of El Dorado County

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CDFW	Habitat Requirements
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT/-- G3T2/S2 --	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers to lay eggs in elderberry 2-8 inches in diameter; some preference shown for "stressed" elderberries.
Mammals		
Antrozous pallidus Pallid bat	--/-- G5/S3 SSC	Deserts, grasslands, shrublands, woodlands, and forest. Most common in open, dry, habitats with rocky area for roosting. Roost must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
Aplodontia rufa californica Sierra Nevada mountain beaver	--/-- G5T3T4/S2S3 SSC	Occurs in dense growth of small deciduous trees & shrubs, wet soil, & abundance of forbs in the Sierra Nevada & east slope. Needs dense understory for food & cover. Burrows into soft soil. Needs abundant supply of water.
Corynorhinus townsendii Townsend's big-eared bat	--/-- G3G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls & ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Gulo gulo California wolverine	--/ST G4/S1 FP	Found in the North Coast Mountains and the Sierra Nevada. Occurs in a wide variety of high elevation habitats in the vicinity of water sources. Uses caves, logs, burrows for cover and den areas. Forages in more open areas and can travel long distances.
Lepus americanus tahoensis *Sierra Nevada snowshoe hare*	--/-- G5T3T4Q/S2? SSC	Occurs in boreal riparian areas in the Sierra Nevada. Requires thickets of deciduous trees in riparian areas and thickets of young conifers.
Pekania pennanti Fisher - West Coast DPS	--/-- G5T2T3Q/S2S3 SSC	Occurs in intermediate to large-tree stages of coniferous forests & deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs & rocky areas for cover & denning. Needs large areas of mature, dense forest.
Taxidea taxus American badger	--/-- G4/S4 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Needs sufficient food, friable soils, and open uncultivated ground. Cannot live in frequently plowed fields. Preys on burrowing rodents.
Vulpes vulpes necator Sierra Nevada red fox	--/ST G5T1T2/S1 --	Historically found from the Cascades down to the Sierra Nevada. Found in a variety of habitats from wet meadows to forested areas. Use dense vegetation & rocky areas for cover & den sites. Prefer forests interspersed w/ meadows or alpine fell-fields.
Reptiles		
Emys marmorata Western pond turtle	--/-- G3G4/S3 SSC	Rivers, ponds, freshwater marshes; nests in upland areas (sandy banks or grassy open fields) up to 1,640 feet from water.

Table 1
Special Status Animal Species Known to Occur or with Potential to Occur within the Western Slope Region of El Dorado County

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CDFW	Habitat Requirements
Phrynosoma blainvillii Coast horned lizard	--/-- G4G5/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial and abundant supply of ants and other insects.

Sources: CNDDB (CDFW, 2016); USFWS ECOS (2016).
FT = Federally Threatened *SE = State Endangered*
FC = Federal Candidate Species *ST = State Threatened*
FE = Federally Endangered *SR = State Rare*
FS = Federally Sensitive *SS = State Sensitive*
DL = Delisted
G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind5.
SSC = CDFW Species of Special Concern *FP = Fully Protected*

Table 2
Special Status Plant Species Known to Occur or with Potential to Occur within the Western Slope Region of El Dorado County

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR	Habitat Requirements
Allium Jepsonii Jepson's Onion	--/-- G2/S2 1B.2	Bloom period: April - August. Occurs in Serpentinite or volcanic chaparral, cismontane woodlands and lower montane coniferous forest habitats. Elevations: 985 - 4,331 feet.
Allium sanbornii var. *congdonii* Congdon's onion	--/-- G3T3/S3 4.3	Bloom period: April-July. Occurs in serpentinite or volvanic chaparral and cismontane woodland habitats. Elevations: 985 - 3,248 feet.
Allium sanbornii var. *sanbornii* Sanborn's onion	--/-- G3T4?/S4? 4.2	Bloom period: May-September. Occurs in gravelly serpentinite chaparral, cismontane woodland and lower montane coniferous forest habitats. Elevations: 853 - 4,954 feet.
Arctostaphylos mewukka ssp. *truei* True's manzanita	--/-- G4?T3/S3 4.2	Bloom period: February- July. Occurs in chaparral and lower montane coniferous forests (sometimes roadside). Elevations: 1,394 - 4,560 feet.
Arctostaphylos nissenana Nissenan manzanita	--/-- G1/S1 1B.2	Bloom period: February-March. Occurs in rocky closed-cone coniferous forests and chaparral. Elevations: 1,476 - 3,609 feet.

Astragalus austiniae Austin's astragalus	--/-- G2G3/S2S3 1B.3	Bloom period: July-September. Occurs in rocky alpine boulder and rock fields as well as subalpine coniferous forests. Elevations: 8,005 - 9,728 feet.
Balsamorhiza macrolepis Big-scale balsamroot	--/-- G2/S2 1B.2	Bloom period: March-June. Occurs in chaparral, cismontane woodland, and valley & foothill grassland; often on ultramafic soil. Elevations: 295 - 5,102 feet.
Bolandra californica Sierra bolandra	--/-- G4/S4 4.3	Bloom period: June-July. Occurs in mesic rocky lower and upper montane coniferous forests. Elevations: 3,199 - 8,038 feet.
Botrychium ascendens Upswept moonwort	--/-- G3/S2 2B.3	Bloom period: July-August. Occurs in mesic areas within lower montane coniferous forest as well as meadows and seeps. Elevations: 4,921 - 8,513 feet.
Botrychium crenulatum Scalloped moonwort	--/-- G3/S2 2B.2	Bloom period: June-September. Occurs in bogs and fens, lower montane coniferous forest, meadows and sweeps, marshes and swamps (freshwater), and upper montane coniferous forest. Elevations: 4,160 - 10,761 feet.
Botrychium minganense Mingan moonwort	--/-- G4G5/S2 2B.2	Bloom period: July-September. Occurs in mesic areas within bogs and fens as well as lower and upper montane coniferous forest. Elevations: 4,773 - 6,906 feet.
Botrychium montanum Western goblin	--/-- G3/S2 2B.1	Bloom period: July-September. Occurs in lower montane coniferous forest, old growth. Elevations: 4,806 - 7,152 feet.
Botrychium paradoxum Paradox moonwort	--/-- G3G4/S1 2B.1	Bloom period: August Occurs in alpine boulder and rock fields (limestone and marble) as well as moist upper montane coniferous forest. Elevations: 5,709 - 13,780 feet.
Brasenia schreberi Watershield	--/-- G5/S3 2B.3	Bloom period: June-September. Occurs in freshwater marshes and swamps. Elevations: 98 - 7,217 feet.
Bruchia bolanderi Bolander's bruchia	--/-- G3/S3? 4.2	Bloom period: None (moss). Occurs in damp soil within lower and upper montane coniferous forest as well as meadows and seeps. Elevations: 5,577 - 9,186 feet.
Calochortus clavatus var. *avius* Pleasant Valley mariposa-lily	--/-- G4T2/S2 1B.2	Bloom period: May-July. Occurs in lower montane coniferous forest of Josephine silt loam and volcanic soil. Elevations: 1,000-5,906 feet.
Calystegia stebbinsii Stebbins' morning-glory	FE/SE G1/S1 1B.1	Bloom period: April-July. Occurs in chaparral openings and cismontane woodlands with gabbroic or serpentinite habitat. Elevation: 607 - 3,576 feet.

Calystegia vanzuukiae *Van Zuuk's morning-glory*	--/-- G2Q/S2 1B.3	Bloom period: May-August. Occurs in chaparral and cismontane woodland with gabbro and serpentinite habitats. Elevations: 1,640 - 3,871 feet.
Carex cyrtostachya Sierra arching sedge	--/-- G2G3/S2S3 1B.2	Bloom period: May-August. Occurs in Lower montane coniferous forest and riparian forest margins, as well as meadows, seeps, marshes and swamps. Elevations: 2,000 - 4,462 feet.
Carex davyi Davy's sedge	--/-- G3/S3 1B.3	Bloom period: May-August. Occurs in subalpine coniferous forest and upper montane coniferous forest. Elevations: 4,921 - 7,546 feet.
Carex limosa Mud sedge	--/-- G5/S3 2B.2	Bloom period: June-August. Occurs in lower and upper montane coniferous forests as well as bogs, fens, meadows, seeps, marshes and swamps. Elevations: 3,937 - 8,858 feet.
Ceanothus fresnensis Fresno ceanothus	--/-- G4/S4 4.3	Bloom period: May- July. Occurs in Cismontane woodland openings and lower montane coniferous forest. Elevations: 2,953 - 6,900 feet.
Ceanothus roderickii Pine Hill ceanothus	FE/SR G1/S1 1B.1	Bloom period: April-June. Occurs in chaparral and cismontane woodlands with serpentinite or gabbroic habitats (nutrient-deficient forms of gabbro-derived soils characterized by low concentrations of available K, P, S, Fe, and Sn). Elevations: 804 - 3,576 feet.
Chaenactis douglasii var. *alpine* Alpine dusty maidens	--/-- G5T5/S2 2B.3	Bloom period: July-September. Occurs in alpine boulder and rock field (granitic). Elevations: 9,842 – 11,154 feet.
Chlorogalum grandiflorum Red Hills soaproot	--/-- G2/S2 1B.2	Bloom period: May-June. Occurs in chaparral, cismontane woodland and lower montane coniferous forest habitat with serpentinite, gabbroic and other soil types. Elevations: 804 - 4,068feet.
Clarkia biloba ssp. *brandegeeae* Brandegee's clarkia	--/-- G4G5T4/S4 4.2	Bloom period: May-July. Occurs in chaparral, cismontane woodland and lower montane coniferous forest (often in road cuts). Elevations: 246 - 3,002 feet.
Clarkia virgata Sierra clarkia	--/-- G3/S3 4.3	Bloom period: May-August. Occurs in cismontane woodland and lower montane coniferous forest. Elevations: 1,312 - 5,299 feet.
Claytonia parviflora ssp. *grandiflora* Streambank spring beauty	--/-- G5T3/S3.2 4.2	Bloom period: February-May. Occurs in rocky soils within cismontane woodland. Elevations: 820 - 3,937 feet.
Crocanthemum suffrutescens Bisbee Peak rush-rose	--/-- G2Q/S2 3.2	Bloom period: April-August. Occurs in chaparral often in gabbroic or lone soil (burned or disturbed areas). Elevation: 246 - 2,198 feet.
Draba asterophora var. *asterophora* Tahoe draba	--/-- G2T2/S2 1B.2	Bloom period: July-September. Occurs in alpine boulder and rock field as well as subalpine coniferous forest. Elevations: 8,202 - 11,499 feet.

Draba asterophora var. *macrocarpa* Cup Lake draba	--/-- G2T1/S1 1B.1	Bloom period: July-September. Occurs in rocky subalpine coniferous forest. Elevations: 8,202 - 9,236 feet.
Epilobium howellii Subalpine fireweed	--/-- G4/S4 4.3	Bloom period: July-August. Occurs in subalpine coniferous forests with mesic soil; often in meadows and seeps. Elevations: 6,562 - 10,236 feet.
Epilobium oreganum Oregon fireweed	--/-- G2/S2 1B.2	Bloom period: June-September. Occurs in bogs and fens, meadows, lower montane coniferous forest, upper montane coniferous forest. In and near springs and bogs; at least sometimes on serpentine. Elevations: 1,640 -7,350 feet.
Erigeron miser Starved daisy	--/-- G2/S2 1B.3	Bloom period: June-October. Occurs in rocky upper montane coniferous forest. Elevation: 6,037-8,599 feet.
Eriogonum tripodum Tripod buckwheat	--/-- G4/S4 4.2	Bloom period: May-July. Occurs in chaparral and cismontane woodland habitats often with serpentinite soil. Elevation: 656-5,249 feet.
Fremontodendron decumbens Pine Hill flannelbush	FE/SR G1/S1 1B.2	Bloom period: April-July. Occurs in chaparral and cismontane woodland with rocky gabbroic or serpentinite soil. Elevations: 1,394-2,493 feet.
Fritillaria eastwoodiae Butte County fritillary	--/-- G3Q/S3 3.2	Bloom period: March-June. Occurs in chaparral, cismontane woodland and lower montane coniferous forest sometimes with serpentinite soil. Elevations: 164-4,921 feet.
Galium californicum ssp. *sierrae* El Dorado bedstraw	FE/SR G5T1/S1 1B.2	Bloom period: May-June. Occurs in chaparral, cismontane woodland and lower montane coniferous forest with gabbroic soil. Elevations: 328-1,919 feet.
Horkelia parryi Parry's horkelia	--/-- G2/S2 1B.2	Bloom period: April-September. Occurs in lone formation and other soils of chaparral and cismontane woodland habitats. Elevations: 262 - 3,510 feet.
Lathyrus sulphureus var. *argillaceus* Dubious pea	--/-- G5T1T2/S1S2 3	Bloom period: April-May. Occurs in cismontane woodland habitat as well as upper and lower montane coniferous forest. Elevations: 492 - 3,051 feet.
Lewisia kelloggii ssp. *hutchisonii* Hutchison's lewisia	--/-- G3G4T3Q/S3 3.2	Bloom period: April-August. Occurs in openings and ridgetops of upper montane coniferous forest (sometimes slate and rhyolite soil). Elevations: 2,510 - 7,759 feet.
Lewisia kelloggii ssp. *kelloggii* Kellogg's lewisia	--/-- G3G4T2T3/S2S3 3.2	Bloom period: April-August. Occurs in openings and ridgetops of upper montane coniferous forest (sometimes slate and rhyolite soil). Elevations: 4,806 - 7,759feet.
Lewisia longipetala Long-petaled lewisia	--/-- G3/S3 1B.3	Bloom period: July-September. Occurs in granitic soils of alpine boulder and rock fields as well as mesic and rocky subalpine coniferous forest. Elevations: 8,202 - 9,596feet.
Lewisia serrata Saw-toothed lewisia	--/-- G2/S2 1B.1	Bloom period: May-June. Occurs in mesic and rocky slopes of broadleafed upland forest, lower montane coniferous forest and riparian forest. Elevations: 2,953 - 4,708 feet.
Lilium humboldtii ssp. *humboldtii* Humboldt lily	--/-- G4T3/S3 4.2	Bloom period: May-July. Occurs in openings of chaparral, cismontane woodland and lower montane coniferous forest habitats. Elevations: 295 - 4,199feet.
Meesia triquetra Three-ranked hump moss	--/-- G5/S4 4.2	Bloom period: July. Occurs in bogs and fens, meadows and seeps, subalpine coniferous forest and upper montane coniferous forest (mesic). Elevations: 4,265 - 9,688 feet.

Myrica hartwegii Sierra sweet bay	--/-- G4/S4 4.3	Bloom period: May-June. Occurs in cismontane woodland, lower montane coniferous forest and riparian forest habitats. Elevations: 492 - 5,741 feet.
Navarretia prolifera ssp. *lutea* Yellow bur navarretia	--/-- G4T3/S3 4.3	Bloom period: May-July. Occurs in chaparral and cismontane woodland habitats. Elevations: 2,800 - 4,600 feet.
Ophioglossum pusillum Northern adder's tongue	--/-- G5/S1 2B.2	Bloom period: July. Occurs in meadows and seeps, as well as the margins of marshes and swamps. Elevations: 3,281 - 6,562 feet.
Packera layneae Layne's ragwort	FT/SR G2/S2 1B.2	Bloom period: April-August. Occurs in rocky serpentinite or gabbroic soils within chaparral and cismontane woodland habitats. Elevations: 656 - 3,560 feet.
Peltigera gowardii Western waterfan lichen	--/-- G3G4/S3 4.2	Bloom period: NA (lichen). Occurs in riparian forest habitats on rocks in cold water creeks with little to no sediment of disturbance. Elevations: 3,494 - 8,596 feet.
Phacelia stebbinsii Stebbin's phacelia	--/-- G3/S3 1B.2	Bloom period: May-July. Occurs in cismontane woodland and lower montane coniferous forest habitats, as well as meadows and seeps. Elevations: 2,001 - 6,594 feet.
Piperia colemanii Coleman's rein orchid	--/-- G3/S3.3 4.3	Bloom period: June-August. Occurs often in sandy soils within chaparral and lower montane coniferous forest. Elevations: 3,937 - 7,545 feet
Poa sierrae *Sierra blue grass*	--/-- *G3/S3* *1B.3*	Bloom period: April-June. Lower montane coniferous forest. Shady, moist, rocky slopes. Often in canyons. Elevations: 1,198 - 3,806 feet.
Potamogeton epihydrus *Nuttall's ribbon-leaved pondweed*	--/-- G5/S2.2? 2B.2	Bloom period: June-September. Fresh emergent wetlands. Shallow water, ponds, lakes, streams, irrigation ditches. Elevations: 1,214 - 7,119 feet.
Pseudostellaria sierrae Sierra starwort	--/-- G3G4/S3 4.2	Bloom period: May-August. Occurs in chaparral, cismontane woodland, upper and lower montane coniferous forest. Elevations: 4,020 - 7,198 feet.
Rhynchospora capitellata Brownish beaked-rush	--/-- G5/S1 2B.2	Bloom period: July-August. Occurs in mesic soils within lower and upper montane coniferous forest habitats as well as meadows, seeps, marshes and swamps. Elevations: 148 - 6,562 feet.
Rorippa subumbellata Tahoe yellow cress	--/SE G1/S1 1B.1	Bloom period: May-September. Occur on decomposed granitic beaches within lower montane coniferous forest habitats as well as meadows and seeps. Elevations: 6,217-6,250 feet.
Sagittaria sanfordii *Sanford's arrowhead*	--/-- G3/S3 1B.2	Bloom period: May-November. Fresh emergent wetlands. In standing or slow-moving freshwater ponds, marshes, and ditches. Elevations: 0 - 2,133feet.
Schoenoplectus subterminalis Water bulrush	--/-- G4G5/S3 2B.3	Bloom period: June-September. Occurs in bogs and fens, as well as marshes and swamps along montane lake margins. Elevations: 2,460 - 7,382feet.
Scutellaria galericulata Marsh skullcap	--/-- G5/S2 2B.2	Bloom period: June-September. Occurs in lower montane coniferous forest, mesic meadows and seeps, as well as marshes and swamps. Elevations: 0 - 6,890feet.
Silene occidentalis ssp. *occidentalis* Western campion	--/-- G4T3/S3 4.3	Bloom period: June-August. Occurs in dry open sites of chaparral habitats as well as lower and upper montane coniferous forests. Elevations: 4,035 - 6,857feet.

Viburnum ellipticum Oval-leaved viburnum	--/-- G4G5/S3? 2B.3	Bloom period: May-June. Occurs in chaparral, cismontane woodland and lower montane coniferous forest habitats. Elevations: 705 - 4,593 feet.
Viola tomentosa Felt-leaved violet	--/-- G3/S3 4.2	Bloom period: May-October. Occurs in gravelly soils of subalpine coniferous forests as well as lower and upper montane coniferous forest habitats. Elevations: 4,708 - 6,562 feet.
Wyethia reticulata El Dorado County mule ears	--/-- G2/S2 1B.2	Bloom period: April-August. Occurs in clay or gabbroic soil within chaparral, cismontane woodland or lower montane coniferous forest habitats. Elevations: 607 - 2,067 feet.

Sources: CNDDB (CDFW, 2016); USFWS ECOS (2016), and CNPS Rare Plant Inventory (2016).
FE = Federally Endangered FT = Federally Threatened DL = Delisted
SE = State Endangered ST = State Threatened SR = State Rare
G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDB RareFind5.
CRPR (California Rare Plant Rank):
1A=Presumed Extinct in California
1B=Rare, Threatened, or Endangered in California and elsewhere
2=Rare, Threatened, or Endangered in California, but more common elsewhere
3=Need more information (a Review List)
4=Plants of Limited Distribution (a Watch List)
CRPR Threat Code Extension:
.1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2=Fairly endangered in California (20-80% occurrences threatened)
.3=Not very endangered in California (<20% of occurrences threatened)

Appendix C

Traffic Deficiency Analysis

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MEMORANDUM

Date: September 9, 2016

Project #: 17666.0

To: Claudia Wade
County of El Dorado
2850 Fairlane Court
Placerville, CA 95667

From: Chirag Safi, Vasin Kiattikomol

Project: CIP & TIM Fee Update: Western Slope

Subject: Final Technical Memorandum 2-3: Existing and Future Deficiency and Nexus Assessment

This memorandum summarizes the existing and future deficiency analysis including the Mitigation Fee Act (MFA) nexus justification for the improvement concepts to be advanced as part of the Major Capital Improvement Program (CIP) & Traffic Impact Mitigation (TIM) Fee Update. The analysis includes results for: the existing conditions and future year Amended General Plan (GP) deficiency assessments; a capacity threshold analysis to determine the timing of when the improvements will be needed; the nexus fair share assessments for each recommended capital improvement category; and, per Assembly Bill (AB) 1600, a fair share discount for developments that meet Smart Growth criteria.

The subsequent sections in this memorandum describe the following:

- Introduction
- Traffic Analysis Methodology
- Traffic Analysis Assumptions
- Level of Service Standards
- Roadway Segment Analysis
- Interchange Analysis
- Parallel Facility Analysis
- Existing Operations Results
- Amended General Plan Operations Results
- Recommended TIM Fee CIP Improvements
- Capacity Threshold Analysis
- AB1600 Nexus: Trip Allocation
- AB1600 Nexus: Other Programs
- Discounted Fair Share

INTRODUCTION

The existing and future deficiency analysis was performed based on the tools, methodologies and assumptions described in this memorandum. These are also described as part of Draft Technical Memorandum 2-1: Analysis Methodology. The same tools and methodologies were applied, as applicable, to the capacity threshold analysis and fair share nexus trip allocation analysis described in subsequent sections of this memorandum.

TRAFFIC ANALYSIS METHODOLOGY

This section describes the approaches, tools, and methods used in the analysis.

Level of Service (LOS)

Circulation Policy TC-Xd of the El Dorado County General Plan provides level of service standards for County-maintained roads and state highways. LOS is a grading system that indicates the quality of service motorists experience on roadway facilities such as intersections or along roadway segments. LOS is a qualitative measure of the effect of a number of factors, including delay, vehicle speeds and travel time, traffic interruptions, freedom to maneuver, driving comfort and convenience. Levels of Service are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. Level of Service (LOS) "A" through "E" generally represents traffic volumes less than or at roadway capacity, while LOS "F" represents over capacity and/or forced flow conditions.

County Roadways

Roadway segment LOS was determined by comparing traffic volumes on the study roadway segments with peak hour LOS capacity thresholds. The planning level capacity thresholds for different roadway classifications are shown in **Table 1**. These capacity thresholds are calculated based on the methodology contained in the Highway Capacity Manual (Transportation Research Board, 2010) (HCM 2010).

Table 1. Local Roadways Level of Service LOS Criteria

Functional Classification	Number of Lanes	Planning Level Volume Threshold (vehicles per hour)				
		LOS A	LOS B	LOS C	LOS D	LOS E
Arterial, Divided	4	-	-	1,850	3,220	3,290
	6	-	-	2,760	4,680	4,710
Arterial, Undivided	2	-	-	850	1,540	1,650
	4	-	-	1,760	3,070	3,130
Multi-Lane Highway	4	-	2,240	3,230	4,250	4,970

Notes:
Two-lane highway (and arterial 2-lane) thresholds are based on HCM 2010, Exhibit 15-30, Class II Rolling, .09 K-factor, and D-factor of 0.6
Arterial volume thresholds are based on HCM 2010, Exhibit 16-14, K-factor of 0.09, posted speed 45 mi/h
Volumes are for both directions

Volume thresholds for 3-lane and 5-lane arterials were derived by linear interpolation between the 2- and 4-lane and between 4- and 6-lane thresholds, respectively. Similarly, the volume thresholds for a 7-lane or more arterial will be calculated by linear extrapolation between 4-lane and 6-lane volumes.

State Highways

State highway LOS was determined using the methodologies for freeway and multilane highways and two-lane highways outlined in the HCM 2010, Chapters 11, 14, and 15, respectively. For freeway and multilane highways density of the traffic stream determines LOS. Density measures the average proximity of vehicles to each other in the traffic stream expressed in passenger cars per mile per lane (pcpmpl) of roadway. Freeway and multilane highways were evaluated using the HCM 2010 compatible spreadsheet models.

For two-lane highways, the LOS calculation is dependent on the class of the roadway. Class I two-lane highways are highways where motorists expect to travel at high speeds. Class II two-lane highways are lower speed highways and serve scenic routes or areas of rugged terrain. Class III two-lane highways serve moderately developed areas with higher densities of local traffic and side-street access. For Class II highways, LOS is determined based on the percent time spent following (PTSF). This measure is calculated as the percentage of vehicles traveling at headways of less than three seconds. For Class III highways, the percent of vehicles traveling at free-flow speed (PFFS) conditions is used to determine LOS. This measure represents the ability of vehicles to travel at the posted speed limit. The two-lane highway analysis will be performed using the Highway Capacity Software (HCS).

Table 2 and **Table 3** show the segment LOS criteria for multilane and two-lane highways, respectively.

Table 2. Multi-Lane State Highways LOS Criteria

LOS	Free Flow Speed (mi/h)	Density (pcpmpl)
A	All	>0 -11
B	All	>11-18
C	All	>18-26
D	All	>26-35
E	60	>35-40
	55	>35-41
	50	>35-43
	45	>35-45
F	Demand Exceeds Capacity	
	60	>40
	55	>41
	50	>43
	45	>45
Based on *Highway Capacity Manual,* Transportation Research Board, Washington D.C, 2010, Exhibit 14-4		

Table 3. Two-Lane State Highways LOS Criteria

LOS	Class II Highways: Percent Time Spent Following (%)	Class III Highways: Percent Free-Flow Speed (%)
A	0-40	>91.7
B	>40-55	>83.3-91.7
C	>55-70	>75.0-83.3
D	>70-85	>66.7-75.0
E	>85	≤66.7
Based on *Highway Capacity Manual,* Transportation Research Board, Washington D.C., 2010, Exhibit 15-3		

US 50 mainline segments were evaluated using the basic freeway methodologies contained in the HCM 2010. As previously described, the US 50 LOS will be reported for each freeway segment based on density and expressed in passenger cars per mile per lane (pcpmpl) of roadway.

Given a limitation of the latest Highway Capacity Software (HCS 2010) for evaluating special purpose lanes (e.g., HOV lanes, auxiliary lanes, truck climbing lanes) freeway mainline segments were evaluated using the HCS 2010 software compatible spreadsheet models. The freeway LOS criteria are provided in **Table 4**.

Table 4. Freeway Mainline Level of Service (LOS) Criteria

LOS	Density (pcpmpl)
A	≤11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45 or Demand > Capacity
Based on *Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2010, Exhibit 11-5	

As description of all key generalized operational parameters and operational analysis assumptions are listed in the following section.

TRAFFIC ANALYSIS ASSUMPTIONS

Generalized operational parameters that will be used for the traffic analysis are provided below:

Ideal Saturation Flow Rate:	Freeway General Purpose Lanes: 2,350 vehicles per hour per lane (vphpl); HCM 2010 Exhibit 10-5; Freeway HOV Lanes: 1,650[1] vehicles per hour per lane (vphpl); Freeway Auxiliary Lanes > 1 mile: 900[2] vphpl Freeway Auxiliary Lanes < 1 mile: 400 vphpl
Base Free Flow Speeds:	All: Posted speed limit plus 5 mph
Peak Hour Factor (PHF):	Freeway mainline: Existing: where counts exist: Caltrans Performance Measurement System (PeMS) and Caltrans Published Volumes; where counts do not exist: 0.92; Future: 0.92 State Highways: Existing: where counts exist: PeMS and Caltrans Published Volumes; where counts do not exist: 0.92; Future: 0.92
Peak Hour Directional (D) Factor:	Existing: Caltrans PeMS or Caltrans/County published reports (average weekday) Future: Same as Existing average weekday if available – other: El Dorado County travel demand model projected D Factor
Peak Hour (K) Factor:	Existing: PeMS or Caltrans/County published reports (average weekday) Future: Same as Existing average weekday if available – other: El Dorado County travel demand model projected K Factor
Analysis Conditions:	Annual Average Weekday Conditions
Traffic Volumes:	Existing: Freeways/State Highways: Caltrans Annual Average Daily Traffic (AADT) published volumes adjusted to average weekday peak hour condition via published K and D factors. US

[1] Caltrans High-Occupancy Vehicle Guidelines, Caltrans 2003.

[2] 900 vphpl is a typical default assumption for auxiliary lanes greater than 1 mile and has been accepted by Caltrans in previous reports. See SC101 HOV Report June 2010.

	50 between County line and Ponderosa Road: higher volumes between Caltrans AADT published volumes adjusted to average weekday and Caltrans PeMS average weekday (April) Existing: Local Roadways: County published data Future: Counts adjusted based on El Dorado County travel demand model growth between 2015 baseline to 2035 forecast horizon per National Cooperative Highway Research Program 255 method (NCHRP 255) (NCHRP, 1982)
Lane Width:	All: 12 feet, or consult Caltrans or County Staff
Driver Population Factor:	All: 1.00 – local drivers
Ramp Density (ramps/mi):	Freeway mainline: Aerial measured
Access Density (points/mi):	State Highways/Local Roadways: Aerial measured
Heavy Vehicles:	Freeway/State Highways– Caltrans published Truck AADT data, or 5 percent default (4% on US 50); State Highways/Local Roadways – 5 percent default, or consult Caltrans or County staff

LEVEL OF SERVICE STANDARDS

The following criteria are established to determine whether the vehicular traffic on a roadway facility exceeds the standard operating conditions.

County Roadways

Circulation Policy TC-Xd of the El Dorado County General Plan provides level of service standards for County-maintained roads and state highways as follows:

> *Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table.*

Roadways in the community regions are evaluated against LOS E standard, while those in the rural regions and rural centers are analyzed against LOS D. **Figure 1** shows the level of service thresholds for local roadways, with exceptions listed in the Table TC-2 of the County's Circulation Element.

State Facilities

County's Policy TC-Xd is applicable not only to the County roadways, but also to the state facilities. As such, traffic conditions for state facilities within the unincorporated areas of the County shall not be worse than LOS E in the community regions and LOS D in the rural center and rural regions, except to the locations specified in Table TC-2.

U.S. Highway 50

Table 5 presents LOS thresholds used for US 50. These standards are consistent with the concept LOS established by Caltrans in the Transportaion Concept Report and Corridor System Management Plan, the County, and Table TC-2 of the 2004 El Dorado County General Plan.

Table 5. US 50: Level of Service Thresholds

Location Description	Begin Post Mile	End Post Mile	Level of Service Threshold
Sacramento/El Dorado County Line to Latrobe Road	0	0.857	LOS E
Latrobe Road to Cambridge Road	0.857	4.962	LOS D
Cambridge Road to Shingle Springs Drive	4.962	8.564	LOS E
Shingle Springs Drive to El Dorado Road	8.564	14.011	LOS D
El Dorado Road to Canal Street	14.011	17.52	LOS E
Canal Street to Mosquito Road	17.52	18.517	LOS F
Mosquito Road to Point View Drive	18.517	20.296	LOS E
Point View Drive to Old Highway, Camino	20.296	23.957	LOS D
Old Highway, Camino to Old Carson Road	23.957	34.219	LOS E
Old Carson Road to Ice House Road	34.219	39.772	LOS D
Ice House Road to Echo Lake Road	39.772	65.619	LOS F

Source: US 50 Transportation Concept Report and Corridor System Management Plan, Caltrans District 3, June 2014, 2004 El Dorado County General Plan, July 2004.

State Route 49

In the State Route 49 Transportation Concept Report (Caltrans, 2000), the concept LOS is F south of the community of El Dorado and through the City of Placerville. All other segments have a concept LOS E. Since the County adopted exceptions for this roadway, the County's LOS standard for rural community (LOS D) was used as the operational criteria for segments from Amador/El Dorado County Line to Union Mine Road and from SR 193 (south) to SR 193 (north).

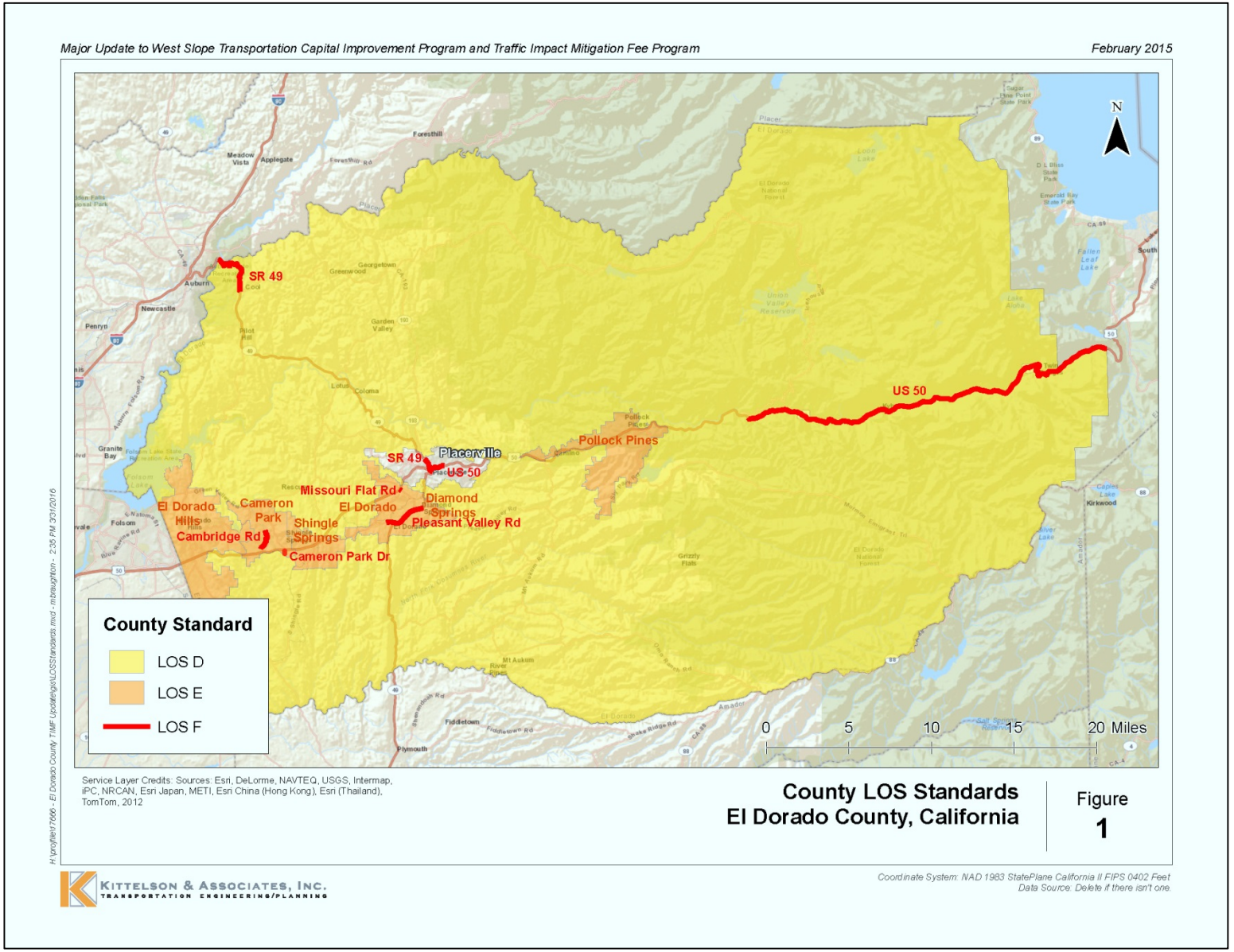
State Route 193

In the State Route 193 Transportation Concept Report (Caltrans, 2011), the concept LOS through El Dorado County is LOS D. This Caltrans concept LOS is consistent with the County standard.

State Route 153

The State Route 153 Transportation Concept Report (Caltrans, 2011) established a concept LOS of E for SR 153 within El Dorado County. Since the roadway runs through a defined rural community, the County's LOS D standard was used as the operational standard for this analysis.

Figure 1. Level of Service Thresholds for Roadways



ROADWAY SEGMENT ANALYSIS

This section provides the operations results by facility type. The facility types include County arterial roadways and state highways including freeways, multilane highways, and two-lane highways. A total of 57 County roadways were analyzed spanning nearly 150 segments. The entire state highway system was analyzed (i.e., US 50, SR 49, SR 193, SR 153) spanning 60 segments. Selection of roadways and roadway segmentation was based on a number of criteria including:

- roadway/segment was analyzed in previous TIM fee analysis;
- roadway/segment is currently listed in the County's current Capital Improvement Program;
- roadway/segment was included as part of the County's Travel Demand Model baseline validation analysis;
- roadway/segment is a critical high volume location with known congestion issues; and,
- roadway/segment is considered to have future importance for accommodating planned development growth.

Given the need for all future traffic projections to be adjusted based on the NCHRP 255[3] guidance principles, the choice of County roadway segments to analyze was contingent upon the availability of weekday (Tuesday-Thursday) daily and peak hour traffic counts (less than 3 years old). To ensure that "raw" model volumes would not form the basis for determining roadway operations, new traffic counts were performed by the County for all roadways that met the above criteria but did not have a recent traffic count. For US 50, average weekday bi-directional peak hour volumes were based on the most recent Caltrans PeMS counts taken during April/May 2014 including AM/PM peak directional splits (D Factor).

All state facilities were analyzed based on the HCM 2010 operational analysis methodology and LOS criteria described in the previous section. All local County roadways were analyzed based the HCM 2010 planning method and LOS criteria, also described in the previous section.

The analysis scenarios include:

- **2015 Baseline (Existing) Scenario** - To ensure that the future traffic growth resulting from new development growth is not double counted, all built and occupied permits between 2010 (model validation baseline year) and January 1st 2015 were reflected in the baseline travel demand model land use to establish an updated model analysis baseline. The 2010 baseline model network was also modified to include only infrastructure improvements open and operational by January 1st 2015.
- **2035 Amended General Plan Land Use Scenario** - This scenario reflects the approved allocation of growth in the County's General Plan, including the recently adopted Targeted

[3] For a description of the NCHRP 255 adjustments process – see subsequent Roadway Segment Volume discussion.

General Plan Ammendment and Zoning Ordinance Update (TGPA-ZOU) project. This assumes growth occurring at approximately 1 percent annual average growth rate over the 20-year planning horizon (2015-2035) with a 75% allocation to community regions and 25% allocation to rural regions (75/25 split). To establish a 2035 baseline network, the 2015 baseline model network was modified to only include infrastructure improvements either completed or under construction by January 1st 2015.

Roadway Segment Volumes

Before "raw" model output is considered suitable for operational determinations, post-processing adjustments must be performed. The recommended procedure is based on the NCHRP 255. NCHRP 255 adjustments entail using model generated link-based growth factors (computed variation between base year and forecast year model link volumes) to adjust baseline traffic counts to reflect future conditions. For each count location, traffic growth estimates were generated using both the Ratio and the Difference method and taking the average between the two methods.

The baseline traffic counts, the 2035 future year "raw" volumes and the NCHRP 255 adjusted segment volumes used to determine future year operations are provided in Attachment A. For reporting purposes, forecasted volumes are rounded to the nearest ten.

All analysis scenarios reflect AM/PM peak hours during average weekday (Tues-Thurs) traffic conditions. Peak hours are confined to the weekday peak commute hour periods of 7:00 AM to 9:00 AM in the morning and between 4:00 PM – 6:00 PM in the afternoon. These forecasts do not reflect peak season or peak weekend traffic conditions which are primarily dominated by interregional traffic which is not appropriate for analysis of a local fee program.

Roadway Segment Capacity

Roadway segment capacities were developed by multiplying the number of through lanes for a given roadway segment with the ideal saturation flow rate parameters (i.e., ideal lane capacity) provided in the Traffic Analysis Assumptions section.

For the eastbound segment of US 50 from the County Line to Bass Lake, the special purpose lane designations allow for some interpretation. Caltrans defines this segment more conservatively as 2 General Purpose Lanes, 1 HOV Lane, and 1 Auxiliary Lane. The County considers the functionality of the segment to operate as having 3 General Purpose Lanes and 1 HOV Lane. Both were analyzed with the most conservative capacity assumption results considered herein.

Another special case is Green Valley Road east of Francisco Drive to east of Silva Valley Parkway. This section of Green Valley Road is comprised of both two- and four-lane sections. Given that this segment is primarily a two-lane facility between Francisco Drive and east of Silva Valley Parkway it was documented as such herein.

Given the uncertainty associated with long-term 20-year travel forecasts, a 3 percent capacity buffer check was performed. If the 2035 forecasted volume on a given roadway segment is within 3 percent of the capacity for that segment, a deficiency was identified.

INTERCHANGE ANALYSIS

There are a total of 21 interchanges operating along US 50 in El Dorado County including:

1. El Dorado Hills Boulevard Interchange
2. Silva Valley Parkway Interchange (under construction)
3. Bass Lake Road Interchange
4. Cambridge Road Interchange
5. Cameron Park Drive Interchange
6. Ponderosa Road Interchange
7. Shingle Springs Drive Interchange
8. Red Hawk Parkway Interchange
9. Greenstone Road Interchange
10. El Dorado Road Interchange
11. Missouri Flat Road Interchange
12. Placerville Drive (West) Interchange
13. Ray Lawyer Drive Interchange
14. Placerville Drive (East) Interchange
15. Mosquito Road Interchange
16. Schnell School Road Interchange
17. Point View Drive Interchange
18. Smith Flat Road Interchange
19. Cedar Grove/Camino Interchange
20. Pollock Pines/Cedar Grove Interchange
21. Sly Park Road Interchange

For interchanges, the under- or over-crossing service roads were analyzed based on the roadway segment analysis described above. However, a more detailed screening assessment was performed for the eight interchanges currently included in the existing TIM Fee CIP. These interchanges include:

- El Dorado Hills Boulevard Interchange
- Silva Valley Parkway Interchange
- Bass Lake Road Interchange
- Cambridge Road Interchange
- Cameron Park Drive Interchange
- Ponderosa Road Interchange
- El Dorado Road Interchange
- Missouri Flat Road Interchange

More detailed operationally-based CIP traffic studies have already been completed for these interchanges. As such, a peak hour volume screening assessment was used to reconfirm the prior deficiency analysis determinations. Given that these interachange operational studies were based on the previous version of the El Dorado County travel demand model, the screening assessment focused on the comparative differences between the future year forecasts generated by the previous model and the current updated model at each interchange. For each interchange (both TIM Fee CIP and non-TIM Fee CIP interchange), ramp and interchange over-crossing link volumes were compared. If the current model yielded equal or higher volumes (in absolute terms) or an equal or higher traffic

growth rate at one or more ramps and/or overcrossing, the previously identified deficiency was considered reaffirmed and the previously identified CIP improvements carried forward. If the screening assessment yielded holistically lower forecasted volumes at a given interchange, a new operationally-based analysis would then be performed to determine whether an LOS deficiency would be identified by 2035.

PARALLEL FACILITY ANALYSIS

A determination for the need to include parallel facilities into the TIM Fee CIP list was based on the deficiency assessment for US 50 and County roadways on a case by case basis. Given that parallel facilities provide corridor capacity and provide congestion relief to the primary deficient facility, parallel facility improvements are considered candidates for TIM Fee CIP improvements.

EXISTING OPERATIONS RESULTS

Existing Operations Results for State Facilities

The LOS analysis results for freeways, multilane highways, and two-lane highways are provided in Attachment B (Tables B-1, B-2, B-3). Based on the results, all state highway facilities are shown to operate within established LOS standards during average weekday AM and PM peak hour conditions.

Existing Operations Results for Local Roadways

The LOS analysis results for local roadways are presented in Attachment B (Table B-4). Given its geometric and operating characteristics, Green Valley Road segments# 51 and 53-62 were analyzed using the HCM 2010 operational method. No deficiencies were identified for study segments under existing conditions except for the following location:

- Green Valley Road west of Sophia Parkway: AM and PM peaks

Given this roadway segment is identified as an existing deficiency, only the share attributable to new growth can be applicable to the TIM Fee Program. Therefore, the TIM Fee Program includes only the cost attributable to new development, calculated as the ratio of traffic growth to the existing traffic volume.

2035 AMENDED GENERAL PLAN OPERATIONS RESULTS

Amended General Plan Operations Results for State Facilities

Under the 2035 General Plan scenario, the LOS analysis results for freeways, multilane highways, and two-lane highways are provided in Attachment C (Tables C-1, C-2, C-3).

All state facilities except for the US 50 segments listed below are projected to meet the LOS threshold:

- El Dorado/Sacramento County Line to Latrobe Road: westbound direction in the AM peak and eastbound in the PM peak[4]
- Bass Lake Road to Latrobe Road: westbound direction in the AM peak
- Bass Lake Road to Cambridge Road: eastbound direction in the PM peak

All segments on SR 49, SR 193, and SR 153 are projected to operate acceptabley.

Amended General Plan Operations Results for Local Roadways

The LOS analysis results for local roadways under the 2035 General Plan scenario are shown in Attachment C (Table C-4).

The following local roadways are projected to exceed the County's LOS standards assuming no other improvements by 2035:

- Cameron Park Drive south of Hacienda Drive: PM peak
- Green Valley Road west of Sophia Parkway: AM and PM peaks
- Green Valley Road east of Francisco Drive[5]: AM and PM peaks
- Missouri Flat Road south of China Garden Road: PM peak
- Latrobe Road north of Golden Foothill Parkway: AM and PM peaks
- White Rock Road west of Windfield Way: PM peak
- White Rock Road at Sacramento/El Dorado County Line: PM peak
- White Rock Road east of Latrobe Road: PM peak

All the above roadway segments are located in designated community regions.

Parallel Facility Deficiency Analysis Results

Based on identified US 50 mainline and several County roadway deficiencies, the following roadway extensions were analyzed.

- Saratoga Way (based on providing parallel capacity to the US 50 segment - County Line to El Dorado Hills Boulevard deficiency)

[4] Eastbound deficiency based on the Caltrans capacity designation of 2 General Purpose Lanes, 1 HOV Lane, and 1 Auxiliary Lane.

[5] This deficiency only applies to the two-lane portion of this segment.

- Country Club Drive (based on providing parallel capacity to the US 50 segment – El Dorado Hills Boulevard to Cambridge Road deficiency)
- Diamond Springs Parkway (based on providing parallel capacity to the Missouri Flat Road deficiency)
- Latrobe Connection (based on providing parallel capacity to the White Rock Road and Latrobe Road deficiencies)
- Headington Road (based on providing parallel capacity to the Missouri Flat Road deficiency)

Assuming these roadways improvements are in place, several deficient segments were shown to operate acceptably due to redistribution of traffic. These facilities were therefore removed from the TIM Fee CIP list.

Summary for Roadways Deficiencies

A summary of all deficient roadways is shown in **Table 6**. Under existing conditions, all local roadway segments analyzed were shown to operate within County standards except the Green Valley Road segment west of Sophia Parkway. All state facilities were also determined to operate within the established General Plan LOS standards. Under 2035 conditions (assumes 2035 General Plan land use and 2015 roadway network), three segments of US 50 and eight local roadway segments were projected to exceed LOS standards. Assuming additional parallel facility improvements, the number of US 50 deficiencies was reduced to two segments and the number of local roadway deficiencies was reduced to five segments.

Table 6. Summary for Deficiency Roadways by Scenario

Facility Type	Baseline Roadway	2035 Amended General Plan Roadway	2035 Amended General Plan Roadway with Parallel Capacity Improvements
State Highways	None	1. US 50 (El Dorado/ Sacramento County Line to Latrobe Road) 2. US 50 (Latrobe Road to Bass Lake Road) 3. US 50 (Bass Lake Road to Cambridge Road)	1. US 50 (Latrobe Road to Bass Lake Road) 2. US 50 (Bass Lake Road to Cambridge Road)
	Total: 0 segment	**Total: 3 segments**	**Total: 2 segments**
Local Roads	1. Green Valley Road (west of Sophia Parkway)	1. Cameron Park Drive (south of Hacienda Drive) 2. Green Valley Road (west of Sophia Parkway) 3. Green Valley Road (east of Francisco Drive to east of Silva Valley Parkway)[1] 4. Latrobe Road (north of Golden Foothill Parkway) 5. Missouri Flat Road (south of China Garden Road)[2] 6. White Rock Road (west of Windfield Way) 7. White Rock Road (at El Dorado/Sacramento County Line) 8. White Rock Road (east of Latrobe Road)[7]	1. Cameron Park Drive (south of Hacienda Drive) 2. Green Valley Road (west of Sophia Parkway) 3. Green Valley Road (east of Francisco Drive) 4. Missouri Flat Road (south of China Garden Road)[2] 5. White Rock Road (east of Latrobe Road)[2]
	Total: 1 segment	**Total: 8 segments**	**Total: 5 segments**

Notes:
1 This deficiency only applies to the two-lane portions of this segment
2 The projected roadway segment forecast is within 3% of the capacity threshold for this segment

Interchange Deficiency Analysis Results

Based on the comparative analysis of the "old" vs. "new" travel model forecasts at each interchange ramp and over/under-crossing segment, the screening results re-confirm the following interchange deficiency assessments (based on previous operational studies) would continue to hold with the new model (based on a combination of comparing 2035 PM peak hour volumes and average annual growth rates).

- El Dorado Hills Boulevard Interchange
- Silva Valley Parkway Interchange (under construction)
- Cambridge Road Interchange
- Cameron Park Drive Interchange
- Ponderosa Road Interchange
- El Dorado Road Interchange

Volume comparisons for the Bass Lake Road interchange showed lower forecasted traffic volumes for all ramps and overcrossing using the new update travel model relative to past forecasts. Based on these lower traffic projections, a more detailed operational analysis was warranted to determine the future operational integrity of the Bass Lake Road interchange. The new operational analysis and findings based on the new model forecasts are provided in Attachment E. The 2035 future year operational results reconfirm the prior Bass Lake Road Interchange deficiencies. As such, the US 50 Bass Lake Road interchange will remain in the TIM Fee CIP.

Comparison results for the Missouri Flat Road interchange also show lower forecasted traffic volumes for all ramps and overcrossing (approximately 75% of the previous model volumes). A more detailed operational analysis was performed to confirm if the Missouri Flat Road interchange can accommodate future year traffic volumes resulting from the amended General Plan. The operational analysis and findings provided in Attachment E, confirm that the Missouri Flat Road interchange has sufficient capacity to accommodate 2035 future year conditions. Therefore the Missouri Flat Road interchange will not be included in the TIM Fee program at this time.

The County has recently commissioned a study of the area called the Missouri Flat Area Master Circulation & Funding Plan Phase II (MC&FP Phase II). The study will identify future land use options and infrastructure needs beyond what is currently assumed in the 2035 Amended General Plan scenario. Given that the MC&FP Phase II study will not be completed prior to the completion of this analysis, the "growth potential" assessment in the vicinity of this interchange will not be fully reflected in this analysis. Based on MC&FP Phase II study, further analysis will be performed to determine if and when additional improvements will be required at the Missouri Flat Road interchange.

Although the screening analysis determined that the Cameron Park Drive Interchange would be deficient by 2035, a more detailed operational analysis was performed to confirm whether the interchange is currently deficient. The analysis determined that there are no existing LOS deficiencies at the Cameron Park Drive interchange. The new baseline operational analysis and findings based on the new traffic count data are provided in Attachment E.

All other interchanges with the exception of the Red Hawk Parkway do not show sufficieint growth in volumes to trigger deficienty. Since Red Hawk Parkway provided an access to and from Red Hawk Casino only and is being funded and operated by Casino, it was excluded from deficiency analysis.

A summary of interchange volumes and annual growth rate comparisons between the previous and the current travel models are shown in Attachment D (Table D-1 and Table D-2). Table D-1 represents a volume comparison and Table D-2 presents a growth comparison for the Amended General Plan scenarios. Operational analyses for the Bass Lake Road, Missouri Flat Road and Cameron Park interchanges are provided in Attachment E.

RECOMMENDED TIM FEE CIP IMPROVEMENTS

Based on identified deficiencies, TIM Fee CIP improvements are proposed for the following facility types:

- Mainline Freeway Improvements
- Interchange Improvements
- Local Roadway ImprovementsParallel Facility Improvements

Freeway Mainline Improvements

US 50 between Sacramento/El Dorado County Line and Cambridge Road is projected to operate at Levels of Service (LOS) exceeding the standards under the 2035 Amended General Plan Conditions. In addition, interchange deficiencies described in the following section also entail adding auxiliary lanes as part of the interchange improvements. Based on these mainline and interchange deficiencies, the following auxiliary lane TIM Fee CIP improvements are needed in order for the specified US 50 segments to maintain acceptable LOS operations.

- Eastbound County Line to Latrobe Road
- Eastbound Bass Lake Road to Cambridge Road
- Eastbound Cambridge Road to Cameron Park Drive
- Eastbound Cameron Park Drive to Ponderosa Road
- Westbound Ponderosa Road to Cameron Park Drive
- Westbound Cambridge Road to Bass Lake Road
- Westbound Bass Lake Road to Silva Valley Parkway
- Westbound EI Dorado Hills Boulevard to County Line

Interchange Improvements

Based on the reconfirmation of the previously identified interchange deficiencies (i.e., comparative analysis of the “old” vs. “new” travel model forecasts at each interchange ramp and over/under-crossing segments), the following improvements are recommended at the following interchanges:

- EI Dorado Hills Boulevard Interchange reconfiguration; existing structure to remain
- Silva Valley Parkway Interchange (Phase I under construction, Phase II only)
- Bass Lake Road Interchange; existing undercrossing structure to remain
- Cambridge Road Interchange modification; existing structure to remain
- Cameron Park Drive Interchange reconfiguration; new overcrossing structure
- Ponderosa Road Interchange reconfiguration; new overcrossing structure
- EI Dorado Road Interchange reconfiguration; widen existing overcrossing

Local Roadway Improvements

Based on identified deficiencies, the following local roadway improvements are recommended:

- Cameron Park Drive north of Palmer Drive to Hacienda Road; 2-Lane to 4-Lane; sidewalk on east side only
- Green Valley Road from Sacramento/El Dorado County line to Sophia Parkway; 2-Lane to 4-Lane; sidewalk on both sides
- Green Valley Road east of Francisco Drive to east of Silva Valley Parkway; 2-Lane to 4-Lane; sidewalk on north side only[6].
- White Rock Road from Post Street to Silva Valley Parkway 2-Lane to 4-Lane; sidewalk on both sides
- Missouri Flat Rd from China Garden Road to State Route 49; sidewalk on both sides

Parallel Facility Improvements

Based on the identified US 50 mainline and local roadway deficiencies, the following parallel roadway capacity improvements are recommended:

- Saratoga Way (future) connect to Iron Point Road; 4-Lane; sidewalk on north side only; widen existing Saratoga Way 2-Lane to 4-Lane from west terminus to El Dorado Hills Boulevard; sidewalk on north side only
- Country Club Drive (future) connect El Dorado Hills Boulevard east to Silva Valley Parkway/Tong Road; sidewalk on both sides
- Country Club Drive (future) 2-Lane; Silva Valley Parkway/Tong Road to Bass Lake Road/Old Bass Lake Road; sidewalk on both sides.
- Country Club Drive (future) 2-Lane from Bass Lake Road/Old Bass Lake Road to Tierra de Dios Drive.
- Diamond Springs Parkway (future) from Missouri Flat Road to Route 49
- Latrobe Connection 2-Lane between White Rock Road and Golden Foothill Parkway/Latrobe Road
- Headington Road 2-Lane between El Dorado Road and Missouri Flat Road

The TIM Fee CIP projects are shown in **Figure 2**.

Improvement Costs

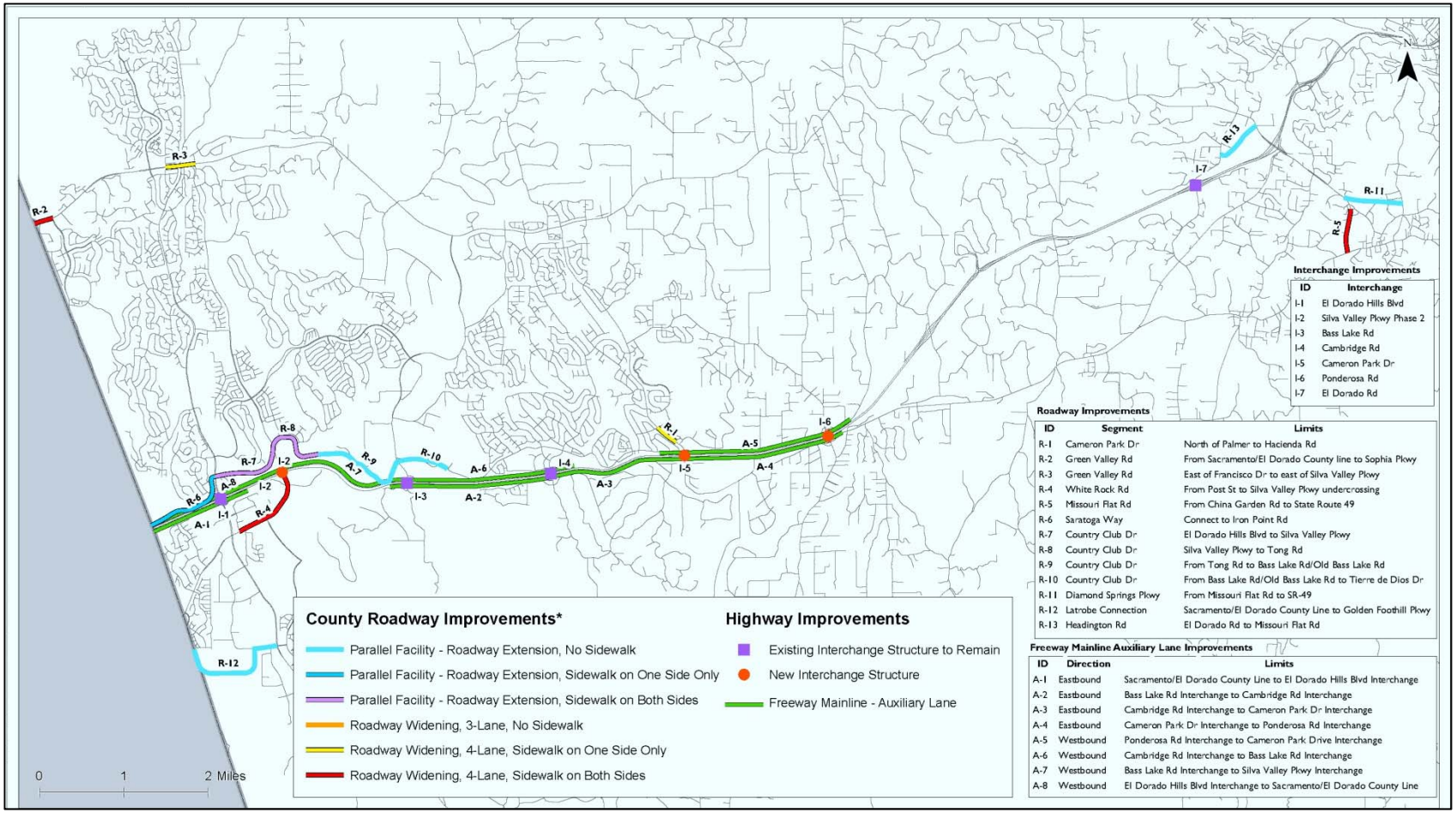
The total cost of these improvements is as follows:

US 50 Auxiliary Lanes:	$ 61,190,000
US 50 Interchanges	$ 172,861,500
Local Roadways	$ 93,674,000
Sub Total:	$ 327,725,500.

Including outstanding reimbursement agreements and other program costs (discussed in the following sections), the projected total cost for the TIM Fee CIP is $412,848,093.

[6] This improvement only applies to the two-lane portions of this segment.

Figure 2. TIM Fee CIP Locations



CAPACITY THRESHOLD ANALYSIS

A Capacity Threshold Analysis was performed for each TIM Fee CIP improvement to determine the timeframe when facilities would exceed the County's LOS thresholds. The analysis was completed in two stages: without and with the parallel capacity projects. Based on this analysis, and available funding, the improvement projects will be designated to the 5-Year, 10-Year, and 20-Year CIP Project Lists.

To establish a continuous timeline of traffic growth, the analysis is based on linear interpolation between the baseline traffic counts and the 2035 Amended General Plan traffic projections. The latter assumes no infrastructure improvements unless built or under construction by January 1, 2015 (i.e., future year no build transportation network). Operational determinations were performed throughout the timeline to determine the interim year a given TIM Fee CIP facility exceeds the LOS standard. For interchange improvements and the associated auxiliary lanes, project timing was based on the freeway mainline deficiency. Interchanges located on non-deficient US 50 segments were defaulted to the 2035 timeframe. For roadways serving as parallel facilities to US 50, the need of the roadway improvements was identified based on the triggered year of the freeway segment.

Operational determinations were based on the same methodologies and LOS thresholds described previously. The HCM 2010 operational analysis methodology was used for analyzing US 50 (basic and merge-diverge) and the HCM 2010 planning method was used for analyzing local County roadways.

Table 7 presents the analysis results for US 50 segments and **Table 8** presents the results for local County roadways. The volumes shown in these tables are for the baseline year and in five year increments (e.g. 2015, 2020, etc.). For each 5-year increment, when triggered, the reported volumes shown represent the actual year that the LOS standard was exceeded. For example, the triggered volume for Cameron Park Drive is 2018, which is representing the 2015 5-year interval.

Table 7. Capacity Threshold Analysis for US 50 (without Parallel Capacity Projects)

Segment	LOS Threshold	Direction	Peak	2015	2020	2025	2030	2035
Sacramento/El Dorado County Line - Latrobe Road	E	EB	AM	2,470	2,880	3,290	3,700	4,110
			PM	4,750	5,125	5,500	5,875	6,250
		WB	AM	3,790	4,110	4,685	4,750	5,070
			PM	1,880	2,160	2,445	2,725	3,010
Latrobe Road - Bass Lake Road	D	EB	AM	1,235	1,515	1,790	2,070	2,350
			PM	3,400	3,820	4,240	4,660	5,080
		WB	AM	3,695	4,145	4,600	5,050	5,500
			PM	2,350	2,745	3,135	3,530	3,920
Bass Lake Road - Cambridge Road	D	EB	AM	1,380	1,605	1,830	2,055	2,280
			PM	3,330	3,605	3,880	4,155	4,430
		WB	AM	3,100	3,275	3,445	3,620	3,790
			PM	2,095	2,405	2,715	3,020	3,330

1-Way Volume (vph) LOS within threshold
1-Way Volume (vph) LOS exceeds threshold

Table 8. Capacity Threshold Analysis for Local Roadways (without Parallel Capacity Projects)

Name	Location	LOS Threshold	Peak	2015	2020	2025	2030	2035
Cameron Park Dr	South of Hacienda Dr	E	AM	1,235	1,300	1,370	1,435	1,500
			PM	1,620	1,680	1,740	1,800	1,860
Green Valley Rd	West of Sophia Pkwy	E	AM	1,880	2,140	2,395	2,655	2,910
			PM	2,065	2,400	2,735	3,065	3,400
Green Valley Rd	East of Francisco Dr	E	AM	1,210	1,340	1,470	1,605	1,735
			PM	1,070	1,230	1,395	1,555	1,715
Latrobe Rd	North of Golden Foothill Pkwy	D	AM	2,123	2,535	3,285	3,365	3,780
			PM	2,287	2,675	3,220	3,450	3,840
White Rock Rd	West of Windfield Way	E	AM	824	980	1,130	1,285	1,440
			PM	816	1,085	1,360	1,685	1,900
White Rock Rd	At County Line	E	AM	834	1,015	1,195	1,380	1,560
			PM	1,026	1,325	1,690	1,930	2,230
White Rock Rd	East of Latrobe Road	E	AM	1,036	1,070	1,110	1,145	1,180
			PM	1,444	1,495	1,545	1,600	1,650
2-Way Volume (vph)	LOS within theshold							
2-Way Volume (vph)	LOS exceeds threshold							

Traffic Diversion Due to Parallel Capacity Projects

Based on the deficiency analysis, several new roadway segments that run parallel to US 50 or other roadways that are projected to be deficient by 2035 were identified. Construction of these parallel capacity projects would provide additional capacity along key segments, thereby extending the service life of the existing facility. The following roadway segments were identified as parallel facilities:

- Saratoga Way extension
- Country Club Drive extension
- Diamond Springs Parkway
- Latrobe Connection
- Headington Road extension

To test the effects of the parallel capacity projects, the segments were added to the 2035 Amended General Plan model (without any other roadway improvements). The travel demand model was run to determine the change in peak hour traffic volumes as a result of the parallel capacity projects. These traffic changes are shown in **Table 9** and **Table 10** for US 50 and local roadways, respectively. Most of the study roadways benefit from the parallel capacity projects, as shown by a decrease in projected peak hour traffic.

The capacity threshold analysis process (described above) was repeated, assuming the parallel capacity projects are constructed. For the interim years, traffic diversion was based on interpolation. The same operational analysis methodologies were used to analyze the deficient facilities affected by the traffic diversion to identify the remaining deficient segments. The analysis results are shown in **Table 11** and **Table 12** for US 50 and local roadways, respectively.

Table 9. Traffic Diversion for US 50 Segments with Parallel Capacity Projects

Segment	Direction	Peak	Volume Change (vph)
Sacramento/El Dorado County Line - Latrobe Road	EB	AM	-1,017
		PM	-1,122
	WB	AM	-1,154
		PM	-750
Latrobe Road - Bass Lake Road	EB	AM	-44
		PM	-160
	WB	AM	-446
		PM	-49
Bass Lake Road - Cambridge Road	EB	AM	+46
		PM	-29
	WB	AM	-25
		PM	+2

Table 10. Traffic Diversion for Local Roadways with Parallel Capacity Projects

Name	Location	Peak	Volume Change (vph)
Cameron Park Drive	South of Hacienda Drive	AM	+4
		PM	-8
Green Valley Road	West of Sophia Parkway	AM	-38
		PM	-142
Green Valley Road	East of Francisco Drive	AM	-67
		PM	-72
Latrobe Road	North of Golden Foothill Parkway	AM	-988
		PM	-852
White Rock Road	West of Windfield Way	AM	-572
		PM	-782
White Rock Road	At County Line	AM	-542
		PM	-762
White Rock Road	East of Latrobe Road	AM	-42
		PM	-1

Table 11. Capacity Threshold Analysis for US 50 with Parallel Capacity Projects

Segment	LOS Threshold	Direction	Peak	2015	2020	2025	2030	2035
Sacramento/El Dorado County Line - Latrobe Road	E	EB	AM	1,860	2,165	2,475	2,785	3,093
			PM	3,895	4,205	4,515	4,820	5,128
		WB	AM	2,925	3,175	3,420	3,670	3,916
			PM	1,410	1,620	1,835	2,045	2,260
Latrobe Road - Bass Lake Road	D	EB	AM	1,210	1,485	1,755	2,030	2,306
			PM	3,295	3,700	4,105	4,515	4,920
		WB	AM	3,395	3,810	4,560	4,640	5,054
			PM	2,320	2,710	3,095	3,485	3,871
Bass Lake Road - Cambridge Road	D	EB	AM	1,405	1,635	1,865	2,095	2,326
			PM	3,310	3,580	3,855	4,130	4,401
		WB	AM	3,080	3,255	3,420	3,595	3,765
			PM	2,095	2,405	2,715	3,020	3,332

1-Way Volume (vph) LOS within threshold
1-Way Volume (vph) LOS exceeds threshold

Table 12. Capacity Threshold Analysis for Local Roadways with Parallel Capacity Projects

Name	Location	LOS Threshold	Peak	2015	2020	2025	2030	2035
Cameron Park Dr	South of Hacienda Dr	E	AM	1,240	1,305	1,375	1,440	1,504
			PM	1,615	1,675	1,735	1,795	1,852
Green Valley Rd	West of Sophia Pkwy	E	AM	1,855	2,110	2,365	2,620	2,872
			PM	1,980	2,300	2,620	2,935	3,258
Green Valley Rd	East of Francisco Dr	E	AM	1,160	1,290	1,415	1,545	1,668
			PM	1,025	1,180	1,335	1,490	1,643
Latrobe Rd	North of Golden Foothill Pkwy	D	AM	1,570	1,875	2,180	2,485	2,792
			PM	1,780	2,080	2,385	2,685	2,988
White Rock Rd	West of Windfield Way	E	AM	495	590	680	775	868
			PM	480	640	800	960	1,118
White Rock Rd	At County Line	E	AM	545	660	780	900	1,018
			PM	675	870	1,075	1,270	1,468
White Rock Rd	East of Latrobe Road	E	AM	1,000	1,030	1,070	1,105	1,138
			PM	1,445	1,495	1,545	1,600	1,649

2-Way Volume (vph) LOS within theshold
2-Way Volume (vph) LOS exceeds threshold

Findings

Based on the parallel capacity assessment, there are two segments of US 50 and three local roadway segments that would remain deficient as shown in **Table 11** and **Table 12**. These are as follows:

US 50

1. Westbound from Bass Lake Road to Silva Valley Parkway (AM Peak)
2. Eastbound from Bass Lake Road to Cambridge Road (PM Peak)

Local Roadways

1. Cameron Park Drive: South of Hacienda Drive
2. Green Valley Road: West of Sophia Parkway
3. Gree Valley Road: East of Francisco Drive

The need for auxiliary lanes is also tied to the deficient interchanges. Assuming the parallel capacity projects are in-place, **Table 13** provides the priority list for the improvement projects by 5-year time increment.

Table 13. Improvement Projects Priority List

Improvements	2015	2020	2025	2030	2035
Freeway Mainline Auxiliary Lane					
A-1 Eastbound County Line to El Dorado Hills Blvd					Y
A-2 Eastbound Bass Lake Rd to Cambridge Rd					Y
A-3 Eastbound Cambridge Rd to Cameron Park Dr					Y
A-4 Eastbound Cameron Park Dr to Ponderosa Rd					Y
A-5 Westbound Ponderosa Rd to Cameron Park Dr					Y
A-6 Westbound Cambridge Rd to Bass Lake Rd					Y
A-7 Westbound Bass Lake Rd to Silva Valley Pkwy			Y		
A-5 Westbound El Dorado Hills Blvd to County Line					Y
Interchange Improvements					
I-1 El Dorado Hills Blvd[1]				Y	
I-2 Silva Valley Pkwy Phase 2					Y
I-3 Bass Lake Rd			Y		
I-4 Cambridge Rd					Y
I-5 Cameron Park Dr[2]					Y
I-6 Ponderosa Rd					Y
I-7 El Dorado Rd					Y
Roadway Improvements					
R-1 Cameron Park Dr: North of Palmer to Hacienda Rd	Y				
R-2 Green Valley Rd: County Line to Sophia Pkwy	Y				
R-3 Green Valley Rd: East of Francisco Dr to East of Silva Valley Pkwy					Y

Improvements	2015	2020	2025	2030	2035
R-4 White Rock Rd: Post St to South of Silva Valley Pkwy[3]					Y
R-5 Missouri Flat Rd: China Garden Rd to SR 49[3]					Y
R-6 Saratoga Way: Connect to Iron Point Rd			Y		
R-7 Country Club Dr: El Dorado Hills Blvd to Silva Valley Pkwy					Y
R-8 Country Club Dr: Silva Valley Pkwy to Tong Rd			Y		
R-9 Country Club Dr: Tong Rd to Bass Lake Rd/Old Bass Lake Rd			Y		
R-10 Country Club Dr: Bass Lake Rd/Old Bass Lake Rd to Tierra de Dios Dr[4]			Y		
R-11 Diamond Springs Pkwy: Missouri Flat Rd to SR-49					Y
R-12 Latrobe Connection: County Line to Golden Foothill Pkwy			Y		
R-13 Headington Rd: El Dorado Rd to Missouri Flat Rd					Y

1. Timeframe based on El Dorado Hills Boulevard Interchange and US-50 HOV Lane Traffic Study (May, 2009)
2. Timeframe based on lack of consensus for a preferred Interchange configuration. Funding to develop an update to the 2008 PSR is applicable to the 2015-2020 timeframe with impending authorization by the County.
3. Inclusion and timeframe based on the forecasts being within 3% of the capacity volume threshold by 2035.
4. Timeframe based on need to procure ROW.

AB1600 NEXUS: TRIP ALLOCATION

To compute the percentage of trip ends applicable to the County's TIM Fee, new daily trip ends that either originate or end within the unincorporated of the County must be accounted for. To determine this as "cleanly" as possible, the exterior boundaries of the County's eight TIM Fee Zone boundaries were first modified ("smoothed") to conform to the applicable El Dorado County travel demand model TAZ boundaries (**Figure 3**).

For each deficient roadway segment to be improved, the model identified total growth in daily trips from 2015-2035 and total growth in daily trips from unincorporated areas for the same time period. The CUBE software select link script automatically computes total new unincorporated trips by TIM Fee Zone through application of a TAZ correspondence table. The link volume delta (or difference) between these model runs represents "new" trips generated by future growth. Of the unincorporated share of growth in daily trips, the traffic model was used to determine the percentage of external, incorporated, or unincorporated travel of daily trips originating or destined to a given TIM Fee Zone.

To differentiate daily trips on deficient roadways as being regional or local, a model select link analysis was performed to determine the share of new daily trips from each of the eight TIM Fee Zones that traverse a given deficient roadway. The determination of interregional trips was based on excluding one-half of daily trips whose origin or destination are from incorporated areas or areas outside El Dorado County (I-X or X-I trips) and excluding all trips which do not have an origin or destination within the county (X-X). Conversely, all daily trips (100%) that have both origin and destination within the unincorporated area (I-I) of the County and half trips (50%) with either an origin or a destination in the unincorporated County were accounted for. This establishes a reasonable relationship between the TIM fees collected and the impacts expected from development occurring specifically within the unincorporated areas of El Dorado County.

For interchanges, model select link results were summed for each ramp (on- and off-ramps) and the interchange service street over- or under-crossing. For auxiliary lanes, fair share percentages were based on both the eastbound and westbound couplet combined.

The resulting percentages for each TIM Fee roadway improvement, which reflect the fair share of the improvement costs to new development by TIM Fee Zone, is shown in **Table 14**. This link-based fair share approach supports the TIM Fee nexus requirements. These percentages are graphically presented in **Attachment F** for each TIM Fee roadway improvement. The City of Placerville is excluded from this analysis given that the City of Placerville's share of costs is excluded from the fee calculation.

For the seven TIM Fee CIP projects with outstanding reimbursement agreement commitments carried over from the existing program, the original 2004 El Dorado County Travel Demand Model trip allocation results were carried forward, except Silva Valley Pkwy Interchange and Latrobe Connection use updated 2015 model data.

Figure 3. TIM Fee Geography: Eight Zone "Smoothed"

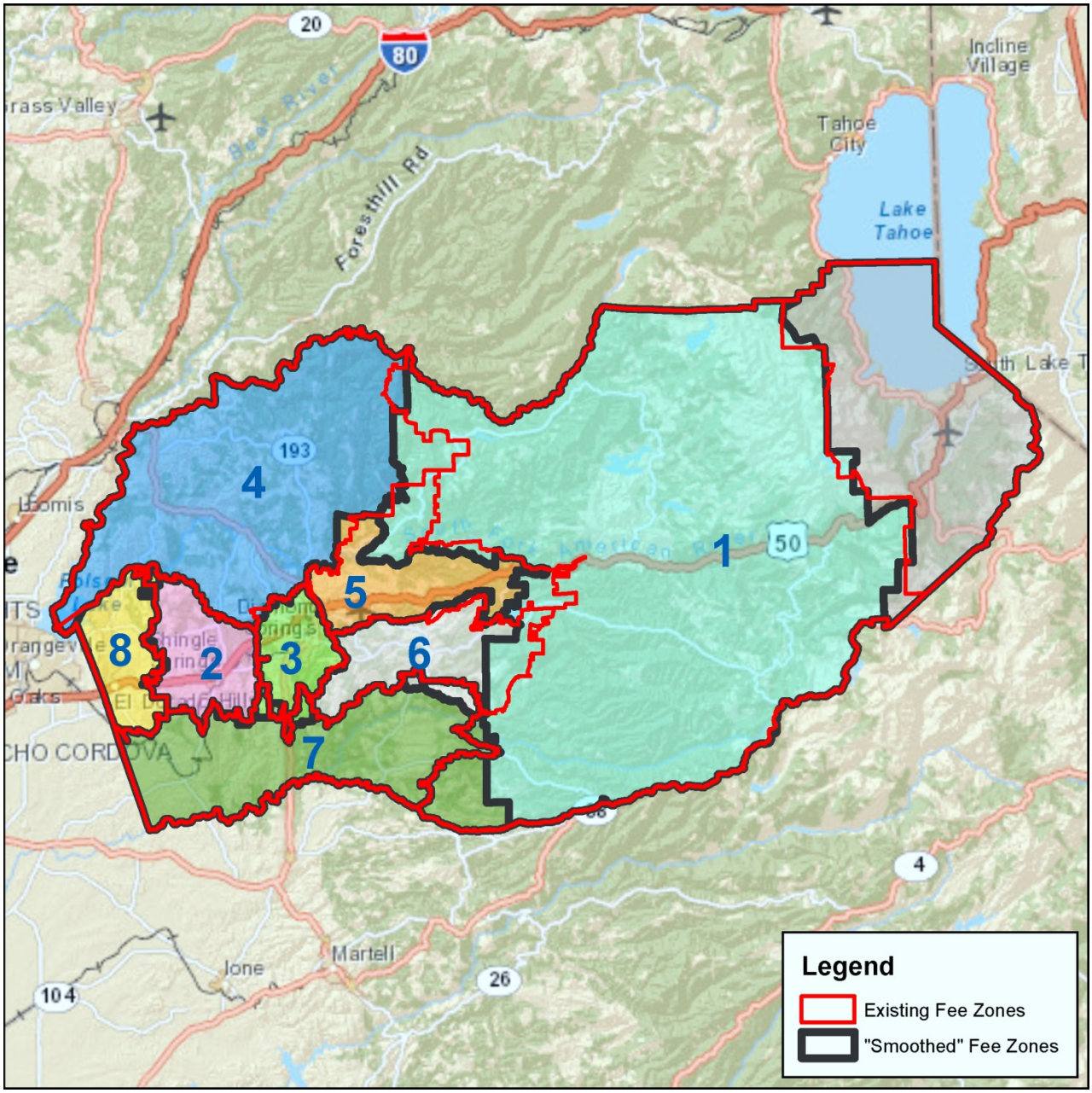


Table 14. TIM Fee CIP Fair Share Analysis Results

TIM Fee Capital Improvement Project				County Allocation		Smoothed 8 Zone Geography Scenario Allocation							
TIM Fee Map ID	CIP Segment	From	To	Local	External	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
	US 50 Auxiliary Lanes												
A-1	EB US 50 Auxiliary Lane	County Line	El Dorado Hills Boulevard Interchange	50.00%	50.00%	0.08%	35.28%	7.82%	0.00%	0.43%	0.50%	0.00%	55.89%
A-2	EB US 50 Auxiliary Lane	Bass Lake Road Interchange	Cambridge Road Interchnage	74.87%	25.13%	0.16%	68.55%	13.60%	1.60%	1.17%	0.97%	0.04%	13.91%
A-3	EB US 50 Auxiliary Lane	Cambridge Road Interchnage	Cameron Park Drive Interchange	65.89%	34.11%	0.72%	37.40%	30.67%	4.69%	3.96%	3.00%	0.41%	19.16%
A-4	EB US 50 Auxiliary Lane	Cameron Park Drive Interchange	Ponderosa Road Interchange	67.89%	32.11%	0.64%	45.83%	27.44%	4.20%	3.54%	2.69%	0.35%	15.31%
A-5	WB US 50 Auxiliary Lane	Ponderosa Road Interchange	Cambridge Road Interchnage	67.89%	32.11%	0.64%	45.83%	27.44%	4.20%	3.54%	2.69%	0.35%	15.31%
A-6	WB US 50 Auxiliary Lane	Cambridge Road Interchnage	Bass Lake Road Interchange	74.87%	25.13%	0.16%	68.55%	13.60%	1.60%	1.17%	0.97%	0.04%	13.91%
A-7	WB US 50 Auxiliary Lane	Bass Lake Road Interchange	Silva Valley Parkway Interchange	76.80%	23.20%	0.15%	54.57%	12.13%	1.38%	0.98%	0.86%	0.04%	29.89%
A-8	WB US 50 Auxiliary Lane	El Dorado Hills Boulevard Interchange	County Line	50.00%	50.00%	0.08%	35.28%	7.82%	0.00%	0.43%	0.50%	0.00%	55.89%
	Interchange Projects												
I-1	El Dorado Hills Boulevard Interchange			92.23%	7.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.54%	99.46%
I-2	Silva Valley Parkway Interchange			83.36%	16.64%	0.28%	25.30%	5.22%	1.85%	1.43%	0.78%	0.72%	64.42%
I-3	Bass Lake Road Interchange			84.34%	15.66%	0.03%	18.02%	3.05%	0.34%	0.46%	0.23%	0.32%	77.55%
I-4	Cambridge Road Interchange			77.94%	22.06%	0.06%	71.65%	1.62%	0.69%	0.42%	0.25%	0.40%	24.91%
I-5	Cameron Park Drive Interchange			87.37%	12.63%	0.23%	79.95%	3.54%	0.98%	0.92%	0.64%	0.36%	13.39%
I-6	Ponderosa Road Interchange			87.25%	12.75%	0.20%	74.12%	5.91%	5.35%	1.08%	0.41%	0.09%	12.83%
I-7	El Dorado Road Interchange			83.70%	16.30%	0.32%	9.95%	77.40%	2.59%	3.02%	0.92%	1.73%	4.07%
	Roadway Improvements												
R-1	Cameron Park Drive	Palmer Drive	Hacienda Road	93.43%	6.57%	0.08%	92.69%	0.89%	0.09%	0.40%	0.43%	0.31%	5.12%
R-2[1]	Green Valley Road	County Line	Sophia Parkway	14.00%	n/a	0.05%	25.80%	0.43%	12.40%	0.07%	0.04%	0.22%	60.98%
R-3	Green Valley Road	Francisco Drive	Silva Valley Parkway	51.33%	48.67%	0.01%	48.70%	0.00%	23.67%	0.00%	0.00%	0.00%	27.62%
R-4	White Rock Road	Post Street	Silva Valley Parkway	95.36%	4.64%	0.71%	43.06%	10.25%	3.43%	3.23%	1.78%	1.63%	35.91%
R-5	Missouri Flat Road	China Garden Road	SR 49	100.00%	0.00%	0.09%	11.79%	73.84%	1.66%	0.80%	0.98%	0.12%	10.72%
R-6	Saratoga Way	Iron Point Road	El Dorado Hills Blvd	49.82%	50.18%	0.17%	3.15%	0.00%	2.34%	0.18%	0.18%	0.00%	93.99%
R-7	Country Club Drive	El Dorado Boulevard	Silva Valley Parkway	96.66%	3.34%	0.44%	35.51%	7.77%	2.46%	2.01%	1.11%	0.71%	50.00%
R-8	Country Club Drive	Silva Valley Pkwy	Tong Road	70.42%	29.58%	0.04%	0.73%	0.07%	0.58%	0.03%	0.01%	0.56%	97.98%
R-9	Country Club Drive	Tong Road	Bass Lake Road	84.37%	15.63%	0.24%	0.12%	0.00%	0.45%	0.00%	0.20%	0.49%	98.50%
R-10	Country Club Drive	Bass Lake Road	Tierre de Dios Drive	83.74%	16.26%	0.32%	44.63%	2.82%	0.46%	1.22%	0.72%	0.51%	49.32%
R-11	Diamond Springs Parkway	Missouri Flat Road	Route 49	82.29%	17.71%	0.82%	10.44%	68.06%	1.43%	2.24%	9.65%	1.77%	5.59%
R-12	Latrobe Connection	White Rock Road	Golden Foothill Parkway	42.67%	57.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.77%	97.23%
R-13	Headington Road	El Dorado Road	Missouri Flat Road	99.83%	0.17%	0.38%	1.01%	92.71%	0.00%	0.00%	4.59%	1.32%	0.00%

TIM Fee Capital Improvement Project				County Allocation		Smoothed 8 Zone Geography Scenario Allocation							
TIM Fee Map ID	CIP Segment	From	To	Local	External	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
	Reimbursement Agreements												
NA	Bass Lake Road			100.00%	0.00%	0.10%	28.87%	4.01%	0.73%	0.36%	0.11%	0.59%	65.23%
NA	Green Valley Road			100.00%	0.00%	0.01%	33.43%	0.28%	7.91%	0.02%	0.01%	0.01%	58.33%
NA	Latrobe Road			100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.77%	97.23%
NA	Madera Way			100.00%	0.00%	0.07%	35.15%	1.36%	3.45%	0.37%	0.07%	0.06%	59.47%
NA	Silva Valley Parkway			100.00%	0.00%	0.28%	25.30%	5.22%	1.85%	1.43%	0.78%	0.72%	64.42%
NA	Silver Springs Parkway			100.00%	0.00%	0.07%	35.15%	1.36%	3.45%	0.37%	0.07%	0.06%	59.47%
NA	Silver Springs Parkway			100.00%	0.00%	0.07%	35.15%	1.36%	3.45%	0.37%	0.07%	0.06%	59.47%

1 Existing Deficiency: Internal Fair Share based on % of trips from new growth relative to total trips

2015 El Dorado County Travel Demand Model used for auxiliary lanes, interchange projects, and roadway improvements. 2004 El Dorado County Travel Demand Model used for reimbursement agreements, except Silva Valley Pkwy IC and Latrobe Connector use updated 2015 model data.

Source: Kittelson & Associates, Inc.

AB1600 NEXUS: OTHER PROGRAMS

The TIM Fee program also includes several line item project categories[7]. These include:

- Bridge Replacements
- Intersection Improvements
- Transit Capital Improvements
- Program Administration.

The AB1600 nexus assessment for each of these programs is provided below.

Bridges Replacement

There are nine bridge replacement projects included as part of the TIM Fee CIP. The need for these improvements is attributable to traffic generated by both existing and future development. As such, only the fraction of new development's share of trip growth from 2015 to 2035 (expressed in equivalent dwelling units or EDU) is applicable for use of TIM fees. Total EDU growth for El Dorado County is 20% (Table 5, Draft Nexus & Funding Model, March, 2016). Given that the 11.47% local match requirement for federal Highway Bridge Replacement (HBR) grants is less than maximum allowable share of TIM Fees (20%), use of TIM fees to satisfy the local match requirement for these nine bridge replacement improvement projects meets the nexus requirement.

The bridge improvements, total costs, and the TIM Fee share of the costs are provided in **Table 15**.

[7] Seven TIM Fee CIP projects have been completed in TIM Fee Zone 8 with outstanding reimbursement agreement commitments to be carried forward as part of this update. These reimbursements total $26.5 million.

Table 15. Bridge Replacement TIM Fee Grant Matching Funds

River	Crossing	Cost
Indian Creek	Green Valley Rd	$ 4,015,769
Mound Springs Creek	Green Valley Rd	4,067,770
Weber Creek	Green Valley Rd	11,616,000
South Fork American River	Salmon Falls Rd	10,500,000
Clear Creek	Sly Park Rd	5,835,000
Weber Creek	Cedar Ravine Rd.	4,500,000
Carson Creek	White Rock Rd	4,500,000
North Fork Cosumnes River	Mt. Aukum Rd	4,500,000
North Fork Cosumnes River	Bucks Bar Rd	8,542,357
Total		$ 58,076,896
New Development Share[1]		11.47%
TIM Fee Program Share		$ 6,661,420

1 Development share based on federal funding for 88.53% of total costs. The remaining share is 11.47%. This share is less than the TIM Fee Program share that could be allocated of 20% based on EDUs from new development in 2035 as percent of total EDUs in 2035

Traffic Signals & Operational Improvements

The El Dorado County Community Development Agency (CDA) has developed an intersection needs prioritization process as part of its annual update of the Capital Improvement Program (CIP). The intersection needs prioritization process is consistent with Goal TC-X and Measure Y which entails coordinating planning and implementation of roadway improvements with new development to maintain adequate levels of service on County roads. This program is integrated with the TIM Fee CIP process to provide a finer level of resolution for identifying TIM Fee eligible intersection improvement needs.

The El Dorado County Transportation Division created a universal "superset" list of non-signalized intersections that may need signalization in the future. This superset list of intersections is evaluated each year to group applicable intersections in the following two tier groups:

- Tier 1: Intersections that meet all three planning level traffic signal volume warrants or address a potential operational issue that can be mitigated by minor intersection improvements.
- Tier 2: Locations that meet one or two planning level volume warrants now and may meet all three in the future. Monitor for movement to Tier 1.

The Tier 1 category addresses existing deficiencies. The need for these improvements is attributable to traffic generated by both existing and future development. Conversely, the Tier 2 category addresses potential signalization needs resulting from future development. Tier 2 improvement costs

are eligible for a 100% TIM Fee cost allocation. At this time, there are three intersections identified in the County's Tier 1 list and 19 intersections listed in the Tier 2 list (**Table 16**).

Table 16. El Dorado County Intersection Needs Prioritization List

Tier Ranking	Road 1	Road 2	Existing Control Type
1	Bass Lake Rd	Country Club Dr	Stop on WB Country Club Dr
1	Lotus Rd-Green Valley Rd	Green Valley Rd	Stop on WB Green Valley Rd
1	Missouri Flat Rd	China Garden Rd	Stop on WB China Garden Rd
2	Cambridge Rd	Knollwood Dr (S)	Stop on EB Knollwood Dr
2	EDH Bl	Francisco Dr	All-Way Stop
2	Missouri Flat Rd	Enterprise Dr	Stop on EB Enterprise Dr
2	Missouri Flat Rd	Headington Rd	Stop on WB Headington Rd
2	Pony Express Tr	Sly Park Rd	All-Way Stop
2	Silva Valley Pw	Golden Eagle Ln	All-Way Stop
2	Silva Valley Pw	Appian Way/Charter Way	All-Way Stop
2	SR49	SR193 (Cool)	All-Way Stop
2	SR49	Pleasant Valley Rd (El Dorado)	All-Way Stop
2	Green Valley Rd	Loch Wy	Stop on NB Loch Wy
2	Pleasant Valley Rd	Big Cut Rd	Stop on SB Big Cut Rd
2	Pleasant Valley Rd	Cedar Ravine Rd	Stop on SB Cedar Ravine Rd
2	Pleasant Valley Rd	Bucks Bar Rd	All-Way Stop
2	Salmon Falls Rd	Lakehills Dr	Stop on EB Lake Hills Rd
2	Pleasant Valley Rd	Newtown Rd	Stop on SB Newtown Rd
2	Pony Express Tr	Forebay Rd	Stop on SB Forebay Rd
2	Salmon Falls Rd	Malcom Dixon Rd	Stop on WB Malcom Dixon Rd
2	Salmon Falls Rd	Village Center Dr	Stop on EB Village Center Dr
2	Green Valley Road	Cameron Park Dr	Signal

The cost per intersection improvement includes installation of traffic signals and channelization requirements including left/right turn pockets and receiving lanes and Inteligent Transportation System (ITS) treatments as applicable. Based on historical cost data since 2001 shown in **Table 17**, the average cost for intersection improvements in El Dorado County is approximately $1.8 million per intersection. The average cost includes the singal installation and any roadway widening needed for turn lanes at the intersection. The maximum allowable TIM Fee allocation for Tier 1 intersection improvements would therefore be $360,000 (20% EDU growth of $1.8 million) and $1.8 million for Tier 2 intersection improvements (i.e., 100% TIM fee cost allocation).

Table 17. El Dorado County Historical Intersection Improvement Costs

PROJECT NUMBER	PROJECT DESCRIPTION	EL DORADO COUNTY SUPERVISORIAL DISTRICT	TOTAL PROJECT COST
73312	Green Valley Road/Silva Valley Parkway Intersection Signalization	1	$ 2,636,859.52
73349	Mormon Island Drive Realignment and Signalization	1	$ 2,000,000.00
76107/ 76114	Silver Springs Parkway/Green Valley Road Intersection, Green Valley Road/Deer Valley Road Intersection	1	$ 5,727,836.68
71350	U.S. 50 - Latrobe Road E/B Off Ramp	1	$ 334,427.46
72366	Cameron Park Drive/La Canada Intersection Signalization	2&4	$ 2,293,052.44
72365	Cameron Park Drive/Oxford Way Intersection Widening and Signalization	2&4	$ 1,866,635.57
73321	Cameron Park Drive/Coach Lane Intersection Improvements	2	$ 672,945.65
73345	Cambridge Road/Merrychase Drive Intersection Signalization	2	$ 1,335,961.93
73127	Cameron Park Drive/Meder Road Intersection Signalization	2&4	$ 1,166,537.51
73124	Cameron Park Drive/Mira Loma Drive Intersection Improvements	2&4	$ 1,068,113.97
53108	U.S.50/Ponderosa Road Interchange Signalization	2&4	$ 1,468,989.18
73320	Pleasant Valley Road (S.R. 49)/Patterson Drive Intersection Signalization	3	$ 4,304,776.20
73354	Durock Road/Business Drive Intersection Signalization	3	$ 2,560,402.21
73356	Missouri Flat Road/Golden Center Drive Intersection Signalization	3	$ 389,902.90
73125	Missouri Flat Road/El Dorado Road Intersection Signalization	3&4	$ 1,196,514.18
73346	S.R. 49/Fowler Drive Intersection	3	$ 331,978.65
		Total	$ 29,354,934.05
		Ave. cost	$ 1,834,683.38

Applying the cost per intersection estimates to the Tier 1 and Tier 2 lists results in a total TIM Fee cost allocation for the County's Intersection Needs Prioritization Process of $35,280,000 (**Table 18**). Since 2001, the historical rate of construction for improvements identified through the County's Intersection Needs Prioritization Program has been approximately one improvement per year.

Table 18. TIM Fee Cost - Intersection Needs Prioritization Process

Location Description	# of Intersections	TIM Fee Cost per Intersection	TIM Fee Cost
Tier 1 Intersections	3	$360,000	$1,080,000
Tier 2 Intersections	19	$1,800,000	$34,200,000
Total	22		$35,280,000

Transit Capital

The TIM Fee program funds transit capital improvements needed to accommodate new development. From a nexus perspective, this can be supported in several ways. One is to allocate 100% of the transit capital costs associated with transit expansion projects (assumes these purchases are designed to accommodate future development) and new development's share of trip growth from 2015 to 2035 expressed in equivalent dwelling units (equates to 20%) to transit capital improvement costs not directly associated with new development. Based on this approach, 1.38% of the total TIM Fee Capital Improvement Program costs would be allocated to transit capital improvements (**Table 19**, $5,701,000 total transit capital cost share / $412,848,093 total TIM Fee CIP cost). This percentage is supported by the most recent American Community Survey data for the unincorporated El Dorado County which indicates that the transit share of journey to work trips in unincorporated El Dorado County is 1.2% (see **Table 20**).

Table 19. TIM Fee Transit Capital Projects

	Amount	Unit Cost	Total Cost	New Develop-ment Share[1]	TIM Fee Program Share
County Line Transit Center[2]					
Land			$ 3,500,000		
Construction			5,400,000		
Total			$ 8,900,000	20%	$ 1,780,000
Cameron Park Park-and Ride[2]			$ 2,350,000	20%	470,000
Missouri Flat Transfer Point Expansion[3]			$ 270,000	100%	270,000
Vehicles Required for Service Expansion[3]					
Dial-A-Ride Vans	10	$ 42,000	$ 420,000		
Local Route Buses	7	323,000	2,261,000		
Commuter Bus	1	500,000	500,000		
Total			$ 3,181,000	100%	3,181,000
Total			$ 14,701,000		$ 5,701,000

[1] For capital projects that benefit existing and new develpment, TIM Fee Program share is based only on EDUs from new development in 2035 as a percent of total EDUs in 2035.

[2] Costs based on Park-and-Ride Master Plan (2007). Facilities serve existing and new development so share assigned to TIM Fee Program based on new EDUs as a percent of total EDUs in 2035.

[3] Costs based on Western El Dorado County Short- and Long-Range Transit Plan (2014). Transfer point and vehicle fleet are expansion projects to serve new development so costs allocated 100 percent to TIM Fee Program.

Sources: El Dorado County Transit Authority; Table 5.

Table 20. El Dorado County Journey to Work Mode Share

Alternative Mode	Unincorporated Areas El Dorado County % Mode Share
Drive Alone	77.7%
Carpool	9.5%
Public Transit	1.2%
Bicycle	0.3%
Walked	1.3%
Work at Home	8.1%
Other	1.3%

Source: 2013 American Community Survey

Program Administration

Per AB1600, a portion of TIM Fee program funds must be set aside to pay for on-going administration of the program and for periodic updates. For similar programs in California this percentage typically ranges between two and five percent of total program costs. In El Dorado County, approximately 2-

3% of total TIM Fee costs are set aside for program administration. This equates to $11 million over the 20-year horizon of the program.

DISCOUNTED FAIR SHARE

Per California Code–Section 66005.1 (effective January 1, 2011), housing development projects that satisfy all of the following "Smart Growth" characteristics shall be provided a discounted fee:

- The housing development is located within one-half mile of a transit station and there is direct access between the housing development and the transit station along a barrier-free walkable pathway not exceeding one-half mile in length.
- Convenience retail uses, including a store that sells food, are located within one-half mile of the housing development.
- The housing development provides either the minimum number of parking spaces required by the local ordinance, or no more than one onsite parking space for zero- to two-bedroom units, and two onsite parking spaces for three or more bedroom units, whichever is less.

A discounted fee amount of 15% has been established based on Smart Growth Trip Generation Study (SANDAG, June 2010). This study compared the vehicle trip generation characteristics of seven development projects in the San Diego region with similar "smart growth" characteristics identified above. The average reduction in trip generation was shown to be approximately 15% relative to the Institute of Transportation Engineers (ITE) based trip generation factors for housing developments without these characteristics.

As used in this section, "housing development" means a development project with common ownership and financing consisting of residential use or mixed use where not less than 50 percent of the floor space is for residential use. For the purposes of this section, "transit station" has the meaning set forth in paragraph (4) of subdivision (b) of Section 65460.1. "Transit station" includes planned transit stations otherwise meeting this definition whose construction is programmed to be completed prior to the scheduled completion and occupancy of the housing development. Transit headway criteria of 10 minutes or less at a transit hub served by three or more transit service lines is defined as cumulative headway versus individual service line headways.

The applicant/developer will be responsible for conducting the initial analysis of the relationship of the new project to the criteria in order to consider eligibility for the discount. El Dorado County will need to verify accuracy for final determination of project's eligibility for the discount on a case by case basis.

ATTACHMENT A

ROADWAY SEGMENT VOLUME FORECASTS

(state highway segments presented by post-mile)
(local roadway segments presented in alphabetical order)

Volume Forecasts for State Facilities

Route	Postmile	Segment Length	Description	2013 Caltrans Volumes Published AADT x K x D				Type	Model Volumes - AM (Interim Step – Not Used for LOS Operations)				Model Volume - PM (Interim Step – Not Used for LOS Operations)				Final Adjusted Forecast Volume (Final Volumes Used for LOS Operations)			
				AM EB/NB PHV	AM WB/SB PHV	PM EB/NB PHV	PM WB/SB PHV		EB/NB 2015	EB/NB 2035 Amended GP	WB/SB 2015	WB/SB 2035 Amended GP	EB/NB 2015	EB/NB 2035 Amended GP	WB/SB 2015	WB/SB 2035 Amended GP	EB/NB 2035 Amended GP AM	WB/SB 2035 Amended GP AM	EB/NB 2035 Amended GP PM	WB/SB 2035 Amended GP PM
50	0		SACRAMENTO/EL DORADO COUNTY LINE																	
		0.857		2470	3790	4749	1879	Freeway	3003	4800	5525	7040	5805	7449	3800	5311	4,110	5,070	6,250	3,010
50	0.857		LATROBE ROAD																	
		2.375		1234	3696	3400	2350	Freeway	1757	3062	3864	5705	3686	5425	2109	3589	2,350	5,500	5,080	3,920
50	3.232		BASS LAKE ROAD																	
		1.73		1379	3102	3331	2095	Freeway	1934	2978	4098	4876	3736	4897	2391	3697	2,280	3,790	4,430	3,330
50	4.962		CAMBRIDGE ROAD																	
		1.608		1700	2610	3010	2080	Freeway	1981	2980	3499	4018	3346	4213	2244	3410	2,630	3,070	3,840	3,210
50	6.57		CAMERON PARK DRIVE																	
		1.994		1730	2650	3060	2110	Freeway	1710	2261	3077	3479	2815	3360	1893	2576	2,290	3,030	3,630	2,840
50	8.564		PONDEROSA ROAD																	
		1.731		1340	2060	2305	1891	Freeway	1531	2013	2468	3011	2347	2934	1694	2316	1,800	2,560	2,890	2,550
50	10.295		SHINGLE SPRINGS																	
		1.895		1330	2040	2360	1630	Freeway	1531	2013	2468	3011	2347	2934	1694	2316	1,790	2,540	2,950	2,240
50	12.19		GREENSTONE ROAD																	
		1.821		1100	1770	1910	1680	Freeway	1643	2088	2513	2896	2438	2918	1817	2311	1,480	2,100	2,340	2,160
50	14.011		EL DORADO ROAD																	
		1.044		1070	1740	1870	1640	Freeway	1648	2066	2404	2729	2337	2717	1749	2181	1,420	2,020	2,220	2,060
50	15.055		MISSOURI FLAT ROAD																	
		0.774		1220	1980	2130	1870	Freeway	1323	1660	1968	2259	1885	2212	1466	1848	1,550	2,280	2,480	2,310
50	15.829		PLACERVILLE, FAIRGROUNDS																	
		1.161		920	1490	1610	1410	Freeway	1266	1539	2155	2235	2035	2297	1470	1756	1,160	1,560	1,850	1,700
50	16.99		WEST PLACERVILLE																	
		0.43		1140	1850	1990	1750	Freeway	1266	1539	2155	2235	2035	2297	1470	1756	1,400	1,930	2,250	2,070
50	17.42		EB OFF TO MAIN STREET																	
		0.1		1200	1940	2090	1840	Multi-lane	1356	1726	2249	2593	2149	2678	1639	2114	1,550	2,270	2,620	2,350
50	17.52		PLACERVILLE, CANAL STREET																	
		0.147		1010	2050	2130	1570	Multi-lane	1356	1726	2192	2403	2149	2678	1799	2028	1,340	2,260	2,660	1,790
50	17.667		PLACERVILLE, JCT. RTE. 49																	
		0.121		900	1820	1890	1390	Multi-lane	1395	1668	2011	2252	2060	2313	1529	1822	1,130	2,050	2,140	1,680
50	17.788		PLACERVILLE, COLOMA STREET																	
		0.244		910	1850	1920	1410	Multi-lane	1395	1668	2011	2252	2060	2313	1529	1822	1,140	2,090	2,170	1,700
50	18.032		PLACERVILLE, BEDFORD AVENUE																	
		0.485		760	1530	1590	1170	Multi-lane	1395	1668	2065	2314	2060	2313	1593	1896	980	1,750	1,820	1,440
50	18.517		PLACERVILLE, MOSQUITO ROAD OH (BROADWAY)																	
		0.473		680	1370	1420	1040	Freeway	838	1018	1865	2064	1597	1868	1204	1430	850	1,550	1,680	1,260
50	18.99		PLACERVILLE, SCHNELL SCHOOL ROAD																	
		1.306		540	1090	1140	840	Freeway	838	1018	1855	2054	1556	1752	1037	1232	690	1,250	1,310	1,020
50	20.296		PLACERVILLE, POINT VIEW DRIVE																	
		0.445		460	930	970	710	Freeway	816	958	1583	1715	1441	1580	923	1065	580	1,040	1,090	840
50	20.741		NEW TOWN ROAD																	
		3.216		460	940	980	720	Multi-lane	838	989	1622	1765	1472	1626	960	1114	580	1,060	1,110	860
50	23.957		JUNCTION OLD HIGHWAY, CAMINO, WEST																	
		1.992		260	840	940	620	Multi-lane	838	989	1622	1765	1472	1626	960	1114	360	950	1,070	750
50	25.949		EAST CAMINO ROAD																	
		2.893		270	870	980	640	Freeway	838	989	1622	1765	1472	1626	960	1114	370	990	1,110	770
50	28.842		SAWMILL (POLLOCK PINES)																	
		2.457		380	670	790	460	Freeway	838	989	1622	1765	1472	1626	960	1114	490	780	910	580
50	31.299		SLY PARK ROAD																	
		2.92		230	410	480	280	Two-lane	838	989	1622	1765	1472	1626	960	1114	330	500	590	380
50	34.219		OLD CARSON ROAD																	
		5.553		310	540	650	380	Multi-lane	633	741	1168	1279	1038	1148	688	794	390	630	740	470
50	39.772		ICEHOUSE ROAD																	
		6.82		320	560	670	390	Two-lane	438	515	466	538	430	499	411	484	390	640	760	470
50	46.592		W O ALDER RIDGE ROAD																	

Route	Postmile	Segment Length	Description	2013 Caltrans Volumes Published AADT x K x D				Type	Model Volumes - AM (Interim Step – Not Used for LOS Operations)				Model Volume - PM (Interim Step – Not Used for LOS Operations)				Final Adjusted Forecast Volume (Final Volumes Used for LOS Operations)			
				AM EB/NB PHV	AM WB/SB PHV	PM EB/NB PHV	PM WB/SB PHV		EB/NB 2015	EB/NB 2035 Amended GP	WB/SB 2015	WB/SB 2035 Amended GP	EB/NB 2015	EB/NB 2035 Amended GP	WB/SB 2015	WB/SB 2035 Amended GP	EB/NB 2035 Amended GP AM	WB/SB 2035 Amended GP AM	EB/NB 2035 Amended GP PM	WB/SB 2035 Amended GP PM
		2.36		320	560	650	380	Two-lane	430	502	454	529	417	487	401	469	390	650	740	450
50	48.952		SILVER FORK ROAD																	
		4.78		320	560	650	380	Two-lane	429	501	455	534	418	490	399	467	390	650	750	450
50	53.732		WRIGHTS LAKE ROAD																	
		4.16		320	560	650	380	Two-lane	425	495	451	529	412	483	394	460	390	650	750	450
50	57.892		STRAWBERRY LN																	
		2.3		320	560	650	380	Two-lane	425	495	451	529	412	483	394	460	390	650	750	450
50	60.192		SLIPPERY FORD ROAD																	
		3.33		320	560	650	380	Two-lane	425	495	451	529	412	483	394	460	390	650	750	450
50	63.522		SIERRA-AT-TAHOE ROAD																	
		1.83		320	560	650	380	Two-lane	425	495	451	529	412	483	394	460	390	650	750	450
50	65.619		ECHO LAKE ROAD																	
									425	495	451	529	412	483	394	460				
49	0		AMADOR/EL DORADO COUNTY LINE																	
		1.65		144	40	53	156	Two-lane	172	192	81	80	120	139	191	236	170	40	70	200
49	1.65		NASHVILLE, SOUTH																	
		6.702		249	68	92	270	Two-lane	172	192	81	80	120	139	191	236	280	70	110	330
49	8.352		CHINA HILL ROAD																	
		1.142		471	129	175	511	Two-lane	172	192	81	80	120	139	191	236	510	130	200	600
49	9.494		EL DORADO, UNION MINE ROAD																	
		0.147		628	172	233	681	Two-lane	219	272	94	99	138	167	230	299	730	180	280	820
49	9.641		EL DORADO, PLEASANT VALLEY ROAD																	
		1.598		883	243	327	958	Two-lane	439	519	191	243	271	355	445	553	1,010	310	420	1,130
49	11.239		MISSOURI FLAT ROAD																	
		0.62		982	269	364	1064	Two-lane	701	824	847	904	818	918	793	844	1,130	310	440	1,130
49	11.859		DIAMOND SPRINGS, PLEASANT VALLEY ROAD																	
		2.604		406	111	150	440	Two-lane	692	818	1073	1148	1076	1190	786	953	510	160	220	580
49	14.463		PLACERVILLE, FISKE ROAD																	
		0.134		916	252	339	993	Two-lane	530	612	467	583	550	689	580	675	1,030	350	460	1,130
49	14.597		PLACERVILLE, PACIFIC/ MAIN STREETS																	
		0.294		353	97	131	383	Two-lane	670	790	677	817	811	936	775	895	450	180	210	480
49	14.891		PLACERVILLE, JCT. RTE. 50																	
		0.794		445	122	165	483	Two-lane	477	455	589	554	756	784	369	488	450	130	190	630
49	15.685		JCT. RTE. 193 NORTH																	
		0.755		308	84	114	334	Two-lane	258	341	488	506	501	525	326	376	400	100	130	390
49	16.44		DIANA STREET																	
		2.98		229	63	85	248	Two-lane	188	226	321	336	332	350	229	270	280	80	100	290
49	19.42		GOLD HILL ROAD																	
		3.445		147	40	55	160	Two-lane	145	182	277	287	287	304	181	220	190	50	70	200
49	22.865		COLOMA, JCT. RTE. 153 WEST																	
		1.615		353	97	131	383	Two-lane	181	231	354	383	366	409	238	293	430	120	170	460
49	24.48		MARSHALL GRADE ROAD (TO GEORGETOWN)																	
		3.71		229	63	85	248	Two-lane	187	278	252	316	290	380	233	340	330	110	150	360
49	28.19		HASTINGS CREEK BRIDGE																	
		6.276		229	63	85	248	Two-lane	111	143	209	246	227	279	145	188	280	90	130	310
49	34.466		COOL, JCT. RTE. 193 EAST																	
		3.767		563	154	208	610	Two-lane	417	536	351	450	379	495	401	529	710	230	300	780
49	38.233		EL DORADO/PLACER COUNTY LINE																	
									333	436	324	409	359	456	356	460	0	0	0	0
153	0	0	JCT. RTE. 49																	
				140	52	91	149	Two-lane	219	272	94	99	138	167	230	299	190	60	120	210
153	0.12	0.12	COLD SPRINGS ROAD																	
				5	4	5	6	Two-lane									10	10	10	10
153	0.55	0.55	MARSHALL'S MONUMENT																	
193	0		COOL, JCT. RTE. 49																	
		0.856		120	329	324	161	Two-lane	155	189	420	483	357	413	192	232	160	390	380	200

Route	Postmile	Segment Length	Description	2013 Caltrans Volumes Published AADT x K x D: AM EB/NB PHV	AM WB/SB PHV	PM EB/NB PHV	PM WB/SB PHV	Type	Model Volumes - AM (Interim Step – Not Used for LOS Operations): EB/NB 2015	EB/NB 2035 Amended GP	WB/SB 2015	WB/SB 2035 Amended GP	Model Volume - PM (Interim Step – Not Used for LOS Operations): EB/NB 2015	EB/NB 2035 Amended GP	WB/SB 2015	WB/SB 2035 Amended GP	Final Adjusted Forecast Volume (Final Volumes Used for LOS Operations): EB/NB 2035 Amended GP AM	WB/SB 2035 Amended GP AM	EB/NB 2035 Amended GP PM	WB/SB 2035 Amended GP PM
193	0.856		AMERICAN RIVER ROAD																	
		1.313		144	397	391	194	Two-lane	148	179	385	439	333	386	184	222	180	460	450	240
193	2.169		AUBURN LAKE TRAIL ROAD																	
		10.021		111	306	302	150	Two-lane	148	179	385	439	333	386	184	222	140	360	360	190
193	12.19		EVERGREEN COURT ROAD																	
		0.509		109	300	296	147	Two-lane	101	131	80	103	94	124	108	144	150	360	360	190
193	12.699		GEORGETOWN, LOWER MAIN STREET																	
		3.406		215	59	76	221	Two-lane	65	89	74	101	76	111	66	99	270	90	120	300
193	16.105		BLACK OAK MINE ROAD																	
		3.295		133	37	47	137	Two-lane	43	45	55	65	51	63	45	50	140	50	60	150
193	19.4		GARDEN VALLEY ROAD																	
		7.55		182	50	64	187	Two-lane	146	146	58	64	75	79	140	141	190	60	70	190
193	26.95		JCT. RTE. 49																	

Volume Forecasts for County Roadways

NAME	LOCATION	Count Two-Way Volume: 2014 AM	2014 PM	Model Two-Way Volume (Interim Step – Not Used for LOS Operations): 2015 AM	2015 PM	2035 Amended GP AM	2035 Amended GP PM	Final Adjusted Two-Way Forecast Volume (Final Volumes – Used for LOS Operations): 2035 Amended GP AM	2035 Amended GP PM
Bass Lake Rd	North of Country Club Dr	1028	966	923	1012	1303	1411	1,430	1,360
Bass Lake Rd	South of Green Valley Rd	539	448	719	732	1060	1062	840	720
Bassi Rd	West of Lotus Rd	83	107	41	51	60	78	120	150
Bedford Ave	At City Limit	35	46	47	52	51	56	40	50
Broadway	At City Limit	256	309	536	562	654	695	350	420
Bucks Bar Rd	South Pleasant Valley Rd	411	412	453	463	507	524	470	470
Bucks Bar Rd	North of Mt Aukum Rd	294	307	400	419	458	482	350	370
Cambridge Rd	North of Country Club Dr	571	632	791	828	1051	1220	800	980
Cambridge Rd	South of Country Club Dr	584	709	990	1031	1231	1276	780	920
Cambridge Rd	At US 50 Overcrossing	641	810	321	669	655	956	1,150	1,130
Cambridge Rd	South of Green Valley Rd	379	394	524	562	837	887	650	680
Cambridge Rd	North of Oxford Rd	339	366	543	610	666	770	440	500
Cameron Park Dr	North of Coach Ln	1155	2022	1561	2130	2334	3201	1,830	3,070
Cameron Park Dr	South of Hacienda Dr	1236	1619	1356	1555	1623	1785	1,500	1,860
Cameron Park Dr	South of Green Valley Rd	685	781	836	907	1028	1104	860	970
Cameron Park Dr	North of Mira Loma Dr	929	1180	884	984	1126	1253	1,180	1,480
Cameron Park Dr	South of Robin Ln	533	901	607	822	1003	1267	910	1,370
Cameron Park Dr	North of Robin Ln	456	773	950	1343	1572	2162	920	1,420
Carson Rd	East of Barkley Rd	189	269	364	411	397	446	220	300
Carson Rd	At Carson Ct	82	149	25	43	26	43	90	150
Carson Rd	West of Gatlin Rd	57	137	43	53	47	57	70	150
Carson Rd	East of Ponderosa Way	139	208	166	181	184	196	160	230
China Garden Rd	East of Missouri Flat Rd	220	320	36	47	92	114	420	580
China Garden Rd	North of SR 49	82	71	400	486	614	825	130	130
Cold Springs Rd	South of Gold Hill Rd	188	289	184	221	215	251	220	330
Cold Springs Rd	South of SR 153	120	187	182	193	221	236	160	230
Country Club Dr	East of Bass Lake Rd	456	320	555	521	981	823	850	570
Country Club Dr	West of Knollwood Dr	515	277	258	297	487	495	860	470
Country Club Dr	East of Cambridge Rd	222	266	335	403	894	888	600	590
Country Club Dr	East of Merrychase Dr	381	197	494	430	660	581	530	310

NAME	LOCATION	Count Two-Way Volume		Model Two-Way Volume (Interim Step – Not Used for LOS Operations)				Final Adjusted Two-Way Forecast Volume (Final Volumes – Used for LOS Operations)	
		2014 AM	2014 PM	2015 AM	2015 PM	2035 Amended GP AM	2035 Amended GP PM	2035 Amended GP AM	2035 Amended GP PM
Country Club Dr	West of Cameron Park Dr	254	375	287	374	638	785	570	790
Durock Rd	West of S. Shingle Rd	365	568	637	772	989	1109	650	870
El Dorado Hills Blvd	South of Wilson Blvd	1951	1895	1651	1999	1686	1946	1,990	1,900
El Dorado Hills Blvd	North of Wilson Blvd	2018	1858	1516	1766	1437	1538	2,020	1,860
El Dorado Hills Blvd	North of Saratoga Way	2353	2458	3284	4070	3691	4268	2,710	2,620
El Dorado Hills Blvd	South of Green Valley Rd	448	367	446	510	424	430	450	370
El Dorado Hills Blvd	North of Harvard Way	1627	1497	1453	1583	1571	1668	1,760	1,580
El Dorado Rd	South of US 50	381	388	398	490	615	789	600	660
El Dorado Rd	North of Pleasant Valley Rd	197	185	109	144	313	391	410	440
El Dorado Rd	South of Missouri Flat Rd	160	185	181	297	339	543	310	390
Enterprise Dr	East of Forni Rd	227	309	43	50	63	100	290	490
Fairplay Rd	South of Mt Aukum Rd	144	162	208	212	226	239	170	190
Forni Rd	North of SR 49	322	280	37	56	64	120	460	480
Forni Rd	West of Arroyo Vista Way	85	141	93	125	107	144	100	170
Francisco Dr	South of Green Valley Rd	1050	1162	84	80	90	92	1,100	1,260
Gold Hill Rd	East of Lotus Road	231	142	143	166	183	204	290	180
Gold Hill Rd	East of Cold Springs Rd	64	45	65	63	79	74	80	60
Gold Hill Rd	West of Cold Springs Rd	243	144	142	165	173	193	290	180
Green Valley Rd	West of Sophia Pkwy	1881	2066	1725	1724	2702	2932	2,910	3,400
Green Valley Rd	West of Weber Creek	277	376	120	143	172	213	370	510
Green Valley Rd	West of Silva Valley Rd	951	1119	1414	1421	1664	1713	1,160	1,380
Green Valley Rd	East of Mormon Island Dr	1998	2480	2104	1840	2694	2737	2,580	3,540
Green Valley Rd	West of Mormon Island Dr	2005	2481	2104	1840	2694	2737	2,590	3,540
Green Valley Rd	East of Sophia Pkwy	2020	2475	2129	1875	2745	2822	2,630	3,580
Green Valley Rd	East of Francisco Dr	1208	1071	1280	1193	1668	1620	1,735	1,715
Green Valley Rd	West of Bass Lake Rd	1289	945	969	947	1159	1138	1,520	1,140
Green Valley Rd	East of Bass Lake Rd	1138	996	1382	1400	1738	1779	1,470	1,330
Green Valley Rd	East of La Crescenta Dr	673	596	319	325	580	609	1,090	1,000
Green Valley Rd	East of Deer Valley Rd	407	403	241	254	338	359	540	540
Green Valley Rd	West of Lotus Rd	607	709	740	729	908	915	770	900
Green Valley Rd	West of Greenstone Rd	368	379	277	300	324	382	430	480
Green Valley Rd	West of Missouri Flat Rd	868	740	341	356	386	424	950	850
Green Valley Rd	West of Campus Dr	392	424	341	356	386	424	440	500
Greenstone Rd	North of US 50	257	246	298	319	356	403	320	320
Greenstone Rd	North of Mother Lode Dr	93	112	61	65	96	108	140	180
Grizzly Flat Rd	East of Mt Aukum Rd	151	199	179	188	228	237	200	250
Harvard Way	East of El Dorado Hills Blvd	970	483	807	709	1057	961	1,250	700
Harvard Way	West of Silva Valley Pkwy	871	561	565	413	827	749	1,210	960
Ice House Rd	North of US 50	37	71	9	9	9	8	40	80
Latrobe Rd	North of County Line	241	329	228	294	458	507	480	560
Latrobe Rd	South of Investment Blvd	373	449	385	437	663	691	650	710
Latrobe Rd	North of Golden Foothill Pkwy	2123	2287	1988	2290	3584	3839	3,780	3,840
Latrobe Rd	North of Investment Blvd	802	971	329	372	548	575	1,180	1,340
Latrobe Rd	North of White Rock Rd	2557	2695	2553	2687	3368	3529	3,380	3,540
Lotus Rd	South of Thompson Hill Rd	346	441	462	449	591	609	460	600
Lotus Rd	North Green Valley Rd	565	703	760	756	942	956	730	900
Lotus Rd	South of SR 49	260	354	446	454	591	638	380	520
Luneman Rd	West of Lotus Rd	333	196	227	248	258	278	380	230
Marshall Rd	East of SR 49	315	315	271	264	330	328	380	390
Marshall Rd	East of Garden Valley Rd	432	408	349	352	423	431	520	500
Marshall Rd	South of Lower Main St	37	50	228	226	294	307	80	110
Meder Rd	East of Cameron Park Dr	528	568	442	423	729	821	850	1,040

NAME	LOCATION	Count Two-Way Volume		Model Two-Way Volume (Interim Step – Not Used for LOS Operations)				Final Adjusted Two-Way Forecast Volume (Final Volumes – Used for LOS Operations)	
		2014 AM	2014 PM	2015 AM	2015 PM	2035 Amended GP AM	2035 Amended GP PM	2035 Amended GP AM	2035 Amended GP PM
Meder Rd	West of Ponderosa Rd	420	436	379	349	506	544	560	660
Missouri Flat Rd	West of El Dorado Rd	844	714	247	310	309	391	990	850
Missouri Flat Rd	East of El Dorado Rd	801	835	431	477	499	575	900	970
Missouri Flat Rd	South of China Garden Rd	1174	1640	1201	1347	1207	1251	1,180	1,640
Missouri Flat Rd	North of SR 49	1047	1307	1060	1175	1054	1072	1,050	1,310
Missouri Flat Rd	North of Forni Rd	1876	2686	1871	2196	2106	2509	2,120	3,040
Missouri Flat Rd	South of Forni Rd	1600	1986	1366	1603	1533	1785	1,790	2,200
Mormon Emigrant Trl	East of Sly Park Rd	38	63	161	165	214	221	80	110
Mosquito Rd	At City Limit	335	346	501	528	586	613	410	420
Mosquito Rd	South of American River Bridge	90	110	130	126	165	159	120	150
Mother Lode Dr	West of Sunset Ln	950	1068	1263	1345	1535	1583	1,190	1,290
Mother Lode Dr	West of Pleasant Valley Rd	642	757	762	808	1090	1179	950	1,120
Mother Lode Dr	East of Pleasant Vally Rd	229	347	170	226	235	295	310	440
Mt Aukum Rd	North of County Line	114	137	50	58	59	70	130	160
Mt Aukum Rd	South of Bucks Bar Rd	252	297	381	403	437	469	300	360
Mt Aukum Rd	South of Pleasant Valley Rd	190	318	290	325	356	405	250	400
Mt Murphy Rd	North of SR 49	26	25	306	334	339	376	50	50
Mt Murphy Rd	South of Marshall Rd	54	97	182	195	205	225	70	120
Newtown Rd	North of Pioneer Hill Rd	231	240	347	361	414	417	290	290
Newtown Rd	East of Broadway Rd	299	323	420	436	486	493	360	380
Newtown Rd	North of Pleasant Valley Rd	215	223	270	262	348	332	290	290
Old French Town Rd	South of Mother Lode Dr	83	104	150	159	224	242	150	180
Omo Ranch Rd	East of Mt Aukum Rd	63	56	54	60	60	67	70	70
Oxford Rd	East of Salida Way	262	335	527	602	901	1052	550	690
Palmer Dr	East of Cameron Park Dr	449	873	560	764	799	1065	670	1,200
Patterson Dr	South of Pleasant Valley Rd	293	407	377	412	524	580	430	580
Pleasant Valley Rd	East of Mother Lode Dr	561	603	592	582	855	885	820	920
Pleasant Valley Rd	East of Bucks Bar Rd	473	443	394	402	461	482	550	530
Pleasant Valley Rd	West of Oak Hill Rd	901	970	864	892	923	961	970	1,050
Pleasant Valley Rd	East of SR 49	1075	1203	1355	1455	1526	1679	1,230	1,410
Pleasant Valley Rd	East of Cedar Ravine Rd	861	860	824	844	943	981	990	1,000
Pleasant Valley Rd	East of Newtown Rd	429	442	406	409	492	511	520	550
Pony Express Trl	East of Carson Rd	203	262	244	256	275	293	240	300
Pony Express Trl	East of Gilmore Rd	237	414	453	494	532	587	300	500
Pony Express Trl	West of Forebay Rd	251	492	264	340	319	406	310	580
Salmon Falls Rd	At New York Creek Bridge	191	244	504	461	632	548	280	320
Salmon Falls Rd	South of Malcolm Dixon Rd	612	590	1030	1047	1205	1179	760	700
Salmon Falls Rd	South of Pedro Hill Rd	92	100	342	307	453	385	170	160
Salmon Falls Rd	South of Rattlesnake Bar Rd	31	38	342	307	453	385	50	90
Serrano Pkwy	West of Bass Lake Rd	491	466	727	633	1219	1073	910	850
Shingle Springs Dr	South of US 50	475	221	152	183	412	611	1,020	650
Silva Valley Pky	North of US 50	776	1052	715	648	2093	2130	2,160	2,540
Silva Valley Pky	South of Green Valley Rd	603	554	482	552	626	687	770	690
Silva Valley Pky	North of Havard Way	886	848	348	383	530	552	1,210	1,120
Silva Valley Pky	South of Serrano Pkwy	1185	975	627	547	1098	1108	1,870	1,760
Snows Rd	North of Newtown Rd	80	83	106	124	127	150	100	110
Snows Rd	South of Carson Rd	337	212	227	203	248	223	370	240
South Shingle Rd	East of Latrobe Rd	98	75	184	200	234	272	140	130
South Shingle Rd	North of Barnett Ranch	192	217	267	295	322	367	240	280
South Shingle Rd	South of Sunset Ln	434	555	382	423	524	659	590	830
Starbuck Rd	North of Green Valley Rd	113	149	110	128	158	177	170	210
Union Ridge Rd	West of Hassler Rd	32	42	26	31	29	35	40	50

NAME	LOCATION	Count Two-Way Volume		Model Two-Way Volume (Interim Step – Not Used for LOS Operations)				Final Adjusted Two-Way Forecast Volume (Final Volumes – Used for LOS Operations)	
		2014 AM	2014 PM	2015 AM	2015 PM	2035 Amended GP AM	2035 Amended GP PM	2035 Amended GP AM	2035 Amended GP PM
Wentworth Springs Rd	West of Quintette Rd	29	50	38	36	51	49	50	70
White Rock Rd	At County Line	834	1026	1066	597	1875	1797	1,560	2,230
White Rock Rd	East of Latrobe Rd	1036	1444	1225	1220	1371	1406	1,180	1,650
White Rock Rd	West of Latrobe Rd	999	1121	1111	747	1634	1538	1,500	2,110
Latrobe Rd	North of Golden Foothill Pkwy South	1601	1819	1254	1392	1995	2103	2,450	2,640
Serrano Pkwy	East of Silva Valley Pkwy	1424	947	1314	1161	1906	1620	2,050	1,370
Bass Lake Rd	North of Serrano Pkwy	824	816	937	939	1223	1220	1,100	1,080
French Creek Rd	North of Old French Town Rd	178	214	269	271	343	281	250	230
Ponderosa Rd	North of Jackpine Rd	147	128	40	34	42	36	160	140
N Shingle Rd	South of Green Valley Rd	414	440	587	559	685	662	500	540
Mother Lode Dr	East of French Creek Rd	904	809	904	897	1090	1117	1,090	1,020
Rock Creek Rd	East of SR 193	19	18	1	1	1	1	30	30
White Rock Rd	West of Windfield Way	824	816	1246	830	1977	1926	1,440	1,900
El Dorado Hills Blvd	South of Francisco Dr	1324	1299	1160	1307	1234	1345	1,410	1,340
Sly Park Rd	East of Mt Aukum Rd	242	272	232	246	271	289	290	320
Sly Park Rd	East of Mormon Emigrant Trail	234	324	401	416	490	508	310	410
Sly Park Rd	South of Pony Express Trail	581	734	419	506	493	591	670	840

ATTACHMENT B

EXISTING OPERATIONS RESULTS

(state highway segments presented by post-mile)
(local roadway segments presented in alphabetical order)

Table B-1. Existing LOS Results for US 50 Freeway Sections

Route	Seg	EB Postmile	WB Postmile	Segment Length	East of Segment	West of Segment	LOS Threshold	Eastbound						Westbound					
								AM Peak			PM Peak			AM Peak			PM Peak		
								Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]
50	1	0	0.857	0.857	SACRAMENTO/EL DORADO COUNTY LINE	LATROBE ROAD	E	65.00	13.95	B	64.51	24.59	C	63.91	26.24	D	65.00	12.38	B
50	2	0.857	3.232	2.375	LATROBE ROAD	BASS LAKE ROAD	D	65.00	6.97	A	65.00	17.46	B	64.22	25.46	C	65.00	15.49	B
50	3	3.232	4.962	1.73	BASS LAKE ROAD	CAMBRIDGE ROAD	D	65.00	11.03	B	64.01	26.00	C	65.00	21.12	C	65.00	13.82	B
50	4	4.962	6.57	1.608	CAMBRIDGE ROAD	CAMERON PARK DRIVE	E	65.00	13.60	B	64.85	23.18	C	65.00	17.77	B	65.00	13.71	B
50	5	6.57	8.564	1.994	CAMERON PARK DRIVE	PONDEROSA ROAD	E	65.00	15.16	B	63.93	26.19	D	64.90	22.84	C	65.00	17.58	B
50	6	8.564	10.295	1.731	PONDEROSA ROAD	SHINGLE SPRINGS	D	65.00	11.74	B	65.00	19.40	C	65.00	17.73	B	65.00	15.76	B
50	7	10.295	12.19	1.895	SHINGLE SPRINGS	GREENSTONE ROAD	D	65.00	11.65	B	65.00	19.86	C	65.00	17.56	B	65.00	13.58	B
50	8	12.19	14.011	1.821	GREENSTONE ROAD	EL DORADO ROAD	D	65.00	9.64	A	65.00	16.08	B	65.00	15.23	B	65.00	14.00	B
50	9	14.011	15.055	1.044	EL DORADO ROAD	MISSOURI FLAT ROAD	E	65.00	9.03	A	65.00	15.72	B	65.00	15.59	B	65.00	14.27	B
50	10	15.055	15.829	0.774	MISSOURI FLAT ROAD	PLACERVILLE, FAIRGROUNDS	E	65.00	7.12	A	65.00	11.94	B	65.00	12.28	B	65.00	10.85	A
50	11	15.829	16.99	1.161	PLACERVILLE, FAIRGROUNDS	WEST PLACERVILLE	E	65.00	7.77	A	65.00	13.54	B	65.00	13.35	B	65.00	12.27	B
50	12	16.99	17.42	0.43	WEST PLACERVILLE	EB OFF TO MAIN STREET	E	65.00	9.62	A	65.00	16.73	B	65.00	16.58	B	65.00	15.23	B
50	18	18.517	18.99	0.473	PLACERVILLE, MOSQUITO ROAD	PLACERVILLE, SCHNELL SCHOOL ROAD	E	55.00	7.16	A	55.00	14.96	B	55.00	14.43	B	55.00	10.95	A
50	19	18.99	20.296	1.306	PLACERVILLE, SCHNELL SCHOOL ROAD	PLACERVILLE, POINT VIEW DRIVE	E	55.00	5.69	A	55.00	12.01	B	55.00	11.48	B	55.00	8.85	A
50	20	20.296	20.741	0.445	PLACERVILLE, POINT VIEW DRIVE	NEW TOWN ROAD	D	65.00	4.10	A	65.00	8.64	A	65.00	8.29	A	65.00	6.33	A
50	23	25.949	28.842	2.893	EAST CAMINO ROAD	SAWMILL (POLLOCK PINES)	E	65.00	2.42	A	65.00	8.80	A	65.00	7.81	A	65.00	5.75	A
50	24	28.842	31.299	2.457	SAWMILL (POLLOCK PINES)	SLY PARK ROAD	E	65.00	3.40	A	65.00	7.07	A	65.00	6.00	A	65.00	4.12	A

[1] Density expressed in pc/mi/ln, passenger cars per mile per lane
[2] Level of service is based on density as described in Basic Freeway Segment, Chapter 11, HCM 2010

Table B-2. Existing LOS Results for US 50 Multilane Highway Sections

Route	Seg	EB Postmile	WB Postmile	Segment Length	East of Segment	West of Segment	LOS Threshold	Eastbound						Westbound					
								AM Peak			PM Peak			AM Peak			PM Peak		
								Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]
50	13	17.42	17.52	0.1	EB OFF TO MAIN STREET	PLACERVILLE, CANAL STREET	E	45.00	15.36	B	45.00	26.76	D	45.00	24.84	C	45.00	23.56	C
50	14	17.52	17.667	0.147	PLACERVILLE, CANAL STREET	PLACERVILLE, JCT. RTE. 49	F	45.00	8.62	A	45.00	18.18	C	45.00	26.24	D	45.00	20.09	C
50	15	17.667	17.788	0.121	PLACERVILLE, JCT. RTE. 49	PLACERVILLE, COLOMA STREET	F	45.00	7.69	A	45.00	16.18	B	45.00	23.38	C	45.00	17.84	B
50	16	17.788	18.032	0.244	PLACERVILLE, COLOMA STREET	PLACERVILLE, BEDFORD AVENUE	F	45.00	7.78	A	45.00	16.42	B	45.00	23.76	C	45.00	18.11	C
50	17	18.032	18.517	0.485	PLACERVILLE, BEDFORD AVENUE	PLACERVILLE, MOSQUITO ROAD OH	F	45.00	6.51	A	45.00	13.64	B	45.00	19.69	C	45.00	15.04	B
50	21	20.741	23.957	3.216	NEW TOWN ROAD	JUNCTION OLD HIGHWAY, CAMINO, WEST	D	60.00	4.47	A	60.00	9.53	A	60.00	9.13	A	60.00	7.00	A
50	22	23.957	25.949	1.992	JUNCTION OLD HIGHWAY, CAMINO, WEST	EAST CAMINO ROAD	E	60.00	2.52	A	60.00	9.13	A	60.00	8.17	A	60.00	6.02	A
50	26	34.219	39.772	5.553	OLD CARSON ROAD	ICEHOUSE ROAD	D	50.00	3.60	A	50.00	7.54	A	50.00	6.26	A	50.00	4.40	A

[1] Density expressed in pc/mi/ln, passenger cars per mile per lane
[2] Level of service for multi-lane highways is based on density as described in Chapter 14, HCM 2010

Table B-3. Existing LOS Results for Two-Lane State Highways (SR 49, US 50, SR 153, SR 193)

Route	Seg	NB/EB Postmile	SB/WB Postmile	Segment Length	North/East of Segment	South/West of Segment	LOS Threshold	Eastbound						Westbound					
								AM Peak			PM Peak			AM Peak			PM Peak		
								PTSF[1] (%)	PFFS[2] (%)	LOS[3]	PTSF[1] (%)	PFFS[2] (%)	LOS[3]	PTSF[1] (%)	PFFS[2] (%)	LOS[3]	PTSF[1] (%)	PFFS[2] (%)	LOS[3]
49	1	0	1.65	1.65	AMADOR/EL DORADO COUNTY LINE	NASHVILLE, SOUTH	D	59.4%	89.8%	C	23.0%	87.0%	A	18.7%	87.6%	A	59.2%	89.4%	C
49	2	1.65	8.352	6.702	NASHVILLE, SOUTH	CHINA HILL ROAD	D	66.8%	87.3%	C	32.7%	86.7%	A	25.5%	87.4%	A	67.4%	85.2%	C
49	3	8.352	9.494	1.142	CHINA HILL ROAD	EL DORADO, UNION MINE ROAD	D	75.4%	83.5%	D	36.6%	84.5%	A	29.0%	85.6%	A	74.7%	80.7%	D
49	4	9.494	9.641	0.147	EL DORADO, UNION MINE ROAD	EL DORADO, PLEASANT VALLEY ROAD	E	79.1%	70.7%	D	43.6%	75.2%	C	35.2%	76.1%	C	82.5%	67.6%	D
49	5	9.641	11.239	1.598	EL DORADO, PLEASANT VALLEY ROAD	MISSOURI FLAT ROAD	F	94.1%	66.6%	E	54.8%	69.4%	D	45.8%	73.4%	D	92.8%	65.6%	E
49	6	11.239	11.859	0.62	MISSOURI FLAT ROAD	DIAMOND SPRINGS, PLEASANT VALLEY ROAD	F	98.1%	64.9%	E	58.5%	66.9%	D	49.8%	70.9%	D	94.4%	63.2%	E
49	7	11.859	14.463	2.604	DIAMOND SPRINGS, PLEASANT VALLEY ROAD	PLACERVILLE, FISKE ROAD	E	72.1%	79.5%	D	41.3%	82.3%	B	33.9%	83.0%	A	71.8%	78.4%	D
49	8	14.463	14.597	0.134	PLACERVILLE, FISKE ROAD	PLACERVILLE, PACIFIC/ MAIN STREETS	E	95.0%	65.4%	E	56.0%	68.1%	D	47.1%	68.7%	D	94.1%	59.9%	E
49	9	14.597	14.891	0.294	PLACERVILLE, PACIFIC/ MAIN STREETS	PLACERVILLE, JCT. RTE. 50	F	70.8%	82.0%	C	31.3%	80.7%	C	23.9%	82.1%	C	72.0%	79.4%	C
49	10	14.891	15.685	0.794	PLACERVILLE, JCT. RTE. 50	JCT. RTE. 193 NORTH	F	28.6%	79.5%	C	74.6%	73.4%	D	75.1%	76.8%	C	35.2%	77.5%	C
49	11	15.685	16.44	0.755	JCT. RTE. 193 NORTH	DIANA STREET	D	21.9%	81.7%	C	69.1%	81.1%	C	67.8%	84.4%	B	28.6%	81.8%	C
49	12	16.44	19.42	2.98	DIANA STREET	GOLD HILL ROAD	D	23.2%	82.4%	A	65.4%	81.4%	C	65.1%	84.6%	C	29.9%	82.1%	A
49	13	19.42	22.865	3.445	GOLD HILL ROAD	COLOMA, JCT. RTE. 153 WEST	D	15.8%	87.1%	A	54.9%	89.1%	B	55.3%	89.8%	C	19.6%	86.1%	A
49	14	22.865	24.48	1.615	COLOMA, JCT. RTE. 153 WEST	MARSHALL GRADE ROAD (TO GEORGETOWN)	D	23.9%	83.0%	A	72.0%	80.6%	D	70.7%	84.0%	D	31.2%	82.6%	A
49	15	24.48	28.19	3.71	MARSHALL GRADE ROAD (TO GEORGETOWN)	HASTINGS CREEK BRIDGE	D	18.8%	85.5%	A	62.5%	87.6%	C	61.9%	88.3%	C	24.0%	84.9%	A
49	16	28.19	34.466	6.276	HASTINGS CREEK BRIDGE	COOL, JCT. RTE. 193 EAST	D	18.8%	88.3%	A	62.7%	89.6%	C	62.2%	90.2%	C	24.1%	87.8%	A
49	17	34.466	38.233	3.767	COOL, JCT. RTE. 193 EAST	EL DORADO/PLACER COUNTY LINE	F	39.7%	82.5%	A	80.3%	77.9%	D	75.8%	78.7%	D	48.2%	81.1%	B
50	25	31.299	34.219	2.92	SLY PARK ROAD	OLD CARSON ROAD	E	52.3%	84.0%	B	73.8%	81.4%	D	54.3%	85.6%	B	47.7%	84.7%	B
50	27	39.772	46.592	6.82	ICEHOUSE ROAD	W O ALDER RIDGE ROAD	F	59.9%	81.1%	C	81.9%	77.2%	D	76.9%	79.3%	D	64.0%	79.0%	C
50	28	46.592	48.952	2.36	W O ALDER RIDGE ROAD	SILVER FORK ROAD	F	59.3%	81.2%	C	80.1%	77.7%	C	76.2%	79.5%	C	63.0%	79.5%	C
50	29	48.952	53.732	4.78	SILVER FORK ROAD	WRIGHTS LAKE ROAD	F	59.8%	81.1%	C	80.7%	77.6%	D	77.3%	79.1%	D	63.7%	79.2%	C
50	30	53.732	57.892	4.16	WRIGHTS LAKE ROAD	STRAWBERRY LN	F	59.5%	81.3%	C	80.3%	77.8%	D	76.4%	79.5%	D	63.2%	79.6%	C
50	31	57.892	60.192	2.3	STRAWBERRY LN	SLIPPERY FORD ROAD	F	59.4%	81.2%	C	80.2%	77.8%	D	76.3%	79.5%	D	63.1%	79.6%	C
50	32	60.192	63.522	3.33	SLIPPERY FORD ROAD	SIERRA-AT-TAHOE ROAD	F	59.7%	81.0%	C	80.6%	77.5%	D	77.3%	79.0%	D	63.7%	79.1%	C
50	33	63.522	65.619	1.83	SIERRA-AT-TAHOE ROAD	ECHO LAKE ROAD	F	59.2%	81.6%	C	79.9%	78.2%	D	75.9%	79.9%	D	62.9%	79.9%	C
153	1	0	0.12	0.12	JCT. RTE. 49	COLD SPRINGS ROAD	D	20.2%	90.0%	A	50.9%	90.8%	B	52.3%	91.6%	B	31.7%	88.8%	A
153	2	0.12	0.55	0.43	COLD SPRINGS ROAD	MARSHALL'S MONUMENT	D	24.1%	94.8%	A	31.8%	94.8%	A	30.2%	94.7%	A	22.8%	94.7%	A
193	1	0	0.856	0.856	COOL, JCT. RTE. 49	AMERICAN RIVER ROAD	D	29.5%	86.5%	A	67.9%	84.4%	C	68.7%	86.0%	C	38.7%	85.5%	A
193	2	0.856	2.169	1.313	AMERICAN RIVER ROAD	AUBURN LAKE TRAIL ROAD	D	33.6%	85.4%	A	70.6%	82.0%	D	73.1%	83.8%	D	42.4%	84.8%	B
193	3	2.169	12.19	10.021	AUBURN LAKE TRAIL ROAD	EVERGREEN COURT ROAD	D	36.1%	85.6%	A	69.5%	82.7%	C	69.1%	83.1%	C	45.1%	84.8%	B
193	4	12.19	12.699	0.509	EVERGREEN COURT ROAD	GEORGETOWN, LOWER MAIN STREET	D	28.1%	81.9%	C	65.9%	80.2%	C	66.7%	82.1%	C	37.1%	80.2%	C
193	5	12.699	16.105	3.406	GEORGETOWN, LOWER MAIN STREET	BLACK OAK MINE ROAD	D	60.6%	90.8%	C	22.6%	88.1%	A	17.7%	88.3%	A	59.9%	90.3%	C
193	6	16.105	19.4	3.295	BLACK OAK MINE ROAD	GARDEN VALLEY ROAD	D	53.8%	92.2%	B	18.4%	90.4%	A	11.4%	88.5%	A	52.6%	92.0%	B
193	7	19.4	26.95	7.55	GARDEN VALLEY ROAD	JCT. RTE. 49	D	61.8%	89.5%	C	25.9%	87.3%	A	20.6%	87.6%	A	61.3%	88.5%	C

[1] Percent of Time Spent Following - average percent of time that one must follow slower vehicles
[2] Percent of Free-Flow Speed - ability of ones to travel at or near the posted speed limit

Table B-4. Existing LOS Results for Local Roadways

ID	Name	Location	Area	Type	LOS Threshold	2014 AM Volume	2014 AM LOS	2014 PM Volume	2014 PM LOS
1	Bass Lake Rd	North of Country Club Dr	Rural	2AU	D	1028	D	966	D
2	Bass Lake Rd	South of Green Valley Rd	Community Region	2AU	E	539	A-C	448	A-C
3	Bass Lake Rd	North of Serrano Pkwy	Community Region	2AU	E	824	A-C	816	A-C
4	Bassi Rd	West of Lotus Rd	Rural	2AU	D	83	A-C	107	A-C
5	Bedford Ave	At City Limit	Rural	2AU	D	35	A-C	46	A-C
6	Broadway	At City Limit	Community Region	2AU	E	256	A-C	309	A-C
7	Bucks Bar Rd	South Pleasant Valley Rd	Rural	2AU	D	411	A-C	412	A-C
8	Bucks Bar Rd	North of Mt Aukum Rd	Rural	2AU	D	294	A-C	307	A-C
9	Cambridge Rd	North of Country Club Dr	Exception F	2AU	F	571	A-C	632	A-C
10	Cambridge Rd	South of Country Club Dr	Community Region	2AU	E	584	A-C	709	A-C
11	Cambridge Rd	At US 50 Overcrossing	Community Region	2AU	E	641	A-C	810	A-C
12	Cambridge Rd	South of Green Valley Rd	Community Region	2AU	E	379	A-C	394	A-C
13	Cambridge Rd	North of Oxford Rd	Community Region	2AU	E	339	A-C	366	A-C
14	Cameron Park Dr	North of Coach Ln	Community Region	4AD	E	1155	A-C	2022	D
15	Cameron Park Dr	South of Hacienda Dr	Community Region	2AU	E	1236	D	1619	E
16	Cameron Park Dr	South of Green Valley Rd	Community Region	2AU	E	685	A-C	781	A-C
17	Cameron Park Dr	North of Mira Loma Dr	Community Region	2AU	E	929	D	1180	D
18	Cameron Park Dr	South of Robin Ln	Community Region	2AU	E	533	A-C	901	D
19	Cameron Park Dr	North of Robin Ln	Exception F	2AU	F	456	A-C	773	A-C
20	Carson Rd	East of Barkley Rd	Community Region	2AU	E	189	A-C	269	A-C
21	Carson Rd	At Carson Ct	Rural	2AU	D	82	A-C	149	A-C
22	Carson Rd	West of Gatlin Rd	Rural	2AU	D	57	A-C	137	A-C
23	Carson Rd	East of Ponderosa Way	Community Region	2AU	E	139	A-C	208	A-C
24	China Garden Rd	East of Missouri Flat Rd	Community Region	2AU	E	220	A-C	320	A-C
25	China Garden Rd	North of SR 49	Community Region	2AU	E	82	A-C	71	A-C
26	Cold Springs Rd	South of Gold Hill Rd	Rural	2AU	D	188	A-C	289	A-C
27	Cold Springs Rd	South of SR 153	Rural	2AU	D	120	A-C	187	A-C
28	Country Club Dr	East of Bass Lake Rd	Rural	2AU	D	456	A-C	320	A-C
29	Country Club Dr	West of Knollwood Dr	Community Region	2AU	E	515	A-C	277	A-C
30	Country Club Dr	East of Cambridge Rd	Community Region	2AU	E	222	A-C	266	A-C
31	Country Club Dr	East of Merrychase Dr	Community Region	2AU	E	381	A-C	197	A-C
32	Country Club Dr	West of Cameron Park Dr	Community Region	2AU	E	254	A-C	375	A-C
33	Durock Rd	West of S. Shingle Rd	Community Region	2AU	E	365	A-C	568	A-C
34	El Dorado Hills Blvd	South of Wilson Blvd	Community Region	4AD	E	1951	D	1895	D
35	El Dorado Hills Blvd	North of Wilson Blvd	Community Region	4AD	E	2018	D	1858	D
36	El Dorado Hills Blvd	North of Saratoga Way	Community Region	4AD	E	2353	D	2458	D
37	El Dorado Hills Blvd	South of Francisco Dr	Community Region	2AU	E	1324	D	1299	D
38	El Dorado Hills Blvd	South of Green Valley Rd	Community Region	2AU	E	448	A-C	367	A-C
39	El Dorado Hills Blvd	North of Harvard Way	Community Region	4AD	E	1627	A-C	1497	A-C
40	El Dorado Rd	South of US 50	Community Region	2AU	E	381	A-C	388	A-C
41	El Dorado Rd	North of Pleasant Valley Rd	Community Region	2AU	E	197	A-C	185	A-C
42	El Dorado Rd	South of Missouri Flat Rd	Community Region	2AU	E	160	A-C	185	A-C
43	Enterprise Dr	East of Forni Rd	Community Region	2AU	E	227	A-C	309	A-C
44	Fairplay Rd	South of Mt Aukum Rd	Rural	2AU	D	144	A-C	162	A-C
45	Forni Rd	North of SR 49	Community Region	2AU	E	322	A-C	280	A-C
46	Forni Rd	West of Arroyo Vista Way	Community Region	2AU	E	85	A-C	141	A-C
47	Francisco Dr	South of Green Valley Rd	Community Region	2AU	E	1050	D	1162	D
48	French Creek Rd	North of Old French Town Rd	Rural	2AU	D	178	A-C	214	A-C
49	Gold Hill Rd	East of Lotus Road	Rural	2AU	D	231	A-C	142	A-C
50	Gold Hill Rd	East of Cold Springs Rd	Rural	2AU	D	64	A-C	45	A-C
51	Gold Hill Rd	West of Cold Springs Rd	Rural	2AU	D	243	A-C	144	A-C
52	Green Valley Rd	West of Sophia Pkwy	Community Region	2AU	E	1881	**F**	2066	**F**
53	Green Valley Rd	West of Weber Creek	Rural	2AU	D	277	A-C	376	A-C
54	Green Valley Rd	West of Silva Valley Rd	Community Region	2AU	E	951	D	1119	D
55	Green Valley Rd	East of Mormon Island Dr	Community Region	4AD	E	1998	D	2480	D
56	Green Valley Rd	West of Mormon Island Dr	Community Region	4AD	E	2005	D	2481	D
57	Green Valley Rd	East of Sophia Pkwy	Community Region	4AD	E	2020	D	2475	D
58	Green Valley Rd	East of Francisco Dr	Community Region	2AU	E	1208	E	1071	E
59	Green Valley Rd	West of Bass Lake Rd	Community Region	2AU	E	1289	E	945	E
60	Green Valley Rd	East of Bass Lake Rd	Community Region	2AU	E	1138	D	996	D
61	Green Valley Rd	East of La Crescenta Dr	Community Region	2AU	E	673	D	596	D
62	Green Valley Rd	East of Deer Valley Rd	Rural	2AU	D	407	C	403	C
63	Green Valley Rd	West of Lotus Rd	Rural	2AU	D	607	D	709	D
64	Green Valley Rd	West of Greenstone Rd	Rural	2AU	D	368	A-C	379	A-C
65	Green Valley Rd	West of Missouri Flat Rd	Community Region	2AU	E	868	D	740	A-C
66	Green Valley Rd	West of Campus Dr	Rural	2AU	D	392	A-C	424	A-C
67	Greenstone Rd	North of US 50	Rural	2AU	D	257	A-C	246	A-C
68	Greenstone Rd	North of Mother Lode Dr	Community Region	2AU	E	93	A-C	112	A-C

ID	Name	Location	Area	Type	LOS Threshold	2014 AM Volume	2014 LOS	2014 PM Volume	2014 LOS
69	Grizzly Flat Rd	East of Mt Aukum Rd	Rural	2AU	D	151	A-C	199	A-C
70	Harvard Way	East of El Dorado Hills Blvd	Community Region	4AU	E	970	A-C	483	A-C
71	Harvard Way	West of Silva Valley Pkwy	Community Region	4AU	E	871	A-C	561	A-C
72	Ice House Rd	North of US 50	Rural	2AU	D	37	A-C	71	A-C
73	Latrobe Rd	North of County Line	Rural	2AU	D	241	A-C	329	A-C
74	Latrobe Rd	South of Investment Blvd	Community Region	2AU	E	373	A-C	449	A-C
75	Latrobe Rd	North of Golden Foothill Pkwy South	Community Region	4AD	E	1601	A-C	1819	A-C
76	Latrobe Rd	North of Investment Blvd	Community Region	2AU	E	802	A-C	971	D
77	Latrobe Rd	North of Golden Foothill Pkwy	Community Region	4AD	E	2123	D	2287	D
78	Latrobe Rd	North of White Rock Rd	Community Region	6AD	E	2557	A-C	2695	A-C
79	Lotus Rd	South of Thompson Hill Rd	Rural	2AU	D	346	A-C	441	A-C
80	Lotus Rd	North Green Valley Rd	Rural	2AU	D	565	A-C	703	A-C
81	Lotus Rd	South of SR 49	Rural	2AU	D	260	A-C	354	A-C
82	Luneman Rd	West of Lotus Rd	Rural	2AU	D	333	A-C	196	A-C
83	Marshall Rd	East of SR 49	Rural	2AU	D	315	A-C	315	A-C
84	Marshall Rd	East of Garden Valley Rd	Rural	2AU	D	432	A-C	408	A-C
85	Marshall Rd	South of Lower Main St	Rural	2AU	D	37	A-C	50	A-C
86	Meder Rd	East of Cameron Park Dr	Community Region	2AU	E	528	A-C	568	A-C
87	Meder Rd	West of Ponderosa Rd	Community Region	2AU	E	420	A-C	436	A-C
88	Missouri Flat Rd	West of El Dorado Rd	Community Region	2AU	E	844	A-C	714	A-C
89	Missouri Flat Rd	East of El Dorado Rd	Community Region	2AU	E	801	A-C	835	A-C
90	Missouri Flat Rd	South of China Garden Rd	Community Region	2AU	E	1174	D	1640	E
91	Missouri Flat Rd	North of SR 49	Community Region	2AU	E	1047	D	1307	D
92	Missouri Flat Rd	North of Forni Rd	Exception F	4AD	F	1876	D	2686	D
93	Missouri Flat Rd	South of Forni Rd	Exception F	4AD	F	1600	A-C	1986	D
94	Mormon Emigrant Trl	East of Sly Park Rd	Rural	2AU	D	38	A-C	63	A-C
95	Mosquito Rd	At City Limit	Community Region	2AU	E	335	A-C	346	A-C
96	Mosquito Rd	South of American River Bridge	Rural	2AU	D	90	A-C	110	A-C
97	Mother Lode Dr	East of French Creek Rd	Community Region	2AU	E	904	D	809	A-C
98	Mother Lode Dr	West of Sunset Ln	Community Region	2AU	E	950	D	1068	D
99	Mother Lode Dr	West of Pleasant Valley Rd	Community Region	2AU	E	642	A-C	757	A-C
100	Mother Lode Dr	East of Pleasant Vally Rd	Community Region	2AU	E	229	A-C	347	A-C
101	Mt Aukum Rd	North of County Line	Rural	2AU	D	114	A-C	137	A-C
102	Mt Aukum Rd	South of Bucks Bar Rd	Rural	2AU	D	252	A-C	297	A-C
103	Mt Aukum Rd	South of Pleasant Valley Rd	Rural	2AU	D	190	A-C	318	A-C
104	Mt Murphy Rd	North of SR 49	Rural	2AU	D	26	A-C	25	A-C
105	Mt Murphy Rd	South of Marshall Rd	Rural	2AU	D	54	A-C	97	A-C
106	N Shingle Rd	South of Green Valley Rd	Rural	2AU	D	414	A-C	440	A-C
107	Newtown Rd	North of Pioneer Hill Rd	Rural	2AU	D	231	A-C	240	A-C
108	Newtown Rd	East of Broadway Rd	Community Region	2AU	E	299	A-C	323	A-C
109	Newtown Rd	North of Pleasant Valley Rd	Rural	2AU	D	215	A-C	223	A-C
110	Old French Town Rd	South of Mother Lode Dr	Community Region	2AU	E	83	A-C	104	A-C
111	Omo Ranch Rd	East of Mt Aukum Rd	Rural	2AU	D	63	A-C	56	A-C
112	Oxford Rd	East of Salida Way	Community Region	2AU	E	262	A-C	335	A-C
113	Palmer Dr	East of Cameron Park Dr	Community Region	2AU	E	449	A-C	873	D
114	Patterson Dr	South of Pleasant Valley Rd	Community Region	2AU	E	293	A-C	407	A-C
115	Pleasant Valley Rd	East of Mother Lode Dr	Community Region	2AU	E	561	A-C	603	A-C
116	Pleasant Valley Rd	East of Bucks Bar Rd	Community Region	2AU	E	473	A-C	443	A-C
117	Pleasant Valley Rd	West of Oak Hill Rd	Community Region	2AU	E	901	D	970	D
118	Pleasant Valley Rd	East of SR 49	Community Region	2AU	E	1075	D	1203	D
119	Pleasant Valley Rd	East of Cedar Ravine Rd	Community Region	2AU	E	861	D	860	D
120	Pleasant Valley Rd	East of Newtown Rd	Community Region	2AU	E	429	A-C	442	A-C
121	Ponderosa Rd	North of Jackpine Rd	Rural	2AU	D	147	A-C	128	A-C
122	Pony Express Trl	East of Carson Rd	Community Region	2AU	E	203	A-C	262	A-C
123	Pony Express Trl	East of Gilmore Rd	Community Region	2AU	E	237	A-C	414	A-C
124	Pony Express Trl	West of Forebay Rd	Community Region	2AU	E	251	A-C	492	A-C
125	Rock Creek Rd	East of SR 193	Rural	2AU	D	19	A-C	18	A-C
126	Salmon Falls Rd	At New York Creek Bridge	Rural	2AU	D	191	A-C	244	A-C
127	Salmon Falls Rd	South of Malcolm Dixon Rd	Community Region	2AU	E	612	A-C	590	A-C
128	Salmon Falls Rd	South of Pedro Hill Rd	Rural	2AU	D	92	A-C	100	A-C
129	Salmon Falls Rd	South of Rattlesnake Bar Rd	Rural	2AU	D	31	A-C	38	A-C
130	Serrano Pkwy	East of Silva Valley Pkwy	Community Region	4AD	E	1424	A-C	947	A-C
131	Serrano Pkwy	West of Bass Lake Rd	Community Region	2AU	E	491	A-C	466	A-C
132	Shingle Springs Dr	South of US 50	Rural	2AU	D	475	A-C	221	A-C
133	Silva Valley Pky	North of US 50	Community Region	2AU	E	776	A-C	1052	D
134	Silva Valley Pky	South of Green Valley Rd	Community Region	2AU	E	603	A-C	554	A-C
135	Silva Valley Pky	North of Havard Way	Community Region	2AU	E	886	D	848	A-C
136	Silva Valley Pky	South of Serrano Pkwy	Community Region	4AD	E	1185	A-C	975	A-C
137	Sly Park Rd	East of Mt Aukum Rd	Rural	2AU	D	242	A-C	272	A-C
138	Sly Park Rd	East of Mormon Emigrant Trail	Rural	2AU	D	234	A-C	324	A-C

ID	Name	Location	Area	Type	LOS Threshold	2014			
						AM Volume	LOS	PM Volume	LOS
139	Sly Park Rd	South of Pony Express Trail	Community Region	2AU	E	581	A-C	734	A-C
140	Snows Rd	North of Newtown Rd	Rural	2AU	D	80	A-C	83	A-C
141	Snows Rd	South of Carson Rd	Community Region	2AU	E	337	A-C	212	A-C
142	South Shingle Rd	East of Latrobe Rd	Rural	2AU	D	98	A-C	75	A-C
143	South Shingle Rd	North of Barnett Ranch	Rural	2AU	D	192	A-C	217	A-C
144	South Shingle Rd	South of Sunset Ln	Community Region	2AU	E	434	A-C	555	A-C
145	Starbuck Rd	North of Green Valley Rd	Community Region	2AU	E	113	A-C	149	A-C
146	Union Ridge Rd	West of Hassler Rd	Rural	2AU	D	32	A-C	42	A-C
147	Wentworth Springs Rd	West of Quintette Rd	Rural	2AU	D	29	A-C	50	A-C
148	White Rock Rd	West of Windfield Way	Community Region	2AU	E	824	A-C	816	A-C
149	White Rock Rd	At County Line	Community Region	2AU	E	834	A-C	1026	D
150	White Rock Rd	East of Latrobe Rd	Community Region	2AU	E	1036	D	1444	D
151	White Rock Rd	West of Latrobe Rd	Community Region	4AD	E	999	A-C	1121	A-C

A-C defined as operating between LOS A-C per HCM 2010
Indicates deficiency

ATTACHMENT C

2035 FORECAST

AMENDED GENERAL PLAN OPERATIONS RESULTS

(state highway segments presented by post-mile)
(local roadway segments presented in alphabetical order)

Table C-1. Amended General Plan LOS Results for US 50

Route	Seg	EB Postmile	WB Postmile	Segment Length	East of Segment	West of Segment	LOS Threshold	Eastbound						Westbound					
								AM Peak			PM Peak			AM Peak			PM Peak		
								Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]
50	1	0	0.857	0.857	SACRAMENTO/EL DORADO COUNTY LINE	LATROBE ROAD	E	64.97	22.24	C	60.11	33.05	D	Unstable	>45	F	65.00	21.65	C
50	2	0.857	3.232	2.375	LATROBE ROAD	BASS LAKE ROAD	D	65.00	12.71	B	64.34	25.10	C	Unstable	>45	F	62.34	29.40	D
50	3	3.232	4.962	1.73	BASS LAKE ROAD	CAMBRIDGE ROAD	D	65.00	18.45	C	58.40	35.65	E	63.47	27.22	D	64.65	24.08	C
50	4	4.962	6.57	1.608	CAMBRIDGE ROAD	CAMERON PARK DRIVE	E	65.00	21.29	C	62.67	28.80	D	65.00	21.54	C	64.86	23.13	C
50	5	6.57	8.564	1.994	CAMERON PARK DRIVE	PONDEROSA ROAD	E	65.00	20.31	C	58.21	35.94	E	63.30	27.59	D	64.20	25.49	C
50	6	8.564	10.295	1.731	PONDEROSA ROAD	SHINGLE SPRINGS	D	65.00	15.96	B	64.00	26.03	D	64.92	22.73	C	64.93	22.64	C
50	7	10.295	12.19	1.895	SHINGLE SPRINGS	GREENSTONE ROAD	D	65.00	15.87	B	63.72	26.68	D	64.94	22.54	C	65.00	19.86	C
50	8	12.19	14.011	1.821	GREENSTONE ROAD	EL DORADO ROAD	D	65.00	13.12	B	65.00	20.75	C	65.00	18.62	C	65.00	19.15	C
50	9	14.011	15.055	1.044	EL DORADO ROAD	MISSOURI FLAT ROAD	E	65.00	12.59	B	65.00	19.68	C	65.00	17.91	B	65.00	18.27	C
50	10	15.055	15.829	0.774	MISSOURI FLAT ROAD	PLACERVILLE, FAIRGROUNDS	E	65.00	9.51	A	65.00	14.66	B	65.00	14.00	B	65.00	13.66	B
50	11	15.829	16.99	1.161	PLACERVILLE, FAIRGROUNDS	WEST PLACERVILLE	E	65.00	10.29	A	65.00	16.40	B	65.00	13.83	B	65.00	15.07	B
50	12	16.99	17.42	0.43	WEST PLACERVILLE	EB OFF TO MAIN STREET	E	65.00	12.41	B	65.00	19.95	C	65.00	17.11	B	65.00	18.35	C
50	18	18.517	18.99	0.473	PLACERVILLE, MOSQUITO ROAD	PLACERVILLE, SCHNELL SCHOOL ROAD	E	55.00	8.95	A	55.00	17.69	B	55.00	16.33	B	55.00	13.27	B
50	19	18.99	20.296	1.306	PLACERVILLE, SCHNELL SCHOOL ROAD	PLACERVILLE, POINT VIEW DRIVE	E	55.00	7.27	A	55.00	13.80	B	55.00	13.17	B	55.00	10.74	A
50	20	20.296	20.741	0.445	PLACERVILLE, POINT VIEW DRIVE	NEW TOWN ROAD	D	65.00	5.17	A	65.00	9.71	A	65.00	9.27	A	65.00	7.49	A
50	23	25.949	28.842	2.893	EAST CAMINO ROAD	SAWMILL (POLLOCK PINES)	E	65.00	3.32	A	65.00	9.97	A	65.00	8.89	A	65.00	6.91	A
50	24	28.842	31.299	2.457	SAWMILL (POLLOCK PINES)	SLY PARK ROAD	E	65.00	4.39	A	65.00	8.14	A	65.00	6.98	A	65.00	5.19	A

[1] Density expressed in pc/mi/ln, passenger cars per mile per lane
[2] Level of service is based on density as described in Basic Freeway Segment, Chapter 11, HCM 2010
Indicates deficiency

Table C-2. Amended General Plan LOS Results for Multilane State Highways

Route	Seg	EB Postmile	WB Postmile	Segment Length	East of Segment	West of Segment	LOS Threshold	Eastbound						Westbound					
								AM Peak			PM Peak			AM Peak			PM Peak		
								Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]	Avg. Speed (mph)	Density[1] (pcpmpl)	LOS[2]
50	13	17.42	17.52	0.1	EB OFF TO MAIN STREET	PLACERVILLE, CANAL STREET	E	45.00	19.84	C	44.47	33.95	D	45.00	29.07	D	45.00	30.09	D
50	14	17.52	17.667	0.147	PLACERVILLE, CANAL STREET	PLACERVILLE, JCT. RTE. 49	F	45.00	11.42	B	45.00	22.71	C	45.00	28.93	D	45.00	22.91	C
50	15	17.667	17.788	0.121	PLACERVILLE, JCT. RTE. 49	PLACERVILLE, COLOMA STREET	F	45.00	9.67	A	45.00	18.31	C	45.00	26.33	D	45.00	21.58	C
50	16	17.788	18.032	0.244	PLACERVILLE, COLOMA STREET	PLACERVILLE, BEDFORD AVENUE	F	45.00	9.76	A	45.00	18.58	C	45.00	26.84	D	45.00	21.82	C
50	17	18.032	18.517	0.485	PLACERVILLE, BEDFORD AVENUE	PLACERVILLE, MOSQUITO ROAD OH	F	45.00	8.40	A	45.00	15.60	B	45.00	22.51	C	45.00	18.53	C
50	21	20.741	23.957	3.216	NEW TOWN ROAD	JUNCTION OLD HIGHWAY, CAMINO, WEST	D	60.00	5.63	A	60.00	10.78	A	60.00	10.30	A	60.00	8.37	A
50	22	23.957	25.949	1.992	JUNCTION OLD HIGHWAY, CAMINO, WEST	EAST CAMINO ROAD	E	60.00	3.50	A	60.00	10.40	A	60.00	9.23	A	60.00	7.28	A
50	26	34.219	39.772	5.553	OLD CARSON ROAD	ICEHOUSE ROAD	D	50.00	4.52	A	50.00	8.60	A	50.00	7.32	A	50.00	5.46	A

[1] Density expressed in pc/mi/ln, passenger cars per mile per lane
[2] Level of service for multi-lane highways is based on density as described in Chapter 14, HCM 2010

Table C-3. Amended General Plan LOS Results for Two-Lane State Highways

Route	Seg	NB/EB Postmile	SB/WB Postmile	Segment Length	North/East of Segment	South/West of Segment	LOS Threshold	Eastbound						Westbound					
								AM Peak			PM Peak			AM Peak			PM Peak		
								PTSF[1] (%)	PFFS[2] (%)	LOS[3]	PTSF[1] (%)	PFFS[2] (%)	LOS[3]	PTSF[1] (%)	PFFS[2] (%)	LOS[3]	PTSF[1] (%)	PFFS[2] (%)	LOS[3]
49	1	0	1.65	1.65	AMADOR/EL DORADO COUNTY LINE	NASHVILLE, SOUTH	D	62.1%	89.3%	C	27.5%	86.3%	A	17.5%	87.5%	A	62.6%	87.0%	C
49	2	1.65	8.352	6.702	NASHVILLE, SOUTH	CHINA HILL ROAD	D	68.7%	86.6%	C	35.9%	86.0%	A	25.3%	87.3%	A	70.7%	83.3%	D
49	3	8.352	9.494	1.142	CHINA HILL ROAD	EL DORADO, UNION MINE ROAD	D	76.1%	82.9%	D	39.0%	83.3%	A	28.4%	85.3%	A	78.8%	79.1%	D
49	4	9.494	9.641	0.147	EL DORADO, UNION MINE ROAD	EL DORADO, PLEASANT VALLEY ROAD	E	84.7%	68.2%	D	49.6%	71.6%	D	36.8%	74.5%	D	88.6%	64.2%	E
49	5	9.641	11.239	1.598	EL DORADO, PLEASANT VALLEY ROAD	MISSOURI FLAT ROAD	F	97.1%	63.6%	E	62.8%	64.0%	E	53.4%	69.5%	D	94.0%	61.3%	E
49	6	11.239	11.859	0.62	MISSOURI FLAT ROAD	DIAMOND SPRINGS, PLEASANT VALLEY ROAD	F	99.2%	61.6%	E	64.1%	64.1%	E	54.3%	67.2%	D	93.2%	61.2%	E
49	7	11.859	14.463	2.604	DIAMOND SPRINGS, PLEASANT VALLEY ROAD	PLACERVILLE, FISKE ROAD	E	74.7%	77.7%	D	50.0%	79.5%	B	41.3%	81.1%	B	77.0%	75.7%	D
49	8	14.463	14.597	0.134	PLACERVILLE, FISKE ROAD	PLACERVILLE, PACIFIC/ MAIN STREETS	E	93.8%	62.7%	E	65.5%	62.8%	E	57.2%	63.8%	E	92.4%	55.6%	E
49	9	14.597	14.891	0.294	PLACERVILLE, PACIFIC/ MAIN STREETS	PLACERVILLE, JCT. RTE. 50	F	73.3%	74.2%	D	42.6%	77.9%	C	38.6%	79.3%	C	73.4%	73.9%	D
49	10	14.891	15.685	0.794	PLACERVILLE, JCT. RTE. 50	JCT. RTE. 193 NORTH	F	75.1%	76.8%	C	37.7%	75.7%	C	29.7%	78.7%	C	78.7%	67.9%	D
49	11	15.685	16.44	0.755	JCT. RTE. 193 NORTH	DIANA STREET	D	73.3%	80.5%	C	30.5%	80.1%	C	24.2%	81.6%	C	72.6%	79.6%	C
49	12	16.44	19.42	2.98	DIANA STREET	GOLD HILL ROAD	D	68.0%	81.2%	C	32.8%	81.0%	A	27.8%	82.1%	A	68.0%	79.6%	C
49	13	19.42	22.865	3.445	GOLD HILL ROAD	COLOMA, JCT. RTE. 153 WEST	D	59.3%	88.6%	C	21.9%	84.2%	A	16.4%	84.7%	A	58.6%	88.0%	C
49	14	22.865	24.48	1.615	COLOMA, JCT. RTE. 153 WEST	MARSHALL GRADE ROAD (TO GEORGETOWN)	D	74.8%	80.3%	D	36.2%	80.6%	A	28.3%	82.5%	A	73.9%	77.1%	D
49	15	24.48	28.19	3.71	MARSHALL GRADE ROAD (TO GEORGETOWN)	HASTINGS CREEK BRIDGE	D	68.5%	84.4%	C	41.4%	82.7%	B	27.1%	84.1%	A	70.0%	81.2%	C
49	16	28.19	34.466	6.276	HASTINGS CREEK BRIDGE	COOL, JCT. RTE. 193 EAST	D	65.4%	88.9%	C	32.9%	87.0%	A	24.2%	87.7%	A	66.8%	86.6%	C
49	17	34.466	38.233	3.767	COOL, JCT. RTE. 193 EAST	EL DORADO/PLACER COUNTY LINE	F	85.0%	76.2%	D	57.2%	77.7%	C	50.2%	79.7%	B	85.7%	74.9%	E
50	25	31.299	34.219	2.92	SLY PARK ROAD	OLD CARSON ROAD	E	61.1%	82.1%	C	78.0%	79.2%	D	62.1%	83.3%	C	55.8%	82.2%	C
50	27	39.772	46.592	6.82	ICEHOUSE ROAD	W O ALDER RIDGE ROAD	F	64.3%	79.4%	C	83.7%	75.4%	D	80.7%	77.7%	D	68.1%	77.0%	C
50	28	46.592	48.952	2.36	W O ALDER RIDGE ROAD	SILVER FORK ROAD	F	64.0%	79.3%	C	83.5%	75.9%	C	80.5%	77.6%	C	66.5%	77.5%	C
50	29	48.952	53.732	4.78	SILVER FORK ROAD	WRIGHTS LAKE ROAD	F	64.4%	79.2%	C	84.4%	75.6%	D	81.5%	77.3%	D	66.8%	77.2%	C
50	30	53.732	57.892	4.16	WRIGHTS LAKE ROAD	STRAWBERRY LN	F	64.2%	79.4%	C	84.1%	75.9%	D	80.7%	77.7%	D	66.4%	77.6%	C
50	31	57.892	60.192	2.3	STRAWBERRY LN	SLIPPERY FORD ROAD	F	64.1%	79.4%	C	83.9%	75.8%	D	80.5%	77.7%	D	66.3%	77.5%	C
50	32	60.192	63.522	3.33	SLIPPERY FORD ROAD	SIERRA-AT-TAHOE ROAD	F	64.3%	79.2%	C	84.3%	75.6%	D	81.5%	77.2%	D	66.8%	77.1%	C
50	33	63.522	65.619	1.83	SIERRA-AT-TAHOE ROAD	ECHO LAKE ROAD	F	63.9%	79.7%	C	83.7%	76.2%	D	80.2%	78.1%	D	66.1%	77.8%	C
153	1	0	0.12	0.12	JCT. RTE. 49	COLD SPRINGS ROAD	D	19.1%	87.6%	A	58.0%	88.3%	C	58.3%	90.6%	C	34.5%	86.5%	A
153	2	0.12	0.55	0.43	COLD SPRINGS ROAD	MARSHALL'S MONUMENT	D	27.7%	94.6%	A	27.7%	94.6%	A	27.7%	94.5%	A	27.7%	94.5%	A
193	1	0	0.856	0.856	COOL, JCT. RTE. 49	AMERICAN RIVER ROAD	D	36.7%	85.5%	A	71.6%	82.5%	D	72.4%	82.9%	D	44.7%	84.6%	B
193	2	0.856	2.169	1.313	AMERICAN RIVER ROAD	AUBURN LAKE TRAIL ROAD	D	37.8%	84.3%	A	72.0%	80.9%	D	73.5%	81.1%	D	47.6%	83.5%	B
193	3	2.169	12.19	10.021	AUBURN LAKE TRAIL ROAD	EVERGREEN COURT ROAD	D	40.8%	84.6%	B	71.3%	81.8%	D	70.0%	81.9%	C	49.5%	83.7%	B
193	4	12.19	12.699	0.509	EVERGREEN COURT ROAD	GEORGETOWN, LOWER MAIN STREET	D	35.5%	80.7%	C	70.0%	76.5%	C	70.7%	77.7%	C	43.7%	78.9%	C
193	5	12.699	16.105	3.406	GEORGETOWN, LOWER MAIN STREET	BLACK OAK MINE ROAD	D	64.0%	89.3%	C	30.2%	87.1%	A	24.3%	87.6%	A	65.5%	87.1%	C
193	6	16.105	19.4	3.295	BLACK OAK MINE ROAD	GARDEN VALLEY ROAD	D	52.6%	91.9%	B	21.8%	89.6%	A	19.4%	90.2%	A	52.5%	91.6%	B
193	7	19.4	26.95	7.55	GARDEN VALLEY ROAD	JCT. RTE. 49	D	62.0%	88.9%	C	27.8%	87.1%	A	24.1%	87.3%	A	61.2%	88.1%	C

[1] Percent of Time Spent Following - average percent of time that one must follow slower vehicles
[2] Percent of Free-Flow Speed - ability of ones to travel at or near the posted speed limit
[3] Level of service for two-lane highways is based on criteria in Chapter 15, HCM 2010

Table C-4. Amended General Plan LOS Results for Local Roadways

ID	Name	Location	Area	Type	LOS Threshold	2035 TGPA2			
						AM Volume	LOS	PM Volume	LOS
1	Bass Lake Rd	North of Country Club Dr	Rural	2AU	D	1430	D	1360	D
2	Bass Lake Rd	South of Green Valley Rd	Community Region	2AU	E	840	A-C	720	A-C
3	Bass Lake Rd	North of Serrano Pkwy	Community Region	2AU	E	1100	D	1080	D
4	Bassi Rd	West of Lotus Rd	Rural	2AU	D	120	A-C	150	A-C
5	Bedford Ave	At City Limit	Rural	2AU	D	40	A-C	50	A-C
6	Broadway	At City Limit	Community Region	2AU	E	350	A-C	420	A-C
7	Bucks Bar Rd	South Pleasant Valley Rd	Rural	2AU	D	470	A-C	470	A-C
8	Bucks Bar Rd	North of Mt Aukum Rd	Rural	2AU	D	350	A-C	370	A-C
9	Cambridge Rd	North of Country Club Dr	Exception F	2AU	F	800	A-C	980	D
10	Cambridge Rd	South of Country Club Dr	Community Region	2AU	E	780	A-C	920	D
11	Cambridge Rd	At US 50 Overcrossing	Community Region	2AU	E	1150	D	1130	D
12	Cambridge Rd	South of Green Valley Rd	Community Region	2AU	E	650	A-C	680	A-C
13	Cambridge Rd	North of Oxford Rd	Community Region	2AU	E	440	A-C	500	A-C
14	Cameron Park Dr	North of Coach Ln	Community Region	4AD	E	1830	A-C	3070	D
15	Cameron Park Dr	South of Hacienda Dr	Community Region	2AU	E	1500	D	1860	**F**
16	Cameron Park Dr	South of Green Valley Rd	Community Region	2AU	E	860	D	970	D
17	Cameron Park Dr	North of Mira Loma Dr	Community Region	2AU	E	1180	D	1480	D
18	Cameron Park Dr	South of Robin Ln	Community Region	2AU	E	910	D	1370	D
19	Cameron Park Dr	North of Robin Ln	Exception F	2AU	F	920	D	1420	D
20	Carson Rd	East of Barkley Rd	Community Region	2AU	E	220	A-C	300	A-C
21	Carson Rd	At Carson Ct	Rural	2AU	D	90	A-C	150	A-C
22	Carson Rd	West of Gatlin Rd	Rural	2AU	D	70	A-C	150	A-C
23	Carson Rd	East of Ponderosa Way	Community Region	2AU	E	160	A-C	230	A-C
24	China Garden Rd	East of Missouri Flat Rd	Community Region	2AU	E	420	A-C	580	A-C
25	China Garden Rd	North of SR 49	Community Region	2AU	E	130	A-C	130	A-C
26	Cold Springs Rd	South of Gold Hill Rd	Rural	2AU	D	220	A-C	330	A-C
27	Cold Springs Rd	South of SR 153	Rural	2AU	D	160	A-C	230	A-C
28	Country Club Dr	East of Bass Lake Rd	Rural	2AU	D	850	D	570	A-C
29	Country Club Dr	West of Knollwood Dr	Community Region	2AU	E	860	D	470	A-C
30	Country Club Dr	East of Cambridge Rd	Community Region	2AU	E	600	A-C	590	A-C
31	Country Club Dr	East of Merrychase Dr	Community Region	2AU	E	530	A-C	310	A-C
32	Country Club Dr	West of Cameron Park Dr	Community Region	2AU	E	570	A-C	790	A-C
33	Durock Rd	West of S. Shingle Rd	Community Region	2AU	E	650	A-C	870	D

ID	Name	Location	Area	Type	LOS Threshold	2035 TGPA2			
						AM Volume	LOS	PM Volume	LOS
34	El Dorado Hills Blvd	South of Wilson Blvd	Community Region	4AD	E	1990	D	1900	D
35	El Dorado Hills Blvd	North of Wilson Blvd	Community Region	4AD	E	2020	D	1860	D
36	El Dorado Hills Blvd	North of Saratoga Way	Community Region	4AD	E	2710	D	2620	D
37	El Dorado Hills Blvd	South of Francisco Dr	Community Region	2AU	E	1410	D	1340	D
38	El Dorado Hills Blvd	South of Green Valley Rd	Community Region	2AU	E	450	A-C	370	A-C
39	El Dorado Hills Blvd	North of Harvard Way	Community Region	4AD	E	1760	A-C	1580	A-C
40	El Dorado Rd	South of US 50	Community Region	2AU	E	600	A-C	660	A-C
41	El Dorado Rd	North of Pleasant Valley Rd	Community Region	2AU	E	410	A-C	440	A-C
42	El Dorado Rd	South of Missouri Flat Rd	Community Region	2AU	E	310	A-C	390	A-C
43	Enterprise Dr	East of Forni Rd	Community Region	2AU	E	290	A-C	490	A-C
44	Fairplay Rd	South of Mt Aukum Rd	Rural	2AU	D	170	A-C	190	A-C
45	Forni Rd	North of SR 49	Community Region	2AU	E	460	A-C	480	A-C
46	Forni Rd	West of Arroyo Vista Way	Community Region	2AU	E	100	A-C	170	A-C
47	Francisco Dr	South of Green Valley Rd	Community Region	2AU	E	1100	D	1260	D
48	French Creek Rd	North of Old French Town Rd	Rural	2AU	D	250	A-C	230	A-C
49	Gold Hill Rd	East of Lotus Road	Rural	2AU	D	290	A-C	180	A-C
50	Gold Hill Rd	East of Cold Springs Rd	Rural	2AU	D	80	A-C	60	A-C
51	Gold Hill Rd	West of Cold Springs Rd	Rural	2AU	D	290	A-C	180	A-C
52	Green Valley Rd	West of Sophia Pkwy	Community Region	2AU	E	2910	**F**	3400	**F**
53	Green Valley Rd	West of Weber Creek	Rural	2AU	D	370	A-C	510	A-C
54	Green Valley Rd	West of Silva Valley Rd	Community Region	2AU	E	1160	E	1380	E
55	Green Valley Rd	East of Mormon Island Dr	Community Region	4AD	E	2580	C	3540	C
56	Green Valley Rd	West of Mormon Island Dr	Community Region	4AD	E	2590	C	3540	C
57	Green Valley Rd	East of Sophia Pkwy	Community Region	4AD	E	2630	C	3580	C
58	Green Valley Rd	East of Francisco Dr	Community Region	2AU	E	1735	**F**	1715	**F**
59	Green Valley Rd	West of Bass Lake Rd	Community Region	2AU	E	1520	E	1140	E
60	Green Valley Rd	East of Bass Lake Rd	Community Region	2AU	E	1470	E	1330	D
61	Green Valley Rd	East of La Crescenta Dr	Community Region	2AU	E	1090	D	1000	E
62	Green Valley Rd	East of Deer Valley Rd	Rural	2AU	D	540	C	540	D
63	Green Valley Rd	West of Lotus Rd	Rural	2AU	D	770	D	900	D
64	Green Valley Rd	West of Greenstone Rd	Rural	2AU	D	430	A-C	480	A-C
65	Green Valley Rd	West of Missouri Flat Rd	Community Region	2AU	E	950	D	850	D
66	Green Valley Rd	West of Campus Dr	Rural	2AU	D	440	A-C	500	A-C

ID	Name	Location	Area	Type	LOS Threshold	2035 TGPA2			
						AM Volume	LOS	PM Volume	LOS
67	Greenstone Rd	North of US 50	Rural	2AU	D	320	A-C	320	A-C
68	Greenstone Rd	North of Mother Lode Dr	Community Region	2AU	E	140	A-C	180	A-C
69	Grizzly Flat Rd	East of Mt Aukum Rd	Rural	2AU	D	200	A-C	250	A-C
70	Harvard Way	East of El Dorado Hills Blvd	Community Region	4AU	E	1250	A-C	700	A-C
71	Harvard Way	West of Silva Valley Pkwy	Community Region	4AU	E	1210	A-C	960	A-C
72	Ice House Rd	North of US 50	Rural	2AU	D	40	A-C	80	A-C
73	Latrobe Rd	North of County Line	Rural	2AU	D	480	A-C	560	A-C
74	Latrobe Rd	South of Investment Blvd	Community Region	2AU	E	650	A-C	710	A-C
75	Latrobe Rd	North of Golden Foothill Pkwy South	Community Region	4AD	E	2450	D	2640	D
76	Latrobe Rd	North of Investment Blvd	Community Region	2AU	E	1180	D	1340	D
77	Latrobe Rd	North of Golden Foothill Pkwy	Community Region	4AD	E	3780	**F**	3840	**F**
78	Latrobe Rd	North of White Rock Rd	Community Region	6AD	E	3380	D	3540	D
79	Lotus Rd	South of Thompson Hill Rd	Rural	2AU	D	460	A-C	600	A-C
80	Lotus Rd	North Green Valley Rd	Rural	2AU	D	730	A-C	900	D
81	Lotus Rd	South of SR 49	Rural	2AU	D	380	A-C	520	A-C
82	Luneman Rd	West of Lotus Rd	Rural	2AU	D	380	A-C	230	A-C
83	Marshall Rd	East of SR 49	Rural	2AU	D	380	A-C	390	A-C
84	Marshall Rd	East of Garden Valley Rd	Rural	2AU	D	520	A-C	500	A-C
85	Marshall Rd	South of Lower Main St	Rural	2AU	D	80	A-C	110	A-C
86	Meder Rd	East of Cameron Park Dr	Community Region	2AU	E	850	D	1040	D
87	Meder Rd	West of Ponderosa Rd	Community Region	2AU	E	560	A-C	660	A-C
88	Missouri Flat Rd	West of El Dorado Rd	Community Region	2AU	E	990	D	850	D
89	Missouri Flat Rd	East of El Dorado Rd	Community Region	2AU	E	900	D	970	D
90	Missouri Flat Rd	South of China Garden Rd	Community Region	2AU	E	1180	D	1640	E
91	Missouri Flat Rd	North of SR 49	Community Region	2AU	E	1050	D	1310	D
92	Missouri Flat Rd	North of Forni Rd	Exception F	4AD	F	2120	D	3040	D
93	Missouri Flat Rd	South of Forni Rd	Exception F	4AD	F	1790	A-C	2200	D
94	Mormon Emigrant Trl	East of Sly Park Rd	Rural	2AU	D	80	A-C	110	A-C
95	Mosquito Rd	At City Limit	Community Region	2AU	E	410	A-C	420	A-C
96	Mosquito Rd	South of American River Bridge	Rural	2AU	D	120	A-C	150	A-C
97	Mother Lode Dr	East of French Creek Rd	Community Region	2AU	E	1090	D	1020	D
98	Mother Lode Dr	West of Sunset Ln	Community Region	2AU	E	1190	D	1290	D
99	Mother Lode Dr	West of Pleasant Valley Rd	Community Region	2AU	E	950	D	1120	D
100	Mother Lode Dr	East of Pleasant Vally Rd	Community Region	2AU	E	310	A-C	440	A-C

ID	Name	Location	Area	Type	LOS Threshold	2035 TGPA2			
						AM Volume	LOS	PM Volume	LOS
101	Mt Aukum Rd	North of County Line	Rural	2AU	D	130	A-C	160	A-C
102	Mt Aukum Rd	South of Bucks Bar Rd	Rural	2AU	D	300	A-C	360	A-C
103	Mt Aukum Rd	South of Pleasant Valley Rd	Rural	2AU	D	250	A-C	400	A-C
104	Mt Murphy Rd	North of SR 49	Rural	2AU	D	50	A-C	50	A-C
105	Mt Murphy Rd	South of Marshall Rd	Rural	2AU	D	70	A-C	120	A-C
106	N Shingle Rd	South of Green Valley Rd	Rural	2AU	D	500	A-C	540	A-C
107	Newtown Rd	North of Pioneer Hill Rd	Rural	2AU	D	290	A-C	290	A-C
108	Newtown Rd	East of Broadway Rd	Community Region	2AU	E	360	A-C	380	A-C
109	Newtown Rd	North of Pleasant Valley Rd	Rural	2AU	D	290	A-C	290	A-C
110	Old French Town Rd	South of Mother Lode Dr	Community Region	2AU	E	150	A-C	180	A-C
111	Omo Ranch Rd	East of Mt Aukum Rd	Rural	2AU	D	70	A-C	70	A-C
112	Oxford Rd	East of Salida Way	Community Region	2AU	E	550	A-C	690	A-C
113	Palmer Dr	East of Cameron Park Dr	Community Region	2AU	E	670	A-C	1200	D
114	Patterson Dr	South of Pleasant Valley Rd	Community Region	2AU	E	430	A-C	580	A-C
115	Pleasant Valley Rd	East of Mother Lode Dr	Community Region	2AU	E	820	A-C	920	D
116	Pleasant Valley Rd	East of Bucks Bar Rd	Community Region	2AU	E	550	A-C	530	A-C
117	Pleasant Valley Rd	West of Oak Hill Rd	Community Region	2AU	E	970	D	1050	D
118	Pleasant Valley Rd	East of SR 49	Community Region	2AU	E	1230	D	1410	D
119	Pleasant Valley Rd	East of Cedar Ravine Rd	Community Region	2AU	E	990	D	1000	D
120	Pleasant Valley Rd	East of Newtown Rd	Community Region	2AU	E	520	A-C	550	A-C
121	Ponderosa Rd	North of Jackpine Rd	Rural	2AU	D	160	A-C	140	A-C
122	Pony Express Trl	East of Carson Rd	Community Region	2AU	E	240	A-C	300	A-C
123	Pony Express Trl	East of Gilmore Rd	Community Region	2AU	E	300	A-C	500	A-C
124	Pony Express Trl	West of Forebay Rd	Community Region	2AU	E	310	A-C	580	A-C
125	Rock Creek Rd	East of SR 193	Rural	2AU	D	30	A-C	30	A-C
126	Salmon Falls Rd	At New York Creek Bridge	Rural	2AU	D	280	A-C	320	A-C
127	Salmon Falls Rd	South of Malcolm Dixon Rd	Community Region	2AU	E	760	A-C	700	A-C
128	Salmon Falls Rd	South of Pedro Hill Rd	Rural	2AU	D	170	A-C	160	A-C
129	Salmon Falls Rd	South of Rattlesnake Bar Rd	Rural	2AU	D	50	A-C	90	A-C
130	Serrano Pkwy	East of Silva Valley Pkwy	Community Region	4AD	E	2050	D	1370	A-C
131	Serrano Pkwy	West of Bass Lake Rd	Community Region	2AU	E	910	D	850	D

ID	Name	Location	Area	Type	LOS Threshold	2035 TGPA2			
						AM Volume	LOS	PM Volume	LOS
132	Shingle Springs Dr	South of US 50	Rural	2AU	D	1020	D	650	A-C
133	Silva Valley Pky	North of US 50	Community Region	4AD	E	2160	D	2540	D
134	Silva Valley Pky	South of Green Valley Rd	Community Region	2AU	E	770	A-C	690	A-C
135	Silva Valley Pky	North of Havard Way	Community Region	2AU	E	1210	D	1120	D
136	Silva Valley Pky	South of Serrano Pkwy	Community Region	4AD	E	1870	D	1760	A-C
137	Sly Park Rd	East of Mt Aukum Rd	Rural	2AU	D	290	A-C	320	A-C
138	Sly Park Rd	East of Mormon Emigrant Trail	Rural	2AU	D	310	A-C	410	A-C
139	Sly Park Rd	South of Pony Express Trail	Community Region	2AU	E	670	A-C	840	A-C
140	Snows Rd	North of Newtown Rd	Rural	2AU	D	100	A-C	110	A-C
141	Snows Rd	South of Carson Rd	Community Region	2AU	E	370	A-C	240	A-C
142	South Shingle Rd	East of Latrobe Rd	Rural	2AU	D	140	A-C	130	A-C
143	South Shingle Rd	North of Barnett Ranch	Rural	2AU	D	240	A-C	280	A-C
144	South Shingle Rd	South of Sunset Ln	Community Region	2AU	E	590	A-C	830	A-C
145	Starbuck Rd	North of Green Valley Rd	Community Region	2AU	E	170	A-C	210	A-C
146	Union Ridge Rd	West of Hassler Rd	Rural	2AU	D	40	A-C	50	A-C
147	Wentworth Springs Rd	West of Quintette Rd	Rural	2AU	D	50	A-C	70	A-C
148	White Rock Rd	West of Windfield Way	Community Region	2AU	E	1440	D	1900	**F**
149	White Rock Rd	At County Line	Community Region	2AU	E	1560	E	2230	**F**
150	White Rock Rd	East of Latrobe Rd	Community Region	2AU	E	1180	D	1650	**F**
151	White Rock Rd	West of Latrobe Rd	Community Region	4AD	E	1500	A-C	2110	D

ATTACHMENT D

INTERCHANGE VOLUME COMPARISON

(all segments presented from west to east)

Table D-1. Interchange Volume Comparison between the Previous and the Current Models – 2035 Amended GP

Interchange	Previous Model - GP PM Peak								Current Model - GP PM Peak							
	Ramps					Overpass			Ramps					Overpass		
	EB OFF	EB ON	WB OFF	WB ON	Tot_Ramps	NB	SB	Total Ovrpas	EB OFF	EB ON	WB OFF	WB ON	Tot_Ramps	NB	SB	Total Ovrpas
El Dorado Hills Blvd	1368	1073	1086	941	4468	2678	2262	4940	1614	782	490	1714	4600	3117	1216	4333
Silva Valley Pkwy	1252	1531	1469	694	4946	1613	1856	3469	989	689	533	428	2639	1276	688	1964
Bass Lake Rd	897	376	506	670	2449	878	427	1305	859	244	405	475	1983	834	366	1200
Cambridge Rd	892	154	152	586	1784	873	190	1063	812	84	174	650	1720	767	169	936
Cameron Park Dr	1523	454	797	1228	4002	1961	849	2810	949	747	629	1010	3335	1906	1242	3148
Ponderosa Rd	1075	640	735	874	3324	1266	826	2092	1219	348	304	887	2758	1447	700	2147
Shingle Springs Dr	222	123	111	211	667	211	111	322	228	119	143	149	639	205	143	348
Red Hawk Pkwy	326	139	52	410	927	326	139	465	140	144	99	153	536	239	297	536
Greenstone Rd	219	81	126	237	663	299	144	443	179	61	87	258	585	373	149	522
El Dorado Rd	205	342	305	187	1039	265	425	690	229	194	224	208	855	301	352	653
Missouri Flat Rd	932	931	817	996	3676	1498	1318	2816	728	731	686	564	2709	958	1160	2118
Placerville Dr (West)	875	332	222	887	2316	1061	534	1595	631	107	0	740	1478	727	79	806
Schnell School Rd	2	257	193	1	453	1061	534	1595	121	156	38	263	578	252	75	327
View Point Dr	431	88	61	282	862	306	102	408	339	18	3	211	571	232	11	243
Smith Flat Rd		9	61		70	12	30	42		46	48		94	0	48	48
Ridgeway Dr	2	0	273	214	489	0	10	10	288	16	16	157	477	293	22	315
Sly Park Rd	273	214	165	98	750	174	200	374	454	46	54	209	763	398	272	670
				Approaches to the Interchanges								Approaches to the Interchanges				
				North_NB	North_SB	South_NB	South_SB	Total Approaches				North_NB	North_SB	South_NB	South_SB	Total Approaches
Ray Lawer Dr	Not an interchange in the previous model			N/A	N/A	N/A	N/A	N/A				311	317	295	25	948
Placerville Dr (East)				496	547			1043				167	319			486
Mosquito Rd				378	272	693	676	2019				409	333	380	434	1556
Carson Rd				152	121			273				39	48			87

shows locations where TIM fee CIP project was identified
indicates where the current model is greater than the previous model

Table D-2. Interchange Volume Comparison between the Previous and the Current Models – 2035 Amended GP

Interchange	Previous Model - GP PM Peak								Current Model - GP PM Peak							
	Ramps					Overpass			Ramps					Overpass		
	EB OFF	EB ON	WB OFF	WB ON	Tot_Ramps	NB	SB	Total Ovrpas	EB OFF	EB ON	WB OFF	WB ON	Tot_Ramps	NB	SB	Total Ovrpas
El Dorado Hills Blvd	3%	0%	0%	4%	2%	4%	3%	3%	-1%	-1%	-1%	0%	0%	0%	0%	0%
Silva Valley Pkwy																
Bass Lake Rd	2%	8%	7%	4%	4%	2%	8%	3%	1%	4%	3%	3%	2%	1%	5%	2%
Cambridge Rd	3%	3%	1%	2%	2%	3%	3%	3%	3%	-1%	0%	3%	2%	2%	1%	2%
Cameron Park Dr	3%	-1%	1%	3%	2%	3%	0%	2%	2%	1%	1%	3%	2%	2%	1%	2%
Ponderosa Rd	1%	1%	2%	1%	1%	2%	2%	2%	1%	2%	1%	1%	1%	1%	2%	1%
Shingle Springs Dr	5%	3%	3%	5%	4%	5%	3%	4%	6%	3%	2%	7%	4%	5%	3%	4%
Red Hawk Pkwy									0%	0%	0%	1%	0%	0%	0%	0%
Greenstone Rd	3%	0%	2%	3%	2%	3%	1%	2%	0%	3%	1%	4%	2%	3%	3%	3%
El Dorado Rd	2%	4%	1%	4%	2%	3%	2%	2%	3%	1%	3%	2%	2%	3%	3%	3%
Missouri Flat Rd	2%	0%	0%	2%	1%	3%	2%	2%	1%	0%	0%	1%	1%	1%	0%	1%
Placerville Dr (West)	1%	-1%	-1%	0%	0%	1%	0%	1%	1%	0%	-100%	1%	0%	1%	-3%	0%
Schnell School Rd	-10%	-2%	1%		-1%		3%	7%	6%	0%	0%	1%	1%	1%	0%	1%
View Point Dr	1%	2%	3%	2%	2%	1%	4%	2%	1%	0%	2%	2%	1%	2%	1%	2%
Smith Flat Rd		-1%	7%		5%	3%	2%	3%		2%	1%		2%		1%	1%
Ridgeway Dr			1%	1%	1%		1%	1%	1%	1%	0%	1%	1%	0%	0%	0%
Sly Park Rd	3%	-1%	0%	0%	1%	0%	1%	0%	1%	1%	1%	1%	1%	1%	0%	1%
				Approaches to the Interchanges								Approaches to the Interchanges				
				North_NB	North_SB	South_NB	South_SB	Total Approaches				North_NB	North_SB	South_NB	South_SB	Total Approaches
Ray Lawer Dr	Not an interchange in the previous model			N/A	N/A	N/A	N/A	N/A								
Placerville Dr (East)																
Mosquito Rd				1%	1%	1%	1%	1%				1%	2%	1%	1%	1%
Carson Rd				0%	0%			0%				2%	4%			3%

shows locations where TIM fee CIP project was identified
indicates where the current model is greater than the previous model

ATTACHMENT E

INTERCHANGE OPERATIONAL ANALYSIS

US 50 Bass Lake Road Interchange
US 50 Missouri Flat Road Interchange
US 50 Cameron Park Drive Interchange

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
428 J Street, Suite 500, Sacramento, CA 95814 P 916.266.2190 F 916.266.2195

MEMORANDUM

Date: September 8, 2015

Project #: 17666.0

To: Claudia Wade
County of El Dorado
2850 Fairlane Court, Building C
Placerville, CA 95667

From: Chirag Safi

Project: CIP & TIM Fee Update: Western Slope

Subject: Attachment Material for Technical Memorandum 2-3: Bass Lake Road Interchange

This memorandum summarizes the existing and future deficiency analysis at the Bass Lake Road interchange with US 50, including the Mitigation Fee Act (MFA) nexus justification for the improvement concepts to be advanced as part of the Major Capital Improvement Program (CIP) & Traffic Impact Mitigation (TIM) Fee Update. The analysis includes results for both existing conditions and the County adopted Amended General Plan (GP).

ANALYSIS METHODOLOGY

The existing and future deficiency analysis at two ramp intersections was performed based on the tools, methodologies and assumptions described in the Draft Technical Memorandum 2-1: Analysis Methodology.

LEVEL OF SERVICE STANDARDS

The following criteria are established to determine whether the vehicular traffic on a roadway facility exceeds the standard operating conditions.

County Roadways

Circulation Policy TC-Xd of the El Dorado County General Plan provides level of service standards for County-maintained roads and state highways as follows:

> *Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume*

to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table.

Roadways in the community regions are evaluated against LOS E standard, while those in the rural regions and rural centers were analyzed against LOS D.

State Facilities

County's Policy TC-Xd is applicable not only to the County roadways, but also to the state facilities. As such, traffic conditions for state facilities within the unincorporated areas of the County shall not be worse than LOS E in the community regions and LOS D in the rural center and rural regions, with except to the locations specified in Table TC-2.

Bass Lake Road eastbound and westbound US 50 ramp intersections are located in the rural regions, and therefore, the analysis was performed using LOS D threshold which is consistent with Caltrans criteria in the Transportation Concept Report and Corridor System Management Plan.

EXISTING DEFICIENCY ANALYSIS

Existing AM and PM peak period turning movement counts collected in January 2014 were used to conduct existing deficiency analysis. All counts were collected on a Tuesday, Wednesday or Thursday during the week of January 26th when schools were in session. In order to better reflect existing demand, the turning movement counts at ramp intersections were balanced upwardly. Table 1 shows level of service and delays results for the existing conditions. The eastbound ramp intersection is registered to exceed the County's LOS threshold (LOS D). Appendix A provides the analysis worksheets.

Table 1. Existing (2014) Conditions Level of Service

Intersection	Control	AM		PM	
		LOS	Delay	LOS	Delay
Bass Lake Road/Westbound Ramp	SSSC	B	11.2	D	28.2
Bass Lake Road/Eastbound Ramp	SSSC	D	28.2	**E**	37.3

Note:
SSSC = Side Street Stop Control
Highlighted cells indicate that level of service exceeds County threshold
Source: Kittelson & Associates, 2015

FUTURE DEFICIENCY ANALYSIS

Cumulative conditions deficiency analysis utilizes the existing lane configuration and traffic volumes derived from County's travel demand model. As documented in Draft Technical Memorandum 2-3: Existing and Future Deficiency Analysis, the future forecasts represent the approved allocation of growth in the County's General Plan. Prior to analysis, post processing adjustments (Furness Method) were performed on the travel forecasts based on the NCHRP Report 255 to yield the future year turn movement volumes.

Table 2 shows level of service and delays results for the 2035 cumulative conditions with existing lane configuration and traffic controls. Both ramp intersections were projected to exceed County's level of service threshold during AM and/or PM peak hours. The 95th percentile vehicular queues were estimated to exceed the available storage on the off-ramps. Appendix B provides the analysis worksheets.

Table 2. Cumulative (2035) Conditions Level of Service with Existing Configuration

Intersection	Control	AM		PM	
		LOS	Delay	LOS	Delay
Bass Lake Road/Westbound Ramp	SSSC	C	15.1	**F**	92.2
Bass Lake Road/Eastbound Ramp	SSSC	**F**	1392.6	**F**	955.8

Note:
SSSC = Side Street Stop Control
Highlighted cells indicate that level of service exceeds County threshold
Source: Kittelson & Associates, 2015

The following improvements would be needed to meet the County's operational threshold:

Bass Lake Road and Westbound Ramps

- Add a traffic signal
- Install a southbound right-turn lane for the westbound on-ramp movement
- Install second northbound through lane

Bass Lake Road and Eastbound Ramps

- Add a traffic signal
- Install an eastbound left-turn lane on the off-ramp approach with 400 feet storage and provide its receiving lane

With above improvements, both ramp intersections are anticipated to operate within acceptable level of service and queues. Replacement of the US 50 bridge structure will not be required to implement these improvements.

CONCLUSION

Completion of the existing and future deficiency analysis will inform the identification of CIP projects to be funded through the updated TIM Fee program.

The westbound US 50 ramp intersection with Bass Lake Road currently operates within level of service standards. It is projected to function at LOS F in the cumulative conditions, exceeding County's threshold. Therefore, this location is eligible for the CIP project which can be funded through TIM fees.

The eastbound US 50 ramp intersection with Bass Lake Road currently operates at LOS E during the PM peak hour, exceeding County's threshold. Level of service and queues will exacerbate at this location under the cumulative conditions. Therefore, this location is eligible for the CIP project which can be funded through TIM fees.

APPENDIX A

EXISTING CONDITIONS ANALYSIS WORKSHEETS

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	3	1	114	25	232	0	0	166	749
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	86	86	86	67	67	67	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	3	1	133	37	346	0	0	180	814

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	601	601	346	180	0	0	346	0	0
Stage 1	421	421	-	-	-	-	-	-	-
Stage 2	180	180	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	463	414	697	1396	-	-	1213	-	-
Stage 1	662	589	-	-	-	-	-	-	-
Stage 2	851	750	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	448	0	697	1396	-	-	1213	-	-
Mov Cap-2 Maneuver	448	0	-	-	-	-	-	-	-
Stage 1	640	0	-	-	-	-	-	-	-
Stage 2	851	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1396	-	-	721	1213	-	-
HCM Lane V/C Ratio	0.027	-	-	0.19	-	-	-
HCM Control Delay (s)	7.7	0	-	11.2	0	-	-
HCM Lane LOS	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0	-	-

Intersection	
Int Delay, s/veh	20.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	235	0	5	0	0	0	0	22	4	162	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	92	92	92	72	72	72	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	385	0	8	0	0	0	0	31	6	184	8	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	409	412	8	8	0	0	36	0	0
Stage 1	376	376	-	-	-	-	-	-	-
Stage 2	33	36	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	599	530	1074	1612	-	-	1575	-	-
Stage 1	694	616	-	-	-	-	-	-	-
Stage 2	989	865	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	529	0	1074	1612	-	-	1575	-	-
Mov Cap-2 Maneuver	529	0	-	-	-	-	-	-	-
Stage 1	613	0	-	-	-	-	-	-	-
Stage 2	989	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.2	0	7.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1612	-	-	535	1575	-	-
HCM Lane V/C Ratio	-	-	-	0.735	0.117	-	-
HCM Control Delay (s)	0	-	-	28.2	7.6	0	-
HCM Lane LOS	A	-	-	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	6.2	0.4	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	8	0	128	11	609	0	0	87	297
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	87	87	87	94	94	94	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	9	0	147	12	648	0	0	101	345

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	772	772	648	101	0	0	648	0	0
Stage 1	671	671	-	-	-	-	-	-	-
Stage 2	101	101	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	368	330	470	1491	-	-	938	-	-
Stage 1	508	455	-	-	-	-	-	-	-
Stage 2	923	811	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	363	0	470	1491	-	-	938	-	-
Mov Cap-2 Maneuver	363	0	-	-	-	-	-	-	-
Stage 1	501	0	-	-	-	-	-	-	-
Stage 2	923	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1491	-	-	499	938	-	-
HCM Lane V/C Ratio	0.008	-	-	0.313	-	-	-
HCM Control Delay (s)	7.4	0	-	15.5	0	-	-
HCM Lane LOS	A	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0	-	-

Intersection	
Int Delay, s/veh	32.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	611	2	16	0	0	0	0	9	7	88	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	92	92	92	67	67	67	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	636	2	17	0	0	0	0	13	10	96	8	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	218	223	8	8	0	0	24	0	0
Stage 1	199	199	-	-	-	-	-	-	-
Stage 2	19	24	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	770	676	1074	1612	-	-	1591	-	-
Stage 1	835	736	-	-	-	-	-	-	-
Stage 2	1004	875	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	723	0	1074	1612	-	-	1591	-	-
Mov Cap-2 Maneuver	723	0	-	-	-	-	-	-	-
Stage 1	784	0	-	-	-	-	-	-	-
Stage 2	1004	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.3	0	6.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1612	-	-	729	1591	-	-
HCM Lane V/C Ratio	-	-	-	0.899	0.06	-	-
HCM Control Delay (s)	0	-	-	37.3	7.4	0	-
HCM Lane LOS	A	-	-	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	11.7	0.2	-	-

APPENDIX B

CUMULATIVE CONDITIONS ANALYSIS WORKSHEETS

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	32	6	142	246	463	0	0	287	750
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	86	86	86	67	67	67	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	37	7	165	367	691	0	0	312	815

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1737	1737	691	312	0	0	691	0	0
Stage 1	1425	1425	-	-	-	-	-	-	-
Stage 2	312	312	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	96	87	445	1248	-	-	904	-	-
Stage 1	222	201	-	-	-	-	-	-	-
Stage 2	742	658	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	50	0	445	1248	-	-	904	-	-
Mov Cap-2 Maneuver	50	0	-	-	-	-	-	-	-
Stage 1	116	0	-	-	-	-	-	-	-
Stage 2	742	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	3.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1248	-	-	564	904	-	-
HCM Lane V/C Ratio	0.294	-	-	0.371	-	-	-
HCM Control Delay (s)	9.1	0	-	15.1	0	-	-
HCM Lane LOS	A	A	-	C	A	-	-
HCM 95th %tile Q(veh)	1.2	-	-	1.7	0	-	-

Intersection	
Int Delay, s/veh	627.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	376	0	86	0	0	0	0	334	72	231	89	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	92	92	92	72	72	72	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	616	0	141	0	0	0	0	464	100	262	101	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1140	1190	101	101	0	0	564	0	0
Stage 1	626	626	-	-	-	-	-	-	-
Stage 2	514	564	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 222	188	954	1491	-	-	1008	-	-
Stage 1	~ 533	477	-	-	-	-	-	-	-
Stage 2	~ 600	508	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	~ 161	0	954	1491	-	-	1008	-	-
Mov Cap-2 Maneuver	~ 161	0	-	-	-	-	-	-	-
Stage 1	~ 386	0	-	-	-	-	-	-	-
Stage 2	~ 600	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 1392.6	0	7.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1491	-	-	190	1008	-	-
HCM Lane V/C Ratio	-	-	-	3.986	0.26	-	-
HCM Control Delay (s)	0	-	-	$ 1392.6	9.8	0	-
HCM Lane LOS	A	-	-	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	74.7	1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	17.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	136	0	247	83	830	0	0	234	506
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	148	0	268	90	902	0	0	254	550

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1337	1337	902	254	0	0	902	0	0
Stage 1	1083	1083	-	-	-	-	-	-	-
Stage 2	254	254	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	169	153	336	1311	-	-	754	-	-
Stage 1	325	293	-	-	-	-	-	-	-
Stage 2	788	697	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	~ 146	0	336	1311	-	-	754	-	-
Mov Cap-2 Maneuver	~ 146	0	-	-	-	-	-	-	-
Stage 1	280	0	-	-	-	-	-	-	-
Stage 2	788	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	92.2	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1311	-	-	396	754	-	-
HCM Lane V/C Ratio	0.069	-	-	1.051	-	-	-
HCM Control Delay (s)	7.9	0	-	92.2	0	-	-
HCM Lane LOS	A	A	-	F	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	13.8	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	586

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	763	2	182	0	0	0	0	152	77	176	195	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	829	2	198	0	0	0	0	165	84	191	212	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	802	844	212	212	0	0	249	0	0
Stage 1	595	595	-	-	-	-	-	-	-
Stage 2	207	249	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 353	300	828	1358	-	-	1317	-	-
Stage 1	~ 551	492	-	-	-	-	-	-	-
Stage 2	~ 828	701	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	~ 295	0	828	1358	-	-	1317	-	-
Mov Cap-2 Maneuver	~ 295	0	-	-	-	-	-	-	-
Stage 1	~ 461	0	-	-	-	-	-	-	-
Stage 2	~ 828	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 955.8	0	3.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1358	-	-	337	1317	-	-
HCM Lane V/C Ratio	-	-	-	3.054	0.145	-	-
HCM Control Delay (s)	0	-	-	$ 955.8	8.2	0	-
HCM Lane LOS	A	-	-	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	90.8	0.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	196	770	312	815
v/c Ratio	0.59	0.52	0.59	0.89
Control Delay	16.1	17.7	25.7	19.3
Queue Delay	0.1	0.1	6.5	5.0
Total Delay	16.2	17.7	32.2	24.3
Queue Length 50th (ft)	17	99	107	54
Queue Length 95th (ft)	67	m125	178	#306
Internal Link Dist (ft)	1213	242	163	
Turn Bay Length (ft)				
Base Capacity (vph)	495	1482	612	953
Starvation Cap Reductn	0	87	244	91
Spillback Cap Reductn	21	0	57	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.55	0.85	0.95

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	32	6	142	246	463	0	0	287	750
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1863	1863
Adj Flow Rate, veh/h				35	7	0	267	503	0	0	312	0
Adj No. of Lanes				0	1	0	0	2	0	0	1	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				48	10	0	699	1413	0	0	383	326
Arrive On Green				0.03	0.03	0.00	0.20	0.20	0.00	0.00	0.21	0.00
Sat Flow, veh/h				1490	298	0	1183	2483	0	0	1863	1583
Grp Volume(v), veh/h				42	0	0	407	363	0	0	312	0
Grp Sat Flow(s),veh/h/ln				1788	0	0	1804	1770	0	0	1863	1583
Q Serve(g_s), s				1.6	0.0	0.0	13.7	12.4	0.0	0.0	11.2	0.0
Cycle Q Clear(g_c), s				1.6	0.0	0.0	13.7	12.4	0.0	0.0	11.2	0.0
Prop In Lane				0.83		0.00	0.66		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				57	0	0	1066	1046	0	0	383	326
V/C Ratio(X)				0.74	0.00	0.00	0.38	0.35	0.00	0.00	0.81	0.00
Avail Cap(c_a), veh/h				409	0	0	1066	1046	0	0	612	520
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.62	0.62	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				33.6	0.0	0.0	17.1	16.5	0.0	0.0	26.5	0.0
Incr Delay (d2), s/veh				16.7	0.0	0.0	0.6	0.6	0.0	0.0	4.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				1.1	0.0	0.0	7.1	6.3	0.0	0.0	6.2	0.0
LnGrp Delay(d),s/veh				50.3	0.0	0.0	17.7	17.1	0.0	0.0	31.0	0.0
LnGrp LOS				D			B	B			C	
Approach Vol, veh/h					42			770			312	
Approach Delay, s/veh					50.3			17.4			31.0	
Approach LOS					D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		45.4				18.4		6.2
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		19.0				23.0		16.0
Max Q Clear Time (g_c+I1), s		15.7				13.2		3.6
Green Ext Time (p_c), s		1.5				1.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

Lane Group	EBL	EBT	NBT	SBT
Lane Group Flow (vph)	258	244	441	348
v/c Ratio	0.50	0.44	0.85	0.79
Control Delay	25.6	17.5	40.5	24.7
Queue Delay	0.1	0.1	0.0	0.5
Total Delay	25.7	17.5	40.5	25.2
Queue Length 50th (ft)	102	62	167	150
Queue Length 95th (ft)	177	131	#310	#253
Internal Link Dist (ft)		850	239	242
Turn Bay Length (ft)	400			
Base Capacity (vph)	516	551	556	488
Starvation Cap Reductn	0	0	0	17
Spillback Cap Reductn	14	13	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.45	0.79	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	376	0	86	0	0	0	0	334	72	231	89	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1900	1900	1863	0
Adj Flow Rate, veh/h	496	0	0				0	363	78	251	97	0
Adj No. of Lanes	2	1	0				0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1171	615	0				0	406	87	292	113	0
Arrive On Green	0.33	0.00	0.00				0.00	0.27	0.27	0.23	0.23	0.00
Sat Flow, veh/h	3548	1863	0				0	1487	319	1297	501	0
Grp Volume(v), veh/h	496	0	0				0	0	441	348	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0				0	0	1806	1798	0	0
Q Serve(g_s), s	7.6	0.0	0.0				0.0	0.0	16.4	13.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0				0.0	0.0	16.4	13.0	0.0	0.0
Prop In Lane	1.00		0.00				0.00		0.18	0.72		0.00
Lane Grp Cap(c), veh/h	1171	615	0				0	0	494	405	0	0
V/C Ratio(X)	0.42	0.00	0.00				0.00	0.00	0.89	0.86	0.00	0.00
Avail Cap(c_a), veh/h	1171	615	0				0	0	542	488	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.00	1.00	0.78	0.00	0.00
Uniform Delay (d), s/veh	18.3	0.0	0.0				0.0	0.0	24.5	26.1	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0				0.0	0.0	16.2	10.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.9	0.0	0.0				0.0	0.0	10.4	7.6	0.0	0.0
LnGrp Delay(d),s/veh	19.4	0.0	0.0				0.0	0.0	40.6	36.2	0.0	0.0
LnGrp LOS	B								D	D		
Approach Vol, veh/h		496						441			348	
Approach Delay, s/veh		19.4						40.6			36.2	
Approach LOS		B						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		23.1		27.1		19.8		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		21.0		18.0		19.0		
Max Q Clear Time (g_c+I1), s		18.4		9.6		15.0		
Green Ext Time (p_c), s		0.7		1.3		0.8		

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	416	992	254	550
v/c Ratio	0.88	0.71	0.67	0.72
Control Delay	40.4	9.1	34.5	8.7
Queue Delay	4.6	0.3	3.6	0.3
Total Delay	45.0	9.4	38.1	9.0
Queue Length 50th (ft)	120	45	98	0
Queue Length 95th (ft)	#270	57	169	79
Internal Link Dist (ft)	1213	242	163	
Turn Bay Length (ft)				
Base Capacity (vph)	499	1405	425	786
Starvation Cap Reductn	0	86	98	32
Spillback Cap Reductn	42	0	40	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.91	0.75	0.78	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	136	0	247	83	830	0	0	234	506
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1900	1900	1863	0	0	1863	1863
Adj Flow Rate, veh/h				148	0	0	90	902	0	0	254	0
Adj No. of Lanes				0	1	0	0	2	0	0	1	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				0	2	0	2	2	0	0	2	2
Cap, veh/h				195	0	0	173	1823	0	0	311	264
Arrive On Green				0.11	0.00	0.00	0.18	0.18	0.00	0.00	0.17	0.00
Sat Flow, veh/h				1774	0	0	314	3396	0	0	1863	1583
Grp Volume(v), veh/h				148	0	0	530	462	0	0	254	0
Grp Sat Flow(s),veh/h/ln				1774	0	0	1847	1770	0	0	1863	1583
Q Serve(g_s), s				5.7	0.0	0.0	18.1	16.4	0.0	0.0	9.2	0.0
Cycle Q Clear(g_c), s				5.7	0.0	0.0	18.1	16.4	0.0	0.0	9.2	0.0
Prop In Lane				1.00		0.00	0.17		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				195	0	0	1019	977	0	0	311	264
V/C Ratio(X)				0.76	0.00	0.00	0.52	0.47	0.00	0.00	0.82	0.00
Avail Cap(c_a), veh/h				431	0	0	1019	977	0	0	426	362
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.55	0.55	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.3	0.0	0.0	20.2	19.5	0.0	0.0	28.1	0.0
Incr Delay (d2), s/veh				6.0	0.0	0.0	1.0	0.9	0.0	0.0	8.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln				3.1	0.0	0.0	9.6	8.3	0.0	0.0	5.5	0.0
LnGrp Delay(d),s/veh				36.3	0.0	0.0	21.3	20.4	0.0	0.0	36.7	0.0
LnGrp LOS				D			C	C			D	
Approach Vol, veh/h					148			992			254	
Approach Delay, s/veh					36.3			20.9			36.7	
Approach LOS					D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		42.6				15.7		11.7
Change Period (Y+Rc), s		4.0				4.0		4.0
Max Green Setting (Gmax), s		25.0				16.0		17.0
Max Q Clear Time (g_c+I1), s		20.1				11.2		7.7
Green Ext Time (p_c), s		2.6				0.6		0.5

Intersection Summary		
HCM 2010 Ctrl Delay		25.4
HCM 2010 LOS		C

Lane Group	EBL	EBT	NBT	SBT
Lane Group Flow (vph)	522	507	249	403
v/c Ratio	0.81	0.78	0.69	0.86
Control Delay	32.5	28.2	32.9	35.3
Queue Delay	0.5	0.3	0.0	1.9
Total Delay	33.0	28.5	32.9	37.2
Queue Length 50th (ft)	215	186	86	174
Queue Length 95th (ft)	#398	#363	151	m#298
Internal Link Dist (ft)		850	239	242
Turn Bay Length (ft)	400			
Base Capacity (vph)	647	654	432	469
Starvation Cap Reductn	0	0	0	16
Spillback Cap Reductn	14	13	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.79	0.58	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	763	2	182	0	0	0	0	152	77	176	195	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900				0	1863	1900	1900	1863	0
Adj Flow Rate, veh/h	514	442	198				0	165	84	191	212	0
Adj No. of Lanes	1	1	0				0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	733	504	226				0	201	102	209	232	0
Arrive On Green	0.41	0.41	0.41				0.00	0.17	0.17	0.24	0.24	0.00
Sat Flow, veh/h	1774	1220	546				0	1165	593	862	957	0
Grp Volume(v), veh/h	514	0	640				0	0	249	403	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1766				0	0	1758	1820	0	0
Q Serve(g_s), s	16.8	0.0	23.4				0.0	0.0	9.6	15.1	0.0	0.0
Cycle Q Clear(g_c), s	16.8	0.0	23.4				0.0	0.0	9.6	15.1	0.0	0.0
Prop In Lane	1.00		0.31				0.00		0.34	0.47		0.00
Lane Grp Cap(c), veh/h	733	0	729				0	0	304	442	0	0
V/C Ratio(X)	0.70	0.00	0.88				0.00	0.00	0.82	0.91	0.00	0.00
Avail Cap(c_a), veh/h	733	0	729				0	0	402	442	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.00	1.00	0.69	0.00	0.00
Uniform Delay (d), s/veh	17.0	0.0	18.9				0.0	0.0	27.9	25.8	0.0	0.0
Incr Delay (d2), s/veh	5.5	0.0	14.1				0.0	0.0	9.7	17.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	9.3	0.0	14.1				0.0	0.0	5.5	9.6	0.0	0.0
LnGrp Delay(d),s/veh	22.5	0.0	33.0				0.0	0.0	37.6	43.2	0.0	0.0
LnGrp LOS	C		C						D	D		
Approach Vol, veh/h		1154						249			403	
Approach Delay, s/veh		28.3						37.6			43.2	
Approach LOS		C						D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		16.1		32.9		21.0		
Change Period (Y+Rc), s		4.0		4.0		4.0		
Max Green Setting (Gmax), s		16.0		25.0		17.0		
Max Q Clear Time (g_c+I1), s		11.6		25.4		17.1		
Green Ext Time (p_c), s		0.5		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	32.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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MEMORANDUM

Date: September 9, 2015

Project #: 17666.0

To: Claudia Wade
County of El Dorado
2850 Fairlane Court, Building C
Placerville, CA 95667

From: Chirag Safi

Project: CIP & TIM Fee Update: Western Slope

Subject: Attachment Material for Technical Memorandum 2-3: Missouri Flat Road Interchange

This memorandum summarizes the existing and future deficiency analysis at the Missouri Flat Road interchange with US 50, including the Mitigation Fee Act (MFA) nexus justification for the improvement concepts to be advanced as part of the Major Capital Improvement Program (CIP) & Traffic Impact Mitigation (TIM) Fee Update. The analysis includes results for both existing conditions and the County adopted Amended General Plan (GP).

Due to close proximity with the adjacent intersections, two additional intersections were included in analysis. As such, the following intersections were analyzed:

1. Missouri Flat Road and Plaza Drive
2. Missouri Flat Road and US 50 Westbound Ramps
3. Missouri Flat Road and US 50 Eastbound Ramps
4. Missouri Flat Road and Mother Lode Drive

ANALYSIS METHODOLOGY

The existing and future deficiency analysis at the study intersections was performed based on the tools, methodologies and assumptions described in the Draft Technical Memorandum 2-1: Analysis Methodology. SimTraffic simulation models were used to report operational results. The simulation models were calibrated to field observations for another project (Diamond Springs Parkway). The models and associated results should be considered preliminary at this point and will be further refined in the ongoing Missouri Flat Circulation and Financing Plan Phase II (MC&FP-II) study.

LEVEL OF SERVICE STANDARDS

The following criteria are established to determine whether the vehicular traffic on a roadway facility exceeds the standard operating conditions.

County Roadways

Circulation Policy TC-Xd of the El Dorado County General Plan provides level of service standards for County-maintained roads and state highways as follows:

> *Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table.*

Roadways in the community regions are evaluated against LOS E standard, while those in the rural regions and rural centers were analyzed against LOS D.

State Facilities

County's Policy TC-Xd is applicable not only to the County roadways, but also to the state facilities. As such, traffic conditions for state facilities within the unincorporated areas of the County shall not be worse than LOS E in the community regions and LOS D in the rural center and rural regions, with except to the locations specified in Table TC-2.

The four study intersections listed earlier are located in the community area, and therefore, the analysis was performed using LOS E threshold which is consistent with Caltrans criteria in the Transportation Concept Report and Corridor System Management Plan.

EXISTING DEFICIENCY ANALYSIS

Existing AM and PM peak period turning movement counts collected in May 2015 were used to conduct existing deficiency analysis. All counts were collected on a Tuesday, Wednesday or Thursday during the week of May 4th when schools were in session. In order to better reflect existing demand, the turning movement counts at ramp intersections were balanced upwardly. Table 1 shows level of service and delays results for the existing conditions. The results denote an average of ten simulation runs. Appendix A provides the analysis worksheets.

Table 1. Existing (2014) Conditions Level of Service

Intersection	Control	AM		PM	
		LOS	Delay	LOS	Delay
Missouri Flat Road/Plaza Drive	Signal	B	16.6	C	27
Missouri Flat Road/Westbound Ramps	Signal	C	23.2	C	24.3
Missouri Flat Road/Eastbound Ramps	Signal	B	19.5	C	29.3
Missouri Flat Road/Mother Lode Drive	Signal	A	8.3	B	10.8
Note: Source: Kittelson & Associates, 2015					

The study intersections operate within County's operational threshold. The 95th percentile queues on the off-ramp approaches are accommodated within the available storage.

FUTURE DEFICIENCY ANALYSIS

Cumulative conditions deficiency analysis utilizes the existing lane configuration and traffic volumes derived from County's travel demand model. As documented in Draft Technical Memorandum 2-3: Existing and Future Deficiency Analysis, the future forecasts represent the approved allocation of growth in the County's General Plan. Prior to analysis, post processing adjustments (Furness Method) were performed on the travel forecasts based on the NCHRP Report 255 to yield the future year turn movement volumes. The signal timings were optimized to better adapt to the future demand and travel patterns.

Table 2 shows level of service and delays results for the 2035 cumulative conditions with existing lane configuration and traffic controls. The results denote an average of ten simulation runs. Appendix B provides the analysis worksheets.

The study intersections were projected to operate within County's level of service threshold during AM and PM peak hours. The 95th percentile queues on the off-ramp approaches are accommodated within the available storage. However, the 95th percentile vehicular queues were estimated to exceed the available storage for a number of movements at the study intersections, including the southbound approach at Missouri Flat Road/Plaza Drive and the eastbound approach at Missouri Flat Road/Mother Lode Drive. The queues could further degrade overall operations near the interchange, potentially affecting the off-ramp approaches.

Table 2. Cumulative (2035) Conditions Level of Service with Existing Configuration

Intersection	Control	AM		PM	
		LOS	Delay	LOS	Delay
Missouri Flat Road/Plaza Drive	Signal	B	14.3	D	54.3
Missouri Flat Road/Westbound Ramps	Signal	B	14.3	C	29.9
Missouri Flat Road/Eastbound Ramps	Signal	B	12.7	C	31.6
Missouri Flat Road/Mother Lode Drive	Signal	A	8.4	C	30.9
Note: Source: Kittelson & Associates, 2015					

CONCLUSION

Completion of the existing and future deficiency analysis will inform the identification of CIP projects to be funded through the updated TIM Fee program.

None of the study intersections reported an existing deficiency. The study intersections would operate at an acceptable level of service under the cumulative conditions, meeting the County's operational standard. However, the existing non-standard spacing between the eastbound ramp and Mother Lode Drive is considered as a design deficiency. Therefore, this location is should be considered an eligible CIP project which cannot be funded through TIM fees. The County should continue to monitor these intersections and, if necessary, work with Caltrans to adjust the signal timings along the corridor to minimize delays and queues.

This interchange will be further evaluated in the MC&FP-II study with refined land use assumptions and roadway network in travel demand model and simulation models.

Appendix A. Existing Conditions Level-of-Service Worksheets

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	3.6	1.5	4.0
Total Del/Veh (s)	51.6	49.4	9.0	38.2	37.5	20.3	34.9	8.6	3.7	48.9	13.2	3.8
Vehicles Entered	7	7	81	217	22	51	98	422	288	34	293	7
Vehicles Exited	7	7	81	217	22	51	95	422	289	34	293	7
Hourly Exit Rate	7	7	81	217	22	51	95	422	289	34	293	7
Input Volume	7	7	83	228	23	50	101	419	294	34	288	7
% of Volume	97	97	98	95	96	101	94	101	98	99	102	104

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.6
Vehicles Entered	1527
Vehicles Exited	1525
Hourly Exit Rate	1525
Input Volume	1542
% of Volume	99

2: Missouri Flat Rd & US 50 WB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	1.1	0.4	1.3	0.1	0.0	0.0	0.0	0.4
Total Del/Veh (s)	38.3	26.3	7.7	44.1	6.2	24.0	2.1	23.2
Vehicles Entered	500	1	287	365	525	506	113	2297
Vehicles Exited	504	1	286	365	526	506	113	2301
Hourly Exit Rate	504	1	286	365	526	506	113	2301
Input Volume	487	1	289	368	528	511	116	2299
% of Volume	103	100	99	99	100	99	98	100

3: Missouri Flat Rd & US 50 EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.0	1.5	0.0	0.0	0.2	0.0	0.3
Total Del/Veh (s)	37.3	22.6	10.8	2.9	61.6	16.6	19.5
Vehicles Entered	123	367	762	69	162	836	2319
Vehicles Exited	123	368	763	69	163	837	2323
Hourly Exit Rate	123	368	763	69	163	837	2323
Input Volume	119	358	775	71	161	821	2305
% of Volume	103	103	98	97	101	102	101

4: Missouri Flat Rd & Mother Lode Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	3.9	0.4	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	40.3	10.1	46.1	4.3	6.4	2.1	8.3
Vehicles Entered	118	40	45	716	1125	78	2122
Vehicles Exited	118	40	45	715	1126	77	2121
Hourly Exit Rate	118	40	45	715	1126	77	2121
Input Volume	119	40	44	727	1102	75	2108
% of Volume	99	101	102	98	102	102	101

5: Missouri Flat Rd & Forni Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.7	0.7	3.7	3.8	0.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	34.7	30.2	4.3	40.6	37.1	15.5	46.3	19.5	6.5	42.2	12.5	7.4
Vehicles Entered	200	74	14	54	44	169	23	835	60	226	717	231
Vehicles Exited	200	75	14	54	44	169	22	833	61	225	715	231
Hourly Exit Rate	200	75	14	54	44	169	22	833	61	225	715	231
Input Volume	205	75	14	53	41	162	21	841	58	224	706	216
% of Volume	98	100	102	102	108	104	106	99	105	100	101	107

5: Missouri Flat Rd & Forni Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	20.3
Vehicles Entered	2647
Vehicles Exited	2643
Hourly Exit Rate	2643
Input Volume	2615
% of Volume	101

Intersection: 1: Missouri Flat Rd & Plaza Dr

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	T	R	L	T	TR
Maximum Queue (ft)	103	48	183	191	55	85	141	135	102	95	184	141
Average Queue (ft)	35	14	92	85	12	40	43	62	46	29	65	40
95th Queue (ft)	74	37	158	161	38	75	106	117	85	72	142	105
Link Distance (ft)	348	348	469	469			444	444	444		714	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					300	300				120		400
Storage Blk Time (%)										0	2	
Queuing Penalty (veh)										0	4	

Intersection: 2: Missouri Flat Rd & US 50 WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	R	L	L	T	T	T	T
Maximum Queue (ft)	292	357	137	84	189	230	272	148	262	224
Average Queue (ft)	152	201	55	37	127	151	41	46	144	102
95th Queue (ft)	256	308	103	66	202	222	149	102	231	191
Link Distance (ft)		630	630				456	456	444	444
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	400			400	140	140				
Storage Blk Time (%)		0			4	16	0			
Queuing Penalty (veh)		0			10	42	0			

Intersection: 3: Missouri Flat Rd & US 50 EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LTR	R	T	T	R	L	L	T	T
Maximum Queue (ft)	252	326	274	188	183	153	126	164	305	340
Average Queue (ft)	68	170	106	125	92	24	57	82	150	184
95th Queue (ft)	195	280	227	208	178	87	108	133	262	302
Link Distance (ft)		710		166	166				456	456
Upstream Blk Time (%)				4	1	0				
Queuing Penalty (veh)				17	5	0				
Storage Bay Dist (ft)	400		400			80	140	140		
Storage Blk Time (%)		0			9	0	0	1	7	
Queuing Penalty (veh)		0			6	0	0	3	12	

Intersection: 4: Missouri Flat Rd & Mother Lode Dr

Movement	EB	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	L	R	L	T	T	T	T
Maximum Queue (ft)	104	106	66	101	176	132	190	193
Average Queue (ft)	48	48	24	42	51	35	110	100
95th Queue (ft)	94	91	55	86	138	96	200	198
Link Distance (ft)			566		286	286	166	166
Upstream Blk Time (%)							2	2
Queuing Penalty (veh)							8	7
Storage Bay Dist (ft)	200	200		140				
Storage Blk Time (%)				0	1			
Queuing Penalty (veh)				0	0			

Intersection: 5: Missouri Flat Rd & Forni Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	T	R	L	T	T	R	L
Maximum Queue (ft)	150	166	116	63	121	134	178	89	291	337	240	301
Average Queue (ft)	44	78	48	11	45	39	71	17	134	163	27	143
95th Queue (ft)	99	141	96	42	90	94	130	60	250	290	131	251
Link Distance (ft)			704			757			480	480		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200	200		160	200		200	240			160	300
Storage Blk Time (%)	0	0	0				0		1	8		1
Queuing Penalty (veh)	0	0	0				0		0	5		4

Intersection: 5: Missouri Flat Rd & Forni Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	260	264	155
Average Queue (ft)	86	91	39
95th Queue (ft)	195	196	108
Link Distance (ft)	1991	1991	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			160
Storage Blk Time (%)	0	2	
Queuing Penalty (veh)	0	4	

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.2	0.3	0.3	0.3	0.0	0.0	0.0	3.5	1.6	3.7
Total Del/Veh (s)	47.1	54.8	24.6	38.2	38.1	25.5	32.4	17.8	6.5	54.2	33.1	21.8
Vehicles Entered	27	53	337	424	44	51	345	295	431	47	336	18
Vehicles Exited	27	54	336	423	45	51	341	295	431	47	338	18
Hourly Exit Rate	27	54	336	423	45	51	341	295	431	47	338	18
Input Volume	28	51	331	432	43	50	336	297	419	47	338	19
% of Volume	96	106	102	98	105	102	101	99	103	99	100	94

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	27.0
Vehicles Entered	2408
Vehicles Exited	2406
Hourly Exit Rate	2406
Input Volume	2392
% of Volume	101

2: Missouri Flat Rd & US 50 WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.7	2.9	0.1	0.0	0.4	0.4	0.7
Total Del/Veh (s)	33.3	8.5	40.3	10.7	32.5	3.0	24.3
Vehicles Entered	632	402	365	672	941	184	3196
Vehicles Exited	636	402	366	672	938	184	3198
Hourly Exit Rate	636	402	366	672	938	184	3198
Input Volume	636	394	366	662	942	187	3187
% of Volume	100	102	100	102	100	99	100

3: Missouri Flat Rd & US 50 EB Ramps Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	2.5	4.1	3.5	0.0	0.0	0.2	0.0	0.8
Total Del/Veh (s)	39.1	42.8	37.9	17.2	5.3	62.3	23.8	29.3
Vehicles Entered	190	3	586	838	109	370	1194	3290
Vehicles Exited	190	4	587	838	109	373	1199	3300
Hourly Exit Rate	190	4	587	838	109	373	1199	3300
Input Volume	191	4	587	830	106	376	1194	3288
% of Volume	99	100	100	101	103	99	100	100

4: Missouri Flat Rd & Mother Lode Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	3.8	0.6	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	43.2	19.2	42.7	7.9	8.6	1.7	10.8
Vehicles Entered	168	64	54	778	1574	211	2849
Vehicles Exited	170	64	54	780	1575	210	2853
Hourly Exit Rate	170	64	54	780	1575	210	2853
Input Volume	168	64	52	771	1564	216	2836
% of Volume	101	100	103	101	101	97	101

5: Missouri Flat Rd & Forni Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Denied Del/Veh (s)	3.5	1.3	3.4	3.7	0.7	3.7	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	54.8	35.8	5.1	44.3	41.9	18.2	47.5	45.9	23.4	5.8	51.5	52.3
Vehicles Entered	453	32	42	32	50	185	3	45	754	23	8	134
Vehicles Exited	455	32	42	33	51	186	3	45	753	23	8	135
Hourly Exit Rate	455	32	42	33	51	186	3	45	753	23	8	135
Input Volume	461	34	42	31	48	179	4	43	759	22	8	138
% of Volume	99	95	101	107	106	104	75	105	99	103	100	98

5: Missouri Flat Rd & Forni Rd Performance by movement

Movement	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.8
Total Del/Veh (s)	23.9	14.9	28.7
Vehicles Entered	1144	332	3237
Vehicles Exited	1140	331	3237
Hourly Exit Rate	1140	331	3237
Input Volume	1137	327	3232
% of Volume	100	101	100

Intersection: 1: Missouri Flat Rd & Plaza Dr

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	T	R	L	T	TR
Maximum Queue (ft)	302	251	282	279	173	188	108	130	151	152	253	221
Average Queue (ft)	158	76	156	146	76	107	41	67	75	42	114	85
95th Queue (ft)	260	182	244	238	143	163	89	111	125	104	226	192
Link Distance (ft)	670	670	469	469			443	443	443		713	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					300	300				120		400
Storage Blk Time (%)										0	11	0
Queuing Penalty (veh)										1	26	0

Intersection: 2: Missouri Flat Rd & US 50 WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	T	T	T	R	
Maximum Queue (ft)	307	288	150	95	189	236	328	215	434	430	86	
Average Queue (ft)	183	171	68	47	125	150	93	81	282	232	6	
95th Queue (ft)	270	258	123	80	192	216	216	170	422	388	90	
Link Distance (ft)	630	630					456	456	443	443		
Upstream Blk Time (%)							0	0	1	1	0	
Queuing Penalty (veh)							0	0	8	3	0	
Storage Bay Dist (ft)			400	400	140	140					380	
Storage Blk Time (%)					2	14	1			1		
Queuing Penalty (veh)					8	48	4			2		

Intersection: 3: Missouri Flat Rd & US 50 EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB		
Directions Served	L	LTR	R	T	T	R	L	L	T	T		
Maximum Queue (ft)	416	427	377	185	181	165	190	240	455	451		
Average Queue (ft)	153	239	192	162	117	45	132	164	250	268		
95th Queue (ft)	356	404	349	198	194	122	198	244	416	410		
Link Distance (ft)	710			166	166				456	456		
Upstream Blk Time (%)	0			15	3	0			0	0		
Queuing Penalty (veh)	0			70	12	0			3	3		
Storage Bay Dist (ft)		400	400			80	140	140				
Storage Blk Time (%)	0	2	0		17	0	9	23	20			
Queuing Penalty (veh)	1	2	0		18	1	56	137	78			

Intersection: 4: Missouri Flat Rd & Mother Lode Dr

Movement	EB	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	L	R	L	T	T	T	T
Maximum Queue (ft)	168	117	101	153	260	164	212	201
Average Queue (ft)	73	54	38	47	99	49	151	146
95th Queue (ft)	137	102	81	102	208	124	219	217
Link Distance (ft)			566		279	279	166	166
Upstream Blk Time (%)					0		8	7
Queuing Penalty (veh)					1		46	42
Storage Bay Dist (ft)	200	200		140				
Storage Blk Time (%)	0			0	4			
Queuing Penalty (veh)	0			0	2			

Intersection: 5: Missouri Flat Rd & Forni Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	L	T	R	L	T	R	UL	T	T	R	UL
Maximum Queue (ft)	286	343	189	89	82	119	174	129	303	328	135	257
Average Queue (ft)	165	200	33	25	31	42	83	36	146	168	12	106
95th Queue (ft)	282	317	123	62	70	89	143	90	266	288	85	207
Link Distance (ft)			704			758			476	476		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200	200		160	200		200	240			160	300
Storage Blk Time (%)	4	15	0				0		1	11		0
Queuing Penalty (veh)	3	12	0				0		0	2		0

Intersection: 5: Missouri Flat Rd & Forni Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	417	456	240
Average Queue (ft)	200	218	120
95th Queue (ft)	374	409	282
Link Distance (ft)	1996	1996	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			160
Storage Blk Time (%)	3	14	0
Queuing Penalty (veh)	4	47	0

Appendix B. Cumulative Conditions Level-of-Service Worksheets

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.3	0.2	0.0	0.0	0.0	3.3	1.6	3.4
Total Del/Veh (s)	33.8	40.6	8.3	41.2	46.3	26.2	37.2	7.4	3.3	41.5	9.1	3.4
Vehicles Entered	8	7	80	223	21	53	101	666	295	33	507	8
Vehicles Exited	8	7	80	223	21	53	101	666	295	33	508	8
Hourly Exit Rate	8	7	80	223	21	53	101	666	295	33	508	8
Input Volume	7	7	83	228	23	50	101	656	294	34	502	7
% of Volume	110	97	96	98	92	105	100	101	100	97	101	110

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	14.3
Vehicles Entered	2002
Vehicles Exited	2003
Hourly Exit Rate	2003
Input Volume	1992
% of Volume	101

2: Missouri Flat Rd & US 50 WB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.4	0.5	2.8	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	29.1	20.4	9.9	19.2	5.7	15.4	2.2	14.3
Vehicles Entered	494	1	343	361	721	642	183	2745
Vehicles Exited	495	1	343	359	721	642	184	2745
Hourly Exit Rate	495	1	343	359	721	642	184	2745
Input Volume	487	1	345	368	709	646	180	2737
% of Volume	102	100	99	98	102	99	102	100

3: Missouri Flat Rd & US 50 EB Ramps Performance by movement

Movement	EBL	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.2	3.4	0.0	0.0	0.1	0.0	0.6
Total Del/Veh (s)	27.4	22.0	11.0	3.2	22.0	7.0	12.7
Vehicles Entered	125	472	959	108	185	951	2800
Vehicles Exited	125	474	959	108	184	951	2801
Hourly Exit Rate	125	474	959	108	184	951	2801
Input Volume	125	469	954	105	182	946	2781
% of Volume	100	101	100	103	101	101	101

4: Missouri Flat Rd & Mother Lode Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	3.9	0.5	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	26.7	13.6	33.3	5.6	8.5	1.3	8.4
Vehicles Entered	121	65	47	1126	1346	75	2780
Vehicles Exited	122	65	48	1126	1347	75	2783
Hourly Exit Rate	122	65	48	1126	1347	75	2783
Input Volume	119	62	49	1122	1335	75	2762
% of Volume	103	105	97	100	101	100	101

Total Zone Performance

Denied Del/Veh (s)	1.7
Total Del/Veh (s)	421.7
Vehicles Entered	2618
Vehicles Exited	239
Hourly Exit Rate	239
Input Volume	10272
% of Volume	2

Intersection: 1: Missouri Flat Rd & Plaza Dr

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	T	R	L	T	TR
Maximum Queue (ft)	86	41	171	195	69	92	141	142	110	93	200	148
Average Queue (ft)	32	14	85	90	15	43	49	68	43	27	74	47
95th Queue (ft)	62	34	150	172	46	77	109	124	82	69	151	111
Link Distance (ft)	670	670	469	469			442	442	442		713	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					300	300				120		400
Storage Blk Time (%)										0	2	
Queuing Penalty (veh)										0	6	

Intersection: 2: Missouri Flat Rd & US 50 WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	R	L	L	T	T	T	T
Maximum Queue (ft)	225	218	128	115	171	192	104	101	209	174
Average Queue (ft)	129	124	64	42	85	114	32	33	110	83
95th Queue (ft)	196	195	110	84	153	168	76	82	182	151
Link Distance (ft)	1283	1283					456	456	442	442
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)			400	400	140	140				
Storage Blk Time (%)					0	2	0			
Queuing Penalty (veh)					1	6	0			

Intersection: 3: Missouri Flat Rd & US 50 EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LTR	R	T	T	R	L	L	T	T
Maximum Queue (ft)	127	253	222	197	188	164	119	131	167	201
Average Queue (ft)	57	135	94	139	131	38	51	74	36	53
95th Queue (ft)	107	220	191	210	200	116	100	115	110	140
Link Distance (ft)	1027			165	165				456	456
Upstream Blk Time (%)				4	2	0				
Queuing Penalty (veh)				20	12	0				
Storage Bay Dist (ft)		400	400			80	140	140		
Storage Blk Time (%)					13	0	0	0	0	
Queuing Penalty (veh)					14	0	0	0	1	

Intersection: 4: Missouri Flat Rd & Mother Lode Dr

Movement	EB	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	L	R	L	T	T	T	T
Maximum Queue (ft)	80	112	86	112	208	198	205	185
Average Queue (ft)	29	47	34	39	76	64	139	130
95th Queue (ft)	68	91	74	84	162	148	212	199
Link Distance (ft)			893		280	280	165	165
Upstream Blk Time (%)					0	0	4	3
Queuing Penalty (veh)					2	2	19	14
Storage Bay Dist (ft)	200	200		140				
Storage Blk Time (%)				0	1			
Queuing Penalty (veh)				0	1			

Zone Summary

Zone wide Queuing Penalty: 97

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.3	0.2	0.4	0.5	0.4	0.0	0.0	0.0	56.7	68.2	73.4
Total Del/Veh (s)	34.2	32.7	20.5	53.7	46.1	32.6	57.7	22.6	6.3	140.6	127.1	96.1
Vehicles Entered	25	50	333	424	42	55	336	614	416	44	659	18
Vehicles Exited	25	51	334	428	42	55	338	615	417	43	649	18
Hourly Exit Rate	25	51	334	428	42	55	338	615	417	43	649	18
Input Volume	28	51	331	432	43	50	336	630	419	47	689	19
% of Volume	90	100	101	99	97	109	101	98	100	91	94	96

1: Missouri Flat Rd & Plaza Dr Performance by movement

Movement	All
Denied Del/Veh (s)	16.7
Total Del/Veh (s)	54.3
Vehicles Entered	3016
Vehicles Exited	3015
Hourly Exit Rate	3015
Input Volume	3074
% of Volume	98

2: Missouri Flat Rd & US 50 WB Ramps Performance by movement

Movement	WBL	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.5	2.6	0.0	0.0	0.2	0.0	0.5
Total Del/Veh (s)	37.1	14.9	22.9	8.5	56.2	5.0	29.9
Vehicles Entered	647	460	452	908	1165	248	3880
Vehicles Exited	645	459	451	909	1161	249	3874
Hourly Exit Rate	645	459	451	909	1161	249	3874
Input Volume	643	457	462	927	1198	254	3942
% of Volume	100	100	98	98	97	98	98

3: Missouri Flat Rd & US 50 EB Ramps Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.8	4.1	3.3	0.0	0.0	0.0	0.1	0.7
Total Del/Veh (s)	26.7	44.3	31.2	22.1	5.8	45.1	38.2	31.6
Vehicles Entered	233	3	662	1127	115	422	1390	3952
Vehicles Exited	234	3	661	1127	115	421	1390	3951
Hourly Exit Rate	234	3	661	1127	115	421	1390	3951
Input Volume	241	4	653	1148	124	439	1408	4017
% of Volume	97	75	101	98	93	96	99	98

4: Missouri Flat Rd & Mother Lode Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	25.5	19.8	0.0	0.0	0.0	0.0	1.6
Total Del/Veh (s)	371.0	72.7	49.4	12.2	11.3	1.8	30.9
Vehicles Entered	165	69	62	1111	1825	221	3453
Vehicles Exited	142	66	62	1111	1824	222	3427
Hourly Exit Rate	142	66	62	1111	1824	222	3427
Input Volume	173	66	65	1110	1832	224	3469
% of Volume	82	100	95	100	100	99	99

Total Zone Performance

Denied Del/Veh (s)	15.5
Total Del/Veh (s)	2352.2
Vehicles Entered	3905
Vehicles Exited	20
Hourly Exit Rate	20
Input Volume	14502
% of Volume	0

Intersection: 1: Missouri Flat Rd & Plaza Dr

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	R	L	LTR	L	L	T	T	R	L	T	TR
Maximum Queue (ft)	263	196	374	356	222	234	224	235	153	180	733	499
Average Queue (ft)	136	60	193	174	109	129	107	123	71	96	504	362
95th Queue (ft)	221	140	339	317	198	211	187	194	120	219	887	617
Link Distance (ft)	670	670	469	469			442	442	442		713	
Upstream Blk Time (%)			1	1							30	
Queuing Penalty (veh)			0	0							0	
Storage Bay Dist (ft)					300	300				120		400
Storage Blk Time (%)					0	0	0			1	71	28
Queuing Penalty (veh)					0	0	0			5	291	106

Intersection: 2: Missouri Flat Rd & US 50 WB Ramps

Movement	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB	
Directions Served	L	LT	R	R	L	L	T	T	T	T	R	
Maximum Queue (ft)	306	301	209	178	189	223	184	142	482	490	430	
Average Queue (ft)	178	182	99	64	128	152	51	56	369	333	105	
95th Queue (ft)	271	274	171	130	199	212	121	116	561	558	410	
Link Distance (ft)	1283	1283					456	456	442	442		
Upstream Blk Time (%)									9	4	0	
Queuing Penalty (veh)									63	29	0	
Storage Bay Dist (ft)			400	400	140	140					380	
Storage Blk Time (%)					1	6	0			11	0	
Queuing Penalty (veh)					3	28	0			27	0	

Intersection: 3: Missouri Flat Rd & US 50 EB Ramps

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB	
Directions Served	L	LTR	R	T	T	R	L	L	T	T	
Maximum Queue (ft)	206	321	291	211	213	165	190	240	485	477	
Average Queue (ft)	103	213	182	174	171	60	140	192	352	354	
95th Queue (ft)	176	296	271	202	205	161	211	268	524	519	
Link Distance (ft)	1027			165	165				456	456	
Upstream Blk Time (%)				25	19	0			1	2	
Queuing Penalty (veh)				158	122	0			14	14	
Storage Bay Dist (ft)		400	400			80	140	140			
Storage Blk Time (%)					36	0	7	17	40		
Queuing Penalty (veh)					45	1	49	119	178		

Intersection: 4: Missouri Flat Rd & Mother Lode Dr

Movement	EB	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	L	R	L	T	T	T	T
Maximum Queue (ft)	288	382	665	175	276	258	198	215
Average Queue (ft)	195	240	267	56	147	139	174	177
95th Queue (ft)	345	443	799	124	244	235	187	198
Link Distance (ft)			893		280	280	165	165
Upstream Blk Time (%)			12		0	0	16	14
Queuing Penalty (veh)			0		2	1	110	98
Storage Bay Dist (ft)	200	200		140				
Storage Blk Time (%)	44	47	2	1	8			
Queuing Penalty (veh)	29	31	3	3	5			

Zone Summary

Zone wide Queuing Penalty: 1535

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MEMORANDUM

Date: March 31, 2016

Project #: 17666.0

To: Claudia Wade
County of El Dorado
2850 Fairlane Court, Building C
Placerville, CA 95667

From: Chirag Safi

Project: CIP & TIM Fee Update: Western Slope

Subject: Attachment Material for Technical Memorandum 2-3: Cameron Park Drive Interchange

This memorandum summarizes the existing deficiency analysis at the Cameron Park Drive interchange with US 50, including the Mitigation Fee Act (MFA) nexus justification for the improvement concepts to be advanced as part of the Major Capital Improvement Program (CIP) & Traffic Impact Mitigation (TIM) Fee Update.

Two intersections were included in analysis, as listed below.

1. Cameron Park Drive and Country Club Drive/US 50 Westbound Ramps
2. Cameron Park Drive and US 50 Eastbound Ramps

ANALYSIS METHODOLOGY

The existing deficiency analysis at the study intersections was performed based on the tools, methodologies and assumptions described in the Technical Memorandum 2-1: Analysis Methodology. Synchro models were used to report operational results.

LEVEL OF SERVICE STANDARDS

The following criteria are established to determine whether the vehicular traffic on a roadway facility exceeds the standard operating conditions.

County Roadways

Circulation Policy TC-Xd of the El Dorado County General Plan provides level of service standards for County-maintained roads and state highways as follows:

> *Level of Service (LOS) for County-maintained roads and state highways within the unincorporated areas of the county shall not be worse than LOS E in the Community Regions or LOS D in the Rural Centers and Rural Regions except as specified in Table TC-2. The volume to capacity ratio of the roadway segments listed in Table TC-2 shall not exceed the ratio specified in that table.*

Roadways in the community regions are evaluated against LOS E standard, while those in the rural regions and rural centers were analyzed against LOS D.

State Facilities

County's Policy TC-Xd is applicable not only to the County roadways, but also to the state facilities. As such, traffic conditions for state facilities within the unincorporated areas of the County shall not be worse than LOS E in the community regions and LOS D in the rural center and rural regions, with except to the locations specified in Table TC-2.

The two study intersections listed earlier are located in the community area, and therefore, the analysis was performed using LOS E threshold which is consistent with Caltrans criteria in the Transportation Concept Report and Corridor System Management Plan.

EXISTING DEFICIENCY ANALYSIS

Existing AM and PM peak period turning movement counts collected in March 2016 were used to conduct existing deficiency analysis. All counts were collected on Wednesday, March 3, 2016. The schools were in session and weather was dry. In order to better reflect existing demand, the turning movement counts at ramp intersections were balanced upwardly. Table 1 shows level of service and delay results for the existing conditions. Appendix A provides the analysis worksheets.

Table 1. Existing (2016) Conditions Level of Service

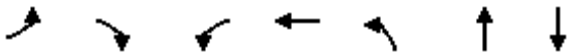
Intersection	Control	AM		PM	
		LOS	Delay	LOS	Delay
Cameron Park Drive/Country Club Drive/US 50 Westbound Ramps	Signal	C	33.5	C	25.8
Cameron Park Drive/US 50 Eastbound Ramps	Signal	B	16.2	C	27.7
Source: Kittelson & Associates, 2016					

The study intersections currently operate within the County's and Caltrans operational threshold. The 95th percentile queues on the off-ramp approaches are accommodated within the available storage.

CONCLUSION

Completion of the existing and future deficiency analysis will inform the identification of CIP projects to be funded through the updated TIM Fee program. None of the study intersections reported an existing deficiency. Therefore, this interchange is considered an eligible CIP project which can be funded through TIM fees.

Appendix A. Existing Conditions Level-of-Service Worksheets



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	52	220	205	470	61	583	1144
v/c Ratio	0.37	0.49	0.70	0.64	0.39	0.31	0.54
Control Delay	46.2	29.8	47.8	9.9	47.6	8.3	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	29.8	47.8	9.9	47.6	8.3	18.1
Queue Length 50th (ft)	29	101	111	32	37	70	135
Queue Length 95th (ft)	60	155	166	112	76	93	206
Internal Link Dist (ft)				817		107	395
Turn Bay Length (ft)	130		75				
Base Capacity (vph)	194	510	389	741	233	1907	2108
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.43	0.53	0.63	0.26	0.31	0.54

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	45	0	191	178	50	359	53	319	188	0	973	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	0	1845	1845	1845	1900	1845	1845	1900	0	1845	1900
Adj Flow Rate, veh/h	52	0	220	205	57	413	61	367	0	0	1118	26
Adj No. of Lanes	1	0	1	1	1	0	1	2	0	0	3	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	0	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	66	0	0	622	53	380	78	1955	0	0	2404	56
Arrive On Green	0.04	0.00	0.00	0.35	0.27	0.27	0.09	1.00	0.00	0.00	0.47	0.47
Sat Flow, veh/h	1757	52		1757	194	1403	1757	3597	0	0	5229	118
Grp Volume(v), veh/h	52	50.4		205	0	470	61	367	0	0	741	403
Grp Sat Flow(s),veh/h/ln	1757	D		1757	0	1597	1757	1752	0	0	1679	1824
Q Serve(g_s), s	2.6			7.7	0.0	24.4	3.1	0.0	0.0	0.0	13.4	13.4
Cycle Q Clear(g_c), s	2.6			7.7	0.0	24.4	3.1	0.0	0.0	0.0	13.4	13.4
Prop In Lane	1.00			1.00		0.88	1.00		0.00	0.00		0.06
Lane Grp Cap(c), veh/h	66			622	0	433	78	1955	0	0	1594	866
V/C Ratio(X)	0.79			0.33	0.00	1.09	0.78	0.19	0.00	0.00	0.47	0.47
Avail Cap(c_a), veh/h	195			622	0	433	234	1955	0	0	1594	866
HCM Platoon Ratio	1.00			1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.70	0.70
Uniform Delay (d), s/veh	42.9			21.2	0.0	32.8	40.6	0.0	0.0	0.0	15.9	15.9
Incr Delay (d2), s/veh	7.4			0.2	0.0	68.2	11.9	0.2	0.0	0.0	0.7	1.3
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4			3.7	0.0	18.9	1.7	0.1	0.0	0.0	6.3	7.0
LnGrp Delay(d),s/veh	50.4			21.5	0.0	101.0	52.5	0.2	0.0	0.0	16.6	17.2
LnGrp LOS	D			C		F	D	A			B	B
Approach Vol, veh/h					675			428			1144	
Approach Delay, s/veh					76.9			7.7			16.8	
Approach LOS					E			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		54.6	35.4		7.5	47.1	6.9	28.5
Change Period (Y+Rc), s		* 4.4	3.5		3.5	4.4	3.5	4.1
Max Green Setting (Gmax), s		* 44	20.0		12.0	28.1	10.0	24.4
Max Q Clear Time (g_c+I1), s		2.0	9.7		5.1	15.4	4.6	26.4
Green Ext Time (p_c), s		8.7	0.3		0.0	5.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

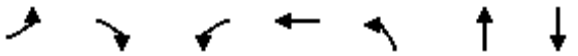
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	199	229	403	168	427	615
v/c Ratio	0.59	0.76	0.22	0.19	0.75	0.25
Control Delay	39.4	49.9	13.9	4.6	49.6	2.5
Queue Delay	0.0	0.0	0.3	0.3	0.0	0.0
Total Delay	39.4	49.9	14.2	5.0	49.6	2.5
Queue Length 50th (ft)	104	124	64	0	126	30
Queue Length 95th (ft)	155	183	120	38	176	38
Internal Link Dist (ft)	664		196			285
Turn Bay Length (ft)					250	
Base Capacity (vph)	545	487	1793	884	659	2496
Starvation Cap Reductn	0	0	806	357	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.47	0.41	0.32	0.65	0.25

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	185	0	213	0	0	0	0	375	156	397	572	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845				0	1845	1845	1845	1845	0
Adj Flow Rate, veh/h	199	0	229				0	403	168	427	615	0
Adj No. of Lanes	0	1	1				0	2	1	2	2	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	302	0	269				0	1945	870	492	2568	0
Arrive On Green	0.17	0.00	0.17				0.00	1.00	1.00	0.29	1.00	0.00
Sat Flow, veh/h	1757	0	1568				0	3597	1568	3408	3597	0
Grp Volume(v), veh/h	199	0	229				0	403	168	427	615	0
Grp Sat Flow(s),veh/h/ln	1757	0	1568				0	1752	1568	1704	1752	0
Q Serve(g_s), s	9.5	0.0	12.7				0.0	0.0	0.0	10.7	0.0	0.0
Cycle Q Clear(g_c), s	9.5	0.0	12.7				0.0	0.0	0.0	10.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	302	0	269				0	1945	870	492	2568	0
V/C Ratio(X)	0.66	0.00	0.85				0.00	0.21	0.19	0.87	0.24	0.00
Avail Cap(c_a), veh/h	547	0	488				0	1945	870	644	2568	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.99	0.99	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.8	0.0	36.1				0.0	0.0	0.0	31.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	2.9				0.0	0.2	0.5	8.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	5.8				0.0	0.1	0.1	5.5	0.1	0.0
LnGrp Delay(d),s/veh	35.7	0.0	39.0				0.0	0.2	0.5	39.3	0.2	0.0
LnGrp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		428						571			1042	
Approach Delay, s/veh		37.5						0.3			16.2	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.0	54.5		19.5		70.5		
Change Period (Y+Rc), s	3.0	4.6		4.0		4.6		
Max Green Setting (Gmax), s	17.0	33.4		28.0		53.4		
Max Q Clear Time (g_c+I1), s	12.7	2.0		14.7		2.0		
Green Ext Time (p_c), s	0.3	5.6		0.7		5.8		

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B



Lane Group	EBL	EBR	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	78	155	218	453	175	1208	1203
v/c Ratio	0.55	0.28	0.72	0.83	0.73	0.66	0.67
Control Delay	57.8	22.5	52.0	36.0	62.8	15.6	32.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	22.5	52.0	36.0	62.8	15.6	32.7
Queue Length 50th (ft)	48	67	133	200	120	198	242
Queue Length 95th (ft)	95	106	197	283	m175	271	#409
Internal Link Dist (ft)				817		107	395
Turn Bay Length (ft)	130		75				
Base Capacity (vph)	175	578	525	681	270	1824	1794
Starvation Cap Reductn	0	0	0	0	0	35	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.27	0.42	0.67	0.65	0.68	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	75	0	149	209	54	381	168	855	304	0	1107	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	0	1845	1845	1845	1900	1845	1845	1900	0	1845	1900
Adj Flow Rate, veh/h	78	0	155	218	56	397	175	891	0	0	1153	50
Adj No. of Lanes	1	0	1	1	1	0	1	2	0	0	3	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	0	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	112	0	0	732	62	437	203	1768	0	0	1751	76
Arrive On Green	0.06	0.00	0.00	0.42	0.31	0.31	0.23	1.00	0.00	0.00	0.35	0.35
Sat Flow, veh/h	1757	78		1757	197	1400	1757	3597	0	0	5116	215
Grp Volume(v), veh/h	78	48.8		218	0	453	175	891	0	0	782	421
Grp Sat Flow(s),veh/h/ln	1757	D		1757	0	1598	1757	1752	0	0	1679	1807
Q Serve(g_s), s	4.4			8.3	0.0	27.2	9.6	0.0	0.0	0.0	19.6	19.6
Cycle Q Clear(g_c), s	4.4			8.3	0.0	27.2	9.6	0.0	0.0	0.0	19.6	19.6
Prop In Lane	1.00			1.00		0.88	1.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	112			732	0	498	203	1768	0	0	1188	639
V/C Ratio(X)	0.70			0.30	0.00	0.91	0.86	0.50	0.00	0.00	0.66	0.66
Avail Cap(c_a), veh/h	176			732	0	597	264	1768	0	0	1188	639
HCM Platoon Ratio	1.00			1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.91	0.91
Uniform Delay (d), s/veh	45.9			19.4	0.0	33.1	37.6	0.0	0.0	0.0	27.2	27.2
Incr Delay (d2), s/veh	2.9			0.2	0.0	16.1	18.4	1.0	0.0	0.0	2.6	4.8
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2			4.0	0.0	14.2	5.6	0.3	0.0	0.0	9.6	10.7
LnGrp Delay(d),s/veh	48.8			19.6	0.0	49.2	56.0	1.0	0.0	0.0	29.8	32.0
LnGrp LOS	D			B		D	E	A			C	C
Approach Vol, veh/h					671			1066			1203	
Approach Delay, s/veh					39.6			10.1			30.6	
Approach LOS					D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		54.9	45.1		15.1	39.8	9.9	35.3
Change Period (Y+Rc), s		* 4.4	3.5		3.5	4.4	3.5	4.1
Max Green Setting (Gmax), s		* 41	30.0		15.0	22.1	10.0	37.4
Max Q Clear Time (g_c+I1), s		2.0	10.3		11.6	21.6	6.4	29.2
Green Ext Time (p_c), s		14.3	0.4		0.1	0.4	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	435	403	919	362	405	807
v/c Ratio	0.90	0.93	0.57	0.39	0.81	0.36
Control Delay	58.0	65.5	22.0	3.3	61.9	7.4
Queue Delay	0.0	0.0	25.6	1.0	0.0	0.0
Total Delay	58.0	65.5	47.6	4.3	61.9	7.4
Queue Length 50th (ft)	261	245	229	0	143	73
Queue Length 95th (ft)	#431	#418	295	51	#193	107
Internal Link Dist (ft)	664		196			285
Turn Bay Length (ft)					250	
Base Capacity (vph)	508	454	1619	919	544	2237
Starvation Cap Reductn	0	0	730	317	0	0
Spillback Cap Reductn	0	0	19	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.89	1.03	0.60	0.74	0.36

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	426	0	395	0	0	0	0	901	355	397	791	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845				0	1845	1845	1845	1845	0
Adj Flow Rate, veh/h	435	0	403				0	919	362	405	807	0
Adj No. of Lanes	0	1	1				0	2	1	2	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3				0	3	3	3	3	0
Cap, veh/h	485	0	432				0	1657	741	462	2237	0
Arrive On Green	0.28	0.00	0.28				0.00	0.47	0.47	0.27	1.00	0.00
Sat Flow, veh/h	1757	0	1568				0	3597	1568	3408	3597	0
Grp Volume(v), veh/h	435	0	403				0	919	362	405	807	0
Grp Sat Flow(s),veh/h/ln	1757	0	1568				0	1752	1568	1704	1752	0
Q Serve(g_s), s	23.8	0.0	25.1				0.0	18.7	15.8	11.4	0.0	0.0
Cycle Q Clear(g_c), s	23.8	0.0	25.1				0.0	18.7	15.8	11.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	485	0	432				0	1657	741	462	2237	0
V/C Ratio(X)	0.90	0.00	0.93				0.00	0.55	0.49	0.88	0.36	0.00
Avail Cap(c_a), veh/h	509	0	455				0	1657	741	545	2237	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.87	0.87	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.9	0.0	35.3				0.0	18.8	18.1	35.7	0.0	0.0
Incr Delay (d2), s/veh	17.3	0.0	24.8				0.0	1.2	2.0	12.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	13.8				0.0	9.3	7.2	6.1	0.1	0.0
LnGrp Delay(d),s/veh	52.2	0.0	60.1				0.0	20.0	20.1	47.7	0.5	0.0
LnGrp LOS	D		E					C	C	D	A	
Approach Vol, veh/h		838						1281			1212	
Approach Delay, s/veh		56.0						20.0			16.2	
Approach LOS		E						C			B	

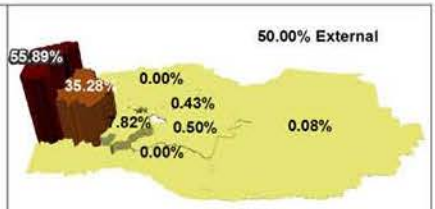
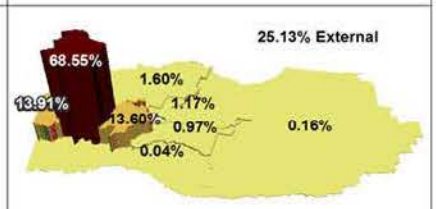
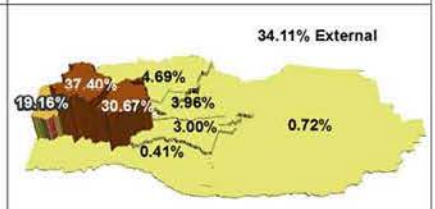
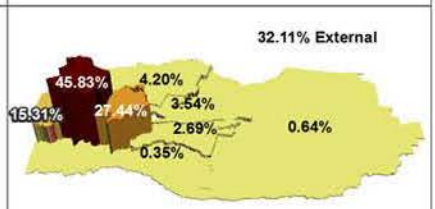
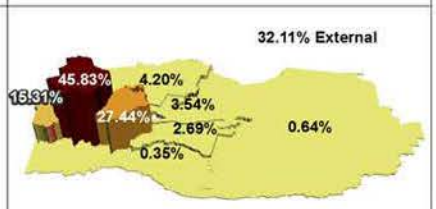
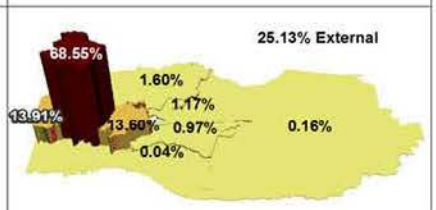
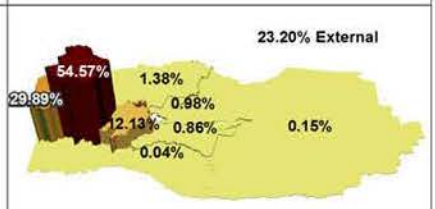
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	16.5	51.9		31.6		68.4		
Change Period (Y+Rc), s	3.0	4.6		4.0		4.6		
Max Green Setting (Gmax), s	16.0	43.4		29.0		62.4		
Max Q Clear Time (g_c+I1), s	13.4	20.7		27.1		2.0		
Green Ext Time (p_c), s	0.2	10.4		0.5		13.6		

Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

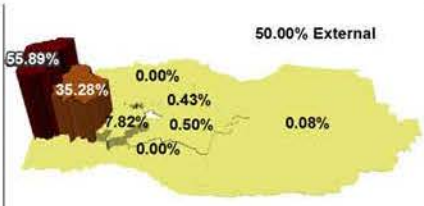
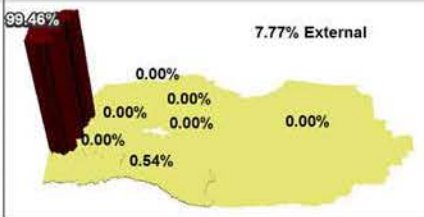
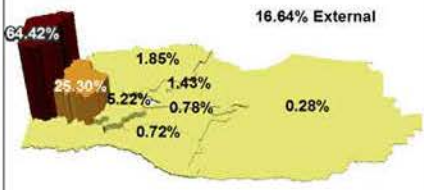
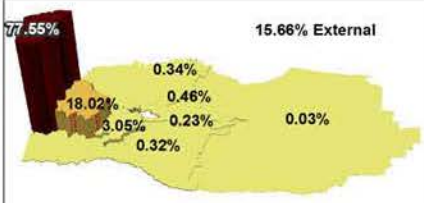
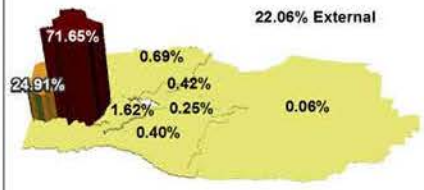
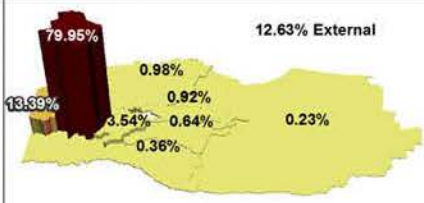
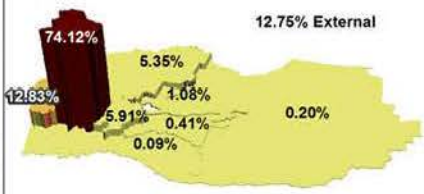
ATTACHMENT F

GRAPHICS FOR FAIR SHARE ANALYSIS RESULTS

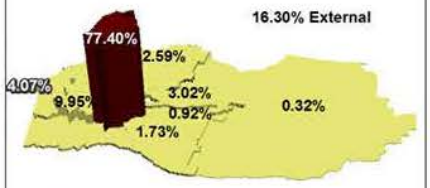
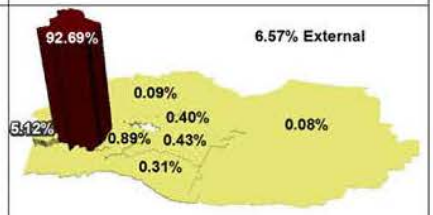
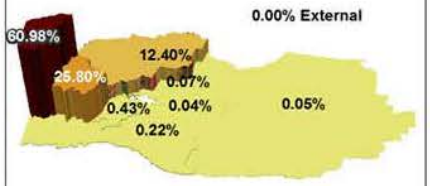
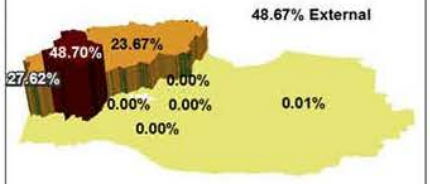
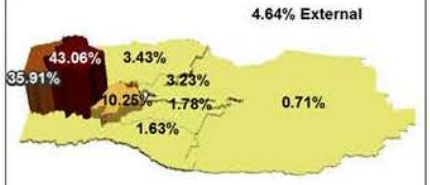
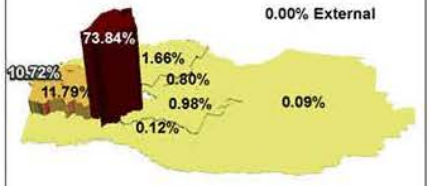
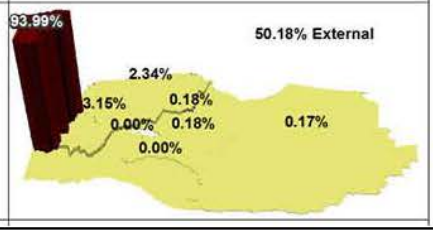
Capital Improvement Program Projects Funding Allocation by Zone Geography

A-1	**US 50 Auxiliary Lane** **Eastbound from Sacramento County to El Dorado Hills Boulevard**		
A-2	**US 50 Auxiliary Lane** **Eastbound from Bass Lake Road to Cambridge Road**		
A-3	**US 50 Auxiliary Lane** **Eastbound from Cambridge Road to Cameron Park Drive**		
A-4	**US 50 Auxiliary Lane** **Eastbound from Cameron Park Drive to Ponderosa Road**		
A-5	**US 50 Auxiliary Lane** **Westbound from Ponderosa Road to Cameron Park Drive**		
A-6	**US 50 Auxiliary Lane** **Westbound from Cambridge Road to Bass Lake Road**		
A-7	**US 50 Auxiliary Lane** **Westbound from Cambridge Road to Bass Lake Road**		

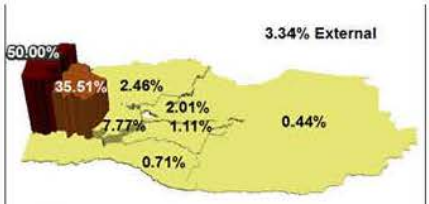
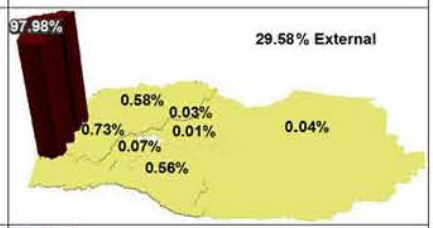
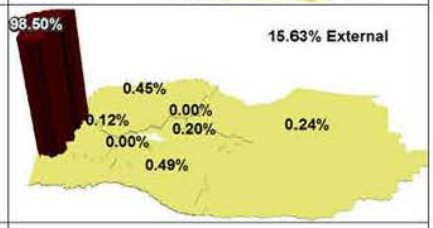
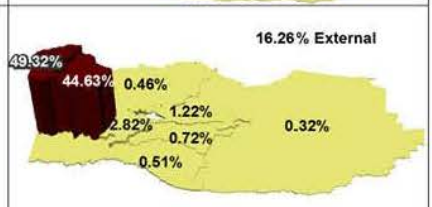
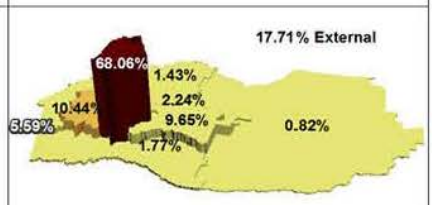
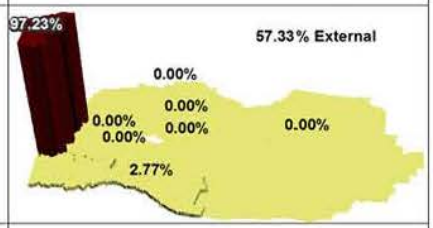
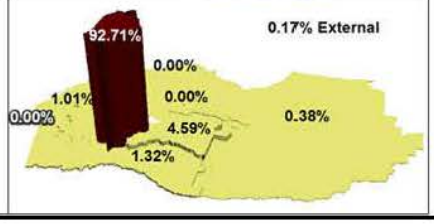
Capital Improvement Program Projects Funding Allocation by Zone Geography

A-8	**US 50 Auxiliary Lane** **Westbound from El Dorado Hills Boulevard to Sacramento County**		
I-1	**US 50 Interchange Improvement** **Cameron Park Drive**		
I-2	**US 50 Interchange Improvement** **El Dorado Hills Boulevard**		
I-3	**US 50 Interchange Improvement** **El Dorado Road**		
I-4	**US 50 Interchange Improvement** **Ponderosa Road**		
I-5	**US 50 Interchange Improvement** **Bass Lake Road**		
I-6	**US 50 Interchange Improvement** **Cambridge Road**		

Capital Improvement Program Projects Funding Allocation by Zone Geography

I-7	**US 50 Interchange Improvement** **Silva Valley Parkway (Phase II)**		
R-1	**Roadway Improvements** **Cameron Park Drive from Palmer Drive to Hacienda Road**		
R-2	**Roadway Improvements** **Green Valley Road from Sacramento County to Sophia Parkway**		
R-3	**Roadway Improvements** **Green Valley Road from Francisco Drive to Silva Valley Parkway**		
R-4	**Roadway Improvements** **Green Valley Road from Deer Valley Road to Lotus Road**		
R-5	**Roadway Improvements** **White Rock Road from Post Street to Silva Valley Road**		
R-6	**Roadway Improvements** **Saratoga Way from Sacramento County to El Dorado Hills Boulevard**		

Capital Improvement Program Projects Funding Allocation by Zone Geography

R-7	**Roadway Improvements** **Country Club Drive from El Dorado Hills Boulevard to Silva Valley Parkway**		
R-8	**Roadway Improvements** **Country Club Drive from Silva Valley Parkway to Tong Road**		
R-9	**Roadway Improvements** **Country Club Drive from Tong Road to Bass Lake Road**		
R-10	**Roadway Improvements** **Country Club Drive from Bass Lake Road to Tierra de Dios Drive**		
R-11	**Roadway Improvements** **Diamond Springs Parkway from Missouri Flat Road to SR 49**		
R-12	**Roadway Improvements** **Latrobe Road Extension from Sacramento County to Golden Foothill Parkway**		
R-13	**Roadway Improvements** **Headington Road Extension from El Dorado Road Missouri Flat Road**		

Appendix D

Mitigation Monitoring & Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment. The mitigation monitoring and reporting program is designed to ensure compliance with adopted mitigation measures during project implementation. For each mitigation measure recommended in the Environmental Impact Report, specifications are made herein that identify the action required and the monitoring that must occur. In addition, a responsible agency is identified for verifying compliance with individual conditions of approval contained in the Mitigation Monitoring and Reporting Program (MMRP).

Agencies considering approval of future projects under the Western Slope Roadway Capital Improvement Program (CIP) and Traffic Impact Mitigation (TIM) Fee program would utilize the EIR as a basis in determining potential mitigation measures for subsequent activities. The agencies responsible for implementing the mitigation measures, described as "the individual project lead agency" in the EIR, will be the lead agency for the individual future projects under the CIP and TIM Fee Program Update. The project lead agency for individual projects will involve El Dorado County, California Department of Transportation, or a public transit agency. The individual project lead agency, which will be the lead agency for individual future projects under the CIP and TIM Fee Program Update, will be responsible to monitor the mitigation measures that are required to be implemented for the project.

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
AESTHETICS							
AES-1(a) Where a particular transportation improvement project under the CIP and TIM Fee Program Update affects adjacent landforms, the project sponsor shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade.	Place conditions of approval on the project to ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade.	During individual environmental review	Once	The County or project sponsor			
AES-1(b) Where a particular transportation improvement project under the CIP and TIM Fee Program Update removes existing vegetation and/or trees, when feasible the project sponsor shall ensure that landscaping is installed to restore natural features along corridors after widening, interchange modifications, realignment, or construction of ancillary facilities. Associated landscape materials and design shall enhance landform variation, provide erosion control, and blend with the natural setting.	Place conditions of approval on the project to ensure that associated landscape materials enhance landform variation, provide erosion control and blend with the natural setting.	During individual environmental review	Once	The County or project sponsor			
AES-1(c) The project sponsor shall ensure that a project in a scenic view corridor will have the minimum possible impact, consistent with project goals, upon foliage, existing landscape architecture and natural scenic views.	Place conditions of approval on the project to ensure that minimizes impact upon foliage, existing landscape architecture and natural scenic views, consistent with project goals.	During individual environmental review	Once	The County or project sponsor			
AES-1(d) For projects in visually sensitive areas, the project sponsor shall apply development standards and guidelines from the most current General Plan and County ordinances to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, and site grading.	Place conditions of approval on the project to ensure compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, and site grading.	During individual environmental review	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
AES-2(a) When feasible, roadway extensions and widenings shall avoid the removal of existing mature trees to the extent possible. The loss of trees that are protected by local agencies shall be replaced consistent with development standards and guidelines from the current (at the time of project approval) General Plan and County ordinances and incorporated into the landscaping design for the roadway.	Development plans shall avoid the removal of existing mature trees to the extent possible; replace trees consistent with development standards and guidelines; incorporate new trees into landscaping design.	During individual environmental review for roadway extensions and widening	Once during plan review; periodically during construction	The County or project sponsor			
AES-2(b) Roadway lighting shall be minimized to the extent possible, and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of hoods, low intensity lighting, and using as few lights as necessary to achieve the goals of the project.	Development plans shall minimize lighting and not exceed local minimum height requirements.	During individual design review	Once	The County or project sponsor			
AES-2(c) Bus shelters and other ancillary facilities constructed as part of roadway improvements under the CIP and TIM Fee Program Update shall be designed in accordance with the County's architectural review requirements and per standards in accordance to the El Dorado County Transit Authority (EDCTA) that are in place at the time of project approval. Such facilities shall incorporate colors and wood materials complementary to the natural surroundings.	Develop plans for bus shelters and other ancillary facilities shall be consistent with architectural review requirements of the County.	During plan check	Once	The County or project sponsor			
AIR QUALITY							
AQ-1 (a) Require the prime contractor to provide an approved plan demonstrating that heavy-duty (i.e., greater than 50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve, at a minimum, a fleet-averaged 20% NO_x reduction compared to the most	The individual project contractor shall ensure that a minimum fleet-average 20% NO_X reduction compared to the most recent ARB fleet average; submit comprehensive	Prior to construction; periodically during construction	Once during plan review; periodically during construction	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
recent Air Resource Board (ARB) fleet average. Successful implementation of this measure requires the prime contractor to submit a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. Usually the inventory includes the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. In addition, the inventory list is updated and submitted monthly throughout the duration of when the construction activity occurs	inventory of all off-road construction equipment equal to or greater than 50 horsepower.						
AQ-1(b) Stipulate that the prime contractor ensure emissions from all off-road diesel powered equipment used on the project site do not exceed the requirements of the current (at the time of project approval) EDCAQMD Rule 202. As an enforcement component of the measure, the prime contractor is required to agree to a visual survey of all in-operation equipment conducted on a periodic basis. In addition, a summary of the visual results is submitted throughout the duration of the construction activity. Usually, the summary includes the quantity and type of vehicles surveyed as well as the dates of each survey. EDCAQMD and other qualified officials may conduct periodic site inspections to determine compliance. In the case where any equipment found exceeds the opacity requirement, it would require immediate repair and notification of noncompliant equipment to EDCAQMD.	The prime contractor shall ensure emissions from all off-road diesel powered equipment used on the project site do not exceed the requirements of the current (at the time of project approval) EDCAQMD Rule 202; submit summary of visual resources.	Prior to construction; periodically during construction.	Once during plan review; periodically during construction	The County or project sponsor			
AQ-1(c) Idling times will be minimized by shutting off equipment when it is not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13,	Minimize idling of construction equipment and provide clear signage.	During project construction.	During project construction.	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.							
AQ-1(d) All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.	Construction equipment shall be maintained in accordance with manufacturer's specifications.	Prior to construction; periodically during construction.	Once during plan review; periodically during construction	The County or project sponsor			
BIOLOGICAL RESOURCES							
B-1(a) Biological Resources Screening and Assessment. Prior to final design approval of individual projects, the sponsor agency shall have a qualified biologist conduct a field reconnaissance of the environmental limits of the project in an effort to identify any biological constraints for the project, including special status plants, animals, and their habitats, as well as protected natural communities including wetland and terrestrial communities. If the biologist identifies protected biological resources within the limits of the project, the sponsor agency shall first prepare alternative designs that seek to avoid and/or minimize impacts to the biological resources. If the project cannot be designed without complete avoidance, the sponsor agency shall coordinate with the appropriate regulatory agency (i.e. USFWS, NMFS, CDFW, USACE) to obtain regulatory permits and implement project - specific mitigation prior to any construction activities. If restoration is necessary to mitigate impacts, sensitive plants and habitat, impacts should be mitigated at a minimum ratio of 1:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration and a	Projects shall conduct a preliminary biological field reconnaissance; if determined the project has potential to impact biological resources a biological resources assessment shall be prepared.	Prior to construction, during individual environmental review.	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
restoration plan shall be prepared and submitted to the jurisdiction overseeing the project for approval.							
B-1(b) Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA (under Mitigation Measure B-1(a)), measures shall be selected from among the following to reduce the potential for impacts to non-listed special status animal species that may be discovered during construction activity: • For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction and if species are collected, relocation of the species to suitable site shall be completed. • Pre-construction clearance surveys shall be conducted prior to start of construction (including staging and mobilization). If necessary, all non-listed special-status species shall be relocated from the site either through direct capture or through passive exclusion (e.g., American badger). A report of the pre-construction survey shall be submitted to the lead agency for their review and approval prior to the start of construction. • A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal to recover special status animal species unearthed by construction activities. • Upon completion of the project, a	If applicable, surveys and mitigation for special status plants shall be completed.	During individual environmental review	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.							
B-2(a) Jurisdictional Delineation. Prior to approval of individual projects, the sponsor agency shall retain a qualified biologist to perform an assessment of the project area to identify wetlands, riparian, and other sensitive aquatic environments. If wetlands are present the qualified biologist shall perform a wetland delineation following the 1987 Army Corps of Engineers Wetlands Delineation Manual and any current and applicable regional supplements to the Delineation Manual. The wetland delineation shall be submitted to the USACE for verification.	The project sponsor shall complete a jurisdictional delineation.	During individual environmental review	Once	The County or project sponsor			
B-2(b) Wetlands, Riparian, or Other Sensitive Aquatic Environments. If wetlands, riparian, or other sensitive aquatic environments are found within the project limits, the sponsor agency shall design or modify the project to avoid direct and indirect impacts on these habitats, if feasible. Additionally, the sponsor agency shall minimize the loss of riparian vegetation by trimming rather than removal where feasible. Techniques to avoid impacts to environmentally sensitive areas should include the use of orange construction barrier fencing and temporary fencing to identify environmentally sensitive areas and stabilizing exposed soils/slopes after construction activity with erosion control treatments.	If applicable, project plans shall include avoid impacts to sensitive aquatic habitats.	During individual environmental review	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
B-2(c) Restoration of Habitat. If wetlands or riparian habitat are disturbed as part of an individual project, the sponsor agency shall compensate for the disturbance to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site - specific information and determined through coordination with state, federal, and local agencies as part of the permitting process for the project. The sponsor agency shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created and monitored over a minimum period of time.	If applicable, the project sponsor shall compensate for loss of sensitive aquatic habitat.	During individual environmental review	Once	The County or project sponsor			
B-3 Design Measures. Prior to design approval of individual projects that contain movement habitat such as the use of long segments of fencing and lighting, the sponsor agency shall incorporate economically viable design measures, as applicable and necessary and as determined by a qualified biologist, to allow wildlife or fish to move through the transportation corridor, both during construction activities and post construction. Such measures may include appropriately spaced breaks in a center barrier, the use of hoods to direct light away from natural habitat, using low intensity lighting, or other measures that are designed to allow wildlife to move through the transportation corridor. If the project cannot be designed with these design measures (i.e. due to traffic safety, etc.) the sponsor agency shall coordinate with the appropriate regulatory agency (i.e. USFWS, NMFS, CDFW) to obtain regulatory permits and implement alternative project-specific mitigation prior to any construction activities.	If applicable, project plans shall include economically feasible design measures to allow for wildlife movement.	During individual environmental review	Once	The County or project sponsor			
CULTURAL RESOURCES							

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
CR-1(a) Improvement projects involving earth disturbance, the installation of pole signage or lighting, or construction of permanent above ground structures or roadways shall ensure that the following elements are included in the project's individual environmental review: 1. Prior to construction, a map defining the project site shall be prepared on a project by project basis for improvements which involve earth disturbance, the installation of pole signage or lighting, or construction of permanent above ground structures. This map will indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known archaeological, paleontological or historical resources are located within the impact zone. 2. A preliminary study of each project area, as defined in the Area of Potential Effects (APE), shall be completed to determine whether or not the project area has been studied under an earlier investigation, and to determine the impacts of the previous project. 3. If the results of the preliminary studies indicate additional studies are necessary; development of field studies and/or other documentary	Project plans shall include required components to limit impacts to cultural resources.	During individual environmental review	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
research shall be developed and completed (Phase I studies). Negative results would result in no additional studies for the project area. 4. Based on positive results of the Phase I studies, an evaluation of identified resources shall be completed to determine the potential eligibility/ significance of the resources (Phase II studies). Based on the evaluations of the Phase II studies, if necessary Phase II mitigation studies shall be coordinated with the Office of Historic Preservation (OHP), as the research design will require review and approval from the OHP. In the case of prehistoric or Native American related resources, the Native American Heritage Commission and/or local representatives of the Native American population shall be contacted and permitted to respond to the testing/mitigation programs.							
CR-1(b) If development of the proposed improvement requires the presence of an archaeological, Native American, or paleontological monitor, the County shall ensure that a Native American monitor, certified archaeologist, and/or certified paleontologist, as applicable, has an opportunity to monitor the grading and/or other initial ground altering activities. The schedule and extent of the monitoring will depend on the grading schedule and/or extent of the ground alterations. This requirement can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review.	Place conditions of approval on the project to ensure that a Native American monitor or certified archaeologist/ paleontologist monitors the grading and/or other ground altering activities if required.	Apply conditions during individual project permitting; monitoring will depend on the schedule and extent of the monitoring will depend on the grading schedule and/or extent of the ground alterations.	Once during individual environmental review; monitor as needed during construction	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
CR-1(c) The project sponsor shall ensure that materials recovered over the course of any given improvement are adequately cleaned, labeled, and curated at a recognized repository. This requirement can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review.	Place conditions of approval on project to ensure that materials recovered are adequately cleaned, labeled, and curated at a recognized repository.	During individual project permitting	Once	The County or project sponsor			
CR-1(d) The project sponsor shall ensure that mitigation for potential impacts to significant cultural resources includes one or more of the following: • Realign the project right-of-way (avoidance; the most preferable method). • Cap the site and leave it undisturbed. • Address structural remains with respect to the most current (at the time of project approval) National Register of Historic Places (NRHP) guidelines (Phase III studies). • Relocate structures per current (at the time of project approval) NRHP guidelines. • Create interpretative facilities at the site. • Develop measures to prevent vandalism. These measures can be accomplished through placement of conditions on the project by the local jurisdiction during individual environmental review.	Place applicable conditions of approval on project to ensure mitigation for potential impacts includes requirements.	During individual project permitting	Once	The County or project sponsor			
CR-1(e) The project sponsor shall ensure that mitigation for potential impacts to significant historical structures examine	Place applicable approval on project to ensure mitigation for	During individual project permitting	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
preservation alternatives designed to prevent impacts such as adjacent construction and or rehabilitation.	potential impacts to historical structures.						
CR-2 Implement Stop-Work and Consultation Procedures Mandated by Public Resources Code 5097. In the event of discovery or recognition of any human remains during construction or excavation activities, the sponsor agency shall cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the following steps are taken: • The El Dorado County Coroner has been informed and has determined that no investigation of the cause of death is required. • If the remains are of Native American origin, the following steps will be taken: o The coroner will contact the Native American Heritage Commission who will assign a Most Likely Descendant (MLD). The coroner will make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly	If applicable, project components shall be required to limit impacts to inadvertently discovered human remains.	During project construction	As needed during construction	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
excavate the human remains. ○ The sponsor agency or its authorized representative will retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs: ▪ The Native American Heritage Commission is unable to identify a MLD. ▪ The MLD identified fails to make a recommendation. ▪ The sponsor agency or its authorized representative rejects the recommendation of the MLD, and the mediation by the Native American Heritage							

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
Commission fails to provide measures acceptable to the landowner.							
GEOLOGY AND SOILS							
G-1 Geotechnical Standards. The project sponsor shall ensure that bridge-related projects are designed and constructed to the latest (at the time of project approval) geotechnical standards. In most cases, this will necessitate site-specific geologic and soils engineering investigations performed by a qualified geotechnical expert to satisfy or exceed state and/or code requirements for high groundshaking zones. This can be accomplished through the placement of conditions on the project by the project sponsor during individual environmental review.	Place conditions of approval on projects to ensure the structure is designed and constructed to the latest geotechnical standard.	During individual environmental review	Once	The County or project sponsor			
G-2 Slope Stabilization. If a project involves cut slopes over 15 feet in height, the County shall ensure that specific slope stabilization studies are conducted. If stabilization is necessary, possible stabilization methods include buttresses, retaining walls and soldier piles which should be implemented prior to construction and/or operation of the transportation improvement project.	Place conditions of approval on the project, when applicable, to ensure that a site-specific geotechnical investigation is conducted.	During individual environmental review	Once	The County or project sponsor			
GREENHOUSE GAS EMISSIONS							
GHG-1 The project sponsor shall ensure that applicable GHG-reducing diesel particulate and NOX emissions measures for off-road construction vehicles are implemented during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Applicable GHG reducing measures include the following:	Construction plans shall incorporate standard GHG control measures; The individual project lead agency shall ensure implementation.	Prior to issuance of grading permits; periodically during construction	Once during plan review; periodically during construction	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
• Configure on-site construction parking to minimize traffic interference and to ensure emergency vehicle access; • Provide temporary traffic control during appropriate phases of construction activities to improve traffic flow; • Use best efforts to minimize truck idling to not more than two minutes during construction; • Apply non-toxic soil stabilizers (according to manufacturers' specifications) to all inactive areas; • During construction, replace ground cover in disturbed areas as quickly as possible; • When feasible, during the period of construction, install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip; • When feasible, during the period of construction, reduce traffic speeds on all unpaved roads to 15 mph or less; • When feasible, pave all construction access roads onto the site from permanent roadways; • On Caltrans projects, the most current (at the time of project approval) Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust Palliative shall be incorporated into project specifications when appropriate; • When feasible, avoid project designs requiring significant amounts of material, such as							

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
excavated soil and construction debris, to be transported from the site to disposal facilities; and • When feasible, employ a balanced cut/fill ration on construction sites, thus reducing haul-truck trip emissions.							
HYDROLOGY AND WATER RESOURCES							
W-1(a) Application Plans. Fertilizer/pesticide application plans for any new right-of-way landscaping shall be prepared to minimize deep percolation of contaminants. The plans shall specify the use of products that are safe for use in and around aquatic environments.	Where applicable fertilizer/pesticide plans shall be prepared.	Prior to issuance of grading permit	Once	The County or project sponsor			
W-1(b) Post-construction Measures. For any widening or roadway extension project, the improvement shall design post-construction measures per the Phase II MS4 Permit in place at the time of project approval to direct runoff into subsurface percolation basins and traps or other methods that would allow for the removal of urban pollutants, fertilizers, pesticides, and other chemicals and encourage groundwater recharge to the MEP. Qualifying projects shall also be designed to meet the MS4 Hydromodifcation Management requirements in place at the time of project approval to the MEP.	Post-construction measures per the Phase II MS4 Permit shall be place.	Prior to project construction	Once prior to construction, periodically during construction	The County or project sponsor			
W-1(c) Stormwater Pollution Prevention Plan (SWPPP). For any project that would disturb one acre or more or is part of a larger common plan of development, a SWPPP shall be developed per State and County standards prior to the initiation of grading and implemented for all construction activity on the project site. The SWPPP shall include specific BMPs designed by a qualified	If applicable, develop a SWPPP.	During individual environmental review	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
professional to control the discharge of material from the site and into the creeks and local storm drains. BMP methods may include, but would not be limited to, the use of temporary retention basins, straw bales, sand bagging, mulching, erosion control blankets and soil stabilizers. For any project disturbing less than one acre, and ESCP shall be prepared per County standards in place at the time of project approval.							
W-2(a) Minimizing Flood Risk. If a project is located in an area with high flooding potential due a storm event or dam inundation, the structure shall be elevated at least one foot above the 100-year flood zone elevation and bank stabilization and erosion control measures shall be implemented along creek crossings.	Where applicable elevate structure at least one foot above elevation.	During individual environmental review	Once	The County or project sponsor			
W-2(b) Flood Risk Communication Strategy. For projects within a dam failure inundation hazard zone, a comprehensive flood risk communication strategy shall be developed, which would include an evacuation plan and/or an Emergency Action Plan and promote dam failure risk awareness and safety.	Where applicable develop a comprehensive flood risk communication strategy.	During individual environmental review	Once	The County or project sponsor			
NOISE							
N-1(a) The project sponsor shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures shall be implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.	Ensure consistency with local noise ordinance requirements relating to construction for sensitive uses.	Prior to issuance of grading permits	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
N-1(b) If a particular project within 800 feet of sensitive receptors requires pile driving, the County or project sponsor shall require the use of pile drilling techniques instead, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.	Place mitigation measures or conditions of approval on project to require the use of pile drilling techniques when applicable and feasible.	During individual environmental review	Once	The County or project sponsor			
N-1 (c) Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds).	Ensure that equipment and trucks use best available noise control techniques.	During individual environmental review	Once	The County or project sponsor			
N-1(d) Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation.	Ensure that equipment is hydraulically or electrically powered; that an exhaust muffler is used; that external jackets on impact equipment is used; or quitter procedures are used, when feasible and applicable.	During individual environmental review	Once	The County or project sponsor			
N-1(e) Locate stationary noise sources as far from sensitive receptors as possible. Stationary noise sources that must be located near existing receptors will be adequately muffled.	Ensure that stationary noise sources are located away from sensitive receptors or muffled.	During individual environmental review	Once	The County or project sponsor			
N-2(a) The project sponsor shall complete detailed noise assessments using applicable	A noise survey shall be conducted to determine	During individual environmental	Once	The County or project sponsor			

Mitigation Measure	Action Required	When Monitoring to Occur	Monitoring Frequency	Responsible Agency or Party	Compliance Verification		
					Initial	Date	Comments
guidelines at the time of project approval (e.g., the California Department of Transportation Traffic Noise Analysis Protocol for roadway projects). The noise survey shall be sufficient to indicate existing and projected noise levels, to determine the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards. This shall be accomplished during the project's individual environmental review as necessary.	projected noise levels, to determine the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards.	review					
N-2(b) Where new or expanded roadways or transit are found to expose receptors to noise exceeding normally acceptable levels, the individual project sponsor shall consider various sound attenuation techniques. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including open grade paving, solid fences, walls, and, landscaped berms. Determination of appropriate noise attenuation measures will be assessed on a case-by-case basis during a project's individual environmental review pursuant to the regulations of the applicable lead agency.	Development plans shall consider various sound attenuation techniques where new or expanded roadways are found to expose receptors to noise exceeding normally acceptable levels; applicable agency shall assess and determine appropriate noise attenuation barriers on a case-by-case basis.	During individual environmental review	Once	The County or project sponsor			

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