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MEMORANDUM

Date: March 31, 2016

Project #: 17666.0

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From: Kittelson and Associates

Project: CIP & TIM Fee Update: Western Slope

Subject: Draft 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).

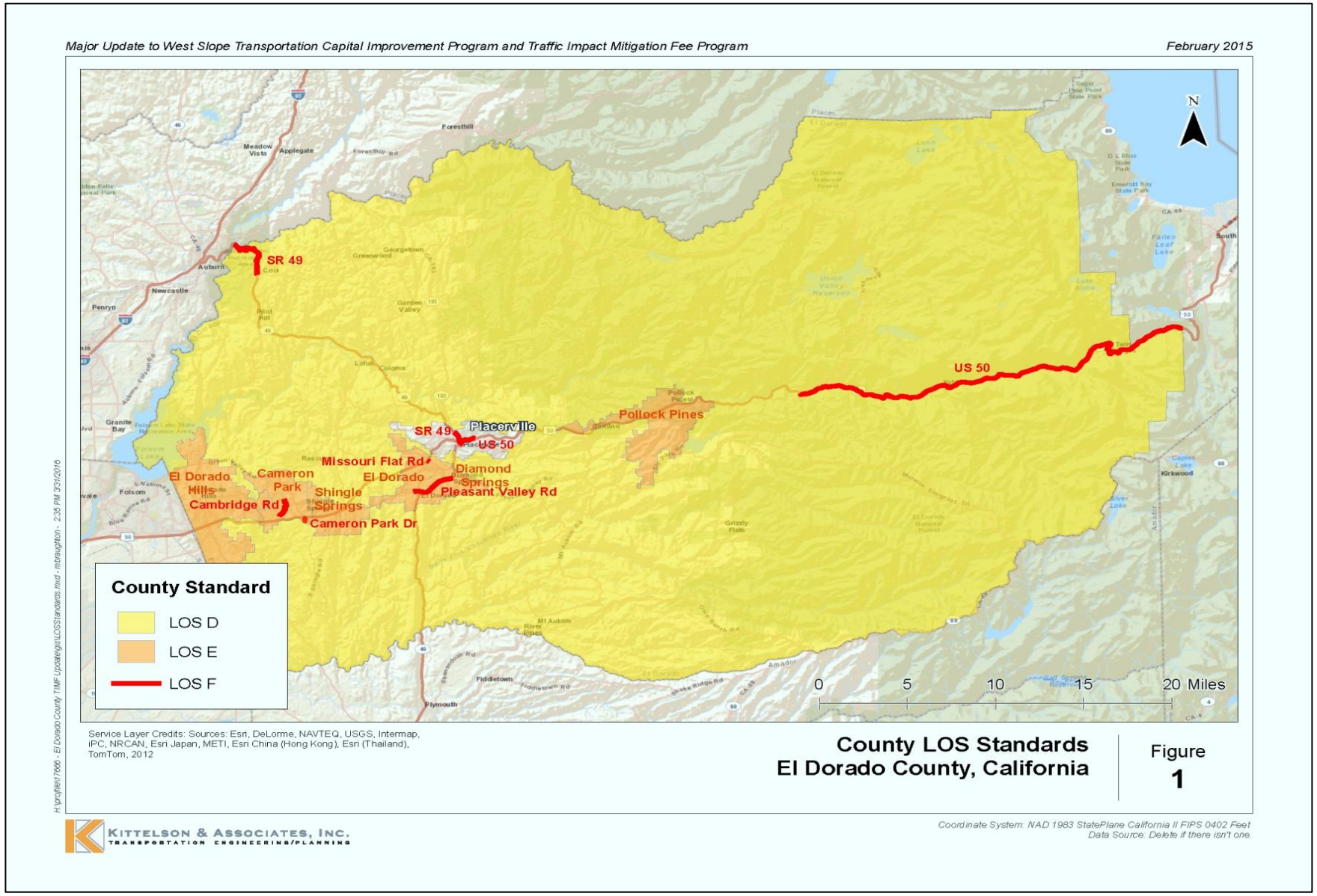
State Route 193

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)[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)[2]	1. Cameron Park Drive (south of Hacienda Drive) 2. Green Valley Road (west of Sophia Parkway) 3. Green Valley Road (east of Francisco Drive)[1] 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 & Financing 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 a deficiency. Since Red Hawk Parkway provided an access to and from Red Hawk Casino only and is being funded and operated by the 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 Improvements
- Parallel 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:

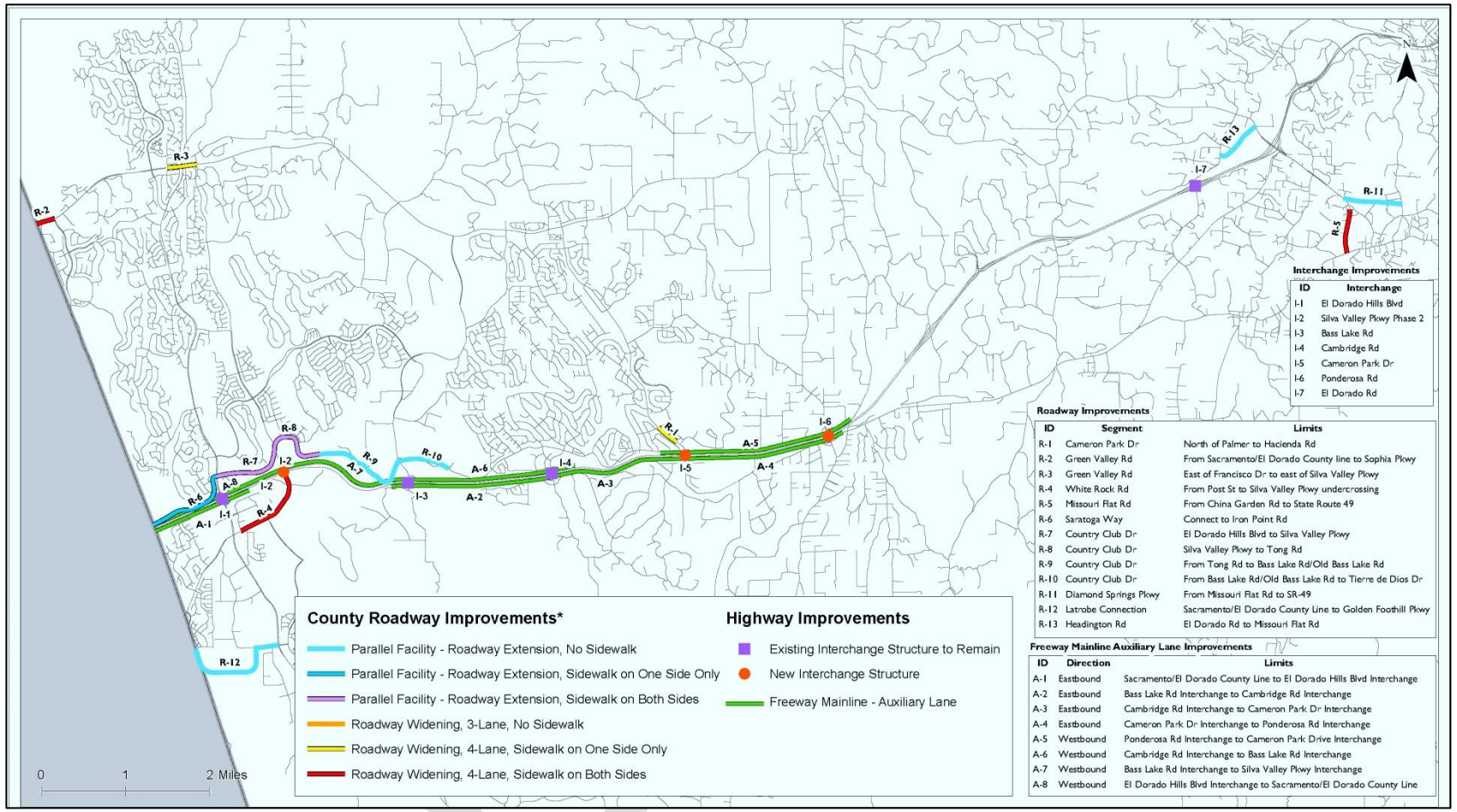
US 50 Auxiliary Lanes:	$ 61,190,000
US 50 Interchanges	$ 172,861,500
Local Roadways	$ 96,944,000

[6] This improvement only applies to the two-lane portions of this segment.

Sub Total: $ 330,995,500.

Including outstanding reimbursement agreements and other program costs (discussed in the following sections), the projected total cost for the TIM Fee CIP is $416,156,874.

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	1,655	1,680	1,740	1,800	1,860
Green Valley Rd	West of Sophia Pkwy	E	AM	1,985	2,140	2,395	2,655	2,910
			PM	2,135	2,400	2,735	3,065	3,400
Green Valley Rd	East of Francisco Dr	E	AM	1,260	1,340	1,470	1,605	1,735
			PM	1,105	1,230	1,395	1,555	1,715
Latrobe Rd	North of Golden Foothill Pkwy	D	AM	605	2,535	3,285	3,365	3,780
			PM	710	2,675	3,220	3,450	3,840
White Rock Rd	West of Windfield Way	E	AM	2,125	980	1,130	1,285	1,440
			PM	2,285	1,085	1,360	1,685	1,900
White Rock Rd	At County Line	E	AM	825	1,015	1,195	1,380	1,560
			PM	815	1,325	1,690	1,930	2,230
White Rock Rd	East of Latrobe Road	E	AM	835	1,070	1,110	1,145	1,180
			PM	1,025	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	1,650	1,675	1,735	1,795	1,852
Green Valley Rd	West of Sophia Pkwy	E	AM	2,010	2,110	2,365	2,620	2,872
			PM	2,110	2,300	2,620	2,935	3,258
Green Valley Rd	East of Francisco Dr	E	AM	1,235	1,290	1,415	1,545	1,668
			PM	1,090	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. Green 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"

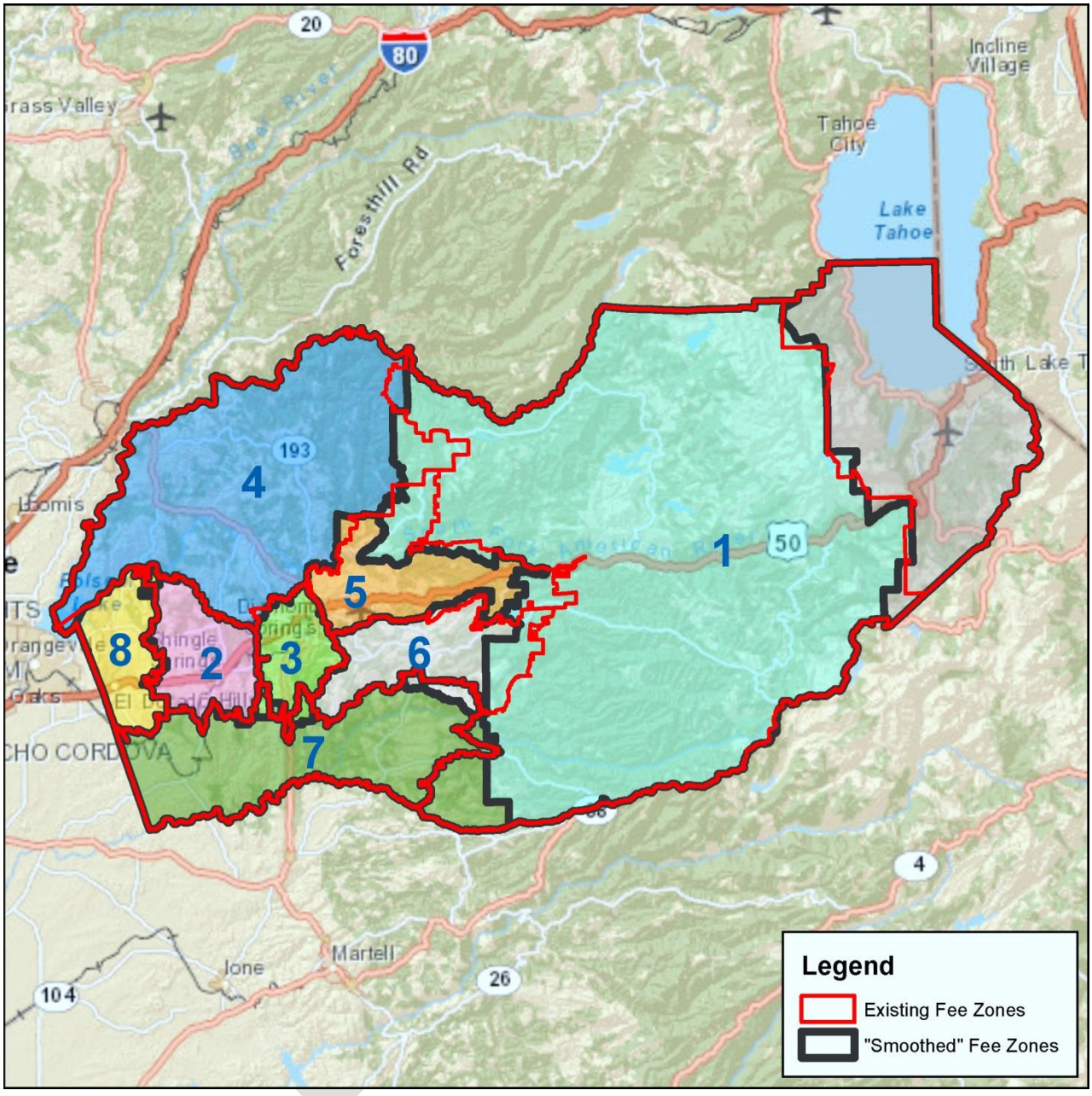


Table 14. TIM Fee CIP Fair Share Analysis Results

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**.

Table 15. Bridge Replacement TIM Fee Grant Matching Funds

	Bridge Improvement	Estimated Cost	% not covered by HBR	Match needed for HBR
1	77127 Green Valley Road at Indian Creek - Bridge Replacement	$ 4,501,600.00	11.47%	$ 516,333.52
2	77136 Green Valley Road at Mound Springs Creek - Bridge Replacement	$ 4,504,008.00	11.47%	$ 516,609.72
3	77114 Green Valley Road at Weber Creek - Bridge Replacement	$ 11,122,714.00	11.47%	$ 1,275,775.30
4	XXXXX Salmon Falls Road at South Fork American River - Bridge Replacement	$ 10,500,000.00	11.47%	$ 1,204,350.00
5	77115 Sly Park Road at Clear Creek Crossing - Bridge Replacement	$ 5,748,951.00	11.47%	$ 659,404.68
6	GPXXX Forni Road at Weber Creek	$ 4,500,000.00	11.47%	$ 516,150.00
7	GPXXX White Rock Road at Carson Creek	$ 4,500,000.00	11.47%	$ 516,150.00
8	GPXXX Mt. Aukum Rd. at North Fork Cosumnes River	$ 4,500,000.00	11.47%	$ 516,150.00
9	77116 Bucks Bar Rd. at North Fork Cosumnes River	$ 7,806,242.00	11.47%	$ 895,375.96
	TOTAL			**$ 6,616,299.17**

[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.

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, 1.37% 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 / $415,192,855total 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

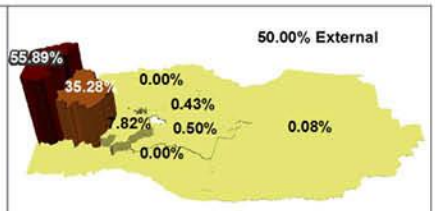
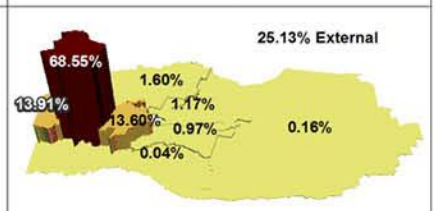
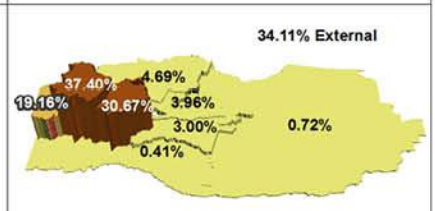
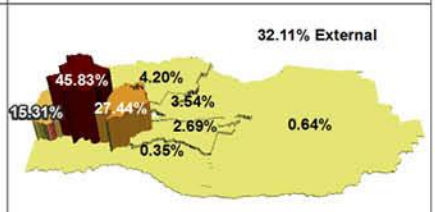
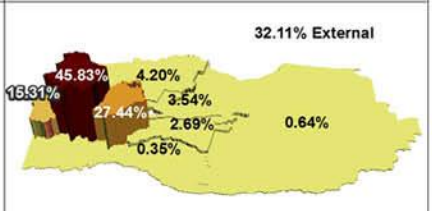
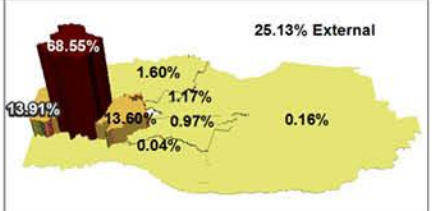
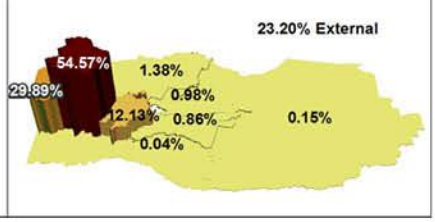
INTERCHANGE OPERATIONAL ANALYSIS

US 50 Bass Lake Road Interchange
US 50 Missouri Flat Road Interchange
US 50 Cameron Park Drive Interchange

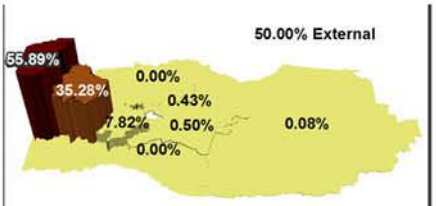
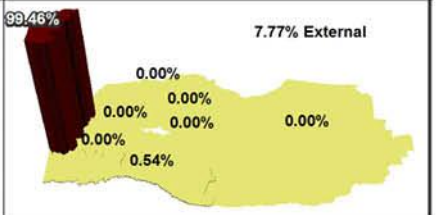
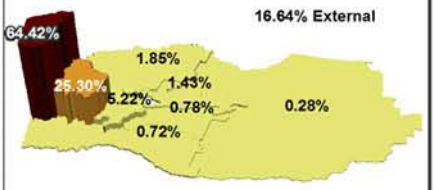
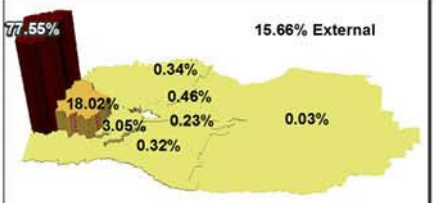
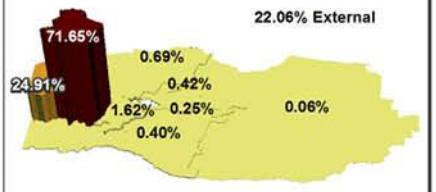
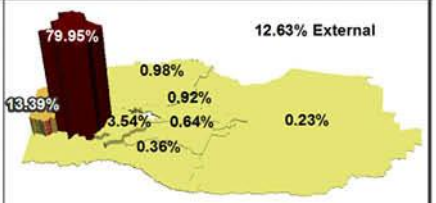
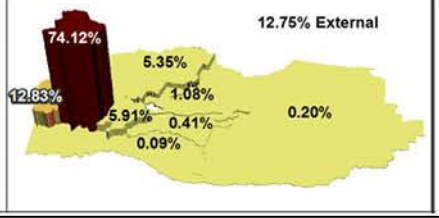
ATTACHMENT F

GRAPHICS FOR FAIR SHARE ANALYSIS RESULTS

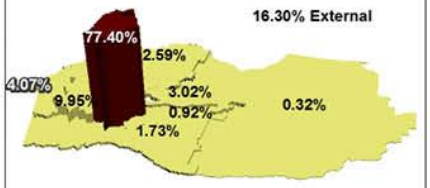
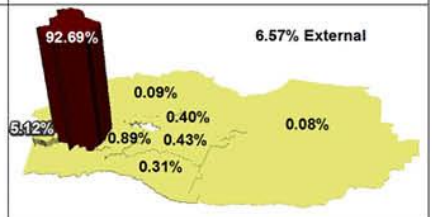
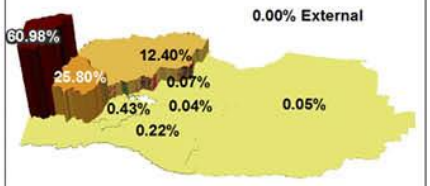
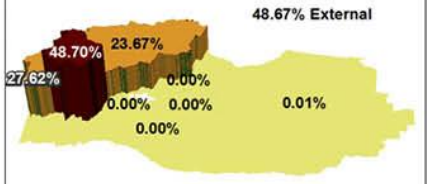
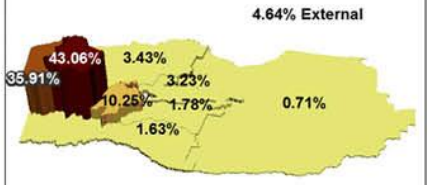
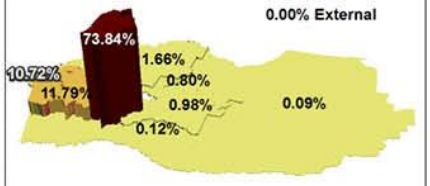
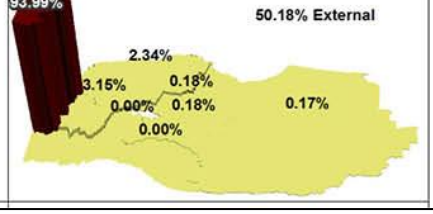
Capital Improvement Program Projects Funding Allocation by Zone Geography

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**		

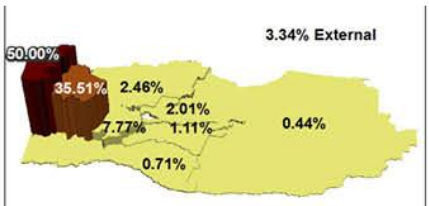
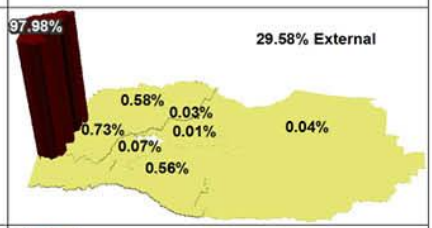
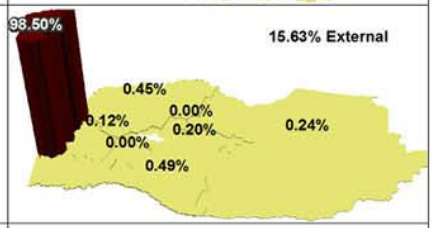
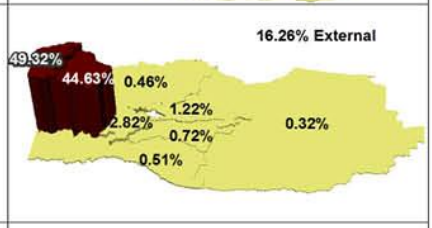
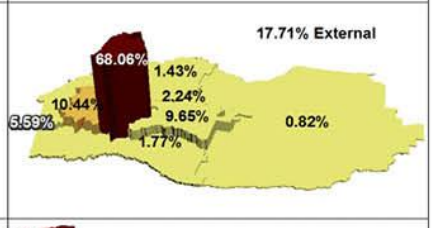
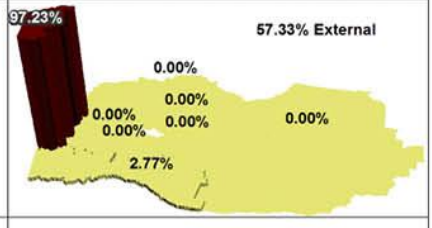
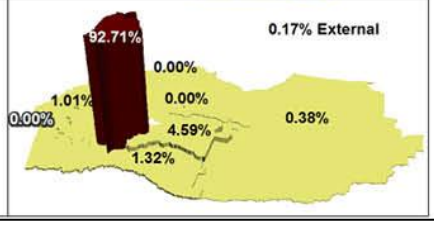
Capital Improvement Program Projects Funding Allocation by Zone Geography

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**		

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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 Draft 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.

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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 Draft 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.

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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 Draft 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.