Transportation Concept Report and Corridor System Management Plan

United States Route 50

District 3

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California Department of Transportation

Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

Approvals:

per Marlon Flournoy
District 3 Deputy Director
Planning and Local Assistance

6-27-14
Date

Jody Jones
Jody Jones
District 3 Director

6/27/14
Date

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ABOUT THIS DOCUMENT

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (Gov. Code §65086) by identifying deficiencies and proposing improvements to the SHS. Through System Planning, Caltrans focuses on developing an integrated multimodal transportation system that meets Caltrans' goals of safety, mobility, delivery, stewardship, and service.

The System Planning process is primarily composed of four parts: the District System Management and Development Plan (DSMDP), the Transportation Concept Report (TCR), the Corridor System Management Plan (CSMP), and the DSMDP Project List. The district-wide **DSMDP** is a strategic policy and planning document that focuses on maintaining, operating, managing, and developing the transportation system. The **TCR** is a planning document that identifies the existing and future route conditions as well as future needs for each route on the SHS. The **CSMP** is a complex, multi-jurisdictional planning document that identifies future needs within corridors experiencing or expected to experience high levels of congestion, and is a foundation document that supports the partnership-based, integrated management of various travel modes (transit, cars, trucks, pedestrians, bicycles) and infrastructure (rail, roads, highways, information systems, bike routes) in a corridor so that mobility along the corridor is provided in the most efficient and effective manner possible. The **DSMDP Project List** is a list of planned and partially programmed transportation projects used to recommend projects for funding. These System Planning products are also intended as resources for external stakeholders, the public, related Caltrans functional units, tribal governments, and partner regional and local agencies.

TCR/CSMP Purpose

California's State Highway System needs long-range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR/CSMP is to evaluate current and projected conditions along the route, and communicate the vision for the development of each route in each Caltrans District during a 20-year planning horizon. The TCR/CSMP is developed with the goals of increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, parallel and connecting roadways, transit, pedestrian, bicycle, freight, operational improvements, and travel demand management components of the corridor. The purpose of the CSMP update portion of this document is to continue with the momentum from the first generation document to achieve a seamless transportation system on urbanized segments of the corridor by revisiting the managed transportation network, updating the traffic forecast and performance measure data, and upgrading the key capital project lists with an emphasis on inclusion of projects such as Intelligent Transportation Systems (ITS) and Traffic Operations Systems (TOS) improvements.

STAKEHOLDER PARTICIPATION

Stakeholder participation was sought throughout the development of the U. S. Highway (US) 50 TCR/CSMP. Outreach involved internal and external stakeholders, regional and local agencies, advocacy groups, and the public. During the initial information resource gathering for the TCR/CSMP, stakeholders were contacted for their input related to their particular specializations, and to verify data sources used and data accuracy. As the document was finalized, stakeholders were asked to review the document for comments, edits, and for consistency with the intent of existing plans, policies, and procedures. The process of including and working closely with stakeholders adds value to the TCR/CSMP, allows for outside input and ideas to be reflected in the document, increases credibility, and helps strengthen public support and trust.

STATE AND LOCAL RESPONSIBILITY

Improvements to the State Highway System are the responsibility of both Caltrans and local agencies. Developments that add cumulative impacts to this route and the regional State Highway System may necessitate that local jurisdictions provide nexus based, proportional fair-share funding for future highway improvements. Developments or local circulation changes that will have significant traffic impacts to the highway should provide improvements to mitigate those impacts.

EXECUTIVE SUMMARY

This document is a combination of the TCR and the CSMP. These two documents complement each other, with the CSMP providing short- to mid-term planning for the urban section, and the TCR providing long-term planning for the rural section of the facility. These two documents were combined into this combined TCR/CSMP document to create greater planning coordination for the entire length of US 50. The combined TCR/CSMP is a long-term document, with a base year of 2012 and a horizon year of 2035.

US 50 is one of three remaining transcontinental routes signed with the U.S. Highway System shield in California. It begins at Interstate 80 (I-80) in West Sacramento and traverses portions of Yolo, Sacramento, and El Dorado Counties before passing into the State of Nevada. All 108 miles of US 50 in California lie within Caltrans District 3. US 50 serves as a major east-west connector. It is an officially designated Scenic Highway from Downtown Placerville to the western city limit of South Lake Tahoe.

The facility is roughly divided into two sections: the urban half, covered by the CSMP, and the rural half, covered by the TCR. The facility begins as a freeway in West Sacramento in Yolo County and continues through the cities of Sacramento, Rancho Cordova, and Folsom in Sacramento County. It then enters El Dorado County, passing through El Dorado Hills, Cameron Park, Shingle Springs, and Placerville. Approximately six miles east of Placerville the facility becomes a conventional highway to the California/Nevada State line. The Cedar Grove Exit marks the boundary between the CSMP area to the west and the TCR area to the east. The narrower, mountain section traverses small mountain communities and over 30 miles of the Eldorado National Forest, until it intersects with SR 89 near the City of South Lake Tahoe, after which it extends eastward through the City of South Lake Tahoe to the California/Nevada State line. In this section the facility is primarily used for recreational trips, particularly to reach Lake Tahoe during the peak summer travel and winter ski months. As a result, US 50 experiences strong directional peak traffic on weekends and holidays.

Concept Summary

The US 50 TCR/CSMP evaluates current and projected future traffic conditions with 2012 as the base year and with the 20-year build facility. Table 1 provides a summary of the existing facility, the 20-year build facility, and the ultimate facility concept, defined as the facility with projects and management strategies anticipated beyond the 20-year horizon. As discussed further in this document, the concept LOS for US 50 is level of service (LOS) D in rural areas and LOS E in urban areas. We recognize some segments of US 50 will not attain their respective operational concepts after the 20-year buildout of the facility. Therefore, ongoing efforts to manage and improve system performance will emphasize the system operations and management strategies discussed further on in this document.

Concept Rationale

The 20-year build facility for US 50 describes the long-term vision for how the facility will operate and what its configuration will be in the horizon year. This 20-year build facility concept is based on planned and programmed, and conceptual projects. The ultimate facility concept includes the construction of bus/carpool (HOV), and auxiliary (Aux) lanes. In the Corridor Performance section, Concept LOS is given for each segment in the base and horizon year. A minimum acceptable LOS is E for an urban segment and D for a rural one. Given greater accessibility and higher traffic in urban areas, LOS E is more appropriate and realistic for those segments while LOS D is more reasonable for a rural segment.

US 50 is an important transportation facility for the communities of Sacramento County, El Dorado County and of the Sierra Nevada, in particular Meyers, South Lake Tahoe, and the numerous recreational opportunities in those areas. US 50 also provides interregional connectivity to communities located in western Nevada. This TCR proposes change in the facility concept, balancing mobility of those communities, cost of improvements, and community character. In the segments in the Sacramento metropolitan area, a freeway and expressway concept is more appropriate because the facility serves commuters traveling to Sacramento and fewer local uses. In the rural segments (15 through 21), which experience lower traffic and provide access to properties, the conventional highway concept is appropriate due to its lesser impact on operations and the community.

TABLE 1: US 50 CONCEPT SUMMARY				
Segment #	**Segment Description**	**Existing Facility***	**20-Year Build Facility***	**Ultimate Facility***
1	Interstate 80 to Yolo/Sacramento County Line	8F (6F btw Jefferson Blvd. ramps)	8F + ITS	8F + 2HOV + Aux Lanes + ITS + ICM
2	Yolo/Sacramento County Line to State Routes (SR) 99 and 51	8F	8F + 2HOV + Aux Lanes + ITS	8F+2HOV+Aux Lanes + ITS + ICM
3	SR 99 and SR 51 to Watt Ave.	8F	8F + 2HOV +ITS	8F + 2HOV + Aux Lanes + Transition + ITS + ICM
4	Watt Ave. to Zinfandel Dr.	8F + 2HOV	8F + 2HOV + Aux Lanes + ITS	8F + 2HOV + Aux Lanes + ITS + ICM
5	Zinfandel Dr. to Sunrise Blvd.	8F + 2HOV	8F + 2HOV + Aux Lanes + ITS	8F + 2HOV + Aux Lanes + Transition + ITS + ICM
6	Sunrise Blvd. to Folsom Blvd.	6F + 2HOV to Hazel Ave, 4F + 2HOV to Folsom Blvd	8F + 2HOV + ITS + Aux Lanes to Hazel Ave., 4F + 2HOV + ITS + Aux Lanes to Folsom	8F + 2HOV + ITS + ICM + Aux Lanes to Hazel Ave., 4F + 2HOV + ITS + ICM + Aux Lanes to Folsom
7	Folsom Blvd. to Sacramento/El Dorado County Line	4F + 2HOV	4F + 2HOV + Aux Lanes + ITS	4F + 2HOV + Aux Lanes + ITS + ICM
8	Sacramento/El Dorado County Line to El Dorado Hills Blvd. (Latrobe Road)	4F + 2HOV	4F + 2HOV + Aux Lanes + ITS	4F + 2HOV + Aux Lanes + ITS + ICM
9	Latrobe Road to Bass Lake Road	4F + 2HOV	4F + 2HOV + Aux Lanes + ITS	4F + 2HOV + Aux Lanes + ITS + ICM
10	Bass Lake Road to Cameron Park Drive	4F + 2HOV	4F + 2HOV + Aux Lanes + ITS	4F + 2HOV + Aux Lanes + ITS
11	Cameron Park Drive to So. Shingle Road (Ponderosa Rd.)	4F	4F + 2HOV + Aux Lanes + ITS	4F + 2HOV + Aux Lanes + ITS
12	Ponderosa Rd to Missouri Flat Road	4F	4F + 2HOV + Aux Lanes + ITS to Greenstone, 4F + Aux Lanes + ITS to Missouri Flat	4F + 2HOV + Aux Lanes + ITS to Greenstone, 4F + Aux Lanes + ITS to Missouri Flat
13	Missouri Flat Road to End of Freeway in Placerville	4F	4F	4F + Aux Lanes + ITS
14	End of Freeway in Placerville to Bedford Ave.	4E + Merge Lanes (Eastbound)	4E + Merge Lanes + ITS	4E + Merge Lanes + ITS + ICM
15	Bedford Ave. to Cedar Grove Exit	4F to Smith Flat, 4E to Camino	4F + to Smith Flat, 4E to Camino	4F + Aux Lanes + ITS to Smith Flat, 4E + ITS to Camino
16	Cedar Grove Exit to 0.67 mi east of Sly Park Road	4F	4F	4F + ITS
17	0.67 miles east of Sly Park Road to Ice House Road	3C, 2.0 mi; 4E, 5.3 mi; 3C, 0.3 mi	3C, 2.0 mi; 4E, 5.3 mi; 3C, 0.3 mi	3C + ITS, 2.0 mi; 4E + ITS, 5.3 mi; 3C + ITS, 0.3 mi
18	Ice House Road to Echo Summit	2C; 0.35 mi of 2-way left turn lane	2C; 0.35 mi of 2-way left turn lane	2C + ITS + ICM; 0.35 mi of 2-way left turn lane
19	Echo Summit to State Route 89 South/Luther Pass Road	2C	2C	2C + ITS + ICM + Bike Lanes
20	State Route 89 South/Luther Pass Road to State Route 89 North/Lake Tahoe Blvd	3C, 0.86 mi; 2C, 3.64 mi; 5C, 0.61 mi	3C, 0.86 mi; 2C, 3.64 mi; 5C, 0.61 mi	3C + ITS + ICM, 0.86; 2C + ITS + ICM, 3.64 mi; 5C + ITS + ICM, 0.61 mi
21	State Route 89 North/Lake Tahoe Blvd to Nevada State Line	5C	5C	5C + ITS + ICM + Bike Lanes

*Facility Type Codes: C=Conventional Highway, E=Expressway, F=Freeway, HOV=High Occupancy Vehicle Lanes, Aux=Auxiliary Lanes, ITS=Intelligent Transportation Systems, ICM=Integrated Corridor Management.

Proposed Projects and Strategies

The proposed projects and strategies on US 50 are limited by the Right of Way (ROW) constraints on the facility, as well as by financial, environmental, and political factors. In the urban section of US 50, existing development limits land purchases for highway expansion, and in the rural section land purchases are limited by National Forest land and environmental constraints. The largest projects on the facility consists of a bus/carpool (HOV) lane expansion from the SR 99/51 junction to Watt Avenue (Ave.) interchange and from the Cameron Park Road interchange to the Missouri Flat Road interchange. There are also a significant number of operational and Intelligent Transportation Systems (ITS) improvements that will be constructed on the facility. These improvements, to be constructed throughout the facility, include the installation of various ITS technologies, auxiliary lanes, transition lanes, passing lanes, ramp metering, intersection improvements, interchange improvements, ramp widening, bus/carpool lanes and connectors and other improvements appropriate to the context of the interchanges to be improved.

Integrated Corridor Management (ICM) is a part of the ultimate facility concept for the US 50 corridor. As an operational management strategy, it is particularly in locations where the ultimate concept LOS performance is unattainable on the 20-year buildout facility, and where further buildout cannot occur due to constraints and limitations such as those described above. ICM is a multimodal approach to managing transportation assets, allowing partner agencies to manage the transportation corridor as an integrated asset in order to improve travel time reliability and predictability, help manage congestion and provide travelers with better information and more choices.

CORRIDOR OVERVIEW

ROUTE SEGMENTATION

US 50 is divided into 21 segments, the first 15 of which are on the CSMP corridor and highlighted in Table 2 below. As shown in Figure 1, the facility spans a large cross-section of California and is roughly evenly split between urban and rural sections.

TABLE 2: US 50 ROUTE SEGMENTATION

Segment #	Location Description	County	Begin Post Mile	End Post Mile
1	Interstate 80 to Yolo/Sacramento County Line	YOL	0	3.16
2	Yolo/Sacramento County Line to State Routes 99 and 51	SAC	L0.00	L2.48 = R0.00
3	State Routes 99 and 51 to Watt Ave.	SAC	R0.00	R5.34
4	Watt Ave. to Zinfandel Drive	SAC	R5.34	R10.92
5	Zinfandel Drive to Sunrise Boulevard	SAC	R10.92	12.5
6	Sunrise Boulevard to Folsom Boulevard	SAC	12.5	17.01
7	Folsom Boulevard to Sacramento/El Dorado County Line	SAC	17.01	23.14
8	Sacramento/El Dorado County Line to Latrobe Road	ELD	0	0.86
9	Latrobe Road to Bass Lake Road	ELD	0.86	R3.23
10	Bass Lake Road to Cameron Park Drive	ELD	R3.23	6.57
11	Cameron Park Drive to Ponderosa Rd	ELD	6.57	R8.56
12	Ponderosa Rd to Missouri Flat Road	ELD	R8.56	R15.06
13	Missouri Flat Road to End of Freeway in Placerville	ELD	R15.06	17.25
14	End of Freeway in Placerville to Bedford Ave.	ELD	17.25	18.11
15	Bedford Ave. to Cedar Grove Exit	ELD	18.11	R25.95
16	Cedar Grove Exit to 0.67 mi east of Sly Park Road	ELD	R25.95	R31.97
17	0.67 miles east of Sly Park Road to Ice House Road	ELD	R31.97	39.77
18	Ice House Road to Echo Summit	ELD	39.77	66.63
19	Echo Summit to State Route 89 South/Luther Pass Road	ELD	66.63	70.62
20	State Route 89 South/Luther Pass Road to State Route 89 North/Lake Tahoe Blvd	ELD	70.62	75.45
21	State Route 89 North/Lake Tahoe Blvd to Nevada State Line	ELD	75.45	80.44

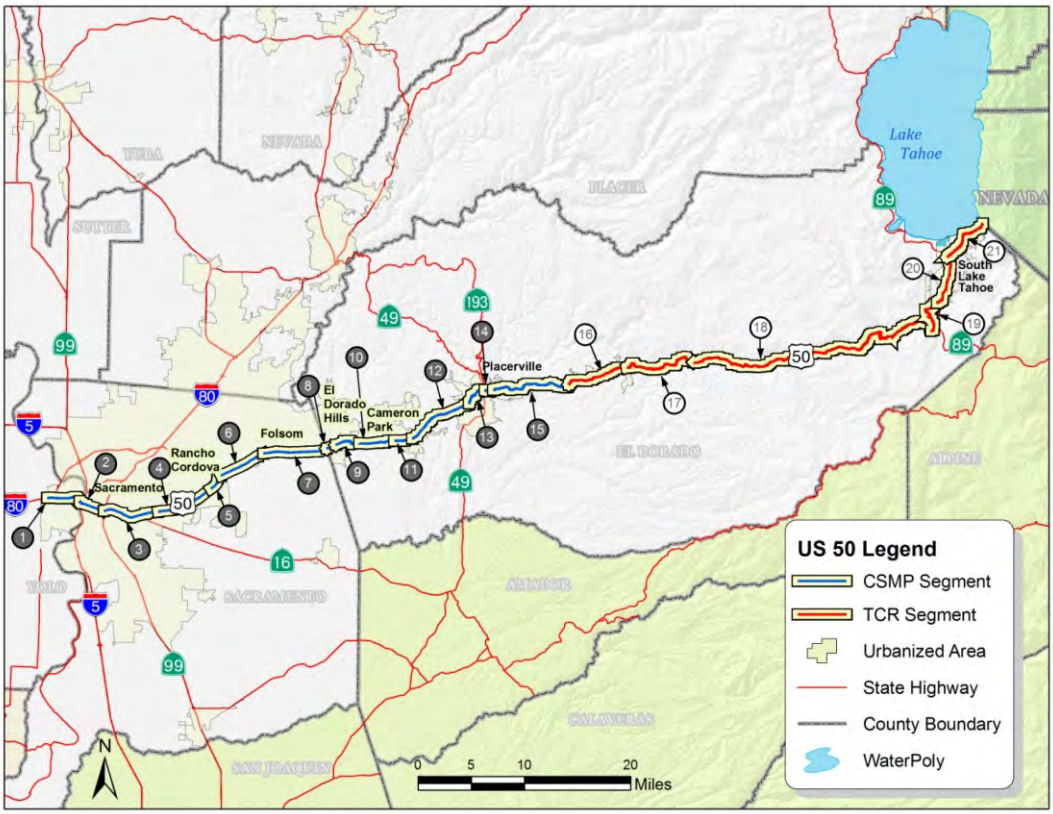


Figure 1: US 50 Route Segmentation Map

CSMP Transportation Network

The US 50 CSMP Transportation Network (managed network) includes US 50 from the US 50/Interstate 80 interchange in the City of West Sacramento to the US 50/Cedar Grove exit in the El Dorado County community of Camino, as well as select parallel roads, transit services, and bike routes. The parallel and connector roadways, transit, and bicycle route components of the managed network were selected for inclusion in the corridor in consultation with the respective local agencies. Changes in the managed network from the original US 50 CSMP include the following additions:

- Parallel and connecting roadways to US 50 in downtown Sacramento and in midtown Sacramento to Watt Ave. were added to close a gap that existed in the original CSMP. These roadways include portions of T Street (St.), Alhambra Boulevard (Blvd.), Broadway, Fruitridge Road (Rd.), Stockton Blvd., 65th St., Power Inn Rd., Florin-Perkins Rd., Folsom Blvd. In the City of Folsom, Iron Point Rd. was extended to Empire Ranch Rd. and in the City of Placerville, Jacquier Rd. and Carson Rd.
- Sacramento Regional Transit District bus routes 38 and 74, and an El Dorado County Transit Agency bus route from Placerville to Pollock Pines.
- Bicycle routes in downtown and midtown Sacramento including, but not limited, to 2nd Ave. and T St. In the City of Folsom, the Humbug Willow Creek bicycle trail was added and the American River Parkway trail was extended north. In and near the City of Placerville, the El Dorado bicycle trail was extended to Missouri Flat Rd.

As the CSMP concept matures, additional facilities may be added to the managed network. The CSMP transportation network is displayed in Figure 2.

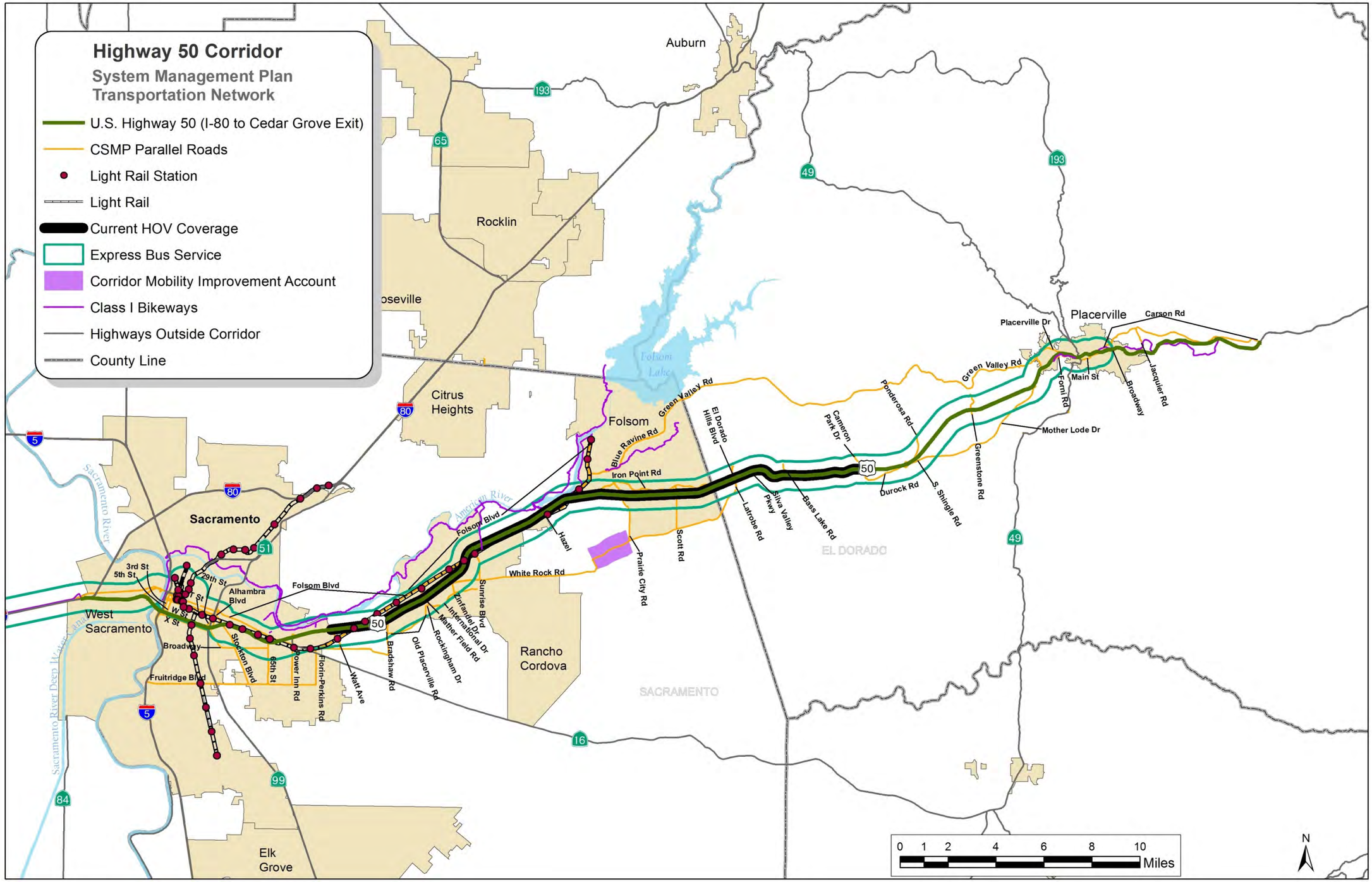


Figure 2: US 50 CSMP Transportation Network

ROUTE DESCRIPTION

Route Location

US 50 begins at the junction of I-80 and US 50 in West Sacramento and continues to beyond the Nevada state line. The urban CSMP portion runs from the beginning in West Sacramento to the Cedar Grove interchange in Camino. The CSMP portion runs through the Cities of West Sacramento, Sacramento, Rancho Cordova, Folsom, and Placerville. It also serves the unincorporated communities of Rosemont, El Dorado Hills, and Shingle Springs. For most of the CSMP portion the land is flat and begins to rise through the foothills in El Dorado County. US 50 joins with several other state highways, such as I-5, SR 99, SR 51, and SR 16 in Sacramento, and SR 49 in Placerville. The TCR portion starts at the Cedar Grove interchange and continues to Pollock Pines, the last community before the Eldorado National Forest. As US 50 enters the National Forest, it runs parallel to the South Fork American River for over thirty miles. The facility then separates from its parallel proximity to the river and heads north towards the end of the National Forest and junction with SR 89. Just after the SR 89 junction, the facility serves as a principle arterial for the unincorporated community of Meyers and for the City of South Lake Tahoe. SR 89 continues north and US 50 continues east as a conventional urban arterial through the City of South Lake Tahoe wherein it eventually crosses the California/Nevada State boundary.

Route Purpose and Major Route Features

US 50 serves the large Sacramento metropolitan area until east of Placerville, where it primarily serves recreational travel to the Sierra Nevada and Lake Tahoe. The facility provides convenient regional access to jobs and services in downtown Sacramento, Rancho Cordova, and Folsom, with peak hour traffic associated with daily commuting. East of the Sacramento metropolitan area, there are relatively few jobs, shopping, educational facilities, or other trip attractors along the highway until the facility reaches the City of South Lake Tahoe. The main attraction in the largely rural eastern half of the facility is the numerous recreation opportunities. The functional classification of the portion of US 50 between its beginning in West Sacramento and Canal St. in Placerville is classified in the California Road System as an “Other Freeway or Expressway.” The portion from Canal St. in Placerville to the California/Nevada State boundary is classified an “Other Principal Arterial.”St.

Route Designations and Characteristics

US 50 is designated a High Emphasis Route in the Interregional Transportation Strategic Plan (ITSP), the plan that guides development of the interregional transportation network. This designation means that the facility will be built to minimum standards for an expressway or freeway, in as much as environmental and ROW constraints allow. In terms of goods movement, US 50 is a part of the Surface Transportation Assistance Act (STAA) National Network until Sly Park Road, which permits larger trucks to traverse the route. This designation facilitates freight movement to the large population areas. At Sly Park Road, the designation becomes California Legal Network, which permits shorter trucks that can negotiate the mountain curves. As the route nears South Lake Tahoe, US 50 is designated a Terminal Route at the junction with SR 89, which permits STAA trucks to use the facility to reach their destinations.

Route designations and characteristics of US 50 for both the TCR and CSMP sections of the corridor are identified in Tables 3 and 4.

TABLE 3: US 50 ROUTE DESIGNATIONS AND CHARACTERISTICS											
Seg. #	**Freeway & Express-way**	**National Highway System**	**Strategic Highway Network**	**Scenic Highway**	**Inter-regional Road System**	**High Empha-sis**	**Focus Route**	**Federal Functional Classifi-cation**	**Goods Move-ment Route**	**Truck Designa-tion**	**Rural/ Urban/ Urbanized**
1	Yes-F	Yes	No	No	Yes	Yes	No	Other Freeway or Express-way	Yes	National Network	Urbanized
2											
3									No		
4											
5											
6											
7											
8											
9											
10											
11											Rural
12											
13											Urban
14	Yes-E			No: to Jct SR 49; Yes: from Jct SR 49				Other Freeway or Express-way / Other Principal Arterial			
15	Yes-F/E/F			Yes				Other Principal Arterial			
16	Yes										
17										National Network / California Legal	Rural
18	No									California Legal	
19											
20											Urban
21										Terminal Access (STAA)	

TABLE 4: US 50 ROUTE AGENCIES, TRIBES AND TERRAIN								
Seg. #	**Metropolitan Planning Organization**	**Regional Transportation Planning Agency**	**Congestion Management Agency**	**County Transportation Commission**	**Local Agency**	**Tribes**	**Air District**	**Terrain**
1	Sacramento Area Council of Goverments (SACOG)	SACOG	Yolo County Transp. District	N/A	West Sacramento	None	Yolo-Solano	Flat and Low Terrain
2			Sacramento Transportation Authority		City of Sacramento		Sacramento Metro	
3								
4					Sac. County; Rancho Cordova			
5					Rancho Cordova			
6								
7					Folsom			
8		El Dorado County Transp. Commission (EDCTC)	N/A	EDCTC	El Dorado County		El Dorado	Foothills
9								
10								
11						Shingle Springs Band of Miwok Indians		
12								
13					El Dorado County; Placerville	None		
14					Placerville			
15					Placerville; El Dorado County			Steep Terrain
16					El Dorado County			
17								
18								
19	Tahoe Metropolitan Planning Organization (TMPO)	Tahoe Regional Planning Agency (TRPA)		N/A	El Dorado County; City of South Lake Tahoe			Rolling or Flat
20								
21								

COMMUNITY CHARACTERISTICS

US 50 begins in West Sacramento, which has mostly low-density residential and industrial land uses. It then continues to the dense urban core of downtown Sacramento, which is made up of a large office district and dense residential neighborhoods. As the facility travels east through Rancho Cordova, Folsom, and El Dorado Hills, the housing density gradually decreases.

Median household income follows a distinct pattern along US 50. It gradually increases from the low $50,000s in West Sacramento and continuing east through Sacramento and Rancho Cordova to $112,111 in Gold River, $95,143 in Folsom and $115,121 in El Dorado Hills. Median household income then decreases going east to $72,562 in Cameron Park and $53,385 in Placerville.

There are four main communities in the eastern rural portion of US 50: Camino, Pollock Pines, Meyers and South Lake Tahoe. Camino, an unincorporated community that is considered a census-designated place for statistical analysis, has over 1,700 residents with a median household income of $51,742 (2010 Census). Many of the residents work in Sacramento. Lying just east of Camino, Pollock Pines is a slightly larger community, a census-designated place of 6,871 people. Approximately 20 percent (%) of Pollock Pines housing units are vacant. In both Camino and Pollock Pines, the largest source of employment is in the Sacramento area. Camino residents travel on average 25 minutes to work, and Pollock Pines residents travel 34 minutes on average. Meyers has a population of approximately 3,000 while South Lake Tahoe has 21,403 residents. Meyers is an urbanizing community with a rural facility. South Lake Tahoe is a much more diverse community with a variety of trip attractors. The community is primarily oriented toward the tourism and recreation industries. Lake Tahoe, Casinos in Nevada, the Lake Tahoe Vacation Resort, the Lake Tahoe Airport, and the many ski resorts south of Lake Tahoe are the major draws in the South Lake Tahoe area, attracting trips to the facility.

LAND USE

Land uses along US 50 are varied and change from one community to another. West Sacramento has a mix of single family homes with industrial uses such as warehousing and the Port of West Sacramento. In downtown Sacramento there is a concentration of office buildings, entertainment, and a variety of dense, older housing. Continuing to the East Sacramento neighborhood, there is a mix of multi-family homes and single family homes with large trip attractors such as UC Davis Medical Center and California State University Sacramento (CSUS). As US 50 makes its way east to Rancho Cordova, the housing stock becomes predominantly single family home with limited multifamily home development.

In Rancho Cordova between Zinfandel Drive and Hazel Ave., there is significant office park development. Major trip attractors include Aerojet Rocketdyne, an aerospace corporation, and Mather Airport, a major air cargo hub. Further east in Folsom, El Dorado Hills, Cameron Park, and Placerville, residential densities decrease to larger lot single family homes, and most non-residential development is in retail commercial and limited office uses.

The western part of the corridor, near Placerville, has experienced rapid growth in the past decade as an increasing number of workers in the Sacramento area live in Camino and Pollock Pines. The land uses in this section are predominantly single family homes of 1-5 dwelling units (DU)/acre and 1 DU/acre. Growing agricultural and ranch uses increase seasonal visitor traffic, such as at Apple Hill during apple harvest season. In the Pollock Pines area there are some multifamily units and commercial, mostly small, businesses. After the Pollock Pines area, there is a long stretch of undeveloped forest land in the Eldorado National Forest. To the east, the land uses in South Lake Tahoe are more diverse, reflecting a larger community with a more diverse economic base. There are major nodes of commercial activity, such as at the SR 89/US 50 junction, and near the California/Nevada State line. US 50 is locally referred to as “Lake Tahoe Boulevard,” and is the main street of the City, connecting these two commercial nodes. The rest of the city is mostly single-family residential housing.

US 50 is a vital transportation corridor for the economy of Sierra Nevada communities in El Dorado County. US 50 is particularly important to the economy of South Lake Tahoe and the surrounding communities that rely on Lake Tahoe and nearby ski resort tourism. Many of the residents of Camino and Pollock Pines drive west to Placerville and Sacramento for work, whereas the residents of the much more diverse Lake Tahoe communities have shorter commutes to nearby job sites.

SYSTEM CHARACTERISTICS

For the purpose of analysis, US 50 is divided into 21 total segments shown in Figures 3 through 23 below. Each segment is described in terms of its geography, classification, configuration, surrounding land uses, jurisdictions, trip attractors and features contributing to its operational characteristics.

Segment 1 consists of 3.2 miles of eight-lane freeway (six-lane between the Jefferson Blvd. ramps) from the facility's beginning at the junction of I-80 to the Yolo/Sacramento County line, extending through the City of West Sacramento. US 50 provides access to the Port of West Sacramento, several warehouses, and industrial properties along the facility. Raley Field, home to the River Cats baseball team, is also along the corridor and is a major trip attractor. It also allows easy access to downtown Sacramento and points east.

Segment 2 consists of eight lanes and spans the length of downtown Sacramento on 2.5 miles of freeway, from the Yolo/Sacramento County line to I-5 and ending at the intersection of SR 99/51. These important transportation connections from US 50 contribute to high traffic volumes, particularly during peak commute periods. Land uses along this corridor include older single family residential neighborhoods south of US 50 and commercial uses and multi-family residential north of US 50.

Figure 3: Segment 1 Map

Figure 4: Segment 2 Map

Segment 3 runs for 5.3 miles of eight-lane freeway from the junction of SR 99/51 to the City of Sacramento City line at Watt Ave. Major land uses along this segment include UC Davis Medical Center and CSUS. CSUS has a total of 28,000 students and almost 3,000 staff. There is a mix of land uses along this facility, consisting of mixed commercial and multi-family housing closer to downtown Sacramento with a higher percentage of single family housing and retail land uses as one travels east.

Segment 4 traverses the unincorporated Sacramento County community of Rosemont and half of the City of Rancho Cordova from Watt Ave. to Zinfandel Dr. It is 5.6 miles of freeway consisting of eight mixed flow lanes

and two HOV lanes, and serves Mather Airport. Land uses along Segment 4 include single family residential with some multifamily residential as well as retail commercial and office commercial.

Figure 5: Segment 3 Map

Figure 6: Segment 4 Map

Segment 5 covers the core of Rancho Cordova on 1.6 miles of freeway consisting of eight mixed flow lanes and two HOV lanes from Zinfandel Dr. to Sunrise Blvd. This short segment has no significant single trip attractors. Predominant land uses along the segment consist of single family residential, retail commercial, and office commercial.

Segment 6 consists of 4.5 miles of freeway, from Sunrise Blvd. in Rancho Cordova to the Folsom Blvd. interchange in the City of Folsom. This segment is comprised of six mixed flow lanes and 2 HOV lanes from Zinfandel Dr. to Hazel Ave., and four mixed flow lanes with two HOV lanes from Hazel Ave. to Folsom Blvd. The major land uses along this segment include Aerojet Rocketdyne with its own off-ramp at Aerojet Dr. and big box retail along Sunrise Blvd. Other land uses include low density residential in the unincorporated community of Gold River.

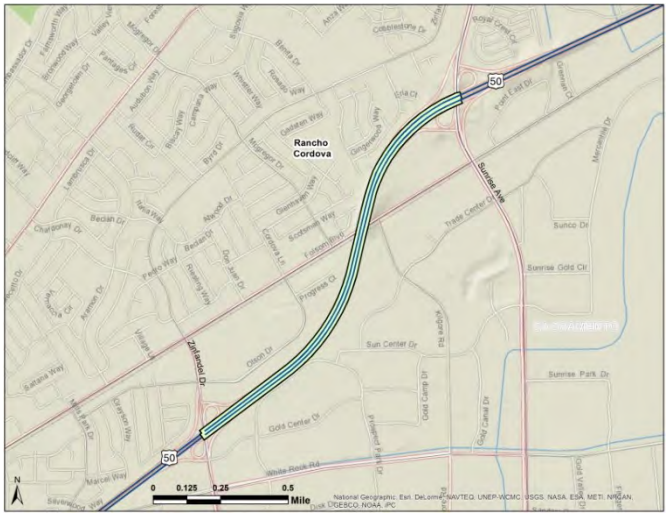


Figure 7: Segment 5 Map

Figure 8: Segment 6 Map

Figure 9: Segment 7 Map

Figure 10: Segment 8 Map

Segment 7 covers almost the entirety of the City of Folsom over 6.1 miles from the Folsom Blvd. interchange to the Sacramento/El Dorado County line. This segment is a freeway consisting of four mixed flow lanes and two HOV lanes. Major trip attractors along the segment are Intel Corporation on Prairie City Rd., the outlet mall near Folsom Blvd., the Pallaido Cinemas, regional commercial facilities along Scott Rd. and numerous small businesses in Old Town Folsom. The predominant land uses along the facility are low density residential and some big box retailers. Currently, most land uses are on the north side of US 50. The south side of US 50 is now mostly occupied by Aerojet Rocketdyne and rangeland, but there are plans for residential and retail development for the area north of White Rock Rd. between Prairie City Rd. and the Sacramento/El Dorado County line.

Segment 8 extends 0.86 miles from the Sacramento/El Dorado County line to El Dorado Hills Blvd./Latrobe Rd. It is a freeway consisting of four mixed flow lanes and two HOV lanes. Land uses along this segment are almost exclusively low density residential with some office or commercial uses.

Figure 11: Segment 9 Map

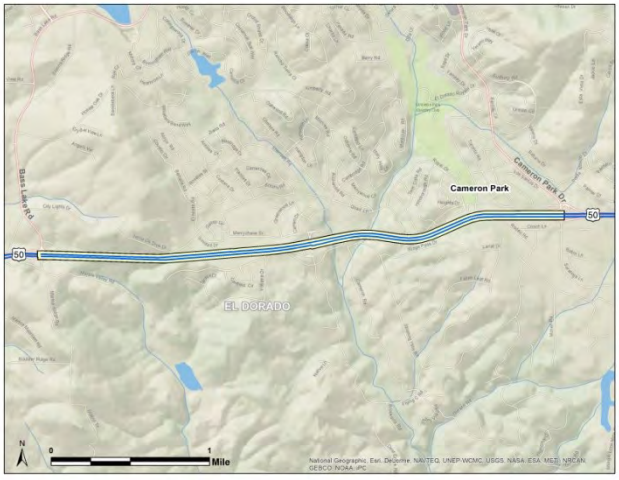


Figure 12: Segment 10 Map

Segment 9 extends 2.37 miles from Latrobe Rd. to Bass Lake Rd. It is a four-lane freeway with two HOV lanes. Land uses along this segment are almost exclusively low density residential with some office or commercial uses.

Segment 10 extends 3.34 miles from Bass Lake Rd. to Cameron Park Dr. This segment is a freeway consisting of four lanes with two HOV lanes. Land uses along this segment are almost exclusively low density residential with some office or commercial uses.

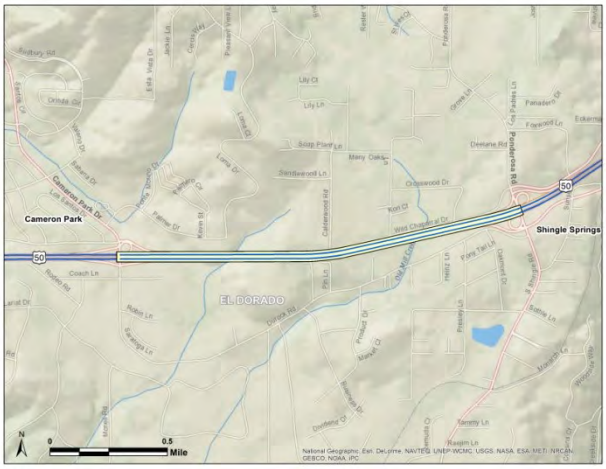


Figure 13: Segment 11 Map

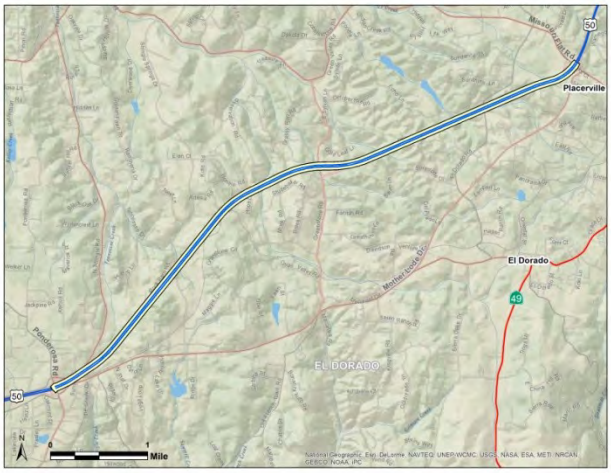


Figure 14: Segment 12 Map

Segment 11 is a four-lane freeway that spans 1.99 miles of rolling hills in El Dorado County from Cameron Park Dr. to Ponderosa Rd. The community of Shingle Springs is an important attractor along this segment. Other land uses along the facility are residential land uses.

Segment 12 is a four-lane freeway spanning 6.5 miles of rolling hills in El Dorado County from Ponderosa Rd. to Missouri Flat Rd. The major attractants along this segment are local and regional commercial land uses along Missouri Flat Rd. Another main trip attractor on the facility is a tribal gaming facility on Red Hawk Parkway. The rest of the land uses along the facility are residential land uses, especially estate residential uses of minimum 5 acre lots.

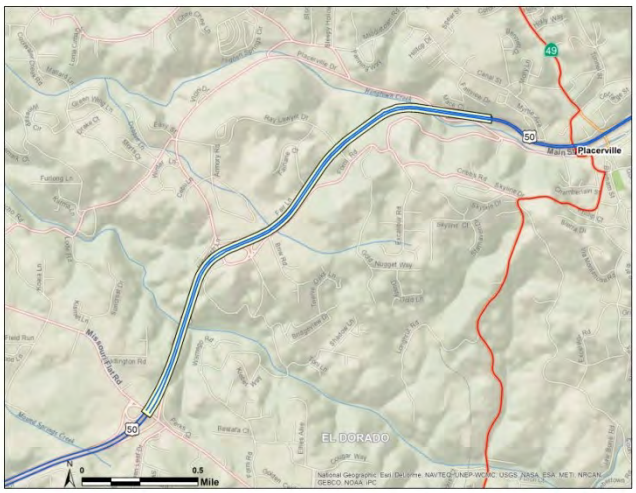


Figure 15: Segment 13 Map

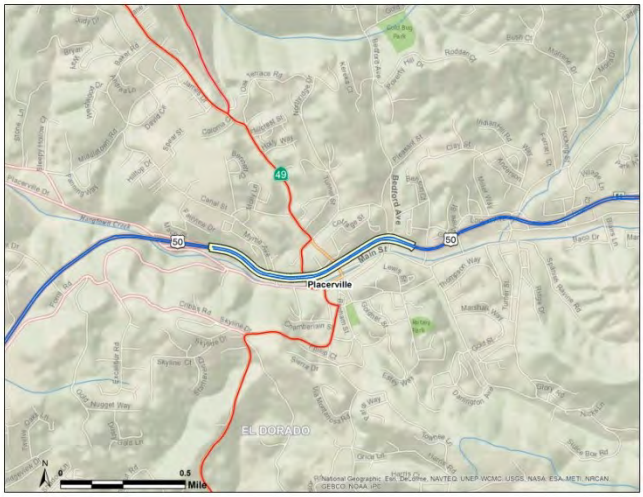


Figure 16: Segment 14 Map

Segment 13 is 2.2 miles of four-lane freeway that extends from Missouri Flat Rd. to the end of the freeway near Canal St. One of the major attractions along Segment 13 is the El Dorado Fairgrounds between Placerville Dr. and Ray Lawyer Dr. Other land uses include shopping in the vicinity of Missouri Flat Rd. and Placerville Dr. as well as low density residential land uses. The El Dorado County Government Center is adjacent to this segment.

Segment 14 is a short segment, consisting of 0.9 miles of four-lane expressway in the historic area of Placerville. The historic area has small businesses centered on Main St. with some residential uses north and south of Main St.

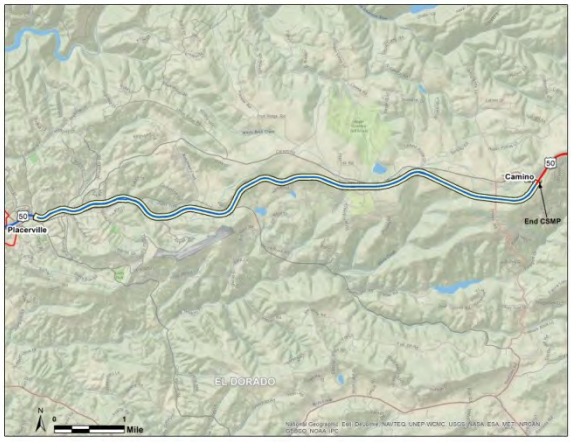


Figure 17: Segment 15 Map

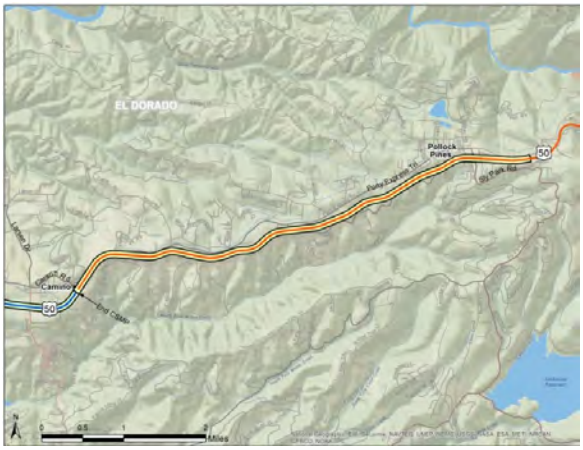


Figure 18: Segment 16 Map

Segment 15 concludes the CSMP corridor with 7.8 miles from Bedford Ave. to the Cedar Grove Exit, which is a four-lane freeway from Bedford Ave. to Smith Flat, and a four-lane expressway from Smith Flat to the Cedar Grove Exit. The segment includes retail and office commercial, primarily along Main St. and Broadway, and low density residential land uses. Significant trip attractors and operational considerations occur on a seasonal basis, such as Apple Hill during apple harvest, tree sales during the winter holidays and growing wine industry with associated tourism. EDCTC is currently conducting a study to examine travel impacts of tourism between the San Francisco Bay Area and the Tahoe Basin, from which operational management strategies will be identified.

Segment 16 consists of 6.0 miles and is a four-lane rural freeway that ends at the freeway-to-conventional highway transition east of Sly Park Rd. No capacity increases are envisioned during the 20-25 year to maintain the concept level of service, although major trip attractors include the community of Pollock Pines (via Sly Park Rd.) and Jenkinson Lake (Sly Park Lake), a recreational trip attractor.

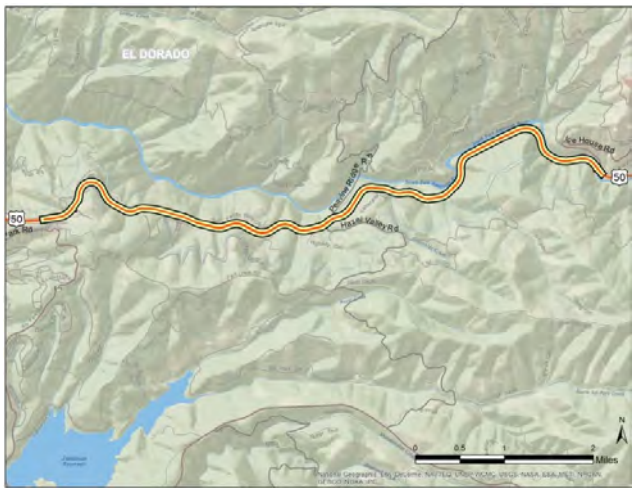


Figure 19: Segment 17 Map

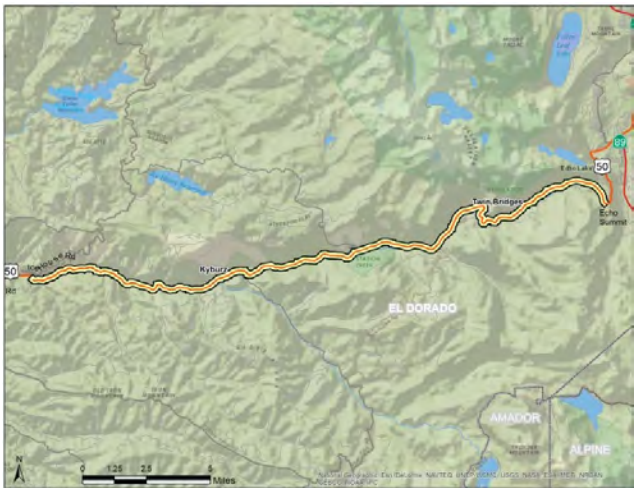


Figure 20: Segment 18 Map

Segment 17 is a 7.6 mile facility between east of Sly Park Rd. to Ice House Rd. that switches between conventional highway and expressway. For the first six lane miles, the facility is a three-lane conventional

highway. For the next 0.4 lane miles, the facility is a four-lane divided expressway, and the facility closes with 1.2 lane miles of two-lane conventional highway with a passing lane. A major attractor along this segment is the Crystal Basin Recreation Area. There are few other land uses that front this facility, so there are few planning conflicts.

Segment 18 is also in the rural environment in the Eldorado National Forest. This segment, which extends from Ice House Rd. to Echo Summit, is a 2-lane, conventional highway of 26.6 miles with six extents of passing lanes in both directions. A major attractor along this segment is Sierra at Tahoe ski resort. Caltrans conducts extensive snow removal operations along this segment during winter, with maintenance facilities including stations, sand houses and chaining areas at various locations.

Figure 21: Segment 19 Map

Figure 22: Segment 20 Map

Segment 19 is a two-lane conventional highway of 5.2 centerline miles. It descends from Echo Summit through the Eldorado National Forest to the SR 89 South junction, and extends through Meyers, an unincorporated community just to the south of South Lake Tahoe. There is an agricultural inspection facility on this segment in the town of Meyers. The Meyers Area Plan proposes intensifications of land use after final approval (to be determined), and increases in trip attraction may be anticipated.

Segment 20 consists of 4.8 miles of conventional highway through low-density residential development and past the Lake Tahoe Airport from the south junction with SR 89 to the north junction with SR 89. This segment begins as a two-lane facility with a two-way left turn lane passing through the unincorporated community of Meyers. At Pioneer Trail, it becomes a two-lane highway with narrow shoulders. Toward the end of the segment, the facility crosses into the City of South Lake Tahoe limits where it becomes four-lanes with a two-way left turn lane. Within the City of South Lake Tahoe, there are a wider variety of land uses, with a commercial strip forming most of the land uses. Numerous businesses have access within the city limits, where recent improvements included bicycle and pedestrian facilities along the highway.

Figure 23: Segment 21 Map

Segment 21 is a four-lane conventional urban arterial with a center turn lane that is 5.0 miles in length that passes through mixed land uses. The facility has sidewalks along some locations and Class II bicycle lanes throughout much of this segment. On this segment, the facility is the main street for South Lake Tahoe. As such, many of the largest commercial and public land uses front US 50 and have access on this conventional highway segment. South Tahoe Middle School, South Tahoe Police Department, numerous small businesses, resorts, and restaurants are located on this facility.

The System Characteristics for the Existing, 20-Year Build, and Ultimate Facility are summarized in Tables 5 and 6 on pages 22 and 23. The tables provide basic information about US 50 on each segment, including HOV characteristics, auxiliary lanes, and passing lanes. The existing facility identifies the highway under current conditions. The 20-Year Build Facility identifies the highway with improvements planned and programmed to be completed by the horizon year of 2035. The post 25-year Ultimate Facility is also listed to identify how the highway is envisioned for beyond the horizon year. The segments are determined based on logical termini including intersections, jurisdiction, changes in land use, and status of construction. All segment lengths are given in centerline miles.

TABLE 5: US 50 SYSTEM CHARACTERISTICS – EXISTING FACILITY

Seg. #	Existing Facility[1)]							
	Facility Type	General Purpose Lanes	Lane Miles	Centerline Miles	HOV Lanes	HOV Characteristics	Auxiliary Lanes	Passing Lanes
1	F	8 / 6 / 8	23.645	3.156	--	--	--	--
2	F	8	39.664	4.958	--	--	--	--
3	F	8	22.88	2.86	--	--	59.90%	--
4	F	8	44.64	5.58	2	2+; Part-Time	6.40%	--
5	F	8	12.928	1.616	2	2+; Part-Time	--	--
6	F	6 / 4	24.558	4.51	2	2+; Part-Time	--	--
7	F	4	24.504	6.126	2	2+; Part-Time	--	--
8	F	4	3.56	0.89	2	2+; Part-Time	--	100%
9	F	4	9.36	2.34	2	2+; Part-Time	--	--
10	F	4	13.36	3.34	2	2+; Part-Time	--	--
11	F	4	7.96	1.99	--	--	--	--
12	F	4	26	6.50	--	--	4.62%	--
13	F	4	8.76	2.19	--	--	--	--
14	E	4	3.44	0.86	--	--	17.10%	--
15	F / E	4	31.344	7.836	--	--	0.50%	--
16	F	4	24.08	6.02	--	--	--	--
17	C / E / C	3 / 4 / 3	28.1	7.648	--	--	--	--
18	C	2	53.276	26.638	--	--	0.70%	15.70%
19	C	2	7.98	3.99	--	--	1.50%	--
20	C	3 / 2 / 5	11.46	4.83	--	--	--	--
21	C	5	19.96	4.99	--	--	--	--

[1)] F = Freeway, E = Expressway, C = Conventional; 3 and 5 lanes include 2-way left turn lane

TABLE 6: US 50 SYSTEM CHARACTERISTICS – 20-YEAR BUILD FACILITY									
Seg. #	20-Year Build Facility[1)]								Ultimate Facility
	Facility Type	General Purpose Lanes	Lane Miles	Centerline Miles	HOV Lanes	HOV Characteristics	Auxiliary Lanes	Passing Lanes	
1	F	8	25.248	3.156	--		--	--	8F + 2HOV + Aux Lanes + ITS + ICM
2	F	8	39.664	4.958	2	2+; Part-Time	--	--	8F+2HOV+Aux Lanes + ITS + ICM
3	F	8	22.88	2.86	2	2+; Part-Time	--	--	8F + 2HOV + Aux Lanes + Transition + ITS + ICM
4	F	8	44.64	5.58	2	2+; Part-Time	6.40%	--	8F + 2HOV + Aux Lanes + ITS + ICM
5	F	8	12.928	1.616	2	2+; Part-Time	100.00%	--	8F + 2HOV + Aux Lanes + Transition + ITS + ICM
6	F	6 / 4	24.558	4.51	2	2+; Part-Time	100.00%	--	8F + 2HOV + ITS + ICM + Aux Lanes to Hazel Ave., 4F + 2HOV + ITS + ICM + Aux Lanes to Folsom
7	F	4	24.504	6.126	2	2+; Part-Time	73.29%	--	4F + 2HOV + Aux Lanes + ITS + ICM
8	F	4	3.56	0.89	2	2+; Part-Time	100.00%	10.50%	4F + 2HOV + Aux Lanes + ITS + ICM
9	F	4	9.36	2.34	2	2+; Part-Time	32.48%	--	4F + 2HOV + Aux Lanes + ICM
10	F	4	13.36	3.34	2	2+; Part-Time	100.00%	--	4F + 2HOV + Aux Lanes + ITS
11	F	4	7.96	1.99	--		100.00%	--	4F + 2HOV + Aux Lanes + ITS
12	F	4	26	6.50	--		0.50%	--	4F + 2HOV + Aux Lanes + ITS
13	F	4	8.76	2.19	--	--	6.30%	--	4F + Aux Lanes + ITS
14	E	4	3.44	0.86	--	--	17.10%	--	4E + Aux Lanes + ITS
15	F / E	4	31.344	7.836	--	--	0.50%	--	4F + Aux Lanes + ITS to Smith Flat, 4E + ITS to Camino
16	F	4	24.08	6.02	--	--	--	--	4F + ITS
17	C / E / C	3 / 4 / 3	28.1	7.648	--	--	--	--	3C + ITS, 2.0 mi; 4E + ITS, 5.3 mi; 3C + ITS, 0.3 mi
18	C	2	53.276	26.638	--	--	--	--	2C + ITS + ICM; 0.35 mi of 2-way left turn lane
19	C	2	7.98	3.99	--	--	--	--	2C + ITS + ICM + Bike Lanes
20	C	3 / 2 / 5	11.46	4.83	--	--	--	--	3C + ITS + ICM, 0.86; 2C + ITS + ICM, 3.64 mi; 5C + ITS + ICM, 0.61 mi
21	C	5	19.96	4.99	--	--	--	--	5C + ITS + ICM

[1)] F = Freeway, E = Expressway, C = Conventional; 3 and 5 lanes include 2-way left turn lane

[2)] The number of lanes in the Concept Attainment column is for both directions required to achieve LOS E in Urban and LOS D in Rural areas along the corridor. It is meant to show the severity of future conditions and what it would take to achieve the Concept LOS. Caltrans is not suggesting that it is our plan to build the facility to achieve this LOS. We recognize the difficulty in achieving the desired LOS given the financial, environmental, right of way, and political constraints.

TRAFFIC OPERATIONS SYSTEM ELEMENTS

Caltrans District 3 seeks to optimize the transportation system. Two cost-effective methods include operational improvements and ITS improvements. Operational improvements include smaller-scale capital improvements that improve efficiency such as auxiliary lanes, express bus/carpool lanes, incident management, traffic demand management, and park and ride projects. ITS improvements can be categorized into four general classifications: driver information, monitoring, vehicle detection, and operations. These traffic operations system (TOS) elements, and transportation management facilities and services are discussed below by transportation mode.

Given the complexity of the corridor and its extensive geographic range, there are a wide variety of system management strategies and elements currently being implemented by jurisdictions and transportation service providers. Strategies and elements range from vehicle detection devices to traveler information systems to traffic flow control mechanisms. A common element among all the strategies and elements is data collection and analysis. Caltrans, SACOG, and local governments have partnered together on corridor performance data and system management in the Sacramento Transportation Area Network (STARNET).

The STARNET web application initial release took place in 2010. Features implemented so far include: Changeable Message Sign (CMS) display, speed data from Caltrans and Google, integration of Regional Transit and Yolo Transit to provide schedule and routing data, California Highway Patrol incident data, connectivity to the 511 systems (web and telephone), personalized traveler information with alerts based on time of day, lane closure data, Closed Circuit Television (CCTV) displays from Caltrans, City of Roseville and County of Sacramento. Near term initiatives include national weather service (NWS) alert data, increased transit data including real time location feed data from Yolo Transit and a City of Sacramento Police Computer Aided Design (CAD) feed. Web based applications include a commercial vehicle page, full feature website, low bandwidth page, mobile device page and under development applications for iPhone and Android smart phones. Caltrans Commercial Web Portal, City of Sacramento Traffic Operation Center (TOC), Sacramento County TOC, Roseville TOC, Elk Grove TOC and Citrus Heights TOC are contributing sources for the STARNET application. STARNET's associated management strategies can and will evolve as the application is implemented throughout the region and as additional features are added as development proceeds.

The SHS has an extensive set of system management strategies in operation. Some cities, counties, and transit operators also have robust system management elements and programs applied to their facilities or services. There are also specific instances of system management linkages among transportation modes and services at particular locations.

These strategies work as a system to gather, analyze, and disseminate information through the Caltrans Transportation Management Center (TMC). Information about collisions, other incidents, road closures, and emergency notifications are fed into this information hub and disseminated to public and private information users. The TMC operates 24 hours a day, seven days a week.

Caltrans is providing the latest in ITS technology to its urban freeways. As summarized in Table 7 and depicted in Figure 25 below, US 50 has had numerous ITS elements installed on the urbanized segments of the facility. Additional ITS elements are planned or programmed for the facility under a 20-Year Build scenario and under the Ultimate Facility Concept. These elements help improve travel times and overall facility performance.

Operational improvements and services utilized by Caltrans along the US 50 corridor are identified as follows:

Auxiliary lanes are used between interchange on- and off-ramps to improve weaving and merging movements to and from adjacent travel lanes. Auxiliary lanes give drivers more room to speed up and slow down when

getting on or off a freeway. An auxiliary lane makes it easier for drivers to merge into freeway traffic, and reduces ramp congestion.

Transition lanes are similar to auxiliary lanes in function, but facilitate merging transitions for traffic over the distance of two or more interchanges. By functioning as "on-system frontage," transition lanes provide broader service for merging traffic and therefore alleviate bottleneck conditions and enhance travel lane throughput along freeway segments spread out over two or more interchanges. A graphic depiction of auxiliary and transition lanes are shown in Figure 24.

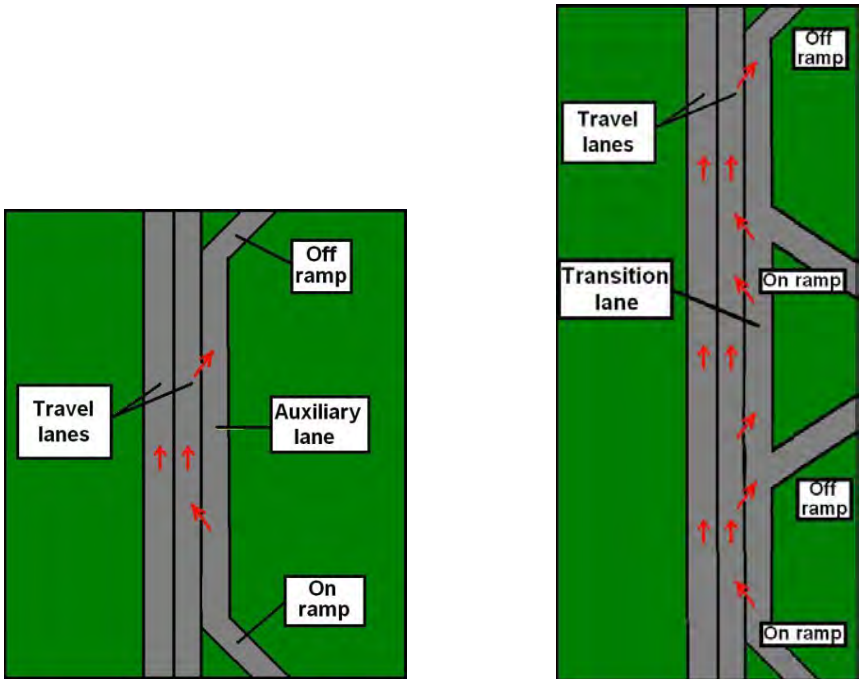


Figure 24: Auxiliary and Transition Lanes

Express Bus/Carpool Lanes sometimes referred to as HOV lanes are lanes for the exclusive use of vehicles carrying two or more occupants during the posted times dedicated to their use and can provide a travel time advantage to people who use the lanes. Express bus/carpool lanes stretch from Watt Ave. in Sacramento County to Cameron Park Dr. in El Dorado County.

Park-and-Ride Lots provide a place for commuters to park their cars and meet carpools, vanpools and buses. Some park and ride lots also provide bike lockers. A listing of lots is identified on Table 9 and shown in Figure 23 below.

Transportation Management Plans (TMP) are required by Caltrans Deputy Directive DD-60-R1 for *"all construction, maintenance, and encroachment permit activities on the State Highway System"*. All projects must be TMP Certified prior to being designated as "Ready to List". TMPs detail how a construction project will be implemented so that its impact to existing travel is minimized or mitigated.

Transportation Demand Management services include Transportation Management Associations (TMAs), employer subsidized transit passes and vanpools, the *511 Traveler Information Service*, carpool ride matching, the *Guaranteed Ride Home* program, and vanpool services. The overall intent is to reduce the number of vehicle trips using highways and roads. Many of these services are financially supported by or directly provided by EDCTC and SACOG. Area employers and office complex owners are also key supporters and funders of TDM programs at their work sites. A listing of TMAs is provided in the Stakeholders Acknowledgement section. Additional TMA information including a list of contacts can be found at: http://www.sacregion511.org/rideshare/tma.html.

Incident Management is an essential component of highway operations. Timely response to incidents reduces the amount of time lanes are blocked and speeds emergency response. A popular aspect of this program is the *Freeway Service Patrol,* which assists motorists whose vehicles break down along the highway due to flat tires, out of gas, or mechanical failure.

Traveler Information services for the corridor include web sites, which are hosted by Caltrans, the California Highway Patrol (CHP), the U.S. Weather Service, and a private company. Caltrans provides real-time data feeds to commercial/media information services, such as radio and TV stations, to help inform travelers of highway and traffic conditions. Among these is the Caltrans QuickMap web page, which can be found at the following URL: http://www.dot.ca.gov/ca511/trafficMapFaq.html.

TABLE 7: EXISTING US 50 ITS ELEMENTS

Seg. #	Cnty	PM	ITS Elements[1]								
			CCTV	CMS	EMS	ETR	HAR	RMS	RWIS	TMS	Grand Total
1	YOL	0.00 - 3.16	2	-	-	-	-	3	-	3	**8**
2	SAC	L0.00 - L2.48/R0.00	5	2	-	-	-	4	-	4	**15**
3		R0.00 - R5.34	5	2	1	-	-	11	-	8	**27**
4		R5.34 - R10.92	3	-	1	-	1	7	-	7	**19**
5		R10.92 - 12.50	1	-	1	-	-	3	-	1	**6**
6		12.50 - 17.01	2	-	-	-	-	6	-	4	**12**
7		17.01 - 23.14	1	1	-	-	-	8	-	6	**16**
8	ELD	0.00 – 0.86	-	1	-	-	-	1	-	1	**3**
9		0.86 - R3.23	-	-	-	-	-		-	2	**2**
10		R3.23-6.57	-	-	-	-	-	-	-	2	**2**
11		6.57 – R8.56	-	-	-	-	-	-	-	3	**9**
12		R8.56 – R15.06	-	-	-	-	-	2	-	4	**6**
13		R15.06 - 17.25	-	-	1	-	-	-	-	1	**2**
14		17.25 - 18.11	1	-	-	-	1	-	-	-	**2**
15		18.11 - R25.95	-	1	2	-	-	-	-	-	**3**
16		R25.95/31.97	-	1	1	-	1	-	-	-	**3**
17		R31.97/39.77	-	-	-	-	-	-	-	-	**0**
18		39.77/66.63	-	1	1	-	1	-	-	-	**3**
19		66.63/70.62	2	1	-	2	1	-	1	1	**8**
20		70.62/75.45	-	-	2	2	-	-	-	3	**7**
21		70.62/80.44	2	2	1	2	1	-	-	3	**11**
TOTAL			**24**	**12**	**11**	**6**	**6**	**44**	**1**	**53**	**158**

[1] CCTV = Closed Circuit Television, CMS = Changeable Message Sign, EMS = Extinguishable Message Sign, ETR = Electronic Tag Reader, HAR = Highway Advisory Radio, RMS = Ramp Metering Stations, RWIS = Road Weather Information System, TMS = Traffic Management Systems. ITS Elements Inventoried April 2013

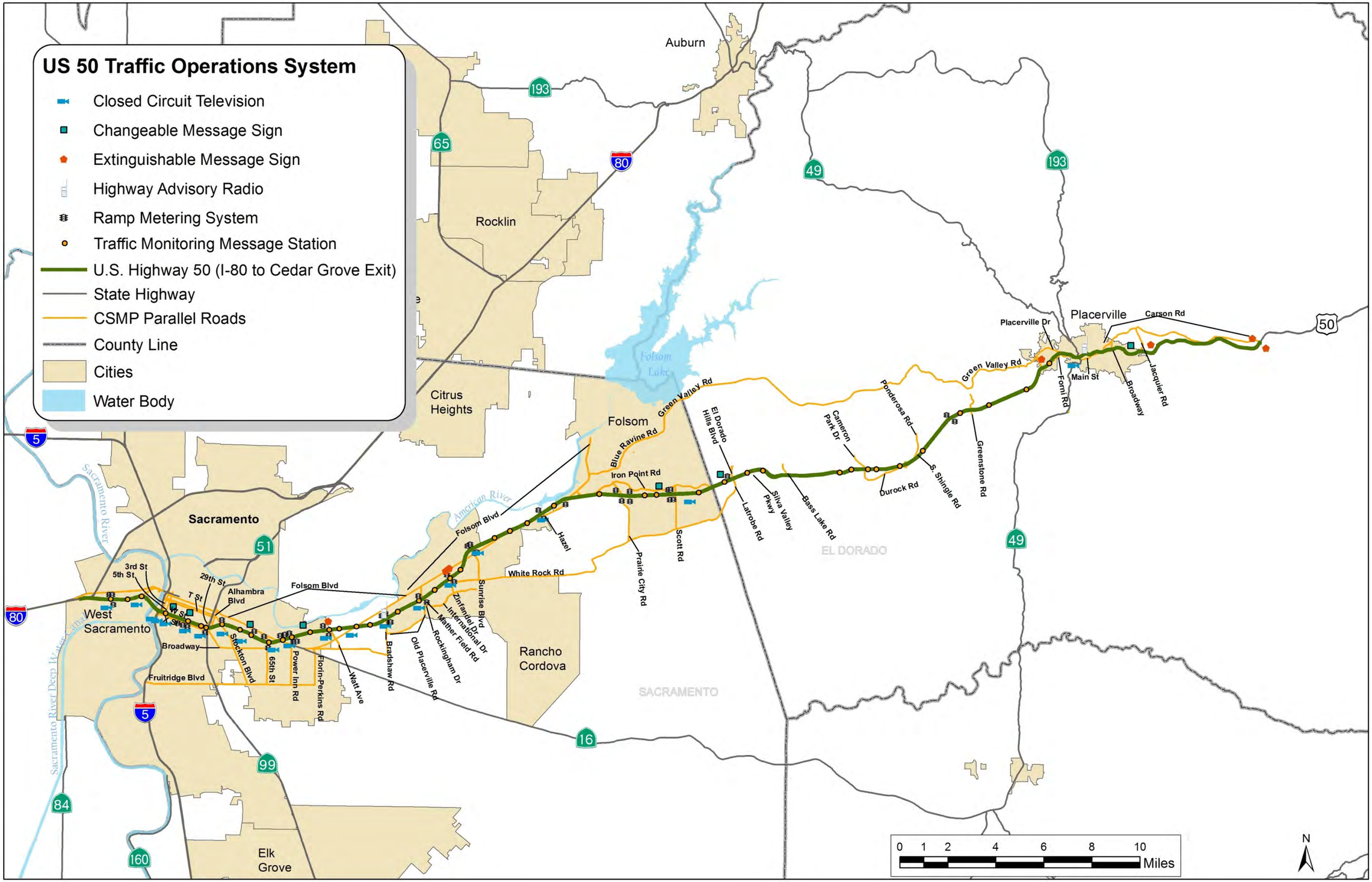


Figure 25: US 50 Traffic Operations System Map

PARALLEL AND CONNECTING ROADWAYS

Working with local agencies, Caltrans District 3 has identified several roads parallel to and connecting to US 50 in the CSMP portions of the facility, which are identified in Table 8 below and shown in Figure 2 on page 11 above. Together with transit and bicycle/pedestrian paths, the corridor functions as a whole to provide optimal system performance. It accomplishes this principally by offering alternatives to transportation along US 50 during times of peak commute or during an incident. Compared to 2009, the network of parallel and connecting roadways was expanded to include more roadways, creating a more complete system of urban streets. Major parallel and connecting roadways on the corridor are West Capitol Ave., Broadway, Stockton Blvd., Folsom Blvd., White Rock Rd., Sunrise Blvd., Iron Point Rd., Green Valley Rd., Cameron Park Dr., Mother Lode Dr., Placerville Dr., Broadway (in Placerville), and Main St.

A number of ITS elements utilized within the CSMP segments along the parallel and connecting roadways are as follows:

City of West Sacramento has one CCTV located on West Capitol Av. between Enterprise Blvd. and Capitol Mall.

City of Sacramento operates a TOC. Sensors in the street detect the passage of vehicles, vehicle speed, and the level of congestion. This information is received on a second-by-second (real-time) basis and is analyzed at the TOC.

Sacramento County also operates a TOC by gathering information through CCTV cameras, CMS, HAR, and a Fiber Optics (FO) network placed along major traffic corridors throughout the county.

City of Rancho Cordova installed CCTV cameras and a FO network on Folsom Blvd. in 2009. Currently, one CCTV exists on Sunrise Blvd. between US 50 and Folsom Blvd. Most major traffic corridors are on the network. The City contracts with the County of Sacramento to operate their systems through the County's TOC.

City of Folsom recently completed installing a FO system on all of the City's major corridors. Currently, the sole intersection that is monitored via camera is located on Iron Point Rd. and East Bidwell.

El Dorado County has three coordinated signals along Francisco Dr., at Green Valley Rd., the Market Place entrance (east side Safeway Center/west side Lake Forest Plaza), and Village Center Dr.

City of Placerville utilizes traditional control devices that includes traffic signals and stop signs. In addition, there is a CCTV at the intersection of US 50 and SR 49 (Spring St.).

TABLE 8: US 50 CSMP PARALLEL ROADWAY NETWORK							
Seg. #	Location		US 50		Parallel and Connector Roads		
	County	City	From	To	Roadway	From	To
1	YOL	West Sacramento	Interstate 80	YOL/ SAC County Line	West Capitol Ave.	Enterprise Blvd.	Capitol Mall
2	SAC	Sacramento	YOL/ SAC County Line	State Routes 99 and 51	W St.	5th St.	29th St.
					X St.	3rd St.	Alhambra Blvd.
					29th St.	W St.	T St.
					T St.	29th St.	Alhambra Blvd.
3			State Routes 99 and 51	Watt Ave.	Alhambra Blvd.	X St.	Folsom Blvd.
					Folsom Blvd.	Alhambra Blvd.	Watt Ave.
					Stockton Blvd.	Alhambra Blvd.	Fruitridge Rd.
					Broadway	5th St.	Alhambra Blvd.
					Broadway	Stockton Blvd.	65th St
					Fruitridge Rd./Seamas Ave	I-5	Florin Perkins Rd.
					65th St.	Fruitridge Rd.	US 50
					Power Inn Rd.	Fruitridge Rd.	US 50
					Florin Perkins Rd.	Fruitridge Rd.	Folsom Blvd.
4	SAC	Unincorp.	Watt Ave.	Zinfandel Dr.	Watt Ave.	Folsom Blvd.	US 50
					Folsom Blvd.	Watt Ave.	Bradshaw Rd.
		Rancho Cordova			Folsom Blvd.	Bradshaw Rd.	Sunrise Blvd.
					Bradshaw Rd.	Folsom Blvd.	Old Placerville Rd.
					Old Placerville Rd.	Bradshaw Rd.	Rockingham Dr.
					Rockingham Dr.	Old Placerville Rd.	Mather Field Rd.
					Mather Field Rd.	Rockingham Dr.	Folsom Blvd.
					International Dr.	Rockingham Dr.	Zinfandel Dr.
					Zinfandel Dr.	International Dr.	Folsom Blvd
5	SAC	Rancho Cordova	Zinfandel Dr.	Sunrise Blvd.	White Rock Rd.	Zinfandel Dr.	Sunrise Blvd
					Sunrise Blvd.	US 50	White Rock Rd.
					White Rock Rd.	Sunrise Blvd.	Rancho Cordova City limits
6	SAC	Rancho Cordova	Sunrise Blvd.	Folsom Blvd.	Folsom Blvd.	Sunrise Blvd.	Hazel Ave.
	SAC	Unincorp.	Sunrise Blvd.	Folsom Blvd.	White Rock Rd.	R. Cordova City limits	Prairie City
					Folsom Blvd.	Hazel Ave.	Iron Point Rd.
					Blue Ravine Rd.	Folsom Blvd.	Green Valley Rd.
					Prairie City Rd.	Iron Point Rd.	White Rock Rd.

TABLE 8: US 50 CSMP PARALLEL ROADWAY NETWORK							
Seg. #	Location		US 50		Parallel and Connector Roads		
	County	City	From	To	Roadway	From	To
7	SAC	Folsom .	Folsom Blvd.	Sacramento/ El Dorado County Line	Iron Point Rd.	Folsom Blvd.	Empire Ranch Rd.
					Folsom Blvd.	Iron Point Rd.	Blue Ravine Rd.
					Blue Ravine Rd.	Folsom Blvd.	Green Valley Rd.
					Prairie City Rd.	Iron Point Rd.	White Rock Rd.
					E. Bidwell/Scott Rd.	Iron Point Rd.	White Rock Rd.
		Unincorp.			White Rock Rd.	Grant Line Rd.	SAC/ELD Cty. Line
8	ELD	Unincorp.	Sacramento/ El Dorado County Line	El Dorado Hills Blvd.(Latrobe)	Green Valley Rd.	Blue Ravine Rd.	Cameron Park Dr.
					White Rock Rd.	SAC/ELD Cty. Line	Latrobe Rd.
					Latrobe Rd.	White Rock Rd.	US 50
					White Rock Rd.	Latrobe Rd.	Silva Valley Pkwy.
					Silva Valley Pkwy.	White Rock Rd.	Serrano Parkway
9	ELD	Unincorp.	Latrobe Road	Bass Lake Rd	Green Valley Rd.	Francisco Dr.	Deer Valley Rd.
					White Rock Rd.	Latrobe Rd.	Silva Valley Pkwy.
					Silva Valley Pkwy.	White Rock Rd.	Serrano Pkwy.
10	ELD	Unincorp.	Bass Lake Rd	Cameron Park Dr	Green Valley Rd.	Deer Valley Rd.	Cameron Park Dr.
					Cameron Park Dr.	Durock Rd.	US 50
11	ELD	Unincorp.	Cameron Park Dr.	So. Shingle Rd. (Ponderosa Rd)	Green Valley Rd.	Cameron Park Dr.	Ponderosa Rd.
					Durock Rd.	Cameron Park Dr.	South Shingle Rd.
12	ELD	Unincorp.	Ponderosa Rd.	Missouri Flat Rd.	Green Valley Rd.	Ponderosa Rd.	Missouri Flat Rd.
					South Shingle Rd.	Durock Rd.	US 50
					Mother Lode Dr.	South Shingle Rd.	Missouri Flat Rd.
13	ELD	Unincorp.	Missouri Flat Rd.	End of Freeway, Placerville	Green Valley Rd.	Missouri Flat Rd.	Placerville Dr.
					Forni Rd.	Placerville Dr.	Main St.
					Placerville Dr.	Forni Rd.	US 50
14	ELD	Placerville	End of Fwy., Placerville	Bedford Ave., fwy. start.	Main St.	Placerville Dr.	Bedford Ave.
15	ELD	Placerville	Bedford Ave., start of Fwy.	Cedar Grove Exit	Main St.	Bedford Ave.	Broadway
					Broadway	Main St.	Point View Dr.
					Jacquier Rd.	Point View Dr.	Carson Rd.
					Carson Rd.	Main St./ Broadway	US 50 at Cedar Grove Exit

TRANSIT AND RIDESHARE FACILITIES

Transit and rideshare services within the US 50 corridor are identified on Table 9 and delineated on the CSMP segments of this Plan in Figure 26 below. They are important alternatives to automobile travel that frees roadway capacity. In the urban segments of US 50, transit services are provided by Sacramento Regional Transit (SacRT), Yolo Bus, Folsom Stage Line, El Dorado Transit, and Amtrak. Yolo Bus offers services between West Sacramento in both traditional and commuter bus options. SacRT provides traditional bus service and light rail service on the Gold Line. Folsom Stage Line has traditional bus services to major points of interest in Folsom, and El Dorado Transit makes both Sacramento commuter and traditional bus services available in western El Dorado County. Folsom Stage Line provides service to the three light rail stations at the end of the Gold Line extension.

In addition to the bus and rail services within metropolitan Sacramento, there are intercity transit services available. Amtrak California offers intrastate rail connections within California on either the Capitol Corridor or the San Joaquin lines. There are also numerous connections through the train service with the Amtrak connector bus, Amtrak Thruway. These Amtrak buses have several destinations in California and Nevada that are not on the Amtrak California rail service lines, such as Yuba City, South Lake Tahoe, and Reno. In addition, interstate Amtrak services connect the US 50 corridor to Oregon and Washington on the Coast Starlight line and to the eastern United States on the California Zephyr line.

In the rural segments of US 50, transit services are limited. Available transit services are focused on the developed areas of the corridor. Camino and Pollock Pines have limited El Dorado Transit bus service from the center of Pollock Pines near the main grocery store to the Missouri Flat Transfer Center near Placerville. Tahoe Transportation District (TTD) also offers transit service through BlueGo. The main line for South Lake Tahoe runs from the SR 89 North junction to east of the state line. With one-hour headways, both transit systems are basic services and are not a viable alternative to automobile travel for many people. Funds are being sought to maintain and possibly expand transit service in the Lake Tahoe Basin.

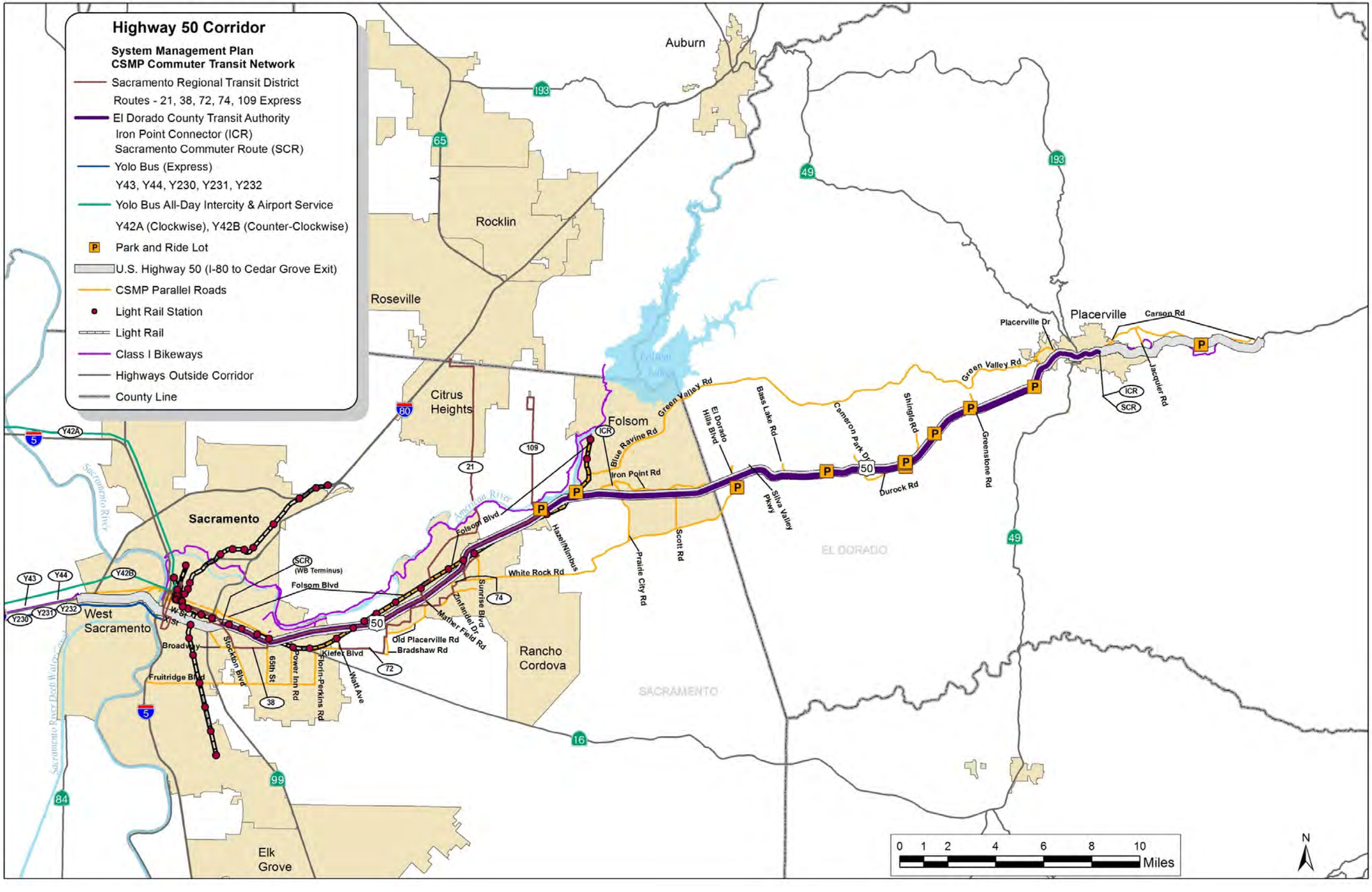


Figure 26: US 50 CSMP Network Transit Routes

Rideshare and park and ride facilities form a vital linkage in the transit system, allowing travelers to take transit when walking distances would otherwise limit its practicality. Park and ride lots can be operated by several different agencies, such as SacRT or local agencies. Caltrans has partnered with several local agencies to provide park and ride lots. These facilities are included in Table 9 below. Several of these lots also offer bicycle facilities such as lockers or stands. Additional Park and Ride lots information including specific location, capacity, and occupancy rates can be found at http://www.dot.ca.gov/dist3/departments/planning/systemplanningPR.htm.

TABLE 9: US 50 CORRIDOR TRANSIT SYSTEM				
Seg. #	**Mode & Collateral Facility**	**Name**	**Route End Points**	**Headway**
1	Traditional Bus	Yolo Bus	Downtown Sacramento; Davis; Woodland	Long
	Commuter Bus	Yolo Bus	Downtown Sacramento; Davis; Woodland	Long
	Amtrak Bus	Amtrak California	Major Cities in California	Long
	Amtrak Rail	Capital Corridor	Sacramento, Bay Area, Reno	Long
2	Traditional Bus	Sacramento Regional Transit (SacRT) and Yolo Bus	West Sacramento; Sacramento; Rancho Cordova	Short
	Commuter Bus	Yolo Bus	Yolo County; Folsom; El Dorado County;	Long
	Light Rail	SacRT Gold Line	Sacramento, Rancho Cordova, Folsom	Short
	Amtrak Bus	Amtrak California	Major Cities in California	Long
	Amtrak Rail	Capital Corridor	Sacramento, Bay Area, Reno	Long
3-6	Traditional Bus	Sacramento Regional Transit (SacRT)	Sacramento; Rancho Cordova; Fair Oaks	Short
	Commuter Bus	El Dorado County Transit Authority	Placerville, El Dorado Hills, Downtown Sacramento	Long
	Light Rail	SacRT Gold Line	Sacramento, Rancho Cordova, Folsom	Short
	Amtrak Bus	Amtrak California	Major Cities in California	Long
6	Park and Ride Lot	Hazel Park & Ride		
7	Traditional Bus	Folsom Stage Line	Places of Interest in Folsom	Short
	Traditional Bus	El Dorado County Transit Authority - Iron Point Connector	Placerville, Shingle Springs, Cameron Park, El Dorado Hills, Folsom	Long
	Light Rail	SacRT Gold Line	Sacramento, Rancho Cordova, Folsom	Short
	Park and Ride Lot	Folsom Iron Point Park & Ride		
8	Park and Ride Lot	El Dorado Hills Park & Ride		
		Cambridge Dr Park & Ride		
12	Park and Ride Lot	Ponderosa East and West Park & Ride Lots		
		Durock Park & Ride		
		Greenstone Park & Ride		
		Shingle Springs Park & Ride		
		Missouri Flat Park & Ride		

TABLE 9: US 50 CORRIDOR TRANSIT SYSTEM				
Seg. #	**Mode & Collateral Facility**	**Name**	**Route End Points**	**Headway**
8-15	Traditional Bus	El Dorado County Transit Authority	Cameron Park, Shingle Springs, Placerville	Short
	Traditional Bus	El Dorado County Transit Authority - Iron Point Connector	Placerville, Shingle Springs, Cameron Park, El Dorado Hills, Folsom	Long
	Commuter Bus	El Dorado County Transit Authority	Placerville, El Dorado Hills, Downtown Sacramento	Long
	Amtrak Bus	Amtrak California	Major Cities in California	Long
	Transit Station	Placerville Transit Station at Mosquito Rd.		
15	Park and Ride Lot	Camino Heights Park & Ride		
13-16	Traditional Bus	El Dorado County Transit Authority	Missouri Flat to Pollock Pines	Long
17-20	None			
21	Traditional Bus	BlueGo Bus Service	Jct. SR 89 North to State of Nevada	Long

A number of ITS elements utilized by Transit agencies along the corridor are as follows:

Yolo County Transit District (YCTD) uses a Global Positioning System (GPS) for locating buses in route, referred to as an Automatic Vehicle Location (AVL) system. The AVL System allows users to see where their bus is located within the last minute.

El Dorado County Transit Authority utilizes the GPS Zonar System for pre-trip inspections, maintenance, and real-time vehicle tracking.

Sacramento Regional Transit District (SacRT) has installed pre-emptive traffic signals at at-grade intersections along the Light Rail routes. SacRT has a GPS; however, it is only utilized for analysis purposes.

Computer-aided dispatch and Bus Rapid Transit are in the planning stages. In addition, SacRT has an online Trip Planning application to assist transit users. During special events such as the California State Fair, the Jazz Festival, the holiday seasons, and the Mather Field Air Show, SacRT operates additional service to connect events to light rail stations and offers free service to promote transit use during select events. The transit routes identified in the CSMP network are shown in Figure 5.

The Sacramento Valley Station in downtown Sacramento is the 7th busiest station in the national Amtrak system and serves as a multi-modal transfer facility. There are over 1.1 million passenger trips annually. Passengers can make connections with numerous local bus services as well as the SacRT light rail system.

Sacramento County installed pre-emptive traffic signals to give preferential signal timing to transit buses at selected locations that serve high priority transit corridors.

SACOG manages the 511 and rideshare programs that cost approximately $1 million per year, region-wide, to foster carpooling, transit ridership, vanpooling, and bicycling in all areas and corridors. The Regional Rideshare Program covers Placer, El Dorado, Sacramento, Yolo, Yuba, and Sutter counties. It is part of a statewide network of rideshare agencies that encourage alternative transportation modes for traveling.

BICYCLE FACILITIES

Bicycling constitutes an active transportation alternative to automobile use that can help reduce congestion and improve corridor performance. Bicycle facilities, particularly on parallel roads, are important to encourage bicycling. These bicycle facilities are located on both local parallel roads and on dedicated pathways, such as the American River Parkway Trail. Table 10 below gives details about the bicycle facilities in the corridor. Figures 27 and 28 show the bicycle routes included in the CSMP segments of this plan.

Bicycles are prohibited on the freeway portion of US 50, but are generally permitted on the conventional highway portion. Bicyclists are expected to use an alternate parallel bicycle facility where US 50 prohibits it. Bicyclists can ride on US 50 where not prohibited. While bikeway expansion on US 50 would improve bicycling on the facility, the environmental constraints, the high cost, and low bicycle ridership currently prohibit construction of bicycle facilities in the rural sections of US 50, particularly through the Eldorado National Forest. In the developed portions of the facility there are several opportunities for collaboration with local agencies to construct the bicycle facilities appropriate to the context.

Caltrans District 3 recently completed the *State Highway Bicycle Facility Plan* (SHBFP). This plan establishes policies for bicycle planning across a variety of areas, such as maintenance, operations, planning, and project management. Further, the plan includes a table and maps with recommended improvements to the bicycle transportation system, such as Class II bike lanes and Class III bike routes. These improvements are to be incorporated as funds allow or the highway segment is improved.

Several policy recommendations were made as to what types of bicycle facilities would be constructed on the SHS. Priority is to be given to ensuring consistency with local bicycle plans, unless the local proposal is inappropriate to the context of the roadway. Bicycle facilities are generally not appropriate in areas with limited access and high vehicular speeds. In particular, urban freeways are not appropriate for bicycle facilities. In these cases, Caltrans consults with local governments to identify alternative routes to segments closed to bicycles. Further, Class II bicycle lanes are appropriate on the SHS passing through town centers and in developed areas where no local routes exist. Class III bicycle routes on the SHS may be appropriate for town centers, developed areas, and some rural locations.

The SHBFP established several District actions that help achieve the plan's vision. These actions by various District 3 divisions are intended to further coordination among divisions. These actions include several measures such as communication between divisions and maintenance agreements with local governments regarding bicycle facility planning. The SHBFP can be viewed at
http://www.dot.ca.gov/dist3/departments/planning/bike/D3SHBFP_June2013.pdf.

As part of the Environmental Improvement Program (EIP) for Lake Tahoe, Caltrans has constructed 2.25 miles of bikeways on the state highways near the lake and has plans for nine more miles, six of which are on US 50. These bikeways form part of the bicycling network, which is intended to provide travel around Lake Tahoe. The plans now call for Class II bike lanes from Meyers to the State Line. Currently, there are bike lanes from Trout Creek to Wildwood. The rest of the bike lanes are slated to be constructed by 2020.

Bicycle facilities in the corridor are not actively managed in the same manner as motor vehicle facilities. However, there are traffic operation systems that serve bicyclists such as dedicated bicycle lanes, bicycle detection loops at signalized intersections, video detection, other non-loop type detection, and bicyclist-activated signal change buttons. The City of Sacramento is installing video detection at some locations.

SacRT buses and the new light rail trains are equipped with bicycle racks. There are over 150 weatherproof bicycle lockers at 19 light rail stations. YCTD has the Bikes on Buses Program that allows bicycles to travel on any YOLOBUS.

The Sacramento Area Bicycle Advocates maintain an on-line hazard reporting system to allow users to report hazardous locations for bicyclist such as potholes, inadequate signal timing, hazardous railroad crossings, insufficient shoulder, and inadequate bikeway markings. The reports are then sent to the applicable jurisdiction. SACOG is creating an on-line route planning system for bicyclists. In addition, SACOG maintains bicycle maps on their website, which are currently being updated. These maps are included in the *SACOG Bicycle, Pedestrian, and Trails Master Plan,* which can be found at http://www.sacog.org/bikeinfo/download_bike_ped_trails_mp.cfm.
SACOG has also created an on-line route planning system for bicyclists, which can be found at http://www.sacregion511.org/bicycling/trips/.

TABLE 10: US 50 BICYCLE TRANSPORTATION NETWORK

Seg. #	County & City Location	Bicycle Access Prohibited	Bicycle Facility Type[1]	Parallel Bike Routes			
				Route	From	To	Facility Type
1	YOL, West Sacramento	Yes	Alt. Route	West Capitol Ave.	Yolo Causeway	Tower Bridge	Class II
2	SAC, Sacramento	Yes	Alt. Route	Tower Bridge	W. Capitol Ave.	Capitol Mall	C. I
				Capitol Mall	Tower Bridge	3rd/5th Sts.	None
				3rd/5th Sts.	Capitol Mall	T St.	None
2/3				T St.	3rd/5th Sts.	65th St.	C. II
3				65th St.	T St.	4th Ave.	None
				4th Ave.	65th St.	Redding Ave.	None
				Redding Ave.	4th Ave.	Folsom Blvd.	C. II
				Folsom Blvd.	Redding Ave.	State Univ. Dr. East	C. II
				State Univ. Dr. E.	Folsom Blvd.	Guy West Bridge	None
				Guy West Bridge	State University Dr. East	Am. Riv. Pkwy. Bike Tr.	C. I
				Alhambra Blvd.	2nd Ave.	Folsom Blvd.	C. II
				Folsom Blvd.	Alhambra Blvd.	Watt Ave.	C. II
				2nd Ave.	Riverside Blvd.	34th St.	C. II
				Riverside/11th St.	T St.	2nd Ave.	C. II
				18th/21st/34th Sts.	T St.	2nd Ave.	C. II
				American River Parkway Bike Trail/Jedediah Smith Memorial Trail			C. I
	SAC, Unincorp.	Yes	Alt. Route	La Riviera Dr./ College Town Dr.	Folsom Blvd.	State University Dr. East	C. II
3/4	SAC, Rancho Cordova	Yes	Alt. Route	Watt Ave. Trail	Am. Riv. Bike Tr.	La Riviera Dr.	C. I
4		Yes	Alt. Route	Folsom Blvd.	Watt Ave.	Bradshaw Rd.	C. III/None
4-7				Folsom Blvd.	Bradshaw Rd.	Iron Point Rd.	C. II
5				Folsom S. Canal Tr.	S. of Kiefer Blvd.	Am. Riv. Bike Tr.	C. I
				American River Parkway Bike Trail/Jedediah Smith Memorial Trail			C. I
5/6	SAC, Unincorp.	Yes	Alt. Route	Sunrise Blvd. Trail	Am. Riv. Bike Tr.	Folsom Blvd.	None
6				Hazel Ave. Trail	Am. Riv. Bike Tr.	Folsom Blvd.	C. II
	SAC, Folsom	Yes	Alt. Route	American River Parkway Bike Trail/Jedediah Smith Memorial Trail			C. I
7	SAC, Folsom	Yes	Alt. Route	Iron Point Rd.	Folsom Blvd.	Empire Ranch Rd.	C. II
				Blue Ravine Rd.	Folsom Blvd.	Green Valley Rd.	C. II
				Humbug-Willow Creek Tr.	Folsom-Auburn Rd.	Natoma St.	C. I
				Natoma St.	H.-W. Creek Trail	Green Valley Rd.	C. II
10	ELD, Unincorp.	Yes	Alt. Route	Green Valley Rd.	SAC/ELD County Line	Cameron Park Dr.	C. II/None
12/ 13				Green Valley Rd.	Cameron Park Dr.	Placerville Dr.	None
13	ELD, Unincorp.	Yes	Alt. Route	Ray Lawyer Dr.	Placerville Dr.	Forni Rd.	C. II
				Placerville Dr.	Ray Lawyer Dr.	Forni Rd.	C. II
				ED Bike Trail	Ray Lawyer Dr.	Main St.	C. I

TABLE 10: US 50 BICYCLE TRANSPORTATION NETWORK							
Seg. #	**County & City Location**	**Bicycle Access Prohibited**	**Bicycle Facility Type[1]**	**Parallel Bike Routes**			
				Route	**From**	**To**	**Facility Type**
13 / 14	ELD, Unincorp.	Yes	Alt. Route	Main St.	Forni Rd.	Bedford Ave.	C. I/II/III
13				ED Bike Trail	Missouri Flat Rd.	Forni Rd.	C. I
12	ELD, Placerville	Yes/No	Alt. Route/Non-Designated	ED Bike Trail	Bedford Ave.	Clay St.	C. I
		No	Non-Designated	ED Bike Trail	Clay St.	Los Trampas Rd.	C. I
13	ELD, Unincorp.	Yes	Alt. Route	None	Cedar Grove Exit	Sly Park Undercrossing	None
		No	Non-Designated	None	Sly Park Undercrossing	0.67 mi east of Sly Park Rd	None
17	ELD	No	Non-Designated	None	East of Sly Park Rd	Ice House Rd	None
18					Ice House Rd	Echo Summit	None
19					Echo Summit	SR 89 South/Luther Pass Rd	None
20	ELD, South Lake Tahoe	No	Non-Designated	Pioneer Trail	SR 89/Luther Pass Rd	SR 89/Lake Tahoe Blvd	C. II
21			Non-Designated	Pioneer Trail	SR 89/Lake Tahoe Blvd	East End Trout Creek Bridge	C. II
			Class II		East End Trout Creek Bridge	Ski Run Blvd	C. II
			Non-Designated		Ski Run Blvd	State Line	C. II

[1] Bicycle Facility Type indicates the type of bicycle facility on that segment. Class I Bike paths are separate ROWs for bicycles and pedestrians. Class II bike lanes are separate lanes for bicyclists. Class III Bike routes are roadways with signs designating the roadway for shared bicycle use. Alternate route indicates that a designated local road is to be used when the facility is closed to bicyclists. Finally, non-designated means that while the facility is not prohibited to bicyclists, there is no designated bicycle facility on the corridor.

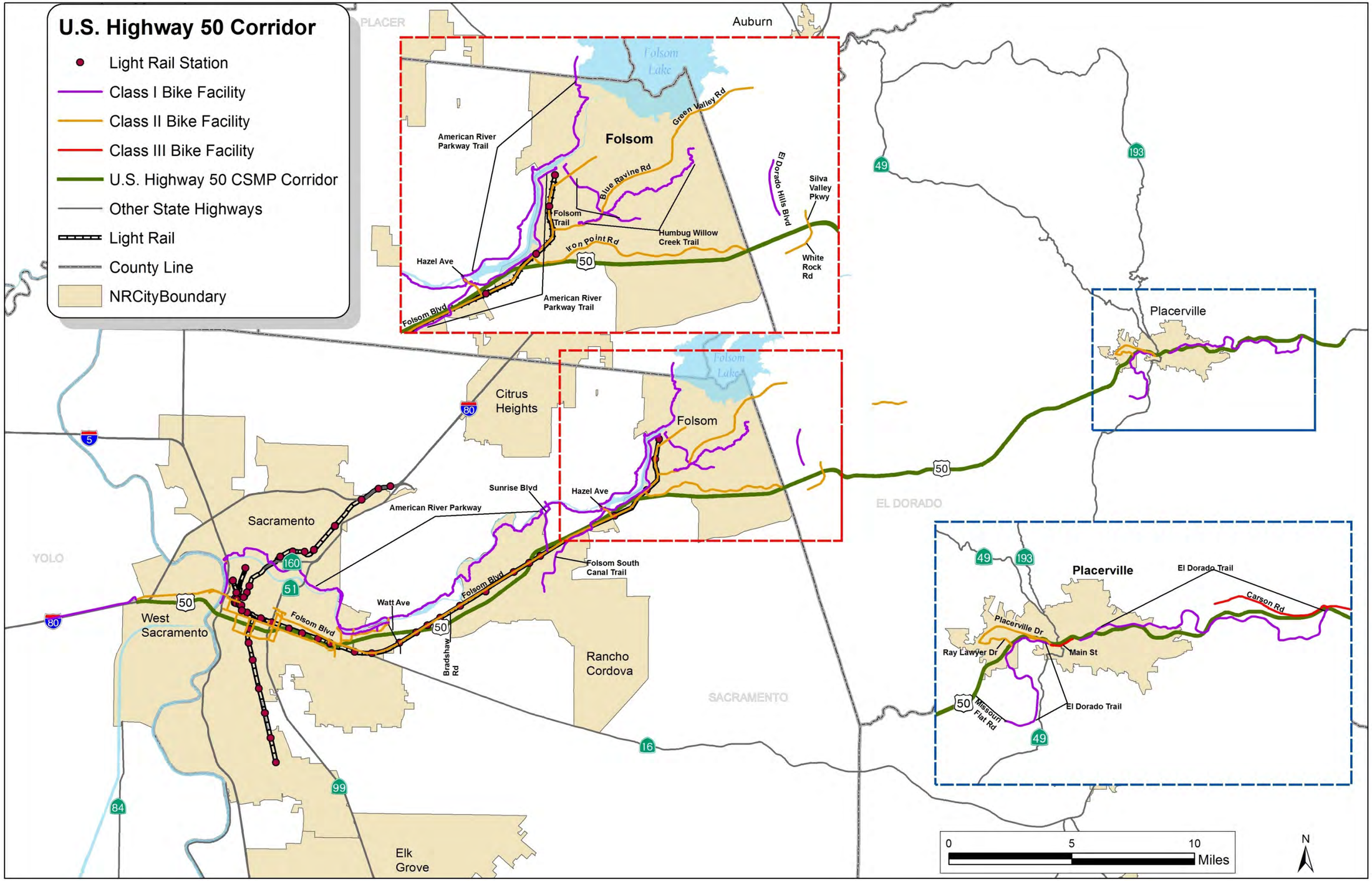


Figure 27: US 50 Corridor Bicycle Facilities Map

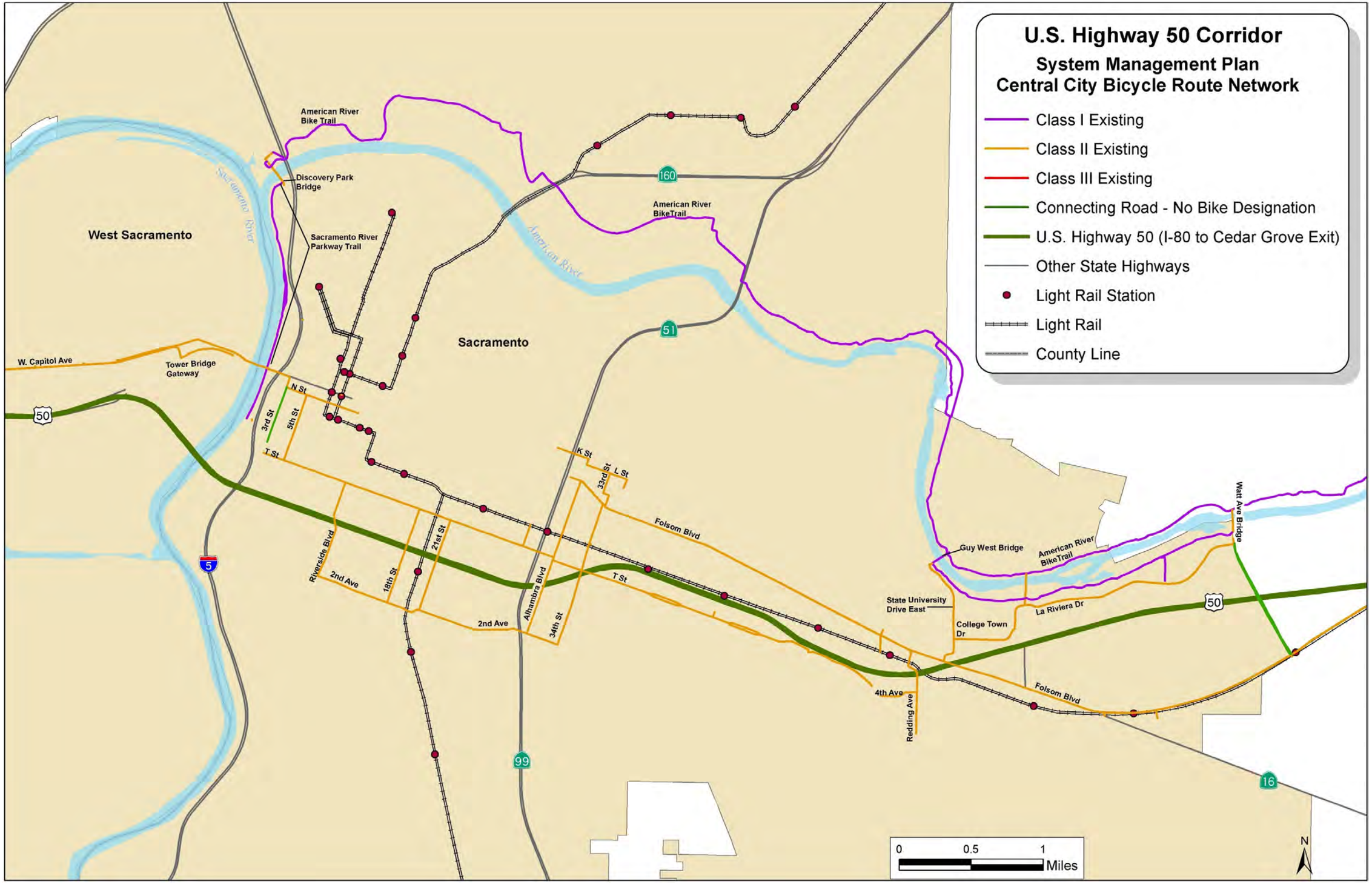


Figure 28: US 50 Corridor Bicycle Facilities Map (Inset)

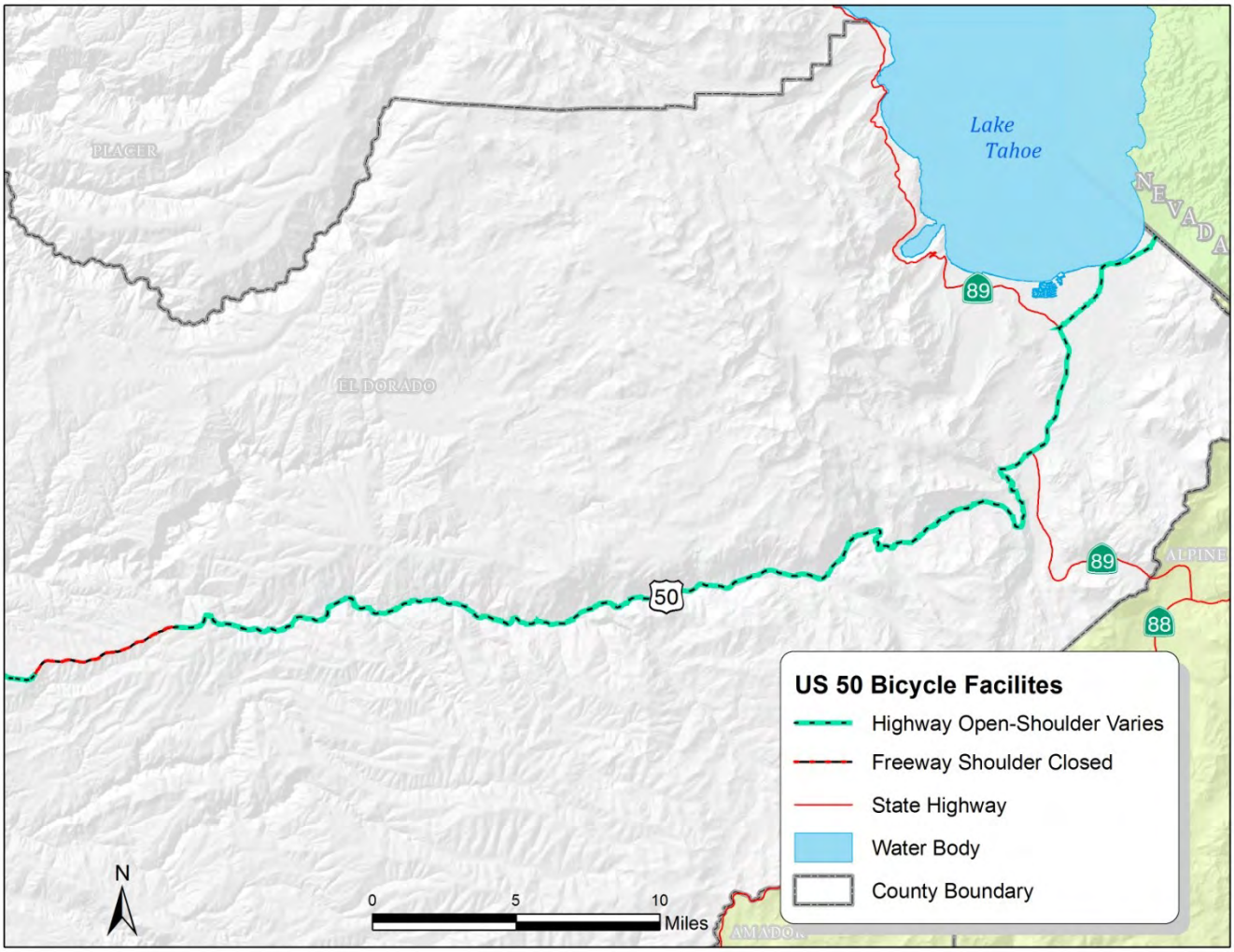


Figure 29: US 50 TCR Portion Bicycle Facilities

PEDESTRIAN FACILITIES

The pedestrian facilities on US 50 are identified in Table 11 below. In the Sacramento metropolitan area pedestrians are prohibited on US 50. For the rest of the corridor until near South Lake Tahoe, there are no pedestrian facilities due to the low pedestrian volumes. Pedestrian facilities can be very costly in areas with environmental or right-of-way constraints, especially in the Lake Tahoe area, so pedestrian sidewalks are not available in all areas. After the junction with SR 89 South near Lake Tahoe there are intermittent pedestrian facilities until the State line because US 50 functions as an urban street through the area.

As urban development takes place in the Sierra Nevada, it may become necessary to ensure pedestrian access in the conventional highway segments. For the Sacramento metropolitan areas, pedestrian bridges over US 50 could be needed. Parallel facilities could also provide a high level of service (LOS) for bicycle, pedestrian, and transit modes. In the South Lake Tahoe area, Caltrans has worked with local agencies through various agreements to develop pedestrian facilities on the state highway. Maintenance responsibilities for these and other pedestrian facilities are and will continue to be identified based on the physical and jurisdictional context of each facility. No plans are in the works for new pedestrian facilities on the urban segments or the segments within the Eldorado National Forest.

Caltrans District 3 is currently preparing the *Caltrans District 3 Complete Streets Plan* that will address the specific implementation of complete streets elements on the SHS within the District. A complete street is a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the function and context of the facility. Information regarding the addition of complete streets elements in the specific route or corridor will be included in each applicable TCR/CSMP. Caltrans will develop and implement the Plan in coordination with local and regional agencies.

TABLE 11: US 50 CORRIDOR PEDESTRIAN FACILITIES				
Seg. #	**Post mile**	**Location Description**	**Pedestrian Access Prohibited**	**Sidewalk**
1	0.00/3.16	I-80 to YOL/SAC County Line	Yes	No
2	L0.00/R0.00	YOL/SAC County Line to SR 99 and 51	Yes	No
3	R0.00/R5.34	SR 99 and 51 to Watt Ave.	Yes	No
4	R5.34/R10.92	Watt Ave. to Zinfandel Dr.	Yes	No
5	R10.92/12.50	Zinfandel Dr. to Sunrise Blvd.	Yes	No
6	12.50/17.01	Sunrise Blvd. to Folsom Blvd.	Yes	No
7	17.01/23.14	Folsom Blvd. to SAC/ED County Line	Yes	No
8	0.00/0.86	Sacramento/El Dorado County Line to Latrobe Rd.	Yes	No
9	0.86/R3.23	Latrobe Rd. to Bass Lake Rd.	Yes	No
10	R3.23/6.57	Bass Lake Rd. to Cameron Park Dr.	Yes	No
11	R6.57/R8.56	Cameron Park Dr. to Ponderosa Rd.	Yes	No
12	R8.56/R15.06	Ponderosa Rd. to Missouri Flat Rd.	Yes	No
13	R15.06/17.25	Missouri Flat Rd. to End of Freeway in Placerville	Yes	No
14	17.25/17.50	End of Freeway in Placerville to east of Canal St.	Yes	No
	17.50/17.70	East of Canal St. to Coloma Pedestrian OC (North side of US 50)	No	No
	17.70/18.11	Coloma Pedestrian OC to Bedford Ave.	Yes	No
15	18.11/20.741	Bedford Ave. to Newtown Rd. Overcrossing (OC)	Yes	No
	20.741/R25.95	Newtown Rd. OC to Cedar Grove Exit	No	No
16	R25.95 - R31.97	Cedar Grove Exit to 0.67 mi east of Sly Park Rd.	Yes	No
17	R31.97 - 39.77	0.67 miles east of Sly Park Rd. to Ice House Rd.	No	No
18	39.77 - 66.63	Ice House Rd. to Echo Summit	No	No
19	66.63 - 70.62	Echo Summit to State Route 89 South/Luther Pass Rd.	No	No
20	70.62 - 72.67	Junction with SR 89 South to Sawmill Rd.	No	Yes
	72.67 - 74.72	Sawmill Rd. to F St.	No	No
	74.72 - 75.45	F St. to SR 89 North/Lake Tahoe Blvd.	No	Yes
21	75.45 - 80.44	SR 89 North/Lake Tahoe Blvd. to State of Nevada	No	Yes

FREIGHT

There are three main types of freight facilities on the US 50 corridor as shown in Figure 29 and identified in Table 12. The first type of facility is the highway network. From the beginning of US 50 until Sly Park Rd, the facility is on the National Network, which allows trucks of Surface Transportation Assistance Act (STAA) dimensions to use the facility until that point. From Sly Park Rd until the junction with SR 89 South, US 50 is part of the California Legal network. This designation prohibits the longest truck lengths from using the facility. From SR 89 South until the state line, STAA trucks are allowed access only for terminal access, which is the permission to drive that route only to reach their destinations. Therefore, US 50 is only of limited use for goods movement. Most long distance haulers travel on I-5 and I-80.

Other important components of the highway network include the agriculture inspection station and the Riverton and Camino Commercial Vehicle Enforcement Facilities (weigh stations). The agriculture inspection station is located in Meyers and is intended to prevent invasive species from entering the State and causing serious damage to the State's agriculture industry. The commercial vehicle enforcement facilities protect the State's road infrastructure from commercial vehicles that are too heavy for facilities and could cause structural damage. Only commercial vehicles must stop at the enforcement facility.

The second type of freight facility is the Port of West Sacramento. This seaport is less than a mile south of US 50 and is easily accessible from Harbor Blvd. This Port primarily serves the import and export of agricultural goods and raw materials, in particular rice and cement. Further improvements of the surface transportation network and of the Sacramento River Deep Water Ship Canal will contribute to the attractiveness of the Port and increase freight volumes, making US 50 an even more important regional highway.

The third type of freight facility is represented by the airports in the corridor. Along US 50 there are two airports that impact goods movement: Mather Airport and the South Lake Tahoe Airport. Mather Airport has one of the longest runways in California and spacious warehousing on site from its time as an Air Force base. In 2011, Mather Airport handled 45,168 tons of cargo and plans to expand to accommodate future cargo deliveries. Caltrans is working with the airport and local agencies to ensure that development around the airport is compatible with airport operations.

The South Lake Tahoe Airport is owned by the City of South Lake Tahoe, but does not currently provide commercial scheduled air service. The airport provides another mode of access to southern Tahoe Basin communities and recreational venues. Air travelers using commercial airlines must currently reach South Lake Tahoe communities through the Reno and Sacramento International airports, and typically rent vehicles to drive to their destination into the basin. If commercial air service to the airport were restored, it could help reduce the number of vehicle trips and congestion on local roads. The City's Emergency Operations Center is located at the airport, and the airport also provides emergency air medical transport, County Search and Rescue, fire fighting, and law enforcement services to the region. The airport is served by several transit operators and private transit companies providing fixed routes, and on demand services that enhance regional connectivity and access for the Lake's residents and visitors. The City's only clean natural gas facility is located at the airport and fuels the City's clean fleet of vehicles. Lastly, the airport is used as a base of operations for Customs and Border Patrol drug interdiction, Fire Academy training, K-9 Hot Load training, and Fire Fest – a community fire education program.

Caltrans District 3 is preparing a district-wide Goods Movement Plan. The Plan will synthesize the findings of other goods movement related plans in the District and State, conduct a district-wide assessment of the District 3 Goods Movement network, propose a prioritization framework to identify and prioritize projects, and propose a list of prioritized projects for potential funding that will sustain or improve goods movement throughput. The plan will require significant outreach, collaboration, and consensus with stakeholders, including public agencies

such as the Sacramento Area Council of Governments (SACOG), and the private sector entities such as the California Trucking Association. Findings from the study will be included in the California Freight Mobility Plan, and will be transferrable to other Caltrans Districts statewide for implementation. The District 3 Goods Movement Plan is scheduled to be finished in 2015. More information can be found at: https://sites.google.com/site/d03goodsmovement/.

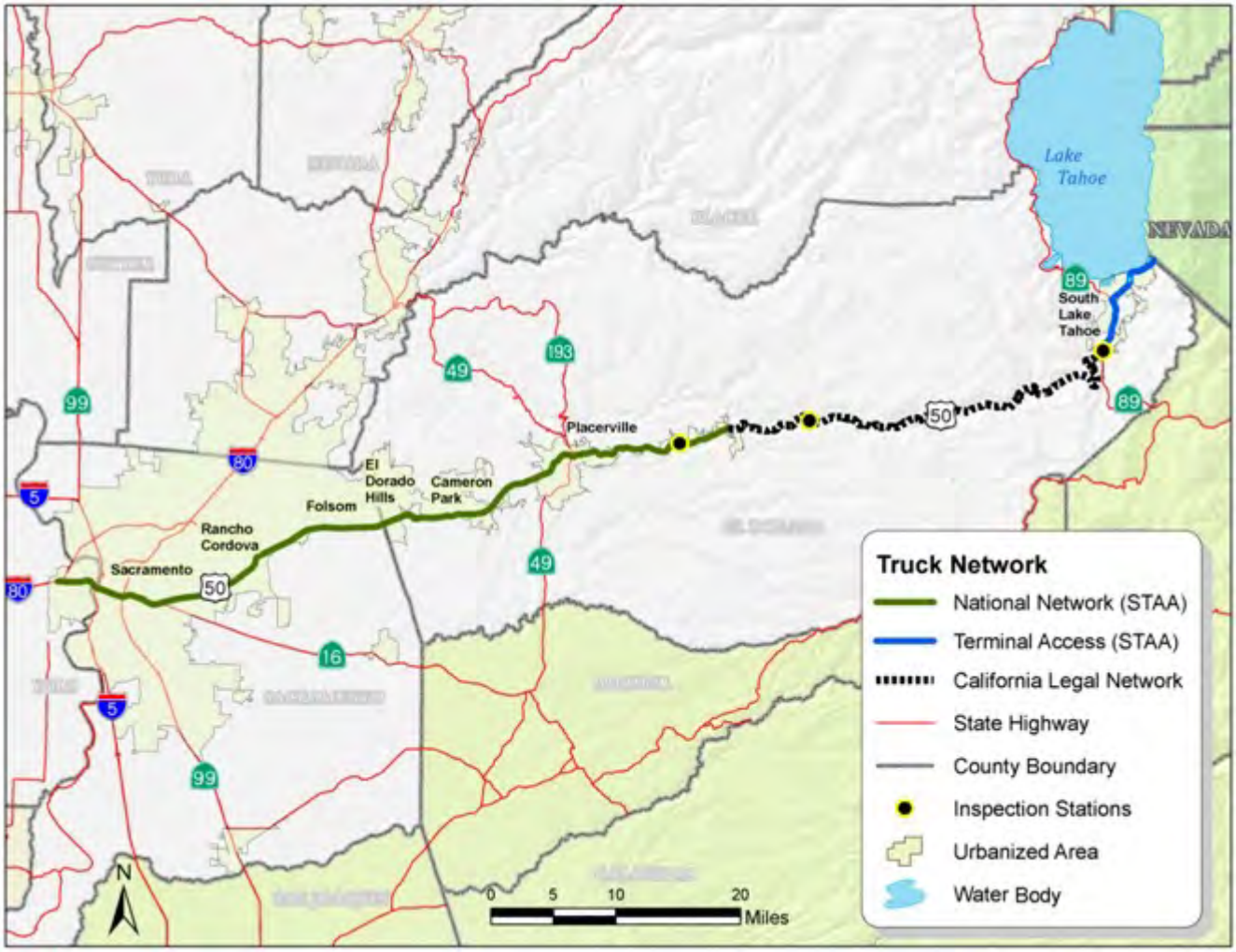


Figure 30: US 50 Truck Network Map

TABLE 12: US 50 FREIGHT FACILITIES			
Seg. #	**Facility Type/Freight Generator**	**Location**	**Mode**
1-21	Highway Network	National Network (STAA) to ED R31.297	Truck
		California Legal to ED PM 75.45	
		Terminal Access (STAA) to ED PM 80.44	
1 - 3	Industrial/Distribution Centers	YOL PM 1.209; SAC R3.682	Truck
1	Port of West Sacramento	YOL PM 1.094	Sea
4	Mather Airport	SAC PM R9.149	Air
20	Agriculture Inspection Station	ED PM 70.946	Automobile and Truck
17	Riverton Commercial Vehicle Enforcement Facility	ED PM 39.3	Truck
16	Camino Commercial Vehicle Enforcement Facility	ED PM R27.1	Truck

CORRIDOR PERFORMANCE MANAGEMENT

There are two major components of corridor performance management, which are performance measurement and performance monitoring.

PERFORMANCE MEASUREMENT

The use of performance measures with threshold standards is used to evaluate the degree of congestion along a highway segment or local parallel/connecting roadway, transit facility, and bicycle and pedestrian facility to determine the scope and schedule of system improvements needed to correct a performance deficiency. The performance measures used for the highway facility in this TCR/CSMP include Level of Service (LOS), Vehicle and Person Hours of Delay (VHD) at 60 MPH, Vehicle Miles Traveled (VMT), Peak Hour VMT, Peak Hour Volume over Capacity (V/C), and Peak Hour Average Speed. The tools used to determine the performance measures include Average Annual Daily Traffic (AADT), Truck AADT, Percent of Trucks, 5+ Axle Truck AADT, and 5 Axle Truck Percentage of AADT. The definitions, applicability, and sources of the baseline performance measures data used in this TCR/CSMP corridor are identified in Appendix C. This data is given for both the base (2012) and horizon (2035) years for all of US 50 where available. Basic system operation, truck traffic, and peak hour traffic performance data is summarized in Tables 13, 14, and 15 on the pages that follow.

LOS is a qualitative measure describing operational conditions within a traffic stream and perception of condition by users. Operational conditions are defined in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. LOS is defined into six levels with letter designations from A to F. LOS A represents the best operating conditions wherein there is ample maneuverability, no speed restrictions and no delays, while LOS F represents the worst operating conditions with traffic congestions, significant delays and little maneuverability (please see Appendix A for more information including data sources). LOS is accepted as a performance measure by the Federal Highway Administration and California, as well as almost all 49 other states.

The "*Concept LOS"* is based on District 3 standards, which are from the Caltrans District 3 District System Management and Development Plan (DSMDP). Typical Concept LOS standards in District 3 are LOS "D" in rural areas and LOS "E" in urban areas. Performance variations and interchange deficiencies within a corridor segment may inadvertently increase or decrease the LOS calculations, which may warrant additional detailed operational analysis. A local agency may set a higher LOS threshold standard consistent with community wishes and other local concerns. Caltrans as the owner and operator of the facility establishes the Concept Level of Service as the **minimum acceptable level of service**. Any threshold standard LOS established by a local agency for the State Highway System (SHS) should not be lower than the Caltrans Concept LOS. For those parts of the SHS where LOS may not be an appropriate measure to describe performance such as in locations designated as a "Transit Priority" area where the Caltrans Performance Measurement System (PeMS) is available, the Caltrans District 3 DSMDP (page 34) suggests using other performance measures including, but not limited to, Vehicle Travel Time (minutes) and Vehicle Hours of Delay (VHD).

LOS is one performance measure utilized by Caltrans in the review of proposed projects during the Intergovernmental Review/CEQA development review process to determine if proposed projects might cause significant impacts to the operation of the SHS. In segments of the SHS main line where the existing LOS is at or below the Concept LOS, any land use development should not directly or cumulatively lower the existing LOS. Any impacts exceeding this threshold will be viewed by Caltrans as significant and warrant appropriate mitigation. Any CEQA lead agency should coordinate with Caltrans as early in the development review process as feasible to jointly determine the most appropriate threshold standards of significance.

Data collection for non-auto modes is not as robust as what is needed for active system management. AADT and LOS were used in the 2009 CSMPs as performance measures for the local parallel/connecting roadways. However, the availability and year date consistency of this data varied between local city and county jurisdictions, which resulted in the data not being valuable to measuring roadway performance across the corridor. Consequently, this TCR/CSMP update does not include performance measures for the roadways.

Available Average Daily and Peak Hour Capacity were used in the 2009 CSMPs as performance measures for transit. No performance measures were identified for bicycle and pedestrian facilities. Following consultation with key external stakeholders for both bicycling and transit after adoption of the 2009 CSMPs, the progress in implementing the infrastructure improvements to close system gaps by improving and facilitating bicycling, pedestrian, and mass transit, as included in the applicable regional transportation plans, was determined to replace the performance measures reported in the 2009 CSMPs for bicycling, pedestrian, and transit facilities, and to be reported in subsequent CSMPs for bicycling, pedestrian, and transit modes. It is realized that the bicycle and pedestrian transportation networks need to be completed prior to developing meaningful performance measures that quantify deficiencies.

PERFORMANCE MONITORING

The goal of performance monitoring is to continuously and dynamically examine corridor performance to identify operational problems caused by traffic congestion and implement immediate, efficient, and effective system operations and improvement actions and strategies along the corridor, including capital improvements to generate the desired results. Where available, PeMS is utilized to monitor highway performance. In other corridor segments where PeMS is not available, HCS 2010 analysis is performed using traffic counts or tachometer (tach) runs to assess performance.

TABLE 13: US 50 BASIC SYSTEM OPERATIONS																
Seg. #	County	Post Miles	Distance (Miles)	Average Annual Daily Traffic			Level of Service (LOS)				Vehicle Miles Traveled (VMT)			Delay	
				Base Year (BY)*	No Build (Horizon Year (HY))*	Build (HY)	BY	No Build (HY)	Build (HY)	Concept LOS	BY	No Build (HY)	Build (HY)	Daily Vehicle Hours of Delay	Daily Person Hours of Delay
1	YOL	0.00/3.16	3.16	176,000	206,000	210,000	E	F	F	E	337,274	394,000	402,000	228	310
2	SAC	L0.00/L2.48(R0.00)	2.48	246,000	279,000	300,000	F	F	F	E	452,373	513,000	552,000	1,697	2,309
3		R0.00/R5.34	5.34	206,000	249,000	265,000	F	F	F	E	959,231	1,158,000	1,235,000	1,708	2,323
4		R5.34/R10.92	5.58	171,000	226,000	234,000	F	F	F	E	660,438	873,000	905,000	509	692
5		R10.92/12.50	1.58	141,000	196,000	204,000	E	F	F	E	194,349	271,000	281,000	204	278
6		12.50/17.01	4.51	117,000	160,000	161,000	F	F	F	E	630,648	862,000	866,000	565	768
7		17.01/23.14	6.13	91,000	113,000	132,000	F	F	F	E	521,760	645,000	759,000	158	215
8	ELD	0.00/0.86	0.86	91,000	100,000	110,000	F	F	F	E	81,060	89,000	98,000	59	80
9		0.86/R3.23	2.37	70,000	94,000	105,000	E	F	F	E	127,860	171,000	191,000	10	13
10		R3.23/6.57	3.34	61,000	86,000	84,000	D	F	D	E	207,994	294,000	286,000	51	70
11		6.57/R8.56	1.99	61,000	73,000	77,000	D	E	D	E	170,099	203,000	216,000	15	20
12		R8.56/R15.06	6.5	52,000	67,000	71,000	C	D	C	E	307,233	396,000	420,000	16	21
13		R15.06/17.25	2.19	49,500	59,000	67,000	D	D	E	E	129,242	153,000	176,000	6	9
14		17.25/18.11	0.86	52,000	59,000	58,000	C	C	C	D	37,604	43,000	42,000	132	179
15		18.11/R25.95	7.84	30,000	35,000	35,000	C	C	C	E / D*	180,361	212,000	213,000	31	43
16		R25.95/R31.97	6.02	19,900	24,880	24,900	B	C	C	E	108,240	135,300	135,420	Not available for TCR corridor	
17		R31.97/39.77	7.65	12,700	15,880	15,890	B	C	C	D	97,160	121,450	121,560		
18		39.77/66.63	26.64	13,100	16,380	16,390	E	F	F	D	351,840	439,800	440,190		
19		66.63/70.62	3.99	10,900	13,630	13,640	E	E	E	D	36,270	45,340	45,380		
20		70.62/75.45	4.83	19,000	23,750	23,770	E	F	F	D	68,450	85,560	85,640		
21		75.45/80.44	4.99	33,000	42,900	42,940	E	F	F	E	159,040	206,750	206,930		

Note: Please see Appendix A: Glossary for explanation of these terms and performance measures.

*- Concept LOS on a segment that contains both urban and rural portions

TABLE 14: US 50 TRUCK TRAFFIC DATA							
Seg. #	**County**	**Post Miles**	**Distance (Miles)**	**Average Annual Daily Truck Traffic (AADTT)**	**Total Trucks (% of AADT) (BY)**	**5+ Axle AADTT (BY)**	**5+ Axle Total Truck (% of AADT) (BY)**
1	YOL	0.00/3.16	3.16	7,093	4.0%	3,120	1.8%
2	SAC	L0.00/L2.48(R0.00)	2.48	6,012	2.4%	2,515	1.0%
3		R0.00/R5.34	5.34	8,060	3.9%	2,137	1.0%
4		R5.34/R10.92	5.58	7,709	4.5%	1,964	1.1%
5		R10.92/12.50	1.58	7,811	5.5%	2,120	1.5%
6		12.50/17.01	4.51	7,488	6.4%	3,295	2.8%
7		17.01/23.14	6.13	5,824	6.4%	2,399	2.6%
8	ED	0.00/0.86	0.86	5,824	6.4%	2,399	2.6%
9		0.86/R3.23	2.37	4,200	6.0%	1,730	2.5%
10		R3.23/6.57	3.34	3,660	6.0%	1,508	2.5%
11		6.57/R8.56	1.99	3,660	6.0%	1,508	2.5%
12		R8.56/R15.06	6.5	3,120	6.0%	1,289	2.5%
13		R15.06/17.25	2.19	2,970	6.0%	1,227	2.5%
14		17.25/18.11	0.86	3,120	6.0%	1,376	2.6%
15		18.11/R25.95	7.84	1,860	6.2%	837	2.8%
16		R25.95/R31.97	6.02	1,393	7.0%	641	3.2%
17		R31.97/39.77	7.64	800	6.3%	384	3.0%
18		39.77/66.63	26.64	537	4.1%	200	1.5%
19		66.63/70.62	3.99	338	3.1%	141	1.3%
20		70.62/75.45	4.83	760	4.0%	228	1.2%
21		75.45/80.44	4.99	1,320	4.0%	139	0.4%

TABLE 15: US 50 PEAK HOUR TRAFFIC DATA

Seg. #	County	Post Miles	Volume			Directional Split			Volume/Capacity (V/C)			VMT		
			BY	No Build (HY)	Build (HY)	BY	No Build (HY)	Build (HY)	BY	No Build (HY)	Build (HY)	BY	No Build (HY)	Build (HY)
1	YOL	0.00/3.16	14,900	17,400	17,800	55%	52%	53%	0.93	1.02	1.06	25,041	29,300	29,800
2	SAC	L0.00/L2.48 (R0.00)	20,500	23,300	25,000	54%	52%	53%	1.14	1.26	1.37	33,921	38,500	41,400
3	SAC	R0.00/R5.34	20,100	24,300	25,900	56%	54%	52%	1.16	1.36	1.29	70,378	85,000	90,600
4	SAC	R5.34/R10.92	16,600	21,900	22,700	56%	54%	53%	1.05	1.21	1.25	75,883	100,300	103,900
5	SAC	R10.92/12.50	13,000	18,100	18,800	64%	58%	58%	0.89	1.06	1.01	15,716	21,900	22,700
6	SAC	12.50/17.01	11,300	15,400	15,500	64%	60%	60%	1.02	1.26	1.09	48,560	66,300	66,600
7	SAC	17.01/23.14	8,600	10,600	12,500	65%	63%	63%	1.04	1.27	1.33	39,119	48,400	56,900
8	ED	0.00/0.86	8,600	9,500	10,400	65%	66%	66%	1.08	1.24	1.14	6,640	7,310	8,070
9	ED	0.86/R3.23	7,000	9,400	10,500	65%	66%	66%	0.95	1.22	1.16	12,120	16,220	18,110
10	ED	R3.23/6.57	5,700	8,100	7,800	65%	66%	66%	0.75	1.02	0.74	17,060	24,130	23,440
11	ED	6.57/R8.56	5,600	6,700	7,100	65%	62%	64%	0.86	0.98	0.83	12,420	14,800	15,740
12	ED	R8.56/R15.06	4,150	5,300	5,700	65%	62%	64%	0.63	0.77	0.62	22,100	28,480	30,230
13	ED	R15.06/17.25	4,600	5,400	6,300	65%	63%	63%	0.73	0.84	0.96	9,750	11,500	13,200
14	ED	17.25/18.11	4,650	5,300	5,200	63%	60%	62%	0.00	0.00	0.00	3,535	4,000	4,000
15	ED	18.11/R25.95	3,250	3,800	3,800	63%	63%	65%	0.54	0.59	0.59	20,747	24,400	24,500
16	ED	R25.95/R31.97	2,650	3,310	3,320	67%	61%	63%	0.47	0.54	0.56	15,490	19,360	19,380
17	ED	R31.97/39.77	2,150	2,690	2,690	67%	63%	63%	0.41	0.47	0.48	16,450	20,560	20,580
18	ED	39.77/66.63	1,900	2,380	2,380	67%	61%	63%	0.88	1.00	1.03	51,030	63,790	63,840
19	ED	66.63/70.62	1,550	1,940	1,940	67%	61%	63%	0.71	0.81	0.84	5,820	7,280	7,280
20	ED	70.62/75.45	2,400	3,000	3,000	61%	55%	57%	0.99	1.13	1.17	9,260	11,580	11,590
21	ED	75.45/80.44	3,850	5,010	5,010	54%	50%	51%	0.66	0.80	0.80	15,910	20,680	20,700

BOTTLENECK AND CONGESTION ANALYSIS

The 2010 Highway Capacity Manual defines a bottleneck as "a road element on which demand exceeds capacity."

The bottleneck analysis evaluates specific causes of existing recurrent traffic congestion in the corridor. Freeway bottleneck locations that create mobility constraints are identified and documented, and their relative contribution to corridor-wide congestion is reported. The bottleneck locations were determined based on a combination of the use of 2012 PeMS data, probe vehicle tach runs, and field observations. This analysis was only performed for the CSMP portion of the facility.

Traffic congestion can be categorized as either recurrent or non-recurrent.

Recurrent congestion occurs repeatedly at the same place and time of day in a predictable pattern. Recurrent congestion is often associated with facility capacity limitations, changes in capacity, conflicting vehicle movements such as lane merges, inadequate number of transit vehicles to handle passenger loads, or other persistent physical conditions of the transportation facility.

Non-recurrent congestion is usually attributed to collisions, equipment malfunction, community events, weather, construction projects and other occasional occurrences. When transportation systems are close to their maximum carrying capacity, non-recurrent congestion is more likely to occur as there is little excess capacity in the system.

Prior to analyzing the congestion and bottlenecks located within the corridor, a review of the District 3 *2012 Mobility Performance Report* (MPR) was conducted. The MPR is prepared by each Caltrans District where PeMS is utilized. Headquarters Traffic Operations Division requests and compiles these District reports annually and quarterly. The freeway congestion data is identified by freeway route and county but does not contain specific CSMP segment data. This data, which lists Vehicle Hours of Delay at 60 MPH, provides an overall perspective of the level of congestion for each route, which can be compared to prior year data so that performance can be monitored. The data presented in the MPR also identifies the top ten bottlenecks during the AM Peak Period and PM Peak Period by freeway route and county and identifies Total and Average Vehicle Hours of Delay and the Average Duration, which again can be compared to prior year data for performance monitoring purposes. The MPR data is useful in providing an overall perspective of the performance of the freeway at the county level that can be compared to the CSMP corridor segment-specific performance data. US 50 in Sacramento and El Dorado Counties is included in the District 3 MPR's top ten congested freeways and bottleneck locations. The ranking of the US 50 corridor is listed as follows:

Traffic Congestion:

- **Vehicle Hours of Delay (VHD):** Total VHD at 60 miles per hour in both directions increased in 2012 over 2011 in both Counties applicable to the CSMP corridor. The results are as follows:

Route	County	2011	2012
US 50	SAC	1,121,970 VHD	1,294,019 VHD
	ELD	247,159 VHD	254,511 VHD

- **Top 10 Congested Freeways:** Based on the VHD of all District 3 Freeway urban corridors in the Sacramento area, the congestion comparison of US 50 for 2011 and 2012 was ranked with the other corridors. As identified below, the US 50 corridor is becoming slightly more congested relative to other freeways in the District.

Route	County	2011 Rank	2012Rank
US 50	SAC	3	2
	ELD	8	8

- **Top Bottleneck Locations:** The bottleneck comparisons of US 50 for 2011 when available and 2012 by locations and rankings listed below can change from year to year, and may be indicative of temporary bottlenecks (i.e. short-term construction activities or special events) rather than major geometric constraints that require major operational strategies or capital expansion. Rankings are in comparison to all state highways in the greater Sacramento area of District 3 during both the AM peak and PM peak time periods and by direction. As identified below, US 50 captures several bottlenecks in the District top ten worst bottlenecks. These bottlenecks come in two main groups. The first and more severe group is between I-5 and SR 99 downtown, where several highways converge. The second group is near Howe Ave, close to Sacramento State and a bridge across the American River.

County	Route	Location	Time of Day	2011 Av. Daily VHD	2012 Av. Daily VHD	2011Av. Duration (min)	2012 Av. Duration (min)	2011 Rank	2012 Rank
Eastbound									
SAC	50	16th St.	PM	75	141	64	122	21	6
Westbound									
SAC	50	Occidental Dr.	AM	8	145	3	54	N/A	5
SAC	50	NB Howe Ave.	AM	55	126	18	49	5	8
SAC	50	15th St.	PM	118	285	32	59	13	5

Along with the MPR information, additional PeMS data was complied and analyzed so that congestion and bottleneck locations on the individual route segments within the CSMP corridor could be further refined and causality defined.

It should be noted that while both the MPR data and the data collected by District 3 Travel Forecasting and Modeling utilized PeMS, the data was collected for different time periods, and duration and delay thresholds between the two data sets vary. As such, while both data sets are generally consistent with each other, there may be some variation. Further work is being conducted to refine the identification and causality of bottlenecks within the corridor.

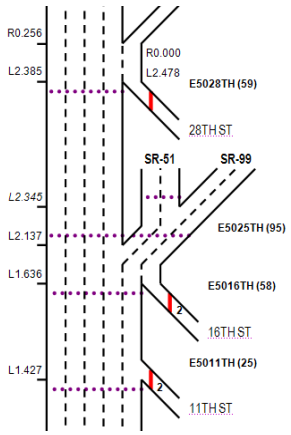
Table 16 shows a summary of the US 50 eastbound and westbound bottlenecks, while the analysis that follow the table discuss each bottleneck, including location and possible causality. Minor or hidden bottlenecks are those that are not as defined (or severe) as the major bottlenecks. Bottlenecks in the chart are listed in order of probability of formation. Please note that the graphics accompanying the bottlenecks are not to scale.

Bottlenecks in the eastbound direction during the PM peak period are at 16th St., 48th St., Folsom Blvd., 28th St., Howe/Power Inn, west of Scott Rd., and Sunrise Blvd. In the AM peak the sole bottleneck is at 16th St. Bottlenecks in the westbound direction during the PM peak period are at 25th St., 15th St., Stockton Blvd., and 59th St. In the AM peak the bottlenecks are at Watt Ave., Occidental Dr., El Dorado Hills Blvd., and Howe Ave.

Causalities for these bottlenecks range from high-traffic demand (congestion), heavy weaving/merging areas, or physical constraints such as lane drops, lack of ramp meters, incomplete HOV network, incomplete auxiliary lane network, poorly coordinated traffic signals and an off-ramp queue (Sunrise Blvd.).

TABLE 16: US 50 BOTTLENECK ANALYSIS DATA								
Seg. #	**Location**	**County**	**Time of Day**	**Post Miles**	**Probability of Bottleneck Forming**	**Avg Queue Length (Miles)**	**Avg Delay (Veh Hrs)**	**Avg Duration (Minutes)**
Eastbound								
2	16th St.	SAC	PM	L1.567	97.4%	0.45	141	122
2	16th St.		AM	L1.567	46.8%	0.49	63	51
2	28th St		PM	L2.394	50.6%	1.52	283	58
3	48th St.		PM	R1.453	71.8%	1.11	193	79
3	NB Howe/Power Inn		PM	R3.88	41.7%	0.72	74	56
5	SB Sunrise Blvd.		PM	12.4	21.8%	0.89	57	45
6	Folsom Blvd.		PM	16.901	53.8%	1.72	93	54
7	West of Scott Rd.		PM	20.7	23.7%	1.95	93	54
Westbound								
8	El Dorado Hills	ELD	AM	0.5	30.1%	0.95	54	46
4	NB Watt Ave.	SAC	AM	R5.4	39.1%	1.14	71	36
3	Occidental Dr.		AM	R4.5	34.0%	1.31	145	54
3	NB Howe Ave.		AM	R3.8	24.4%	1.46	126	49
3	Stockton Blvd		PM	R.595	54.5%	1.26	129	43
3	59th St.		PM	R1.9	48.1%	1.52	156	52
2	25th St.		PM	L2.166	80.1%	1.05	108	53
2	15th St.		PM	L1.351	64.7%	2.25	285	59

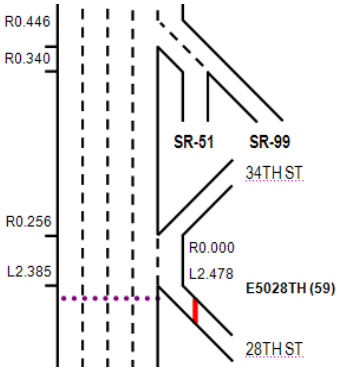
Eastbound Bottleneck Analysis



A. 16th St. Bottleneck (Both AM and PM)

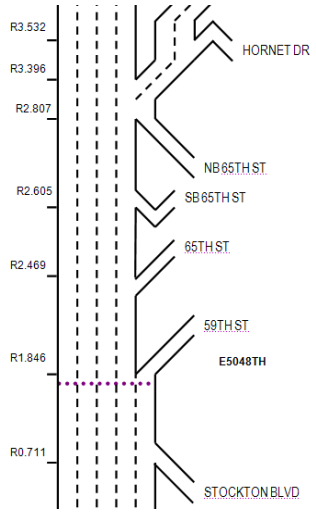
The bottleneck at 16th St. is caused by heavy volume of merging traffic, which causes weaving between vehicles merging onto US 50 and diverging vehicles for the SR 51 and SR 99 connectors. Merging traffic from the on-ramps has to cross 2+ lanes of traffic and diverge directly across diverging vehicles for SR 51 and SR 99 connectors. The combination of heavy volumes and diverging traffic approaching the SR 51 and SR 99 connectors creates bottlenecks that are exacerbated during peak hours.

B. 16th St. (See A Above)



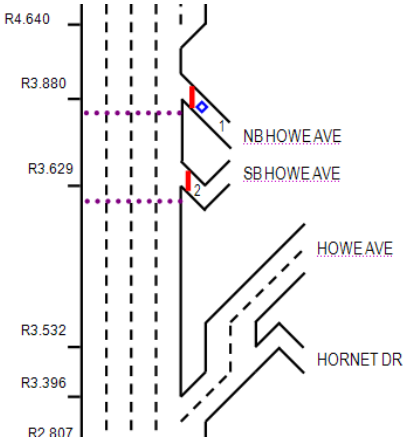
C. 28th St. Bottleneck

The bottleneck at 28th St. is caused by heavy demand, the downstream lane drop, as well as diverging traffic at the 28th St. on-ramp. Past the on-ramp, there is a slight uphill grade and horizontal curve that contributes to the formation of a bottleneck.



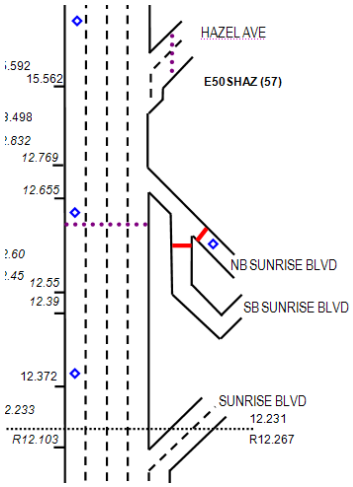
D. 48th St. Bottleneck

The bottleneck approximately located at 48th St. is due to the additional traffic merging from SR 51 and SR 99, combined with a lane drop at 59th St. This queue extends upstream past the off-ramp to SR 51 and SR 99. These off-ramps are bottlenecks in themselves, which spill back and choke the US 50 mainline.



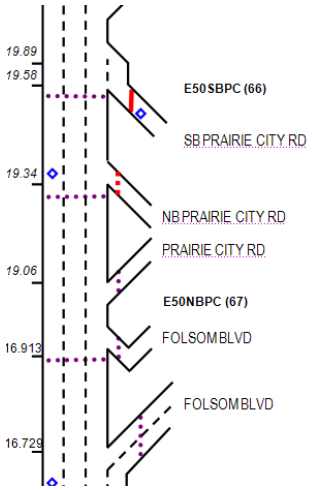
E. Howe/Power Inn

The bottleneck at Howe Ave. is due to the entering traffic from Howe Ave. Two Howe Ave. on-ramps feed into US 50 eastbound: southbound Howe Ave. loop on-ramp and northbound Howe Ave. direct ramp, approximately 300 feet apart. The Watt Ave. off-ramp is just downstream with heavy existing volumes; therefore the segment between Howe and Watt is characterized by heavy weaving.



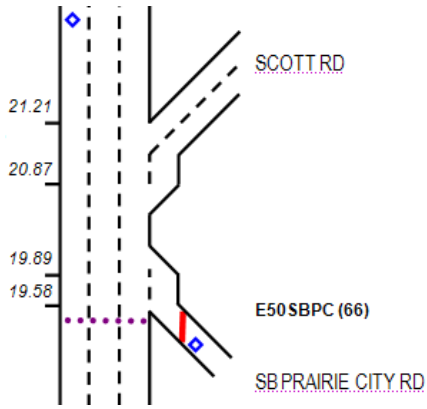
F. Sunrise Blvd Bottleneck

At Sunrise Blvd., the right-most lane exits, and high volumes of automobiles enter the facility from the large employment centers in Rancho Cordova. As a result, there is a large volume of vehicles queued at Sunrise off-ramp which spills back and negatively affects the US 50 mainline.



G. Folsom Blvd

The right-most lane exits to Folsom Blvd., leaving one HOV lane and two regular lanes along the US 50. The bottleneck is caused by this lane drop as well as the quick merge at the Folsom on-ramp.



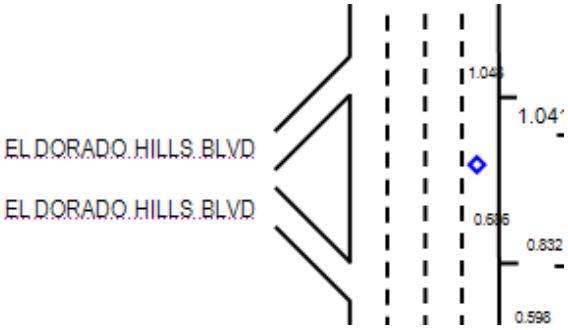
H. West of Scott Road Bottleneck

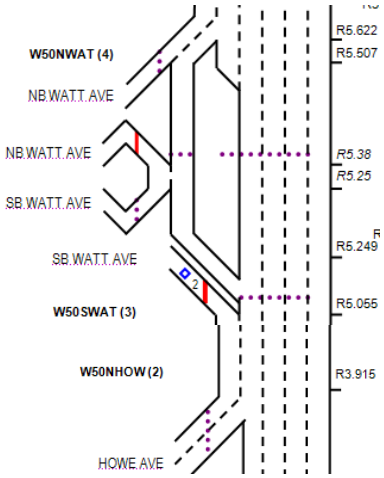
The bottleneck at Scotts Rd. is due to heavy demand and merging traffic from both southbound and northbound Prairie City on-ramps.

Westbound Bottleneck Analysis

A. El Dorado Hills Blvd Bottleneck

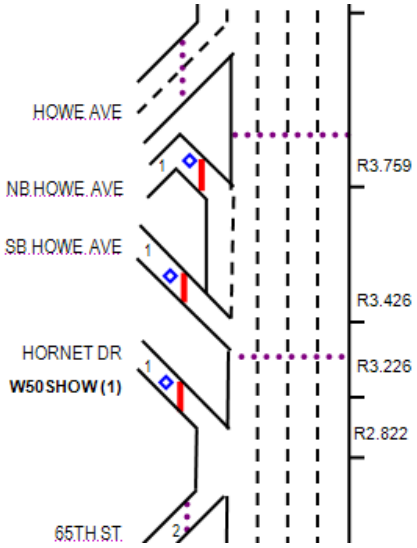
The bottleneck at El Dorado Hills Blvd is caused by heavy demand on El Dorado Hills Blvd. and traffic from El Dorado Hills Blvd. merging with existing westbound US 50 traffic.





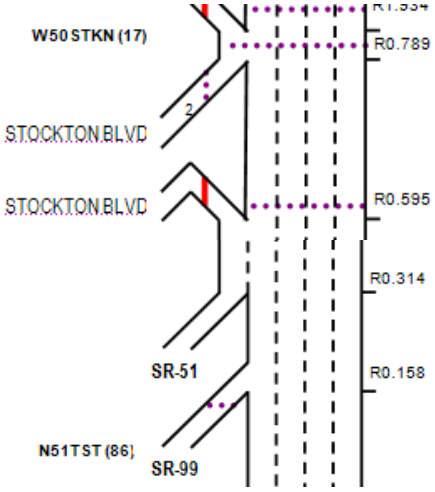
B. Occidental Dr. Bottleneck/Watt Ave. Bottleneck

The bottleneck at Watt Ave. is due to the lane drop at the Watt Ave. exit and merging traffic from the Watt Ave. on-ramp, which conflict with traffic on US 50. The auxiliary lane stretches all the way to the Howe Ave. exit. Last second weaving from vehicles merging along the auxiliary lane, before the Howe Ave. exit, creates a spill back effect on US 50 and contributes to the sections bottleneck.



C. Howe Ave Bottleneck

The Howe Ave. bottleneck is caused by a grade change and the merging traffic entering from northbound and southbound Howe Ave. on-ramps and Hornet D.r on-ramp.

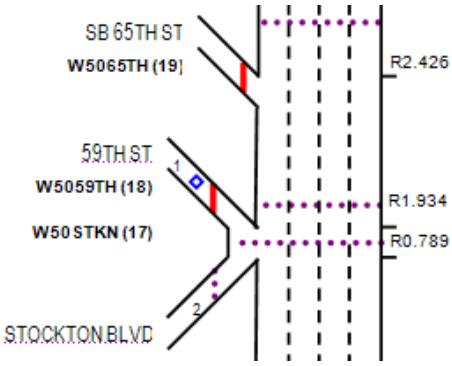


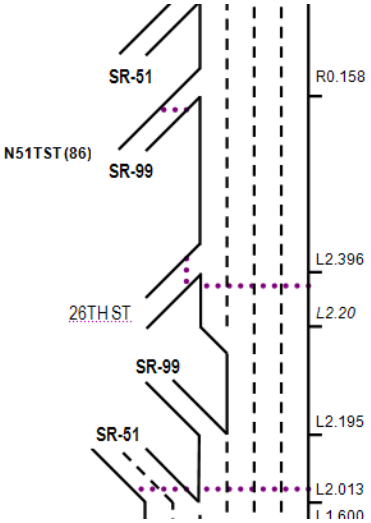
D. Stockton Blvd Bottleneck

Bottleneck at Stockton Blvd. is due to vehicles merging onto US 50 and diverging to SR 99 and SR 51 along the same auxiliary lane. High volume of weaving between entering and exiting vehicles on US 50 increases the likelihood of bottlenecks in this segment is increased during peak hours.

E. 59th St. Bottleneck

Vehicles merging onto US 50 from the 59th St. on-ramp, conflict with traffic on US 50 and weaving at the two most right lanes create a bottleneck. This bottleneck is exacerbated and/or worse from the spill back effect of the Stockton Blvd. bottleneck.



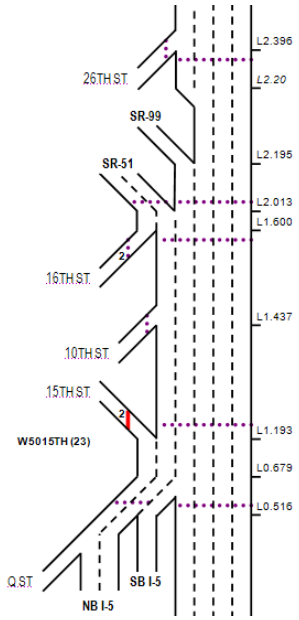


F. 25th St. Bottleneck

The bottleneck approximately at 25th St. is due to a lane drop and merging traffic from SR 99 and SR 51 connectors onto US 50. Vehicles on US 50 experience a slight horizontal curve and a lane drop approaching the SR 99 connector. A small stretch of US 50 is reduced to three lanes, but is widened back to four lanes after the SR 99 interchange. The high volume of weaving and diverging traffic, along with the downstream lane drop and slight horizontal curve, contribute to the overall sections bottleneck.

G. 15th St. Bottleneck

The bottleneck approximately at I-5 is caused by a conflict between entering SR 99 and SR 51 traffic and exiting I-5 traffic as well as the queues formed on the ramps to I-5, which spill back onto US 50. The number of lanes in this section reaches a maximum of 6 and then drops to 4 as two lanes exit at the I-5 freeway. This bottleneck is exacerbated during the peak periods when it stretches upstream to the lane drop before SR 99.



KEY CORRIDOR ISSUES

A number of significant issues provide challenges for the segments of US 50 discussed in this document, including the complicated physical, environmental, and commercial setting of the highway.

Roadway configuration is a critical issue for transportation on US 50. Lanes drop off at some specific locations, causing a bottleneck to be activated at times. Further, there is an incomplete set of auxiliary lanes on the facility, causing operational problems at those locations. Constructing auxiliary lanes would allow easier merging onto and exiting from the facility. Further the system of HOV lanes needs to be expanded to include the entire Sacramento urban area. The HOV lanes begin at Watt Ave. and run until the Cameron Park Area. Constructing HOV lanes in downtown Sacramento and West Sacramento would significantly improve traffic flow and reduce congestion.

Improvements to ITS on US 50 could also greatly improve traffic flow. Implementing ramp metering on all appropriate onramps would greatly increase throughput on the facility by reducing platooning and resulting bottlenecks. Another ITS implementation strategy is signal coordination on key arterials and freeway ramp intersections. Other ITS implementation strategies are forthcoming in the District 3 *ITS/Operational Improvement Plan* (ITS/Ops Plan).

Transit improvements have also been identified for the corridor to improve traffic. To increase transit ridership, more funding is necessary for capital and operations on expanded lines and enhanced service. For example, double tracking of the light rail Gold Line to Folsom is necessary to decrease headways at stations east of the Sunrise Blvd. station. At-grade rail crossings, in downtown Sacramento and along Folsom Blvd. going east, cause delay to motorists, bicyclists, and pedestrians. Coordination between local and regional agencies will be critical in making service improvements to transit along the corridor.

There are also deficiencies in the bicycle and pedestrian facilities on the corridor. Pavement deficiencies, maintenance issues, and gaps and barriers within the bicycle route network make active transportation modes less attractive to travelers and contribute to higher automobile usage. Keeping bicycle facilities in usable order will require the close cooperation of local agencies along the corridor. Bicyclist-activated signal change devices will also greatly improve transportation on the corridor. Finally, coordination between transit operators and bicyclists can make great improvements on transit access and bicycle storage to promote increased alternative transportation.

Recreational traffic is an important issue in US 50 transportation. This traffic is highly directional and heavily concentrated in certain times of year (ski season and summer recreation season). Traffic on this route is concentrated on weekends, particularly Fridays and Saturday mornings to Lake Tahoe and Sunday afternoons from Lake Tahoe, during the ski season and during the summer, and to the Apple Hill area during fall. Because of the difficulty of planning for these conditions, the El Dorado County Transportation Commission (EDCTC) applied for and received grants from the State to study the impact of tourism on travel and mobility issues associated with agritourism. The *Bay to Tahoe Basin Recreation and Tourism Travel Impact Study* is currently in development and will provide important information and recommendations regarding recreational travel within this corridor, covering several counties and transportation facilities and the *Sustainable Agritourism Mobility Study* will begin developing recommendations regarding agritourism mobility in the corridor in winter 2015.

Additionally, EDCTC has identified operational issues between the Smith Flat interchange and east of the Upper Carson Road/Camino intersection in the *Camino Area Parallel Capacity/Safety Study*. Transportation issues include at-grade access to US 50, left turn conflicts across US 50, increasing average daily local and interregional traffic, growth in the area, lack of alternate routes, seasonal traffic to and from Apple Hill and other local events,

and seasonal access to recreation in the Lake Tahoe Region. These operational issues were further explored in a PSR-PDS that EDCTC completed in December 2009.

Large rock slides have required closure of US 50 and the need for a detour for traffic crossing the Sierra. Caltrans has partnered with El Dorado County and the Eldorado National Forest to detour traffic at the US 50/Sly Park Road turn-off which connects with Mormon Emigrant Trail, which connects with SR 88.

Climate also is an issue that the US 50 corridor must confront. During most of the year, the weather is warm and travel to Lake Tahoe is unimpeded. During the winter, access to much of the facility is restricted to vehicles with four-wheel drive or chains, and chain control locations are conveniently located throughout the corridor. This chain requirement, the inclement weather, and use of traction material on the road have a detrimental impact on the road pavement, which deteriorates more rapidly than other facilities' pavements. Special attention must be paid to ensure that US 50 is maintained in good condition. In addition, snow removal in the area is not provided on bicycle facilities during the winter months.

Another key corridor issue is the lack of right of way for modification or enhancement of the facility in some locations. The urban facility from West Sacramento to Folsom is surrounded by urban development, and expansion would be prohibitively expensive. From Folsom until Placerville there is room to expand US 50 to accommodate new development in western El Dorado County, but careful corridor planning is essential in preserving ROW for future lane expansion. Through most of the Eldorado National Forest US 50 is a two-lane conventional highway, with protected forest, steep cliffs, or mountainside, thus making modification considerably more difficult. In developed areas, such as South Lake Tahoe, the facility serves built out areas, and modifying the facility would be prohibitively costly. There is some ability to expand capacity in Camino and Pollock Pines. In planning for future facility improvements coordination with local agencies will prove vital.

Bus/Carpool Lane Degradation

A recent report, the *2011 California HOV Lane Degradation Determination Report*, determined that US 50 bus/carpool lanes are degraded in the eastbound evening and the westbound morning periods. According to federal law, a bus/carpool lane is degraded when during the peak morning or evening period the average speed drops below 45 mph for at least 10% of the time in a 180-day period. The degraded segments are from Sunrise Blvd. (PM 12.5) to halfway between Hazel Av. and Folsom Blvd. (PM 16.311) in both directions. The segments are listed as slightly degraded, 14.5% of the time degraded for eastbound evening and 18.3% of the time degraded for westbound morning. This pattern roughly reflects commuting patterns to and from downtown Sacramento and Rancho Cordova employment opportunities. Because this report uses data from before the opening of the bus/carpool lanes from Watt Ave. to Sunrise Blvd. in 2012, the conditions may have changed on the ground.

As a result of this report and the degraded bus/carpool lane conditions, Caltrans must take action to improve bus/carpool lane performance. According to the federal transportation law, Moving Ahead for Progress in the 21st Century Act (MAP 21), Caltrans must enact measures to improve bus/carpool lane performance within 180 days of the determination of degradation, or Caltrans must otherwise face sanctions of withheld funds or withheld project approval.

CORRIDOR CONCEPT FACILITY

CONCEPT RATIONALE

"Concept LOS" and *"Concept Facility"* have traditionally been used in Caltrans TCRs and CSMPs to reflect the minimum level or quality of operations acceptable for each route segment and the highway facility needed in

the next 20 years and beyond. The "*Base Year", "No Build", "Build",* and *"Concept"* LOS for US 50 are identified in Table 13 by segment. The *Concept* LOS is LOS D in rural areas and LOS E in urban areas. The *"20-Year Build Facility"* and *"Ultimate Facility Concept"* for US 50 are shown above in Table 6. The *20-Year Build Facility* includes all projects expected to be completed within the 20-year horizon (2031), while the *Ultimate Facility Concept* includes all projects with an expected completion year beyond the 20-year horizon. Projects have been identified below as *Projects and Strategies*.

Over one-half of US 50 segments are forecasted to operate under LOS "F" conditions in 20 years under the *"No Build," "Build,"* and *"Concept"* scenarios. The No-Build scenario is the current facility with future traffic volumes. The Build scenario is the current facility plus planned and programmed SHS projects with future traffic volumes. The *Ultimate Facility Concept* is the facility needed to meet District performance standards for a particular segment. Many segments within the US 50 TCR/CSMP cannot be improved to perform at the District standard of E for urban areas due to financial, environmental, right of way, or political constraints. For these segments, targeted operational improvements, Intelligent Transportation Systems (ITS), and Integrated Corridor Management (ICM) including Transportation Demand Management (TDM) and active multimodal corridor management strategies will be needed to assist in achieving the Concept LOS, which are reflected in the programmed, planned, and conceptual project lists located in Tables 18 through 22. Planning and deployment of ITS and operational improvements within District 3 will be articulated in the *District 3 ITS/Operational Improvement Plan* and the *District 3 Concept of Operations Plan*, both in development.

Additionally, measures to reduce travel demand on the highway such as increased use of transit and development of parallel local road facilities may be explored as a means to prevent further LOS threshold degradation on the SHS and will be considered in the CEQA development process, provided that the reduction is quantified to the satisfaction of Caltrans. Moreover, the District *3 Complete Streets Implementation Plan* as described previously in this document, and the *District 3 State Highway Bicycle Facility Plan* identify locations for construction of pedestrian and bicycle facilities that will further reduce local vehicular trips on state highway facilities.

PROJECTS AND STRATEGIES

Projects and strategies to achieve the LOS and facility concept have two categories of funding status: fiscally constrained and fiscally unconstrained.

Fiscally constrained projects and strategies are projects that can be implemented using committed, available, or reasonably available revenue sources.[1]

Fiscally unconstrained projects and strategies are conceptual transportation improvements without an identified funding source and may be funded if reasonable additional resources become available.[2]

In addition to the funding status categories, there are three types of transportation improvements or actions: programmed, planned, and conceptual. Projects and strategies to achieve facility concept are grouped into (1) highway planned and programmed projects and strategies, (2) highway conceptual projects and strategies, and (3) off-highway corridor projects.

Planned and Programmed Projects and Strategies

A ***programmed improvement or action*** is a project listed in a near-term programming document identifying funding amounts by year, such as the State Transportation Improvement Program (STIP) or the State Highway Operations and Protection Program (SHOPP).

A ***planned improvement or action*** is a project listed in a fiscally constrained section of a long-term plan, such as an approved Regional or Metropolitan Transportation Plan (RTP or MTP), Capital Improvement Plan, or measure, including SHOPP plan projects.

Conceptual Projects and Strategies

Conceptual improvement or action is a project that is needed to maintain mobility or serve multimodal users, but is not currently included in a fiscally constrained plan and is not currently programmed. Conceptual projects are all fiscally unconstrained projects derived from documents such as local and regional General Plans, and Caltrans System Planning Documents.

Highway planned and programmed projects along the US 50 corridor are listed in Table 17, highway conceptual projects along the corridor are listed in Table 18, and off-highway corridor projects are listed in Tables 19 through 21.

To improve the bus/carpool lane segments with degraded performance, several projects have been proposed and are listed in this CSMP. Chief among these projects is the extension of bus/carpool lanes from Watt Ave. to the Oak Park Interchange, which will improve traffic flow on the entire facility. Several traffic operations projects will also improve the performance of the bus/carpool lanes. These projects include an auxiliary lane from Zinfandel Dr. to Sunrise Blvd., ramp metering, and a transition lane between the slip-on and off-ramps at Sunrise Blvd. Transit projects, such as shuttle service to light rail stations in Rancho Cordova, and bus stop and light rail station enhancements, will make transit a more attractive alternative to freeway travel. Finally, numerous bicycle and pedestrian improvements are planned for the corridor, creating a further alternative to travel on US 50. In the mean time, before these projects are built, increased enforcement by the California Highway Patrol (CHP) of minimum bus/carpool lane occupancies and more rapid Freeway Service Patrol response will yield improved bus/carpool lane performance. Further information on these actions can be found in the *2013 California High Occupancy Vehicle Lane Degradation Action Plan*.

TABLE 17: HIGHWAY PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES							
Seg. #	**Description**	**Programmed or Planned[1)]**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[2)]**	**Total Cost Estimate (x $1,000)[3)]**	**Completion Year[3)]**
1	IC improvements	Programmed	Jefferson Blvd. YOL PM 2.495	System Management	2035 SACOG MTP/MTIP	26,450	2022
1	Install ramp meters; modify ramp design	Programmed	South River Rd. YOL PM 2.926	System Management	2035 SACOG MTP/MTIP	22,625	2020
1	Install Weigh-In-Motion (WIM) Station on SR 50 and I-80 Ramp	Planned	I-80 Junction. YOL PM 0.00	Weigh Stations and Weigh-in-Motion Stations	2014 SHOPP	2,000	2020
1-6; 20-21	Upgrade closed caption televisions (CCTV)	Programmed	80 locations in urban areas. Various PM.	Modify existing ITS elements	2014 SHOPP	2,640	2020
2	IC reconstruction including Bus/Carpool connectors	Planned	Oak Park IC. SAC PM L2.137	System Expansion	2035 SACOG MTP	300,000	2035
2/3/4	Construct Bus/Carpool lanes	Partially Programmed	Watt Ave. to Downtown Sacramento. SAC PM L0.00- R5.37	Priority Congestion Relief,System Expansion	2035 SACOG MTP	68,315	2020
3	Replace existing communication lines with fiber optics to improve performance	Planned	SR 99 and 51 to Watt Ave. SAC PM L0.00-R5.37	Modify existing ITS elements	2013 10 Year SHOPP Plan	952	2023
3-7	Upgrade Comm systems	Programmed	178 locations in urban areas. Various PM, routes and counties.	Modify existing ITS elements	2014 SHOPP	4600	2019
4	Construct aux lanes	Planned	NB Howe Ave. on ramp to SB Howe Ave. on ramp. SAC PM R3.68	Priority Congestion Relief,System Management	2035 SACOG MTP	3,746	2020
4	Construct aux lanes	Planned	Bradshaw Rd. overcrossing to Mather Field Rd. overcrossing. SAC PM R7.8-R9.5	Priority Congestion Relief,System Management	2035 SACOG MTP	3,700	2020
4	IC modification	Planned	Mather Field Rd. SAC PM R9.505	Interchange Modification	2035 SACOG MTP	5,647	2025
5	Bike/Ped OC of US 50 to connect Olson Dr to Prospect Dr	Planned	Olson Dr. to Prospect Park Dr. SAC PM R11.30	System Management	2035 SACOG MTP	8,500	2035
5	Construct aux lanes EB & WB	Planned	Sunrise Blvd. to Zinfandel Dr. SAC PM R10.92-12.5	System Management	2035 SACOG MTP	6,844	2035

TABLE 17: HIGHWAY PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES							
Seg. #	**Description**	**Programmed or Planned[1)]**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[2)]**	**Total Cost Estimate (x $1,000)[3)]**	**Completion Year[3)]**
5/6	Construct transition lane WB	Planned	Sunrise Blvd. slip off ramp to Sunrise Blvd. slip on ramp. SAC PM 12.5	Priority Congestion Relief,System Management	2035 SACOG MTP	4,107	2035
6	Upgrade video wall at Regional Transportation Management Center (RTMC)	Planned	RTMC east of Sunrise Blvd. SAC PM 12.96	Modify existing ITS elements	2013 10 Year SHOPP Plan	2,000	2023
6	Multi-modal corridor improvements & IC improvements	Programmed	Hazel Ave. SAC PM 15.76	System Management	2035 SACOG MTP	85,000	2020
6/7	Natoma Overhead: widen EB US 50 and add HOV lane at on ramp, add ramp meter	Programmed	Folsom Blvd. and Natomas Overcrossing. SAC PM 16.90-17.40	Priority Congestion Relief,System Management	2013 10 Year SHOPP Plan	6,821	2015
6/7	Add aux lanes EB	Planned	Sunrise Blvd. to Scott Rd. SAC PM 12.5-21.5	System Management	2013 DSMDP	3,500	2025
6/7	Construct new IC at US 50/Rancho Cordova Pkwy. including aux lanes on US 50 btwn Hazel Ave. & Sunrise Blvd. and 4 lane arterial connection to US 50 off Rancho Cordova Pkwy. to White Rock Rd.	Partially Programmed	Rancho Cordova Pkwy. SAC PM 12.5-15.76	System Expansion	2035 SACOG MTP	100,000	2020
7	Construct new 4 lane IC	Programmed	Empire Ranch Rd. SAC PM 23	System Management	2035 SACOG MTP	38,552	2035
7	Construct new 4 lane IC	Planned	Oak Ave Pkwy. SAC PM 20.3	System Management	2035 SACOG MTP	84,646	2035
7	Ramp modifications & overpass widening	Planned	East Bidwell St./Scott Rd. IC. SAC PM 21.5	System Management	2035 SACOG MTP	3,740	2020
9	IC Phase 1	Programmed	Silva Valley Pkwy. IC ELD PM R1.65	System Management	2035 SACOG MTP/MTIP	52,375	2016
8	Construct Auxiliary Lanes - WB	Planned	WB, El Dorado Hills Blvd./Latrobe Rd. to future Empire Ranch Rd. IC. ELD PM 0.00-0.86	Priority Congestion Relief,System Management	2035 SACOG MTP	3,688	2035

TABLE 17: HIGHWAY PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES							
Seg. #	**Description**	**Programmed or Planned[1)]**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[2)]**	**Total Cost Estimate (x $1,000)[3)]**	**Completion Year[3)]**
8	IC Improvements-EB Ramps	Planned	El Dorado Hills Blvd. ELD PM 0.86	System Management	2035 SACOG MTP/MTIP	5,904	2035
9	Construct Class 1 Ped/Bike overcrossing, El Dorado Hills Blvd	Programmed	El Dorado Hills Blvd. Area. ELD PM 1.183	System Management	2035 SACOG MTP/MTIP	6,783	2028
9	IC Improvements Ph 1, WB auxillary lane between Silva Valley Rd & Bass Lake Rd.	Planned	Bass Lake Rd. IC. ELD PM R1.65-R3.23	System Management	2035 SACOG MTP	20,829	2035
9	IC Phase 2	Planned	Silva Valley Parkway IC. ELD PM R1.65	System Management	2035 SACOG MTP	14,200	2035
10	Construct Aux. Lanes - WB	Planned	Bass Lake Rd. to Cambridge Rd. ELD PM R3.23-4.962	System Management	2035 SACOG MTP	23,640	2035
10	Construct Auxiliary Lanes - EB	Planned	Cambridge Rd. to Cameron Park ICs, WB Cameron Park to Bass Lake Rd. Ics. ELD PM R3.23-6.57	System Management	2035 SACOG MTP	15,500	2035
10	IC Improvements-Ph 1, EB/WB Ramps	Planned	Cambridge Rd IC. ELD PM 4.962	System Management	2035 SACOG MTP	10,645	2035
10-12	Construct Aux. Lanes - EB	Planned	Cambridge Rd. to Ponderosa Rd. ELD PM 4.962-R8.564	System Management	2035 SACOG MTP	14,550	2035
10/11	IC Improvements	Planned	Cameron Park Dr. ELD PM 6.57	System Management	2035 SACOG MTP	58,737	2035
12	IC; Realign WB Offramp with Wild Chaparral Dr and signalize intersection; Realign 0.25 Mile of North Shingle Rd at Ponderosa Rd	Programmed	Ponderosa Rd IC/ North Shingle Rd. ELD PM R8.564	System Management	2035 SACOG MTP/MTIP	5,020	2024
12	Bus/Carpool Lanes (Phase 3)	Planned	Ponderosa Rd. to Greenstone Rd. ELD PM R8.56-R12.19	System Expansion	2035 SACOG MTP	34,730	2035
12	Durock Rd Realignment; signalize new intersection	Planned	Ponderosa Rd. IC/ Durock Rd. ELD PM 8.564	System Management	2035 SACOG MTP/MTIP	7,152	2026
12	IC Improvements	Planned	South Shingle Rd. IC. ELD PM R8.564	System Management	2035 SACOG MTP	23,088	2035

TABLE 17: HIGHWAY PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES							
Seg. #	**Description**	**Programmed or Planned[1)]**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[2)]**	**Total Cost Estimate (x $1,000)[3)]**	**Completion Year[3)]**
12	IC Improvements Ph 1 & 2	Planned	El Dorado Rd. ELD PM 14.011	System Management	2035 SACOG MTP	10,803	2035
13	IC Improvements Ph 2A & Ph 3	Planned	Western Placerville ICs, Ph 2A & Ph 3. ELD PM 15.83-16.503	System Management	2035 SACOG MTP/MTIP	23,374	2030
13	Local Road Improvements Ph 2B & 2C; improvements to Ray Lawyer Dr & Forni Rd	Programmed	Western Placerville ICs, Ph 2B & 2C. ELD PM 15.83-16.503	System Management	2035 SACOG MTP/MTIP	6,748	2018
13	Local Road Improvements Ph 1B-Realign Fair Lane to correct curve & construct Class II Bike Lanes, sidewalks & retaining walls	Programmed	Western Placerville ICs, Ph 1B, ELD PM 16.276	System Management	2035 SACOG MTP/MTIP	1,589	2014
14, 16, 18, 19, 21	Upgrade HAR systems	Planned	25 locations in rural areas. Various PM, routes and counties.	Modify existing ITS elements	2016 SHOPP	2670	2021
15	EB signalization and ramp lengthening	Planned	Broadway. ELD PM 18.517	System Management	2035 SACOG MTP	2,000	2035
15	Construct new IC	Planned	Mosquito Rd. ELD PM 18.52	System Management	2035 SACOG MTP	60,000	2035
15	Construct undercrossing, median barriers, modify local connectors, operational/ safety improvements	Planned	Camino Operational/ Safety Improvements. ELD PM 24.052	System Management	2035 SACOG MTP	33,900	2035
19	Upgrade RWIS systems	Planned	18 locations in rural areas. Various PM, routes and counties.	Modify existing ITS elements	2016 SHOPP	2300	2021
20	Construct roundabout or install signal at junction	Planned	Junction SR 89 in Meyers. ELD PM 70.64	System Management	2035 TMPO RTP	5,000	2020
20	Intersection improvements	Planned	Pioneer Trail in Myers. ELD PM 71.477	System Management	2035 TMPO RTP	2,000	2020
20/ 21	Signal synchronization - Install Adaptive Traffic Signal Control	Planned	19 locations in El Dorado County. Various PM.	System Management	ITS/OPS Project List	1,000	Long
21	Create new Loop Rd	Partially Programmed	Park Ave to Stateline. ELD PM 80.149-80.44	System Management	2035 TMPO RTP	75,000	2017

TABLE 17: HIGHWAY PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES							
Seg. #	**Description**	**Programmed or Planned[1)]**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[2)]**	**Total Cost Estimate (x $1,000)[3)]**	**Completion Year[3)]**
21	Signal improvements	Planned	SR 89 (the "Y") to Nevada State line. ELD PM 75.456-80.44	Priority Congestion Relief,System Management	2035 TMPO RTP	5,000	2015

1) Programmed include those projects that are partially and fully funded. Definitions of Programmed, Planned, and Conceptual projects can be found in Appendix A.

2) Note, only SHOPP projects that improve Mobility and are Mandated for furthering Complete Streets are included. A complete listing of SHOPP projects can be viewed at http://ctips.dot.ca.gov/citrix/metaframexp/default/reports.asp.

3) Total Cost and Completion Year Estimates are from listed Source. Additional project details and programming information can be found in the District 3 DSMDP at http://www.dot.ca.gov/dist3/departments/planning/systemplanningDSMDP.htm, 2012 SACOG MTP project list at http://www.sacog.org/2035/files/MTP-SCS/appendices/A-1%20Project%20List.pdf, 2012 SACOG MTIP Appendix 3 project list at http://www.sacog.org/mtip/2013-2016/adoption/pdf/2013%20MTIP%20Transmittal%209-26-12.pdf, 2012 TMPO RTP, Chapter 6 project list at http://tahoempo.org/rtp_final/TAHOE%20RTP%2006%20Funding%20and%20Impl.pdf, and CT Programming at http://ctips.dot.ca.gov/citrix/metaframexp/default/reports.asp .

There are several conceptual projects identified in Table 18 below that are proposed for construction on US 50 in the long term, beyond year 2025. These projects consist of HOV lanes, ITS/Operations projects, interchange improvements, and bicycle/pedestrian projects. Because these projects are of an undefined time frame, they are subject to revision.

TABLE 18: HIGHWAY CONCEPTUAL PROJECTS AND STRATEGIES						
Seg. #	**Description**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[1)]**	**Total Cost Estimate (x $1,000)[2)]**	**Completion Year[2)]**
1	Construct HOV lanes (Sections B)	Davis to downtown Sacramento (Sections B & C). YOL PM 0.0-3.156	Construct HOV lanes to relieve congestion	2035 SACOG MTP	(see section A)	2035
2	Construct HOV lanes (Section C)	Davis to downtown Sacramento (Section C). SAC PM L0.36-0.02	Construct HOV lanes to relieve congestion	2035 SACOG MTP	(see section A)	2035
3 - 6	Ramp meter improvements on both directions	Stockton Blvd. to Folsom Blvd. SAC PM 0.6-17.01	Improve facility performance through operational enhancements	ITS/OPS Project List	8,000	2016
12/ 13	Interchange Improvements Ph 2	Missouri Flat Interchange. ELD PM R15.06	Interchange improvements to accommodate local development	2013 DSMDP	20,000	2035
11	Bus/Carpool Lanes (Phase 2B)	Cameron Park Dr. to Ponderosa Rd. IC. ELD PM 6.57-R8.56	System Expansion	2035 SACOG MTP	22,637	2035

TABLE 18: HIGHWAY CONCEPTUAL PROJECTS AND STRATEGIES						
Seg. #	**Description**	**Location, County, Lead Agency, Post Mile**	**Purpose**	**Source[1)]**	**Total Cost Estimate (x $1,000)[2)]**	**Completion Year[2)]**
13 - 19	El Dorado 50 ITS	In El Dorado County from Missouri Flat Rd to Echo Sandhill. ELD PM R15.06-67.295	Improve facility performance through ITS enhancements	ITS/OPS Project List	2,600	Long
19 - 21	Construct Class II Bike Lane	S. Upper Truckee Rd. to Stateline Rd.	Accommodate bicyclists as part of the Environmental Improvement Program (EIP)	2013 D3 SHBFP	4,800	Long

1) Note, only SHOPP projects that improve Mobility and are Mandated for furthering Complete Streets are included. A complete listing of SHOPP projects can be viewed at http://ctips.dot.ca.gov/citrix/metaframexp/default/reports.asp.

2) Total Cost and Completion Year Estimates are from listed Source. Additional project details and programming information can be found in the District 3 DSMDP at http://www.dot.ca.gov/dist3/departments/planning/systemplanningDSMDP.htm, 2012 SACOG MTP project list at http://www.sacog.org/2035/files/MTP-SCS/appendices/A-1%20Project%20List.pdf, 2012 SACOG MTIP Appendix 3 project list at http://www.sacog.org/mtip/2013-2016/adoption/pdf/2013%20MTIP%20Transmittal%209-26-12.pdf, 2012 TMPO RTP, Chapter 6 project list at http://tahoempo.org/rtp_final/TAHOE%20RTP%2006%20Funding%20and%20Impl.pdf, and CT Programming at http://ctips.dot.ca.gov/citrix/metaframexp/default/reports.asp .

Off-Highway US 50 Corridor Projects

The original US 50 CSMP from 2009 contained off-highway projects on parallel roads, bicycle routes, and transit systems. These projects, while not under Caltrans' direct purveyance, have an impact on freeway operations of US 50 by offering alternatives to travel on the highway. These alternatives reduce traffic on the freeway and improve overall functioning of the corridor. These off-highway projects as identified in Tables 20 through 22 below are either on parallel roads, cross US 50 ROW, are transit projects, or are bicycle and pedestrian projects.

TABLE 19: OFF-HIGHWAY PARALLEL AND CONNECTING ROADS PROJECTS				
Seg. #	**Description**	**Planned or Programmed**	**Location, County**	**Source**
1	Streetscape improvements, including wider sidewalks, flatter road cross-section, reconfigure lanes, roundabout, utility relocation, new lighting, and substantial planting and hardscape treatments.	Programmed	West Capitol Ave, Westacre Rd. to Harbor Blvd.	2035 SACOG MTP/MTIP
3	Widen to 5 lanes	Planned	65th St., US 50 to Broadway	2035 SACOG MTP
3	Widen to 6 lanes	Planned	Power Inn Rd., Fruitridge Rd. to 14th Ave.	2035 SACOG MTP
3	Streetscape project including pedestrian and bicycle improvements, a raised landscaped median, landscaped planters, improvements to signal operations, frontage landscaping, and enhanced connections to transit facilities.	Programmed	Folsom Blvd., Power Inn Rd. to Watt Ave.	2035 SACOG MTP/MTIP
4	Widen to 4 lanes	Planned	Mather Blvd., Rockingham Rd. to Zinfandel Dr.	2035 SACOG MTP
6	Widen to 6 lanes with special treatments. Intersection improvements at White Rock, Folsom Blvd., Coloma Rd., Zinfandel Dr., Gold Express, and Gold Country.	Planned	Sunrise Blvd., White Rock Rd. to American River	2035 SACOG MTP
6	On existing 6-lane White Rock Rd., from Sunrise Blvd. to Luyung Dr.: construct improvements. From Luyung Dr. to Grant Line Rd.: widen and reconstruct from 2 to 4 lanes.	Programmed	On White Rock Rd.: Sunrise Blvd. to Luyung Dr.; Luyung Dr. to Grant Line Rd.	2035 SACOG MTP/MTIP
6	Grant Line Expressway Phase I: Widen four lanes and complete remaining sections of four lane Expressway. Intersection improvements at Jaeger Road, Keifer Blvd, International Drive and Jackson Highway.	Planned	Grant Line Rd., Jackson Hwy. to White Rock Rd.	2035 SACOG MTP
6-7	Easton Valley Pkwy.: Construct New Road: 4 Lanes	Programmed	Hazel Ave. to Prairie City Rd.	2035 SACOG MTP
7	Widen from 2 to 4 lanes	Planned	Prairie City Rd., US 50 to White Rock Rd.	2035 SACOG MTP
7	Widen from 2 to 4 lanes	Planned	White Rock Rd., Prairie City Rd to El Dorado County Line	2035 SACOG MTP

TABLE 19: OFF-HIGHWAY PARALLEL AND CONNECTING ROADS PROJECTS				
Seg. #	**Description**	**Planned or Programmed**	**Location, County**	**Source**
7	Widen to 6 lanes	Planned	Iron Point Rd., Black Diamond Dr. to Prairie City Rd.; Outcropping Way to Broadstone Pkwy.	2035 SACOG MTP
7	Widen from 2 to 6 lanes	Planned	Scott Rd., US 50 to White Rock Rd.	2035 SACOG MTP
8	Widen from 2 to 4 lanes, divided	Planned	White Rock Rd., Sacramento County Line to Manchester Dr.	2035 SACOG MTP
8	Construct new 2 lane arterial road to extend Saratoga Way from its current terminus at Finders Way in El Dorado Hills to the Sacramento County Line / Iron Point Rd.	Planned	Saratoga Way, Iron Point Rd/Sacramento County Line to Finders Way	2013 El Dorado County CIP
8/9	Construct a second eastbound through lane from the commercial area near Sophia Parkway intersection to Francisco Drive with traffic signal installation at the Green Valley Road/Browns Ravine/Miller Road intersection. Also add a second westbound lane from Francisco Drive to the commercial area near the Sophia Parkway intersection.	Planned	On Green Valley Rd. from County line to Francisco Dr.	2035 SACOG MTP
9	Widen to 6 lanes, divided. Construct interchange.	Planned	White Rock Rd., Latrobe Rd. to Silva Valley Pkwy.	2035 SACOG MTP
9	Widen from 2 lanes undivided to 4 lanes divided, with interchange; includes curb, gutter, sidewalk and Class II bike lanes	Planned	White Rock Rd., Monte Verde Dr. to Silva Valley Pkwy.	2035 SACOG MTP
9	Widen to 4 lanes	Planned	Green Valley Rd., Francisco Dr. to Deer Valley Rd.	2035 SACOG MTP
10/11	Widen to 5-lanes: 2 NB through lanes (with right and left turn pockets) and 3 SB through lanes (with dual right turn lanes at Robin Ln.). Project includes median and signal modification at Coach Ln. intersection, realignment of Robin Ln. intersection for future extension to Rodeo Dr. and construction of a new traffic signal.	Planned	Cameron Park Dr., Cameron Park Dr. to Coach Ln.	2035 SACOG MTP
12	Intersection improvements	Planned	Green Valley Rd and Deer Valley Intersection	2035 SACOG MTP

TABLE 19: OFF-HIGHWAY PARALLEL AND CONNECTING ROADS PROJECTS				
Seg. #	**Description**	**Planned or Programmed**	**Location, County**	**Source**
12	Replace the existing 2 lane functionally obsolete bridge with a new 2 lane bridge	Programmed	Green Valley Rd. and Indian Creek	2035 SACOG MTP/MTIP
12	Widen Green Valley Rd. to two 12-ft lanes with paved shoulders. Project includes adding six left-turn pockets.	Planned	Deer Valley Rd to Lotus Rd	2035 SACOG MTP
13	Widen to 4 lanes of traffic, a dual left turn lane, sidewalks, and bike lanes on both sides.	Planned	Placerville Dr. from Fair Ln. to Ray Lawyer Dr.	2035 SACOG MTP
13	Widen to 4 lanes of traffic, a dual left turn lane, sidewalks, and bike lanes on both sides.	Planned	Placerville Dr. from Ray Lawyer Dr. to Cold Springs Rd.	2035 SACOG MTP
13	Widen bridge to 5 lanes, 2 through lanes in each direction and a median turn lane. Widening will include bike lanes and sidewalks.	Programmed	Bridge over Hangtown Creek Bridge, 0.3 mi west of Cold Springs Rd.	2035 SACOG MTP/MTIP
13	Widen to 4 lanes of traffic, a dual left turn lane, sidewalks, and bike lanes on both sides.	Planned	Placerville Dr. from Cold Springs Rd. to US 50	2035 SACOG MTP
13	Replace existing structurally deficient 2 lane bridge with new 2 lane bridge over Weber Creek, widen and realign Green Valley Rd. at bridge approaches, and drainage improvements.	Programmed	Green Valley Rd. and Weber Creek	2035 SACOG MTP/MTIP
15	Construct 700-foot of new 2-lane road. Includes sidewalks to City collector street standards between Broadway and Main St. New road will extend Main St. down Spanish Ravine Road.	Planned	Main St., Broadway, and Spanish Ravine Rd.	2035 SACOG MTP
15	Construct roundabout	Planned	Main St., Cedar Ravine Rd., and Clay St.	2035 SACOG MTP
15	Install traffic signals	Planned	Intersection with Broadway. and Blairs Ln.	2035 SACOG MTP

TABLE 20: OFF-HIGHWAY TRANSIT PROJECTS				
Seg. #	**Description**	**Planned or Programmed**	**Location, County**	**Source**
1 - 2	9 mile urban streetcar network connecting the Intermodal Terminal in downtown Sacramento to West Sacramento	Programmed	West Sacramento and downtown Sacramento	2035 SACOG MTP/MTIP
2	Light rail station improvements: Add 2 shelters, surveillance camera, pedestrian signage, 2 visible message signs	Programmed	29th St. Light Rail Station	2035 SACOG MTP/MTIP
2	North-south alignment, relocating bus berths, providing enhanced passenger connections, relocating passenger vehicle and bicycle parking.	Programmed	Sacramento Valley Station	2035 SACOG MTP/MTIP
2	Complete makeover and rehab. of the depot to make it fully usable. Accommodation of high speed trains, commuter rail, light rail, streetcars, transit bus lines, intercity buses.	Planned	Sacramento Valley Station	2035 SACOG MTP
2 - 7	Enhancement of bus stops and light rail stations	Programmed	Various bus stops and light rail stations	2035 SACOG MTP/MTIP
3	Streetscape project with pedestrian and bicycle improvements, a raised landscaped median, planters, improvements to signal operations, frontage landscaping, and connections to transit facilities.	Programmed	On Folsom Blvd, from Power Inn Rd to Watt Ave	2035 SACOG MTP/MTIP
3 - 4	Modify freeway interchange. Construct multi-modal improvements with a bicycle and pedestrian path.	Programmed	US 50/Watt Ave Interchange	2035 SACOG MTP/MTIP
4	Streetscape Project: On Folsom Blvd. Includes landscape and safety improvements for bicycle and pedestrian access to transit. Phase IV.	Planned	Bradshaw Rd to Sunrise Blvd	2035 SACOG MTP
4	Rail Crossing Projects: Plan and construct a rail grade separation for RT's Gold Line	Planned	Bradshaw Rd, Mather Field Rd, Routier Rd, and Zinfandel Dr.	2035 SACOG MTP
4 - 5	Phase 1 of Loop Streetcar (7.5 miles)	Planned	Rancho Cordova Town Center	2035 SACOG MTP
7 - 8	Construct a 250-space park-and-ride facility near Empire Ranch Interchange	Planned	South of US 50 near Empire Ranch Interchange	2035 SACOG MTP
7 - 8	Construct a regional fueling station for transit operators	Planned	Sacramento/El Dorado County Line	2035 SACOG MTP
13	Construct 150 space park and ride lot on south side of US 50 between proposed Ray Lawyer Dr eastbound off-ramp and realigned Forni Road	Programmed $1.1 million CMAQ on March 6, 2014	South of US 50 near Ray Lawyer Dr	SACOG MTIP

TABLE 21: OFF-HIGHWAY BICYCLE AND PEDESTRIAN PROJECTS				
Seg. #	**Description**	**Planned or Programmed**	**Location, County**	**Source**
4	Bicycle facility improvements at light rail station	Planned	Watt Ave Light Rail Station	SACOG MTP/MTIP
4	Add sidewalks and enhance pedestrian and disabled access.	Programmed	West side of Mather Field Road, between Folsom Blvd and Rockingham Dr. Known as the Mather Railroad Spur Rails to Trails Project	SACOG MTP/MTIP
4	Class I bike path along the south bank of the American River	Conceptual	Watt Ave. to Gristmill Park	Conceptual Project
4	Overcrossing of US 50 at Railroad ROW	Conceptual	Between Routier Rd. and Mather Field Rd.	Conceptual Project
4 - 6	Develop plan for citywide bicycle system	Planned	City of Rancho Cordova	SACOG MTP/MTIP
4 - 6	Class I bike path	Planned	From Mosher Rd. to White Rock Rd.	2013 RBPTMP
5 - 6	Provide a bicycle/pedestrian connection	Planned	Douglas Rd to Folsom South Canal Bike Trail	SACOG MTP/MTIP
6 - 7	Bicycle overcrossing of US 50	Planned	Folsom Blvd.	SACOG 2013 Regional Bicycle, Pedestrian, and Trails Master Plan (2013 RBPTMP)
7	Construct Class I bicycle path - Humbug-Willow Creek Trail/Lake Natoma Bikeway	Planned	Blue Ravine Rd to Lake Natoma Trail	SACOG MTP/MTIP
7	Overcrossing of Folsom Blvd at Humbug-Willow Creek Pkwy	Planned	Folsom Blvd at Humbug-Willow Creek Pkwy	SACOG MTP/MTIP
7	Construction of a Class I bike path parallel to US 50	Planned	Empire Ranch Rd to Alder Creek	SACOG MTP/MTIP
7 - 8	Construct Class II bike lanes as part of Saratoga Way extension	Planned	On Saratoga Way, from Finders Way to County Line	SACOG MTP
8	Bicycle/pedestrian overcrossing of US 50	Planned	El Dorado Hills Blvd.	SACOG MTP
8/9	White Rock Rd. Class II bike lanes	Planned	El Dorado County Line to Silva Valley Pkwy	2013 RBPTMP

TABLE 21: OFF-HIGHWAY BICYCLE AND PEDESTRIAN PROJECTS				
Seg. #	**Description**	**Planned or Programmed**	**Location, County**	**Source**
9	Silva Valley Pkwy. Class II bike lanes	Planned	White Rock Rd to Harvard Wy.	2013 RBPTMP
9	Sliva Valley Pkwy. Class I bike path and Class II bike lanes	Programmed CMAQ March 6, 2014	Class I bike path Harvard Way to Appian Way; Class II bike lanes Appian Way to Green Valley Road	SACOG MTIP
10	Class II bike lanes	Planned	On Country Club Dr., from Bass Lake Rd. to Cambridge Rd.	2013 RBPTMP
10	Class II bike lanes	Planned	On Country Club Dr., from Cameron Park Dr. to Cambridge Rd.	2013 RBPTMP
9	Design and construct a Class I bike path within the powerline easement operated by the Sacramento Municipal Utility District (SMUD)	Programmed	El Dorado Hills Blvd to Silva Valley Pkwy (Phase 1 from Silva Valley Parkway to New York Creek was completed and Phase II was programmed CMAQ 3/6/14	SACOG MTP/MTIP
13	Class I bike path	Planned	Missouri Flat Rd. to Mother Lode Dr.	2013 RBPTMP
12	Class II bike lanes	Planned	On Mother Lode Rd., Lindberg Ave. to Missouri Flat Rd.	2013 RBPTMP
12/13	Bicycle/pedestrian overcrossing of US 50	Planned	Missouri Flat Rd.	2010 Placerville Non-Motorized Transportation Plan
13	Widen Placerville Dr and construct sidewalks and Class II bike lanes on both sides	Planned	Cold Springs Rd to US 50	SACOG MTP/MTIP
13	Widen Placerville Dr and construct sidewalks and Class II bike lanes on both sides	Planned	Fair Ln to Ray Lawyer Dr	SACOG MTP/MTIP
13	Widen Placerville Dr and construct sidewalks and Class II bike lanes on both sides	Planned	Ray Lawyer Dr to Cold Springs Rd	SACOG MTP/MTIP
15	Design and construct a Class I bike path along the El Dorado Trail. Bike and pedestrian overcrossing.	Programmed	Clay St to Bedford Ave	SACOG MTP/MTIP
15	Class I bike path parallel to US 50	Planned	Halcon Rd. to Snows Rd. near Camino	2013 RBPTMP
15	Extend El Dorado Trail Class I bike path	Programmed CMAQ 3/6/14	Los Trampas Dr to Halcon Rd in Camino	2013 RBPTMP

APPENDIX A: GLOSSARY OF TERMS AND ACRONYMS

Acronyms and Important Abbreviations

AADT - Annual Average Daily Traffic
ADT - Average Daily Traffic
BY - Base Year
CALTRANS - California Department of Transportation
CEQA – California Environmental Quality Act
CHP – California Highway Patrol
CSMP - Corridor System Management Plan
CSUS – California State University, Sacramento
DSMP - District System Management Plan
DU - Density Unit
EDCTC - El Dorado County Transportation Commission
EIP - Environmental Improvement Program
FHWA - Federal Highway Administration
HCM - Highway Capacity Manual
HOV – High Occupancy Vehicle
HY - Horizon Year
I-5 – Interstate 5
I-80 – Interstate 80
ICM – Integrated Corridor Management
ITS - Intelligent Transportation System
ITSP - Interregional Transportation System Plan
LOS - Level of Service
MAP-21 – Moving Ahead for Progress in the 21st Century Act
MPO - Metropolitan Planning Organization
MPR – Mobility Performance Report
MTIP - Metropolitan Transportation Improvement Program
MTP - Metropolitan Transportation Plan
PeMS – Performance Measurement System
PM - Post Mile
ROW – Right of Way
RTIP – Regional Transportation Improvement Program
RTP – Regional Transportation Plan
RTPA - Regional Transportation Planning Agencies
SACOG - Sacramento Area Council of Governments
SHBFP – State Highway Bicycle Facilities Plan
SHOPP - State Highway Operation and Protection Program
SHS - State Highway System
SR - State Route
STAA - Surface Transportation Assistance Act
TCR - Transportation Concept Report
TDM – Transportation Demand Management
TMPO - Tahoe Metropolitan Planning Organization
TOC – Traffic Operations Center
TOS – Traffic Operations Systems
TRPA - Tahoe Regional Planning Agency
TTD - Tahoe Transportation District

V/C – Volume-to-Capacity Ratio
VHD – Vehicle Hours of Delay
VMT - Vehicle Miles Traveled

Definitions

AADT – Annual Average Daily Traffic is the total volume for the year divided by 365 days. The traffic count year is from October 1st through September 30th. Traffic Counting is generally performed by electronic counting instruments moved from locations throughout the State in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways and other purposes.

Base Year- The year that the most current data is available to the Districts.

Bikeway Class I (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow by motorists minimized.

Bikeway Class II (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway.
Bikeway Class III (Bike Route) – Provides for shared use with pedestrians or motor vehicle traffic.

Capacity – The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions.

Capital Facility Concept – The 20-25 year vision of future development on the route to the capital facility. The capital facility can include capacity increasing, State Highway, bicycle facility, pedestrian facility, transit facility (Intercity Passenger rail, Mass Transit Guideway, etc.), grade separation, and new managed lanes.

Concept LOS – The minimum acceptable LOS over the next 20-25 years.

Conceptual Project – A conceptual improvement or action is a project that is needed to maintain mobility or serve roadway users, but is not currently included in a financially constrained plan and is not currently programmed. It could be included in a General Plan or in the unconstrained section of a long-term plan.

Corridor – A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, bicycle, pedestrian, and transit route alignments. Off system facilities are included as information purposes and not analyzed in the TCR.

Facility Concept – Describes the facility and strategies that may be needed within 20-25 years. This can include capacity increasing, State Highway, bicycle facility, pedestrian facility, transit facility, non-capacity increasing operational improvements, new managed lanes, conversion of existing managed lanes to another managed lane type or characteristic, TMS field elements, transportation demand management and incident management.

Facility Type – The facility type describes the state highway facility type. The facility could be freeway, expressway, conventional, or one-way city street.

Freight Generator – Any facility, business, manufacturing plant, distribution center, industrial development, or other location (convergence of commodity and transportation system) that produces significant commodity flow, measured in tonnage, weight, carload, or truck volume.

Headway – The time between two successive vehicles as they pass a point on the roadway, measured from the same common feature of both vehicles.

Horizon Year – The year that the future (20-25 years) data is based on.

ITS – Intelligent Transportation System improves transportation safety and mobility and enhances productivity through the integration of advanced communications technologies into the transportation infrastructure and in vehicles. Intelligent transportation systems encompass a broad range of wireless and wire line communications-based information and electronics technologies to collect information, process it, and take appropriate actions.

LOS – Level of Services is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. Six levels of LOS can generally be categorized as follows:

LOS A describes free flowing conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway.

LOS B is also indicative of free-flowing conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.

LOS C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.

LOS D demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.

LOS E reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.

LOS F a stop and go, low speed conditions with little or poor maneuverability. Speed and traffic flow may drop to zero and considerable delays occur. For intersections, LOS F describes operations with delay in excess of 60 seconds per vehicle. This level, considered by most drivers unacceptable often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection.

Multimodal – The availability of transportation options using different modes within a system or corridor, such as automobile, subway, bus, rail, or air.

System Operations and Management Concept – Describes the system operations and management elements that may be needed within 20-25 years. This can include non-capacity increasing operational improvements (auxiliary Lanes, channelizations, turnouts, etc.), conversion of existing managed lanes to another managed lane type or characteristics (e.g., High Occupancy Vehicle lane to High Occupancy Toll lane), TMS Field Elements, Transportation Demand Management, and Incident Management.

Peak Hour – The hour of the day in which the maximum volume occurs across a point on the highway.

Peak Hour Volume – The hourly volume during the highest hour traffic volume of the day traversing a point on a highway segment. It is generally between 6 percent and 10 percent of the ADT. The lower values are generally found on roadways with low volumes.

Planned Project – A planned improvement or action is a project in a financially constrained section of a long-term plan, such as an approved Regional or Metropolitan Transportation Plan (RTP or MTP), Capital Improvement Plan, or measure.

Post Mile – A post mile is an identified point on the State Highway System. The milepost values increase from the beginning of a route within a count to the next county line. The milepost values start over again at each county line. Milepost values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The milepost at a given location will remain the same year after year. When a section of road is relocated, new milepost (usually noted by an alphabetical prefix such as "R" or "M") are established for it. If relocation results in a change in length, "milepost equations" are introduced at the end of each relocated portion so that mileposts on the remainder of the route within the county will remain unchanged.

Programmed Project – A programmed improvement or action is a project in a near-term programming document indentifying funding amounts by year, such as the State Transportation Improvement Program or the State Highways Operations and Protection Program.

Route Designation – A route's designation is adopted through legislation and identifies what system the route is associated with on the State Highway System. A designation denotes what design standards should apply during project development and design. Typical designations include but not limited to National Highway System (NHS), Interregional Route System (IRRS), and Scenic Highway System.

Rural – Fewer than 2,500 in population designates a rural area. Limits are based upon population density as determined by the U.S. Census Bureau.

Segment – A portion of a facility between two points.

TDM – Transportation Demand Management programs designed to reduce or shift demand for transportation through various means, such as the use of public transportation, carpooling, telework, and alternative work hours. Transportation Demand Management strategies can be used to manage congestion during peak periods and mitigate environmental impacts.

TMS – Transportation Management System is the business processes and associated tools, field elements and communications systems that help maximize the productivity of the transportation system. TMS includes, but is not limited to, advanced operational hardware, software, communications systems and infrastructure, for integrated Advanced Transportation Management Systems and Information Systems, and for Electronic Toll Collection System.

Post-25 Year Concept – This dataset may be defined and re-titled at the District's discretion. In general, the Post-25 Year concept could provide the maximum reasonable and foreseeable roadway needed beyond a 20-25 year horizon. The post-25 year concept can be used to identify potential widening, realignments, future facilities, and rights-of-way required to complete the development of each corridor.

Urban Cluster – 2,500 to 49,999 in population designates an urban cluster. Limits are based upon population density as determined by the U.S. Census Bureau.

Urbanized Area – Over 50,000 in population designates an urbanized area. Limits are based upon population density as determined by the U.S. Census Bureau.

VMT – Is the total number of miles traveled by motor vehicles on a road or highway segments.

APPENDIX B: RESOURCES

California Road System (CRS) Maps, http://www.dot.ca.gov/hq/tsip/hseb/crs_maps/
Camino CDP.
http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1
El Dorado Transit. http://www.eldoradotransit.com/
Interregional Transportation Strategic Plan (ITSP). http://www.dot.ca.gov/hq/transprog/ocip/te/itsp.pdf
Pollock Pines CDP, California. http://quickfacts.census.gov/qfd/states/06/0658030.html
South Lake Tahoe (city), California. http://quickfacts.census.gov/qfd/states/06/0673108.html
South Lake Tahoe Zoning Map. http://www.cityofslt.us/DocumentCenter/Home/View/60
Tahoe Transportation District. http://www.tahoetransportation.org/southtahoe
Truck Networks on California State Highways: District 3.
http://www.dot.ca.gov/hq/traffops/trucks/truckmap/truckmap-d03.pdf
Zoning Maps. http://www.edcgov.us/Government/Planning/Zoning_Maps.aspx
http://quickfacts.census.gov/qfd/states/06/0659444.html
http://www.csus.edu/oir/Data%20Center/University%20Fact%20Book/University%20Fact%20Book.html

APPENDIX C: DATA RESOURCES

Base Year ADT: 2011 Caltrans Traffic Volumes on California State Highways Book

LOS: Used HCS in conjunction with data from this table

Base Year VMT: 2011 Caltrans Traffic Volumes on California State Highways Book (Link Based)

Horizon Year Volumes and VMT based on SACSIM model growth and SHI growth factors

Truck Data: 2011 Annual Average Daily Traffic on California State Highways Book

Base Year Peak Hour Volumes and Directional Split: 2011 Caltrans Traffic Volumes on California State Highways Book

Peak Hour VMT: 2011 Caltrans Traffic Volumes on California State Highways Book (Link Based)

Horizon Year Directional Splits based on SACSIM model projections in conjunction with 2011 Caltrans Traffic Volumes on California State Highways Book

V/C: HCS used in conjunction with data from this table

APPENDIX D: MAPS OF BICYCLE IMPROVEMENTS

The following reproduce the maps of bicycle improvements as given in the District 3 State Highway Bicycle Facility Plan.

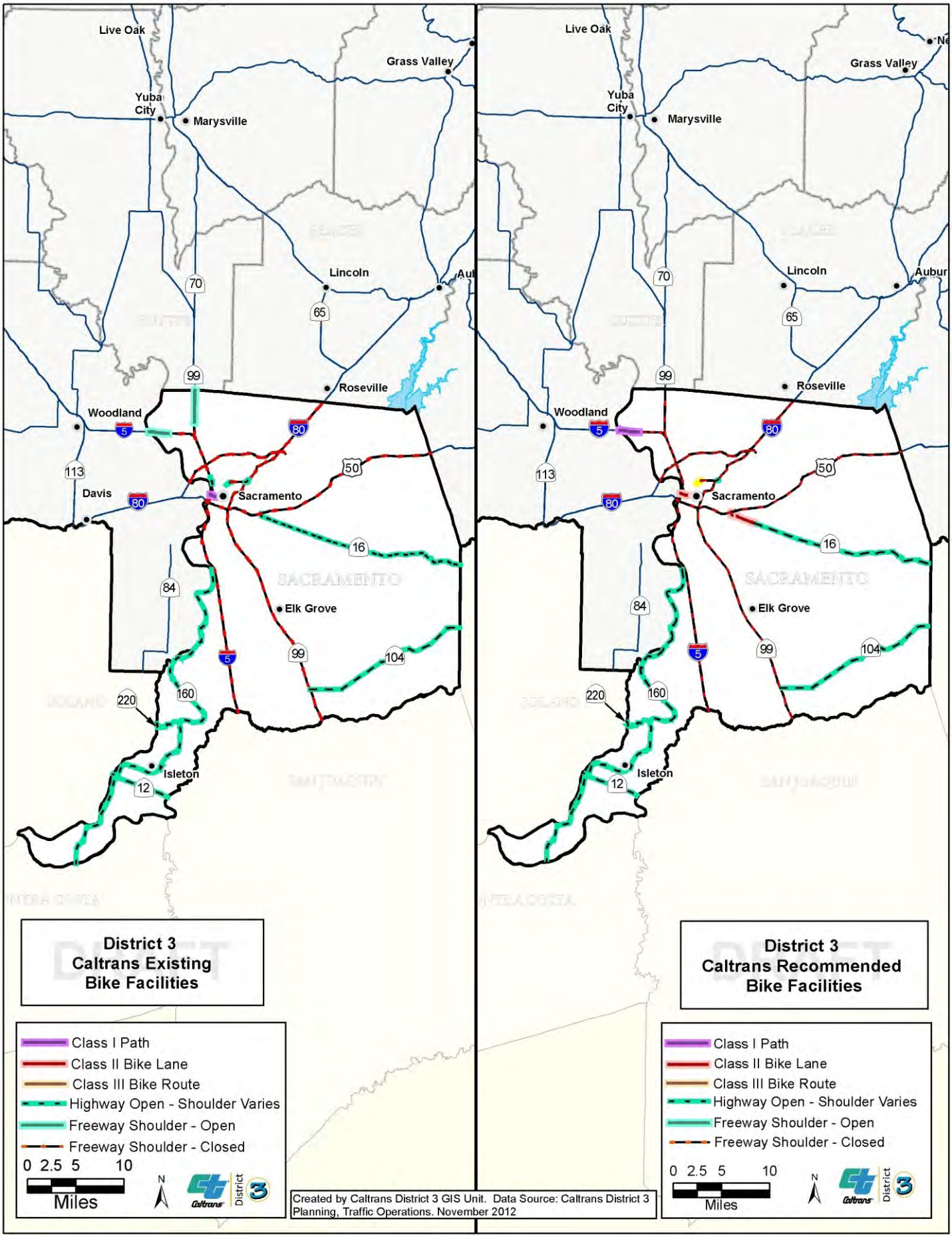


Figure 1: Sacramento County Facility Improvements

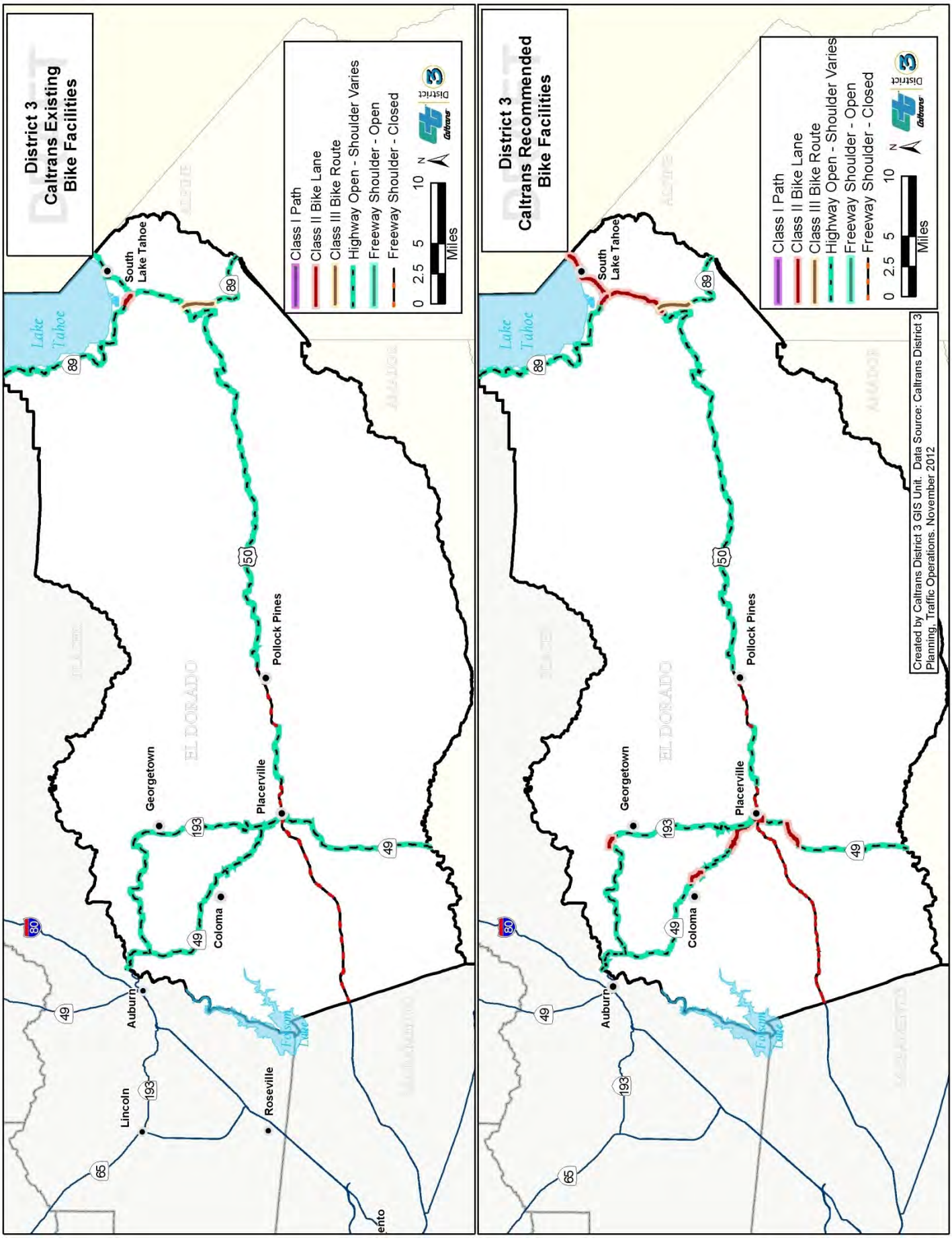


Figure 2: El Dorado County Bicycle Facility Improvements

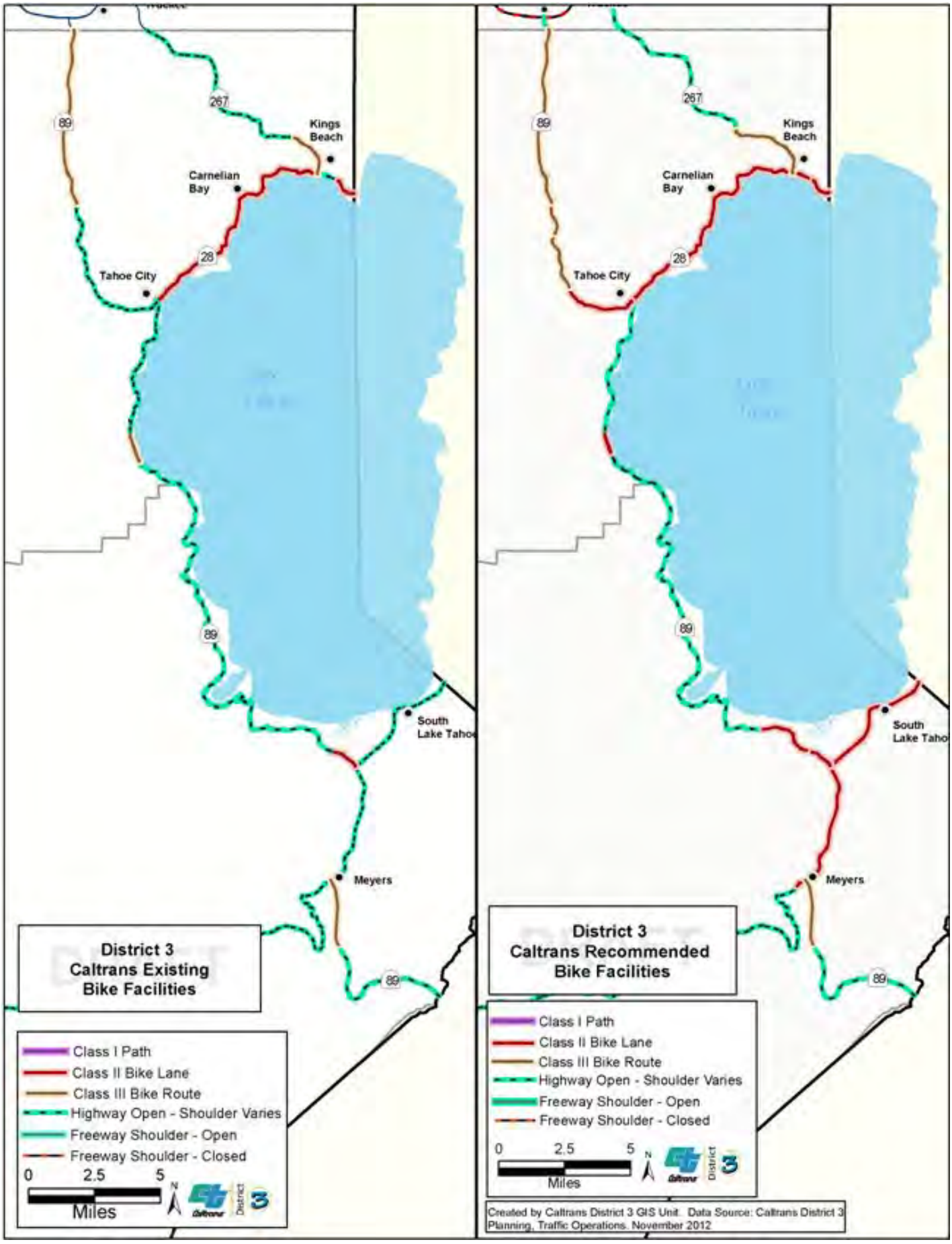


Figure 3: Lake Tahoe Area Bicycle Facility Improvements