

CHAPTER 12: TRANSPORTATION SYSTEMS MANAGEMENT

GOAL 7: TRANSPORTATION SYSTEMS MANAGEMENT

Develop and support an integrated transportation system that incorporates corridor-based solutions and public awareness programs which support alternative transportation modes and reduce the impacts of single-occupant vehicle travel.

Transportation Systems Management (TSM) is defined as a set of techniques to increase the capacity of a transportation system without drastically increasing its size. TSM techniques may include changes to traffic signals, Intelligent Transportation Improvements, ramp metering, minor changes to road geometry, such as straightening corners or lengthening merge lanes. These low-cost interventions can be very effective in reducing congestion under some circumstances. Transportation Control Measures (TCMs) and Transportation Demand Management (TDM) describe a series of techniques designed to maximize the efficiency of the existing transportation system by reducing dependence on single-occupant vehicles. The common goals of TSM, TCMs, and TDM are to reduce traffic congestion, improve air quality, and reduce or eliminate the need for new and expensive transportation infrastructure. Techniques are generally low-cost measures to reduce travel demand or improve the utilization of existing transportation facilities.

The differences between the three concepts are subtle. TSM's emphasize the reduction of traffic congestion by increasing the person-trip capacity of existing transportation systems. As such, TSM techniques also include restriping roadways for channelization, ramp metering, and establishment of freeway auxiliary lanes. TCM's are geared towards reducing air pollution through techniques such as alternative fuel vehicles. Typical TDM strategies include the provision of public information and incentives for carpooling, vanpooling, bicycling, or using public transit, primarily for work trips. Strategies to encourage telecommuting, or working from home, or alternate work schedules that encourage travel during off-peak hours are also considered TDM.

Since 1981, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have required that Transportation Systems Management be part of the regional transportation planning and programming process. Specifically, the Regional Transportation Plan must have a TSM element which describes how the region intends to deal with the movement of people and goods by improving the efficiency and effectiveness of the total transportation system.

TRANSPORTATION SYSTEMS MANAGEMENT STRATEGIES

TRAFFIC FLOW IMPROVEMENTS

Roadway restriping, channelization, ramp metering, auxiliary lanes, elimination of on-street parking, non-motorized facilities, and computerized signalization are techniques currently used to improve the flow of traffic without new road construction. Roadway restriping seeks to increase the number of lanes by reducing lane width, thus increasing traffic capacity. Channelization, which is often done in conjunction with restriping, adds turn lanes to busy roadways to eliminate traffic backups behind cars trying to make turns. Auxiliary lanes are often added to ease merging of traffic onto and off of freeways, such as US 50. Elimination of on-street parking is done to add lanes, and thus capacity, to heavily traveled roadways. In addition, traffic backups caused by vehicles entering or exiting on-street parking spaces is eliminated. Computerized signalization seeks to coordinate signal timing to smooth traffic flow, control speed, and improve throughput.

TRANSIT

Public transit service is the most widely used TSM measure in El Dorado County, serving residents who depend on transit for commuting to work and school and for shopping, medical, and leisure trips. Chapter 9 provides a comprehensive overview of the public transportation services provided by the El Dorado County Transit Authority (EDCTA). EDCTA provides commuter bus services to downtown Sacramento as well as local fixed routes, deviated fixed routes, Dial-a-Ride, demand response, intercity commuter service, and contracted social service transportation.

FREEWAY SERVICE PATROL

The Freeway Service Patrol program (FSP) is a program managed by the California Highway Patrol and a regional or local entity which provides emergency roadside assistance on a freeway in an urban area. The FSP was established by the California legislature through the Freeway Service Patrol Act, Streets and Highways Code Section 2560-2565, to provide for the implementation of a freeway service patrol system using a formula-based allocation. The Freeway Service Patrol is designed to increase roadway safety, reduce motorist delays, reduce freeway congestion, reduce air pollution, and improve overall efficiency of freeway operations. FSP is a fleet of roving white tow trucks on the lookout for stalls and accidents during peak commute hours. Over 350 CHP certified, and supervised tow truck drivers assist 50,000 motorists monthly on California freeways absolutely free. The El Dorado County FSP operates from the El Dorado/Sacramento County line approximately ten miles east on US 50.

INTELLIGENT TRANSPORTATION SYSTEMS

There are several Intelligent Transportation Systems (ITS) efforts underway in the Sacramento region, in the foothill counties (El Dorado, Placer, Nevada, Sierra), and in the Tahoe Basin (refer to Chapter 12). The Tahoe Gateway ITS Strategic Deployment Plan recommends implementation of several technology improvements that can improve the flow and timeliness of information available to the traveler in order to avoid and/or reduce traffic congestion and delays due to traffic. Regional projects focus on traveler information management, emergency management, and communications. In El Dorado County, recommended improvements include signal system technology, traffic management, and Automatic Vehicle Identification, Automatic Vehicle Location, and Computer Aided Dispatch technologies for public transit and emergency vehicles.

An example of a regional ITS project is the 511 comprehensive traveler information system. 511 is a joint project between SACOG, the California Department of Transportation, and other partners. The 511 system provides access to information about all modes of travel: traffic conditions for commuters, bus and light rail information for more than 20 transit agencies, Paratransit services for the elderly and disabled, and information about ridesharing and commuting by bike. The telephone service is available in English and Spanish and, in conjunction with the phone service, the 511 website can help users plan their daily commute, access transit providers, find a carpool partner, and learn about bicycling as a commute option. With the traffic information on the 511 site, users can check commute options and know the road conditions before traveling. For more information about the 511 service, visit the Sacramento Region 511 website at www.sacregion511.org.

The “official” Intelligent Transportation Systems (ITS) definition (23 CFR Part 940), “Means electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.” An alternative definition for ITS is the application of advanced technology to assist in the solution of transportation problems and the management of transportation systems. The implementation of ITS technology is not new. ITS elements such as computerized signal systems have been used for well over a decade in the Sacramento Region to manage traffic flow on arterial roads. However, ITS systems are increasingly being used for other transportation management purposes such as traffic management, transit operations management, incident management, and travel information management.

ADVANCED TRAVELER INFORMATION SYSTEMS

These systems deliver data directly to travelers, empowering them to make better choices about alternate routes or modes of transportation. These systems include real-time traffic data via the internet or Highway Advisory Radio, Changeable Message Signs, Landslide Sensor Integration, and Weather Stations. An example of this type of technology utilized in El Dorado County is the www.50corridor.com website, which contains construction updates and road closures for regionally significant roadways, real-time traffic via video cameras, commute assistance, and general information and news regarding the U.S. 50 corridor.

ADVANCED TRAFFIC MANAGEMENT SYSTEMS

Advanced traffic management systems include a variety of relatively inexpensive detectors, cameras, and communication systems that monitor traffic, optimize signal timings on major arterials, and control the flow of traffic. In March 2016, the U.S. Highway Transportation Management System Upgrades Project was approved. The project is located on U.S. 50 in El Dorado County from the El Dorado County/Sacramento County line to Stateline Avenue in the City of South Lake Tahoe and includes improving communications and installation of new Transportation Management Systems including Closed Circuit Television, Changeable Message Signs, Traffic Monitoring Stations, Remote Weather Information Stations and Highway Advisory Radio equipment. Construction is anticipated to begin in August 2020 and is estimated to be completed by December 2021.

INCIDENT MANAGEMENT SYSTEMS

Incident management systems provide traffic operators with the tools to allow quick and efficient response to accidents, hazardous spills, and other emergencies. Multiple communications systems link data collection points, transportation operations centers, and travel information portals into an integrated network that can be operated efficiently and intelligently.

TRANSIT OPERATIONS MANAGEMENT

Transit Operations Management utilize technology of Automatic Vehicle Identification (AVI) and Automatic Vehicle Location (AVL) to provide communications between transit agency vehicles and dispatch centers. AVI and AVL is currently not being utilized in El Dorado County but is one of the planned applications.

ALTERNATIVE FUELS

Alternative fuels are used to power motor vehicles while reducing the impacts to air quality. Common alternative fuels include ethanol, propane, compressed natural gas, and electricity. Current efforts in the Sacramento region are focusing on cost effective ways to reduce precursors to ozone in order to meet federal air quality conformity guidelines. Due in large part to the unavailability of alternative fueling facilities in El Dorado County, EDCTA utilizes “clean diesel” equipment which meets California Air Resources Board requirements.

INTELLIGENT TRANSPORTATION SYSTEMS EXISTING CONDITIONS

The EDCTC is involved in varied levels of ITS studies and plans to integrate this technology into the region. EDCTC participates in the Statewide ITS Deployment Plan, the Sacramento Regional ITS Plan, the Tahoe Basin ITS Plan, and the Tahoe Gateway Strategic Deployment Plan, all of which must conform with a broader, National ITS Architecture. These programs and plans are described in detail below.

NATIONAL ITS ARCHITECTURE

The FHWA has produced a National ITS Architecture that provides a template, or framework, to assist individual states and regions with the development of their ITS Programs. In addition to the template, the National Architecture provides a consistent vocabulary to facilitate the communication between transportation professionals, and structured guidelines to aid in regional ITS development. In short, the National ITS Architecture provides a common structure for the design of Intelligent Transportation Systems.

STATEWIDE ITS ARCHITECTURE AND SYSTEM PLAN

In 2018, Caltrans released an updated Statewide ITS Architecture Assessment and Support “Planning for ITS Guide”. The first Planning for ITS guidebook was published in 2007 as part of Statewide ITS Architecture and System Plan initiative. Since 2007, ITS has evolved dramatically and will continue to do so in upcoming years with the penetration of new technologies, like 5G networks. Examples of recent advancements include smartphone applications including real-time mapping, location-tracking, and crowd sourced information and electronic and dynamic road pricing via express lanes and cashless toll facilities. The Planning for ITS Guide states, “It is thus not only advisable, but imperative that ITS is incorporated into every facet of transportation planning and system operations”. The intent of the Guide is to help prepare California for the future through planning, programming and initiation of projects that incorporate these advanced technologies.

SACRAMENTO REGIONAL ITS PARTNERSHIP

A Regional ITS Architecture is a plan that describes ITS deployment in terms of regional integration and cooperation among stakeholders within that region over a time period of generally 10 to 20 years. The Sacramento Region ITS Partnership is an advisory committee made up of local and state transportation personnel. The Partnership meets on a monthly basis and identifies issues and opportunities for deploying ITS in the region. SACOG has been active in building consensus among the various agencies to support successful ITS projects and anticipates continued collaboration between Partnership members on future projects. In 2019 the Smart Region Sacramento Technology and Mobility Master Plan was published. Objectives of the Plan include considering urban, suburban, rural, and underserved communities; adapting new technology; achieving consistency and reliability for all modes; increasing safety; improving traveler information dissemination; and improving emergency and disaster preparedness.

CAPITOL VALLEY REGIONAL SERVICE AUTHORITY FOR FREEWAYS AND EXPRESSWAYS

The Capitol Valley Regional Service Authority for Freeways and Expressways (CVRS) was established in October 1991. CVRS is a multi-county Service Authority for Freeways and Expressways (SAFE) containing six counties: El Dorado, Sacramento, San Joaquin, Yolo, Yuba, and Sutter. SACOG provides staffing and management for SAFE.

TAHOE GATEWAY INTELLIGENT TRANSPORTATION SYSTEMS STRATEGIC DEPLOYMENT PLAN

The Tahoe Gateway Counties project area includes the counties of Sierra, Placer, El Dorado, and Nevada and encompasses approximately 5,500 square miles and nearly 450,000 people. The Tahoe Gateway Counties regional ITS architecture was created as a consensus view of what ITS systems the stakeholders in the region have currently implemented and what systems they plan to implement in the future to improve mobility to and from the Tahoe region.

SMART MOBILITY FRAMEWORK

Smart Mobility 2010: A Call to Action for the New Decade, also known as The Smart Mobility Framework (SMF) is a planning guide that furthers integration of smart growth concepts into transportation planning in California.

Smart Mobility moves people and freight while enhancing California's economic, environmental, and human resources by emphasizing:

- Convenient and safe multimodal travel
- Speed suitability
- Accessibility
- Management of the circulation network
- Efficient use of land

Smart Mobility responds to the transportation needs of the State's people and businesses, addresses climate change, advances social equity and environmental Justice, supports economic and community development, and reduces per capita vehicle miles traveled.

The Smart Mobility Framework (SMF), formally known as Smart Mobility 2010: A Call to Action for the New Decade, was prepared by Caltrans in partnership with the US Environmental Protection Agency, the Governor's Office of Planning and Research, and the California Department of Housing and Community Development to address both long-range challenges and short-term programmatic actions to implement multi-modal and sustainable transportation strategies in California.

The SMF is a planning framework that helps guide and assess how well plans, programs, and projects meet a definition of "smart mobility". It can be used by both Caltrans and partner agencies in all geographic parts of the State to transform transportation decisions.

Ideally, the SMF can be applied to various levels of plans, programs, or projects (e.g., Regional Transportation and Blueprint Plans, General Plans, corridor plans, specific development proposals, etc.) in all parts of the state (i.e., urban, suburban, and rural).

TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

TELECOMMUTING, COMPRESSED WORK WEEKS, AND FLEXIBLE WORK HOURS

Telecommuting, compressed work weeks, and flexible work hours are employment-based techniques to reduce the number of work trips per week, or to transfer trips to off-peak hours to reduce peak hour congestion.

Telecommuting, or alternative work location, allows workers to perform job duties at home or another location, communicating with the main work center by modem, fax, or telephone, as necessary. From 2003 to 2008, the total number of Telecommuters rose 43 percent to 33.7 million Americans (World at Work 2010). While the surface transportation infrastructure for cars, buses, and trains consists of roads and rails, the infrastructure required for telecommuting is broadband internet. Continued efforts to expand broadband internet infrastructure to rural El Dorado County will further telecommuting opportunities throughout the region; refer to Table 12-1, ITS Action Plan. One such effort was initiated in 2010 through the Central Valley Next Generation Broadband Infrastructure Plan which will begin opening telecommuting opportunities to rural residents who currently do not have access to broadband infrastructure. Providing broadband throughout rural areas is imperative for telecommuting to be a viable tool toward decreasing daily commuter travel.

Compressed work weeks increase the number of hours worked each day to squeeze a regular work week into fewer workdays. A typical schedule could be four ten-hour workdays each week (4/10 schedule) or eight, nine-hour days and one, eight-hour day in two weeks (9/80 schedule).

Flexible work hours may reduce the number of work trips per week but seek to reduce traffic congestion by shifting some trips out of the peak period. Employers using flexible hours may allow

workers to vary time of arrival and departure daily, better coordinate with transit service, or may require workers to choose a specific schedule to meet the needs of the employer and employee.

TELE/VIDEO CONFERENCING

Tele/video conferencing is generally defined as meetings held by telephone or via video hookup to replace the need for traveling to meet in person. Many employers in El Dorado County utilize tele/video conferencing as a cost-effective way to conduct meetings and seminars while avoiding travel on roadways.

50 CORRIDOR TRANSPORTATION MANAGEMENT ASSOCIATION (TMA)

50 Corridor TMA, a nonprofit agency, promotes commuting options by providing information about ridesharing and other alternative transportation options. Placement assistance is available to employers, individuals, and other interested organizations.

EMERGENCY RIDE HOME

Members of the Regional Rideshare Program in the Sacramento Region receive two emergency rides home per year valued at \$50 per ride. If the members' workplace is also a member of a Transportation Management Association, such as the 50 Corridor TMA, they receive up to six emergency rides home per year.

BICYCLING AND WALKING

Promotional events that encourage bicycling and walking as a transportation mode in El Dorado County have continually seen annual increases in participation. EDCTC works closely with the 50 Corridor Transportation Management Association and SACOG to promote "Bike Month" events held annually in May. The Sacramento Region mayisbikemonth.com website serves as a venue for the promotion of bicycling events held throughout the region in May to encourage bicycle commuting. The website also allows bicyclists to log their miles and develops a summary of commute, errand, work trip and recreational miles ridden in the Sacramento Region during May.

EDCTC has worked with local El Dorado County and City of Placerville schools to hold Walk to School Day events annually in October. The events are promoted in conjunction with International Walk to School Day, which is typically held on the first Wednesday in October. Several El Dorado County schools participate and each year approximately 500 students walk to school. The event promotes increased awareness about walking as a transportation mode.

PARK-AND-RIDE LOTS

The purpose of park-and-ride lots is to provide a central meeting place adjacent to major travel routes where commuters can congregate and form carpools or catch buses for the remainder of the commute trip. Caltrans operates numerous park-and-ride lots in El Dorado County, located along US 50. The El Dorado County Transit Authority also operates several lots, located near US 50. The lots include paved areas for parking cars and some lots include bicycle lockers.

RIDESHARING

There are several coordinated ridesharing programs that serve El Dorado County. The Sacramento Area Council of Governments (SACOG) manages the Regional Rideshare Program covering El Dorado, Placer, Sacramento, Yolo, Yuba, and Sutter counties. The Regional Rideshare Program is a Transportation Control Measure, included in the 2009 State Implementation Plan for Air Quality for the Sacramento Region. Under federal law, the Regional Rideshare Program must be provided as long as the Sacramento Region is designated a non-attainment area for the federal eight-hour ozone air quality standard. The purpose of the Regional Rideshare Program is to encourage carpooling and the use of alternative transportation modes for traveling to work, school, personal trips, and

recreation. The Regional Rideshare Program includes the toll-free 511 phone number and the sacregion511.com website. The website includes an online database for commuters interested in ridesharing (carpools and vanpools), a transit trip planning tool, real time traffic information, and detailed information about commuting by bike. Members of the Regional Rideshare Program conduct outreach to large employers throughout the region and work with them to offer incentives, such as transit pass subsidies, and disincentives, such as charging for parking, to encourage employees to use an alternative transportation mode. The 50 Corridor Transportation Management Association works with employers in El Dorado County and along the 50 Corridor to implement commute programs that focus on transportation alternatives such as carpooling, vanpooling, cycling, walking, and utilizing transit to improve the commute today and into the future. The 50corridor.com website provides up-to-date traffic information for US 50, links to the Regional Rideshare Program database, and information on ridesharing, bicycling, and transit along the US 50 Corridor.

Another regional program focused on encouraging ridesharing is the Spare-the-Air program managed by the Sacramento Metropolitan Air Quality Management District and supported by the air districts of the Sacramento region (including the El Dorado County Air Quality Management District). Spare-the-Air is a regional driving curtailment and health notification program which operates in the Sacramento ozone non-attainment area (which includes El Dorado County with the exception of the Tahoe Basin) during the summer smog season, May to October. Drivers are alerted to reduce driving on days when ozone formation is expected to be high. The public is advised of ozone levels and health effects through a variety of media.

CARPOOL/VANPOOL

Commuter vanpools can be organized and paid for in a variety of ways. In general, a group of ten or more commuters share the operating and maintenance cost of a leased van that transports them to and from work. Usually one person in the group is the regular driver. Participants typically meet in a central location, such as a park-and-ride lot, and are then dropped off at their workplace(s). Vanpool participants often work for the same company. Vanpools are often self-supporting but can also be subsidized by a public agency and/or employers.

Formal carpools and vanpools in El Dorado County are primarily organized by the private rideshare firm, Enterprise Rideshare, as well as the US 50 Corridor Transportation Management Association (TMA) who coordinate vanpools on behalf of Broadridge, a large employer in El Dorado Hills. Currently Enterprise Rideshare operates seven vanpools that originating in El Dorado County and destined for workplaces in the Sacramento area. The 50 TMA manages two vanpools that originate in the Vineyard area near Elk Grove destined for the Broadridge Company located in the El Dorado Hills Business Park.

INTEGRATED CORRIDOR MANAGEMENT

BACKGROUND

California is a dynamic state that continues to be a leader in many important areas, including agricultural production, innovative technology, miles of highways, and traffic congestion. According to the California Department of Transportation's Mobility Report for 2013, Californians lost over 100 million hours because of congestion. US 50 ranks as one of the most congested corridors in the Sacramento region. The state exemplifies many of the problems of transportation systems around the world: It is a highly successful economy with a transportation infrastructure less and less able to deliver the mobility and accessibility California needs.

The Connected Corridors program is a new initiative for Caltrans and a focus for both Headquarters and the local Caltrans Districts. Connected Corridors (CC) is an Integrated Corridor Management (ICM) strategy that looks at an entire transportation system and all opportunities to move people and goods in the most efficient manner possible—including freeways, arterials, transit, parking, travel

demand strategies, agency collaboration, and more—to ensure the greatest potential gains in operational performance will be achieved. The US 50 corridor already contains many of the parallel facilities and ITS infrastructure required for ICM integration. Coordinating with other agencies and improving system-wide performance through collaboration with local stakeholders is critical to the success of Connected Corridors.

PROJECT PURPOSE

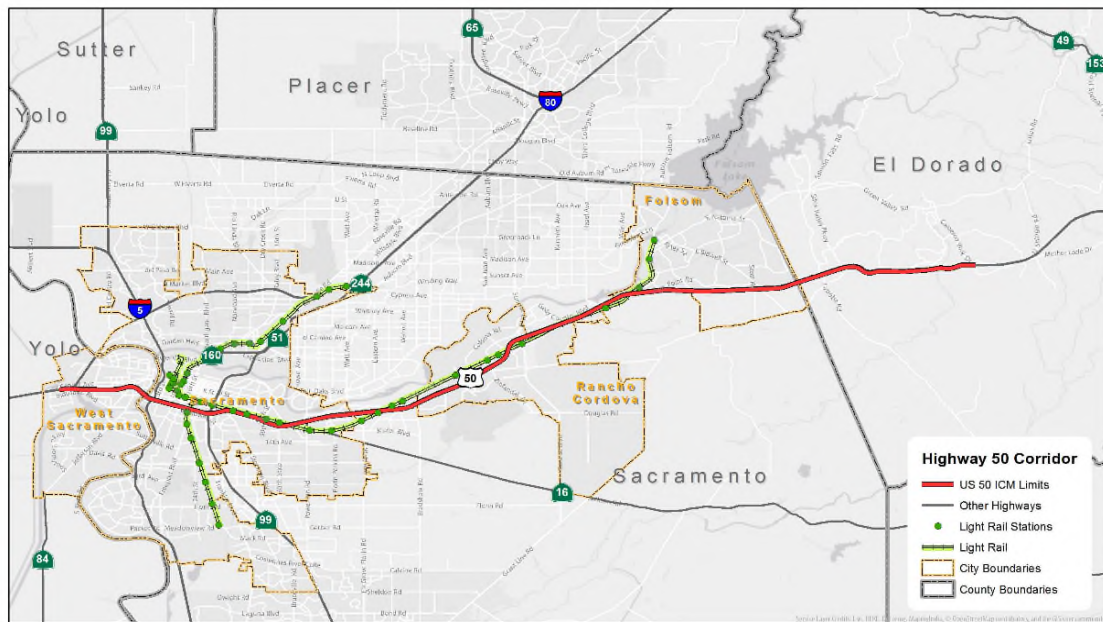
The US 50 ICM Project is a collaborative effort to research, develop, test, and deploy a framework for corridor transportation challenges managed by the state and its partners. The project’s aim is to fundamentally change the way the state manages its transportation challenges for years to come. The US 50 ICM Project was developed in collaboration with local transportation agencies, the county, the cities, and other stakeholders. The US 50 ICM Project will connect individual stakeholders and work to address congestion for the betterment of the entire network.

District 3 has identified US 50 as a pilot corridor to implement ICM strategies due to the congestion the corridor faces daily. Additionally, the US 50 corridor already contains many of the parallel facilities and ITS infrastructure required for ICM integration. It is the District’s long-term intention to implement ICM strategies within other corridors throughout the District based on the success and lessons learned from ICM application within the US 50 corridor.

Upon completion of the District 3 RCTO in 2015, a strategic plan to improve the District’s and the region’s Transportation System Management and Operations (TSM&O), Caltrans District 3 and its US 50 corridor partner agencies launched a coalition to consider ICM applications on the corridor. The coalition formed a project development group (herein referred to as the “group”) with engineering and planning members from each of the partner agencies. The group defined the vision and scope for the US 50 ICM and meets on a regular basis to provide guidance and direction in the future development and deployment of the ICM concept.

The group selected a 37-mile option that extends west to east from Enterprise Boulevard in the City of West Sacramento (southeastern Yolo County), through Sacramento County, to Cameron Park Drive in western El Dorado County as shown on Figure 12-1.

Figure 12-1: US 50 CORRIDOR ICM LIMITS



TRANSPORTATION SYSTEMS MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN

The Action Element of the RTP consists of short-term and long-term projects and activities that address regional transportation issues and needs. The federal conformity regulations (Title 40 CFR 93.106, Content of Transportation Plans) identify the short-term horizon as a period up to 10 years in the future, 2020-2030, and the long-term horizon as projects or activities between 2030-2040 or beyond the scope of this plan (Post 2040). The Action Element implements the Policy Element, must be consistent with the financial constraints identified in the Financial Element, and must conform with the air quality State Implementation Plan. The following tables list the short-term and long-term Transportation Systems Management/Transportation Demand Management projects. For those projects which have an estimated completion date, the year of expenditure dollar is provided. The year of expenditure dollar is adjusted based on inflation factors provided by SACOG. Projects proposed in the Post 2040 project list (Table 12-4) are fiscally unconstrained, i.e., funding for these projects is not anticipated during the planning horizon of this RTP. An unconstrained project list is also included in Appendix E of this RTP.

Projects proposed in the Transportation Systems Management/Transportation Demand Management Action Plan tables (12-2, 12-3, 12-4) are considered to be regionally significant if they meet one or all of the following criteria; the project serves regional travel needs; the project must be included in the regional travel model; the project must be modelled for air quality conformity; or, the project is located on a roadway classified as a collector or above. Those projects that are deemed to be regionally significant based on these criteria are indicated as such with an asterisk in the table next to the project title.

The TSM Action Plan implements Goal 7 of the Policy Element of this RTP, which pertains to Transportation Systems Management/Transportation Demand Management.

TABLE 12-1: TRANSPORTATION SYSTEMS MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN STRATEGIES (2020-2040)

Project Description	Responsible/Support Agencies
Work with Caltrans and local agencies to develop options for the use of managed lane facilities where applicable	Local jurisdictions, EDCTC, El Dorado Transit, SACOG, Caltrans
Work with Caltrans and local agencies to develop options for the strategic location of park-and-ride lots to support social network transportation and ridesharing options	Local jurisdictions, EDCTC, El Dorado Transit, SACOG, Caltrans, 50 Corridor TMA
Coordinate with local jurisdictions to develop and improve integrated corridor management	Local jurisdictions, EDCTC, El Dorado Transit, SACOG, Caltrans
Work with Caltrans and local jurisdictions to include noise abatement and control into projects when appropriate	Local jurisdictions, EDCTC, Caltrans
Work with Caltrans and local jurisdictions to consider safety and security in every transportation project	Local jurisdictions, EDCTC, Caltrans
Strive for full modal integration to provide options for a “complete trip” to include bicycle, pedestrian, transit, and auto for employment, education, and other trips	Local jurisdictions, EDCTC, El Dorado Transit, SACOG, Caltrans
Support the use of public transportation as a transportation control measure to improve throughput and reduce traffic congestion and vehicle emissions	Local jurisdictions, EDCTC, El Dorado Transit

TABLE 12-1: (continued)

TRANSPORTATION SYSTEMS MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN STRATEGIES (2020-2040)

Project Description	Responsible/Support Agencies
Encourage local jurisdictions, Caltrans, and transit operators to embrace technology, such as mobile device applications, as a means to inform the travelling public on conditions, route choices, and traveler experience	Local jurisdictions, EDCTC, El Dorado Transit, SACOG, Caltrans, TRPA
Continue the Freeway Service Patrol program along US 50 in El Dorado County	EDCTC, Caltrans
Work with local jurisdictions and Caltrans to deploy Intelligent Transportation System elements along primary travel corridors which are fully integrated with the local network	Local jurisdictions, EDCTC, El Dorado Transit, SACOG, Caltrans
Encourage local jurisdictions to integrate multi-modal transit facilities when planning development supporting large concentrations of people and services	Local jurisdictions, EDCTC, El Dorado Transit
Work with schools to promote the use of bus transportation, ridesharing, and active transportation using the five principals of safe routes to schools	Local jurisdictions, EDCTC, El Dorado Transit, School Districts

TABLE 12-2: TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN SHORT-TERM PROJECTS (2020-2030)

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
Caltrans	US 50 Advance Warning and ITS	In El Dorado County, US 50, from the Sacramento County Line to east of Stateline Avenue (PM 0.0/80.4) - Upgrade new Transportation Management System elements. Intelligent Transportation System (ITS) (Toll Credits). Toll Credits for ENG, ROW, CON. EA 0H520	\$13,000,000	2020-2025
Caltrans D3	District 3 AVC Upgrades	In various counties on various routes at various locations within Caltrans District 3 - Repair and install permanent Automatic Vehicle Classification (AVC) truck data collection stations [CTIPS ID 107-0000-1051]	\$13,570,000	2020-2025
Caltrans D3	District 3 LED Upgrades	In various counties on various routes at various locations within District 3 (listed under PLA-80-Var in 2018 SHOPP) - Upgrade Extinguishable Message Signs (EMS) to LED [CTIPS ID 107-0000-1035]	\$2,530,000	2020-2025
Caltrans D3	Loop Detectors	In various counties on various routes at various locations within District 3 (Primary Location: I-80): Repair or replace damaged inductive loop vehicle detection elements [CTIPS ID 107-0000-1099]. Toll Credits for ENG, ROW, CON	\$1,629,000	2020-2025

TABLE 12-2: (continued)

**TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT
ACTION PLAN SHORT-TERM PROJECTS (2020-2030)**

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
Multiple Lead Agencies	SR 49 Pedestrian Safety and Traffic Flow Improvements at the American River Confluence	Improve pedestrian and traffic safety through improved parking and roadway improvements.	\$2,800,000	2020-2025
El Dorado County	Camino Agritourism Congestion Relief Project Phase 1*	Includes innovative technology-based solutions to address yearly congestion in Camino, as well as ITS, signage, planning studies, etc.	\$5,000,000	2020-2025
El Dorado County, Caltrans District 3	US 50 Corridor Broadband and System Technology Advances*	Extend US 50 Corridor Broadband to Pollock Pines, Placerville System Technology Advances, Remote Traffic Control Workstation, Traffic Control System Upgrade (TCS), Procurement and Information Dissemination Devices at Key Locations	\$2,800,000	2026-2030
El Dorado County	Priority Corridor Deployment of ITS Latrobe Road/El Dorado Hills*	Priority Corridor Deployment of ITS Latrobe Road/El Dorado Hills	\$1,200,000	2026-2030
El Dorado County	Metal Beam Guardrail Installation - Various Locations	Construction/reconstruction of guardrail at various locations throughout the County. Listed locations are those most in need and for which FHWA HSIP grant funds are anticipated to be available. As funding permits, additional locations will be identified. (CIP OP005/36105026)	\$672,000	2026-2030
Caltrans D3	EB Latrobe Rd. Diagonal Ramp Meter	EB Latrobe Rd. Diagonal Ramp Meter	\$380,000	2026-2030
Caltrans D3	WB Bass Lake Rd. Diagonal Ramp Meter	WB Bass Lake Rd. Diagonal Ramp Meter	\$380,000	2026-2030
Multiple Lead Agencies	STARNET Integration B	STARNET Integration, El Dorado County, Caltrans District 3, SACOG	\$40,000	2026-2030

TABLE 12-2: (continued)

TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN SHORT-TERM PROJECTS (2020-2030)

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
Caltrans D3	System Management/Traffic Operations System on U.S. 50 between I-80 and Cedar Grove*	Operational Improvements: traffic monitoring stations, closed circuit television, highway advisory radio, changeable message signs, and other system management infrastructure in El Dorado and Sacramento Counties.	\$4,000,000	2026-2030
El Dorado County	El Dorado Hills ITS	ITS technology implementation along major signalized corridors in the El Dorado Hills area, including El Dorado Hills Boulevard, Latrobe Road, White Rock Road, and Silva Valley Parkway.	\$10,000,000	2026-2030

TABLE 12-3: TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN LONG-TERM PROJECTS (2031-2040)

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
Caltrans D3	EB Bass Lake Rd. Diagonal Ramp Meter	EB Bass Lake Rd. Diagonal Ramp Meter	\$380,000	2031-2035
Caltrans D3	EB Cambridge Rd. Loop Ramp Meter	EB Cambridge Rd. Loop Ramp Meter	\$380,000	2031-2035
Caltrans D3	EB Cameron Park Dr. Diagonal Ramp Meter	EB Cameron Park Dr. Diagonal Ramp Meter	\$380,000	2031-2035
Caltrans D3	EB Ponderosa Rd. / S. Shingle Rd. Loop Ramp Meter	EB Ponderosa Rd. / S. Shingle Rd. Loop Ramp Meter	\$380,000	2031-2035
Caltrans D3	NB Cameron Park Dr. Loop Ramp Meter	NB Cameron Park Dr. Loop Ramp Meter	\$380,000	2031-2035
Caltrans D3	SB Cameron Park Dr. Diagonal Ramp Meter	US-50 WB Cameron Park Dr. Diagonal Ramp Meter	\$380,000	2031-2035
Caltrans D3	SB Ponderosa Rd. Diagonal Ramp Meter	SB Ponderosa Rd. Diagonal Ramp Meter	\$380,000	2031-2035
Caltrans D3	WB Cambridge Rd. Loop Ramp Meter	WB Cambridge Rd. Loop Ramp Meter	\$380,000	2031-2035

TABLE 12-3: (continued)

TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN LONG-TERM PROJECTS (2031-2040)

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
Caltrans D3	WB Shingle Springs Dr. Diagonal Ramp Meter	WB Shingle Springs Dr. Diagonal Ramp Meter	\$380,000	2031-2035
Caltrans D3	EB Shingle Springs Dr. Diagonal Ramp Meter	EB Shingle Springs Dr. Diagonal Ramp Meter	\$380,000	2036-2040
Caltrans D3	WB US 50 Placerville Dr/Forni Rd. Diagonal Ramp Meter	WB US 50 Placerville Dr/Forni Rd. Diagonal Ramp Meter	\$380,000	2036-2040
El Dorado County	U.S. 50 Auxiliary Lane WB – Bass Lake Road IC to Silva Valley Parkway I/C*	This project consists of adding an auxiliary lane to westbound US 50, connecting Bass Lake Road Interchange and the Silva Valley Parkway Interchange. Timing of construction to be concurrent with or after the Bass Lake Road Interchange Improvements (71330/36104005). (CIP 53117/36104022)	\$6,134,000	2025-2030
El Dorado County	Aux Lane Project: WB Latrobe Road / ED Hills Blvd*	WB Latrobe Road/ ED Hills Blvd. to Empire Ranch	\$6,185,417	2036-2040
El Dorado County	Aux Lane Project: WB Silva Valley*	WB Silva Valley to El Dorado Hills Blvd (T)	\$6,025,587	2036-2040
El Dorado County	Intelligent Transportation System (ITS)* Improvements (Phase 2)	Minor ITS Improvement: Deployment of various ITS improvements along U.S. 50 and regionally significant corridors in the County. Includes: implementation of ITS projects listed and prioritized in El Dorado County. (See ELD19239 for Phase 1)	\$5,000,000	2036-2040
El Dorado County	ITS Improvements - Phase 1*	Identification of various Intelligent Transportation System (ITS) improvements along US 50 and regionally significant corridors in the County; projects may include upgrading all controllers, building the communications infrastructure, adding CCTVs, adding DMS, connecting all the signals. (See ELD19240 for Phase 2)	\$5,833,200	2036-2040
El Dorado County	US 50 Auxiliary Lane Eastbound - Bass Lake Road to Cambridge Road*	This project consists of widening US 50 and adding an auxiliary lane to eastbound US 50 connecting Bass Lake Road Interchange and the Cambridge Road Interchange. Timing of construction to be concurrent with or after the Bass Lake Road Interchange Improvements project (CIP 71330/36104005). (CIP GP148/36104018)	\$9,909,000	2036-2040

TABLE 12-3: (continued)

TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN LONG-TERM PROJECTS (2031-2040)

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
El Dorado County	US 50 Auxiliary Lane Eastbound - Cameron Park Drive to Ponderosa Road*	Project provides eastbound continuous auxiliary lane from Cameron Park Drive Interchange to Ponderosa Road Interchange as determined necessary in the US 50/Cameron Park Drive PSR/PDS dated October 2008. (CIP 53127/36104020)	\$9,404,000	2036-2040
El Dorado County	U.S. 50 Auxiliary Lane Eastbound – Sacramento County Line to El Dorado Hills Boulevard I/C*	This project consists of adding an auxiliary lane to eastbound US 50 from the County line to the El Dorado Hills Boulevard/Latrobe Road Interchange. This project will eventually connect to the City of Folsom's future empire Ranch Road Interchange. Timing of construction to be concurrent with the El Dorado Hills Blvd. interchange (71323/36104001) or Empire Ranch Interchange. The City of Folsom is planning the update to the CEQA/NEPA for the Empire Ranch Interchange Environmental Impact Report. (CIP 53125/36104017)	\$7,306,000	2036-2040
El Dorado County	U.S. 50 Auxiliary Lane Westbound – El Dorado Hills Boulevard I/C to Sacramento County Line*	This project consists of adding an auxiliary lane to westbound US 50 connecting the El Dorado Hills Boulevard/Latrobe Road interchange to the County line. Timing of construction to be concurrent with or after the El Dorado Hills Blvd Interchange (CIP 71323/36104001) or Empire Ranch Interchange. CEQA/NEPA cleared through the Empire Ranch Interchange document (CIP 53115/36104021)	\$6,297,000	2030-2040
El Dorado County	US 50 Auxiliary Lane Westbound - Cameron Park Dr to Cambridge Rd*	Widening US 50 and adding an auxiliary lane to westbound US 50, connecting Cameron Park Drive Interchange to Cambridge Road Interchange. (CIP 53US50/36104028)	\$12,522,000	2036-2040
El Dorado County	U.S. 50 Auxiliary Lane Eastbound – Cambridge Road to Cameron Park Drive*	This project consists of adding an auxiliary lane to eastbound US 50 connecting Cambridge Road Interchange to Cameron Park Drive Interchange. Timing of construction to be concurrent with or after the Cambridge Road Interchange Improvements (71332/36104006). (CIP 53126/36104019)	\$9,811,000	2036-2040

TABLE 12-3: (continued)

TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN LONG-TERM PROJECTS (2031-2040)

Lead Agency	Title	Description	Total Cost	Completion Timing
*Regionally Significant Projects				
El Dorado County	US 50 Auxiliary Lane Westbound - Ponderosa Rd to Cameron Park Dr*	Widening US 50 and adding an auxiliary lane to westbound US 50, connecting Cameron Park Drive Interchange to Ponderosa Road Interchange. Timing of construction to be concurrent with or after the Ponderosa Road Interchange Improvements project (71333/36104010). (CIP 53128/36104024)	\$10,055,000	2036-2040
El Dorado County, Caltrans District 3	Develop Caltrans US 50 Traffic Management Center in South Lake Tahoe*	Conduct US 50 Surveillance, Traveler Information, Web Page, Winter Traffic Management	\$2,800,000	2036-2040
Caltrans D3	SHOPP - Collision Reduction	SHOPP - Collision Reduction	\$505,000,000	2036-2040
Caltrans D3	SHOPP - Emergency Response	SHOPP - Emergency Response	\$10,000,000	2036-2040

TABLE 12-4: TRANSPORTATION SYSTEMS MANAGEMENT / TRANSPORTATION DEMAND MANAGEMENT ACTION PLAN PROJECT DEVELOPMENT ONLY (POST 2040 - UNCONSTRAINED)

Lead Agency	Title	Description	Total Cost	Completion Timing
Project Development Only				
*Regionally Significant Projects				
Caltrans D3	Aux Lane Project: EB Latrobe Road*	US-50 EB Latrobe Rd to Silva Valley (T); US 50	\$1,500,000	Post-2040
Caltrans D3	US 50 WB Auxiliary Lane*	In Placerville, from west of Coloma Road offramp to the Placerville Drive offramp, Construct WB Auxiliary Lane (PM 17/19)	\$20,000,000	Post-2040
El Dorado County	US 50 Westbound Auxiliary Lane - Cambridge Road to Bass Lake Road*	This project consists of widening US 50 and adding an auxiliary lane to westbound US 50 connecting Cambridge Road Interchange to Bass Lake Road Interchange. (GP149)	\$9,250,000	Post-2040
El Dorado County	SR 49 Realignment B*	SR 49 Realignment	\$28,800,000	Post-2040