Chapter 16—Transportation and Traffic

16.1 Introduction

This chapter describes existing transportation conditions (environmental and regulatory) and assesses the potential of the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (proposed MTP/SCS) to affect the transportation environment within the MTP/SCS plan area and beyond. This chapter evaluates potential impacts on aviation, goods movement, vehicular, transit, bicycle, and pedestrian components of the transportation system that may result from implementation of the proposed MTP/SCS. Where necessary and feasible, mitigation measures are identified to reduce these impacts.

During circulation of the Notice of Preparation (NOP), four letters were received and comments were made at the NOP Scoping Meeting related to transportation and traffic. Most comments focused on the potential impacts of the proposed MTP/SCS on transportation and traffic while select comments were targeted at desired content for the MTP/SCS.

The letters and oral comments specific to the transportation and traffic impact environmental analysis were received from CalTrans, the Delta Protection Commission, the City of Sacramento, and WALKSacramento. Appendix PD-1 contains each letter and the NOP Scoping Meeting Comment Summary. The comments included the following requests related to EIR content, all of which are addressed in this chapter:

- Consider transportation connectivity for recreation in the Delta zones
- Include transportation analysis using LOS and VMT for performance
- Measure access to and from concentration of services
- Measure commute trips and travel time spent walking or bicycling
- Analyze collision and health impacts to pedestrian safety
- Explain mitigation requirements for projects utilizing CEQA streamlining related to their impacts to the State Highways System, as well as transit, pedestrian, and bicycling networks
- Requirements for CEQA streamlining provisions
- Pedestrian and bicycle facilities metrics that go beyond complete streets
- Consideration of road speeds on safety
- Additional information on transportation funding sources
- Policies from the Corridor System Management Plans

The information presented in this EIR chapter is based on review of existing and available information and is regional in scope. Data, analysis and findings provided in this chapter are programmatic rather than project-specific. This document is appropriate for general policy planning and to use for tiering in preparation of subsequent environmental documents; however, site-specific, project-level evaluations may be necessary to determine future project-level environmental effects and appropriate mitigation measures. Once certified, this EIR may be used to streamline CEQA compliance for those projects listed in the Preferred Scenario Project List as well as the anticipated community development shown on the 2016 Draft MTP/SCS Preferred Scenario map to the extent
those projects are consistent with requirements set forth in the Public Resources Code for streamlined environmental review.

16.2 Environmental Setting

The proposed MTP/SCS plan area consists of transportation routes, including highways, rail alignments, bicycle/multi-use trails, state routes, roads, and other transportation right-of-way in the SACOG region. The major components of the existing transportation system within the proposed MTP/SCS plan area include three interstate highways, several state highways, numerous local arterial roadways, a deep water shipping port, a major international airport, numerous general aviation airports, freight and passenger rail service, and a public transit system that includes approximately 40 miles of light rail transit service and several thousand miles of regional and local bus routes.

The components of the existing and proposed transportation system in the MTP/SCS plan area are defined below.

16.2.1 Roadway System

For purposes of this report, the roadway network within the MTP/SCS plan area is categorized into several functional classifications as follows:

Freeways

A freeway is a divided highway with full control of access and two or more lanes for the exclusive use of high volumes of traffic in each direction. Intersections with other streets and roads are grade-separated and provide through ramps and connectors. Because of the grade-separations and access control, these facilities do not provide direct access to land. These types of facilities serve primarily regional through-trips and connect to other regional and interregional facilities. Within the “Freeway” classification, several sub-classifications are of interest and importance to the MTP/SCS, since the prevalence of freeway projects and improvements varies widely by the following sub-classifications:

High-Occupancy Vehicle (HOV) Lanes

HOV Lanes are restricted to private vehicles with two-or-more persons (exceptions are allowed for select partial or zero emission vehicles), motorcycles, and public transit vehicles during commute hours, but allow all private vehicles to use the lanes during non-commute hours. HOV lanes are intended to provide an incentive to commuters to carpool by providing faster travel speeds than the parallel general purpose lanes during peak periods.

Freeway Ramps and Connectors

Ramps and connectors link the region’s surface street system to the freeway system or connect one designated freeway to another.
Freeway Auxiliary Lanes

Auxiliary lanes are added at an on-ramp and then drop at the next downstream off-ramp to help facilitate merging and diverging traffic. In cases where parallel local streets do not exist, longer auxiliary lanes may extend beyond the next downstream interchange.

General Purpose Freeway Lanes

Freeway lanes that do not fall into one of the three categories above are characterized as general purpose freeway lanes. These lanes allow all types and occupancy classes of vehicles at all times of the day.

Surface Streets

Any street type that predominantly intersects with other streets at-grade are surface streets. There is a wide range of sub-classifications of surface streets. For many practical and historical reasons, surface streets often do not fall neatly into one sub-classification or another, and some surface streets may have characteristics of more than one sub-classification.

Expressways

An expressway facility intersects other roadways at-grade, but direct land access to the facility is very limited. Where allowed, driveways are usually consolidated (i.e., one driveway serves several fronting properties), or mediated through frontage roadways. Spacing of signalized intersections is usually very wide, generally greater than one-half mile. Medians are raised, and midblock turns are disallowed.

Arterial Roadways

Arterial facilities also limit direct land access, but are less restrictive than expressways. Intersection spacing is generally about one quarter mile and may be less. Arterials are usually multi-lane (i.e., two-or-more lanes per travel direction). Most arterial roadways have raised medians, but mid-block turns and two-way-left turn lanes are also common. Intersections usually include separate turning lanes.

Collector Streets

Collector facilities generally do not limit direct land access. Intersection spacing is less than one-quarter mile, and unsignalized, stop-sign-controlled intersections are common. Collectors include a mix of two- and four-lane facilities. If provided, medians are usually striped and rarely raised.

Local Streets

Local facilities are intended to provide land access. The majority of local streets are provided in residential areas, although local streets are provided in mixed and employment-oriented areas, too. Local streets are two lanes, one lane per travel direction. Most local streets do not have medians or center strips.
Table 16.1 provides a tabulation of roadway classes by route miles and lane miles for the SACOG region for the baseline year of 2012. The two overall classifications are minor roadways (collectors/local streets) and major roadways (arterials/expressways, auxiliary lanes/ramps, HOV lanes, and general-purpose freeways). Because the major roadways (arterial and above roadway classes) carry more traffic and transit trips, they have the greater effect on the transportation performance measures. “Route miles” are the centerline mileage of roads. “Lane miles” are route miles multiplied by the number of lanes on the roadway.

Table 16.1
Roadway Route and Lane Mileage by Class Year 2012 and 2036 MTP/SCS

<table>
<thead>
<tr>
<th>Roadway Class</th>
<th>2012</th>
<th>2036 MTP/SCS</th>
<th>Change from 2012</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route Miles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Purpose Freeway</td>
<td>288</td>
<td>303</td>
<td>+15</td>
<td>+5%</td>
</tr>
<tr>
<td>HOV Lane 2</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Auxiliary Lanes/Ramps 2</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Expressways/Arterials</td>
<td>1,548</td>
<td>1,813</td>
<td>+266</td>
<td>+17%</td>
</tr>
<tr>
<td>Collectors/Local Streets 3</td>
<td>10,655</td>
<td>13,266</td>
<td>+2,611</td>
<td>+25%</td>
</tr>
<tr>
<td><strong>All Roadway Classes</strong></td>
<td>12,491</td>
<td>15,382</td>
<td>+2,891</td>
<td>+23%</td>
</tr>
<tr>
<td>Arterial &amp; Above</td>
<td>1,836</td>
<td>1,976</td>
<td>+140</td>
<td>+8%</td>
</tr>
<tr>
<td><strong>Lane Miles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Purpose Freeway</td>
<td>1,526</td>
<td>1,593</td>
<td>+67</td>
<td>4%</td>
</tr>
<tr>
<td>HOV Lane 2</td>
<td>96</td>
<td>185</td>
<td>+89</td>
<td>93%</td>
</tr>
<tr>
<td>Auxiliary Lanes/Ramps 2</td>
<td>201</td>
<td>260</td>
<td>+59</td>
<td>29%</td>
</tr>
<tr>
<td>Arterials/Expressways</td>
<td>4,520</td>
<td>5,626</td>
<td>+1,106</td>
<td>24%</td>
</tr>
<tr>
<td>Collectors/Local Streets 3</td>
<td>21,444</td>
<td>26,755</td>
<td>+5,311</td>
<td>25%</td>
</tr>
<tr>
<td><strong>All Roadway Classes</strong></td>
<td>27,786</td>
<td>34,418</td>
<td>+6,632</td>
<td>24%</td>
</tr>
<tr>
<td>Arterial &amp; Above</td>
<td>6,343</td>
<td>7,663</td>
<td>+1,321</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>2,268,100</td>
<td>3,078,800</td>
<td>+810,700</td>
<td>36%</td>
</tr>
<tr>
<td><strong>Lane Miles Per Thousand People</strong></td>
<td>12.25</td>
<td>11.18</td>
<td>-1.07</td>
<td>-9%</td>
</tr>
</tbody>
</table>

Source: SACOG, June 2015.

1From “California Public Road Data Reports” and Highway Performance Monitoring Data provided by Caltrans. Data assembled by and modified SACOG.

2Since HOV lanes, auxiliary lanes and ramps are located within freeways, they do not generate route mileage, only lane mileage.

3MTP/SCS quantity of local streets based on applying a per capita rate to population growth.
Several freeways and state highways are included in the MTP/SCS plan area and are depicted in Figure 16.1

The freeway and highway systems are under the jurisdiction of the California Department of Transportation (Caltrans). Below is a description of the major freeways and highways within the plan area.

- **Interstate 5 (I-5)** is a 4 to 10-lane freeway that runs from north to south through the western portion of the MTP/SCS plan area and is the largest of the major regional facilities in the area. I-5 is a major federal interstate freeway and travels from the Canadian border to Mexico.

- **Interstate 80 (I-80)** is a 6 to 14-lane freeway that runs from west to east through the MTP/SCS plan area from the San Francisco Bay Area extending 132 miles, from the Yolo/Solano county line to the California/Nevada state line, passing through Yolo, Sacramento, and Placer counties. I-80 is also part of the federal interstate system, connecting the East Coast of the United States with the Pacific Rim.

- **Interstate 505 (I-505)** is a 4-lane freeway extending 22 miles from I-5 near Dunnigan south to Yolo County near Winters. After leaving Yolo County and the SACOG region, I-505 merges with I-80 in Vacaville. I-505 connects areas north of Sacramento to areas east of Sacramento while bypassing traffic in the urbanized region of Sacramento and its suburbs.

- **United States Highway 50 (US 50)** is a 4 to 10-lane east-west route that is part of the California State Highway system, which predates the federal interstate system. US 50 traverses the MTP/SCS plan area from the eastern portion of Yolo County through Sacramento and El Dorado counties.

- **State Route 49 (SR 49)** is part of the state highway system while also serving as Main Street in several foothill communities. In the SACOG region, SR 49 is a 2 to 4-lane, north-south highway that traverses the central portion of the plan area through El Dorado, Placer, and Yuba counties.

- **State Route 65 (SR 65)** is a 2 to 5-lane, north-south highway that traverses the east side of the MTP/SCS plan area through Sacramento, Placer and Sutter counties. The route connects automobile and truck traffic originating in the I-80 corridor (in the Roseville/Rocklin area) to the SR70/99 corridor (in the Marysville/Yuba City area).

- **State Route 70 (SR 70)** is a 2 to 4-lane, north-south highway that travels the western side of the MTP/SCS plan area through Sutter and Yuba counties. SR 70 currently travels through downtown Marysville as a local street.

- **State Route 99 (SR 99)** is the second largest regional facility in the MTP/SCS plan area. SR 99 is a 2 to 8-lane north-south highway and freeway that traverses the central portion of the MTP/SCS plan area through Sacramento and Sutter counties. SR 99 serves ten of the State’s urbanized areas, making it an important corridor in the Central Valley. The route also serves as a main access between several small cities and urban areas in Sacramento County.
16.2.2 Transit System

Local transit service in the region is currently provided by 12 public transit operators and two private non-profit Consolidated Transportation Services agencies of varied size and type of service, as shown in Figure 16.2. These operators range from very large systems, such as the Sacramento Regional Transit District (RT) that operates 212 buses, 76 light rail vehicles, and 39 miles of track, to the very small systems—the City of Auburn provides service with a fleet of only five vehicles.

For purposes of this report, transit services in the MTP/SCS plan area were categorized by “service type.” Service type is defined according to unique combinations of right-of-way (e.g., exclusive vs. mixed with traffic), traction (rail/steel wheel vs. rubber tire), vehicle technology, and operational features like station or stop spacing and running speeds. As with roadway classifications, in some cases, actual transit service may include characteristics of more than one service type, and some “gray areas” between service types exist (e.g., between “light rail transit” and “streetcar”). Table 16.2 lists each service type and the 2012 levels of vehicle service hours (VSH) provided. The table is followed by more detailed descriptions of each service type.

Table 16.2

<table>
<thead>
<tr>
<th>Service Types</th>
<th>VSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Rail</td>
<td>251</td>
</tr>
<tr>
<td>Streetcar</td>
<td>0</td>
</tr>
<tr>
<td>Express Bus</td>
<td>272</td>
</tr>
<tr>
<td>BRT/Fixed Route Bus</td>
<td>3,207</td>
</tr>
<tr>
<td>Shuttle</td>
<td>42</td>
</tr>
<tr>
<td>Regional Rail</td>
<td>10</td>
</tr>
<tr>
<td><strong>Regional Total</strong></td>
<td><strong>3,782</strong></td>
</tr>
</tbody>
</table>

*Source: SACOG, June 2015.*

**INTERCITY RAIL AND BUS SERVICE**

Intercity rail service is an electric or diesel propelled railway for passenger train operated on a regular basis by Amtrak or under contract with a transit operator for transporting passengers between and within urbanized and outlying areas. Such rail service is generally characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, and considerable distance between stations. Intercity bus service is similar to intercity rail service except that it uses the highways system to transport passengers.
Figure 16.2 2036 Transit Network
Within the MTP/SCS plan area, Amtrak operates two intercity rail services – the Capitol Corridor and the San Joaquin Route. The Capitol Corridor has stations in Auburn, Rocklin, Roseville, Sacramento, and Davis, connecting Placer, Sacramento, and Yolo counties to stations in the San Francisco Bay Area. It operates 30 trains daily on weekdays, and 22 on weekends, and carried over 1.7 million passengers between Auburn and San Jose in 2013. The Capital Corridor service is supplemented by bus connections to Lake Tahoe, Reno, Emeryville and Richmond. The Capitol Corridor was the fourth busiest Amtrak-operated route in the nation in 2013.

The Amtrak San Joaquin Route provides intercity rail service between the Bay Area and Sacramento and Bakersfield, with bus connections to Los Angeles, Redding, Yosemite National Park, and Las Vegas, Nevada. The Sacramento-to-Bakersfield segment has two daily round trips. Four daily round trips between Oakland/San Francisco and Bakersfield are also accessible by Sacramento and Elk Grove riders through Amtrak connecting buses. Amtrak buses also serve the Davis station to allow riders to connect to all San Joaquin trains. The San Joaquin Route shares rail equipment, train crews, and maintenance facilities in Oakland with the Capitol Corridor. In addition, the Coast Starlight and California Zephyr trains pass through the region stopping in Davis, Sacramento, Roseville and Colfax on their way from Seattle to Los Angeles and from Chicago to San Francisco, respectively (Amtrak, 2014).

Greyhound Bus operates intercity bus services in the region to connect to a variety of local and national destinations. There are station stops in Colfax, Marysville, and Roseville with a major regional station in Sacramento at Richards Boulevard. The Richards Boulevard bus station connects with the RT light Rail Station at Township 9, a new mixed-use development currently under construction. Greyhound offers regular service to San Francisco and Oakland from its Sacramento station. MegaBus also operates intercity bus services to San Francisco and Reno/Sparks, from the SRTD 65th Street light rail station.

**Light Rail**

Light rail (LRT) is a rail system designed for operating in lighter-demand, urban environments, with passenger rail cars operating up to four two-car trains, on fixed rails in a right-of-way exclusive in some locations or mixed with street vehicle traffic in others. Light rail vehicles (LRVs) are typically driven electrically with power being drawn from an overhead electric line via a trolley or a pantograph. Sacramento Regional Transit District (RT) operates the only light rail service within the MTP/SCS plan area. In general, LRT operates with station spacing one-half mile or more, and with maximum running speeds of about 55 miles-per-hour. The current system operated by RT is 39 miles and consists of Blue, Gold, and Green Lines. The Gold Line serves the US 50 Corridor extending from downtown Sacramento to Folsom. The Blue Line serves the I-80 corridor northeast of downtown Sacramento and extends south of downtown into the Meadowview community. The Blue Line extension to the Cosumnes River College begins revenue service in September of 2015. The Green Line is the newest line with a short extension from the Sacramento Valley Intermodal Station to the River District area just north of downtown.

**Express Bus**

Express bus service is typically operated over long distances with limited stops. Express buses typically travel on highways and freeways with extended “closed door” (i.e., no passengers boarding
or alighting) distances. Several transit operators within the MTP/SCS plan area operate express bus services during morning and evening commute periods.

**Fixed Route Bus**

Fixed route bus (or “local bus”) service is the largest share of bus transit services. Buses stop frequently along a route that is typically several miles long. This is the most common type of bus service in the MTP/SCS plan area. Within the MTP/SCS plan area, the following operators provide fixed-route service in the Sacramento or Yuba City/Marysville urbanized areas:

- City of Auburn – providing intra-city service;
- El Dorado County Transit – providing intra-city, intra-county and commuter service to Sacramento;
- e-tran – serving the City of Elk Grove and commuter service to Sacramento;
- Folsom Stage Line – providing intra-city service;
- Placer County Transit with service connecting I-80 communities, commuter service to Sacramento and the Regional Transit light rail stop at Watt Avenue and I-80, and community service within the City of Lincoln;
- Roseville Transit – operated by the City of Roseville, providing intra-city and commuter services to Sacramento;
- Sacramento Regional Transit (RT) – the largest fixed-route transit provider in the MTP/SCS plan area, with extensive service coverage across urban Sacramento County;
- Unitrans – providing intra-city service in Davis;
- Yolobus – serving Davis, Woodland, West Sacramento, Downtown Sacramento, the Sacramento International Airport, and rural Yolo County; and
- Yuba-Sutter Transit – providing intra-city service in the Marysville/Yuba City area, intercity service to Live Oak, Wheatland and the Yuba foothills, and commuter service to Sacramento.

Transit service in the non-urbanized portion of Sacramento County includes South County Transit Link fixed route services linking the Cities of Elk Grove, Galt, Isleton, Lodi, Sacramento, and other delta communities. Amador Regional Transit System provides additional fixed-route services that link Jackson in Amador County with Rancho Murieta, the 65th Street Light Rail station, and downtown Sacramento.

**Community Shuttles**

Community shuttles provide short-distance transit service within a small geographic area and are often called circulator, feeder, neighborhood, trolley, or shuttle services. Shuttles often have a lower fare than local fixed route service, frequently operate in a loop and connect to major routes for travel to more outlying destinations. The RT, California State University, Sacramento (CSUS), and the North Natomas Transportation Management Association provide publicly operated shuttles in the MTP/SCS plan area.
**Demand Responsive Services**

Demand responsive services provide transportation service required by the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. § 12101 et seq.) for seniors or individuals with disabilities who are unable to use fixed-route transit systems. Under federal law, demand responsive services must be comparable in service area coverage to fixed-route services in the same area. Demand responsive services providers within the MTP/SCS plan area include the following operators:

- Davis Community Transit - serving the City of Davis;
- El Dorado County Transit, operating demand responsive services in El Dorado County;
- Paratransit Inc., the largest paratransit provider in the MTP/SCS plan area - providing door-to-door share-ride, subscription, and intermittent transportation service within the Sacramento Metropolitan area;
- Placer County Transit - serving the Rocklin/Loomis area, Granite Bay, and along the State Route 49 corridor;
- Roseville Transit Dial-A-Ride - serving the City of Roseville;
- South County Transit - providing service in the Galt area;
- Yolo County Transportation District ADA Yolobus Special Program - serving Woodland, West Sacramento and intercity service needs throughout Yolo County and into Sacramento County; and
- Yuba Sutter Transit - serving the Marysville/Yuba City urban area.

**Bicycle and Pedestrian Network**

Bicycling and walking are active transportation modes. In addition to providing low-cost transportation, bicycling and walking contribute to community health and wellness and reduce congestion, regional greenhouse gas emissions, and other transportation-related pollutants. The SACOG region has a robust system of bicycling and walking facilities. A complete inventory is included in SACOG’s Regional Bicycle, Pedestrian, and Trails Master Plan published on June 20, 2013. The bicycle and pedestrian system currently serves almost two percent of all commuter trips as reported in Table 16.6 below.
Figure 16.3 Bicycle Facility Classifications
BICYCLES

The existing Sacramento area bikeway network consists of over 480 miles of Class I multi-use pathways, 1,100 miles of Class II bike lanes, 300 miles of Class III signed bicycle routes, and less than one mile of separated (a.k.a., “Class IV”) bikeways. A highlight of the regional bikeway system is the 23-mile American River Parkway trail. This Class I multi-use trail extends from Folsom to downtown Sacramento along the American River and is heavily used for recreation and commute travel. Figure 16.2 shows the cross-section of each type of bicycle facility, as further defined below.

Class I Shared Use Paths provide a completely separated right-of-way for non-motorized users such as bicycles, pedestrians, joggers, and skaters, with crossflows by motorists minimized. Shared or multi-use paths are often the most popular type of facilities because of their exclusive use by active transportation modes and separation from vehicles. Prime locations for bike paths are areas such as power-line easements, utility easements, canal banks, river levees, drainage easements, railroad or highway rights-of-way, or regional community parks.

Class II Bike Lanes usually consist of a portion of a roadway that has been set aside by striping and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes are intended to promote an orderly flow of bicycle and vehicle traffic. This type of facility is established by using the appropriate striping, legends, and signs.

Class III Bike Routes are facilities shared with motor vehicle traffic. Bike routes must be of benefit to the bicyclist and offer a higher degree of service than adjacent streets. They provide for specific bicycle demand and may be used to connect discontinuous segments of bike lanes. Bike routes may also be located on residential streets and rural roads. If the pavement width is sufficient and traffic volume/speeds warrant, an edge line may be painted to further delineate the bike route.

Separated (a.k.a., “Class IV”) Bikeways, provide a right-of-way for exclusive bicycle use adjacent to but separated and protected from vehicular traffic. Separation may be provided by grade differences, flexible posts, inflexible physical barriers, on-street parking, or other means. The barrier separation from vehicular traffic is intended to provide greater protection for cyclists using these bikeways, and thereby make them more attractive than Class II lanes or Class III routes.

In addition to paths, lanes, routes, and separated bikeways, secure and convenient parking and bus and rail bike accommodations are an important supporting part of regional bicycle infrastructure. The Sacramento RT light rail transit system incorporates bicycle parking at 15 stations. RT also accommodates up to four bicycles inside each car, and many buses within the region have bicycle

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1 In September 2014, state law requiring Caltrans to develop guidelines and design standards for “protected” or separated bikeways was enacted. Caltrans will publish guidelines and design standards by January 1, 2016. The small number of separated bikeways in the SACOG region which may meet these standards are located in the City of Davis.
racks. Additionally, Amtrak accommodates six bicycles per train on the Capitol Corridor and San Joaquin routes.

PEDESTRIANS

Pedestrian facilities include multi-use paths, sidewalks, crosswalks, walkways, stairs, ramps, and building entranceways. By far, sidewalks are the most common type of public pedestrian facility and exist along streets in most of the urbanized areas of the MTP/SCS plan area. Exceptions generally include rural areas or still developing areas where gaps in sidewalks occur due to undeveloped parcels or low potential for walking. The region has made a concerted effort over the past few years to improve the pedestrian system and continues to focus on the following types of improvements in modifying and expanding the system.

- Improved signals and signal timings to better accommodate pedestrians
- Improved accessibility to meet Americans with Disabilities Act (ADA) requirements including curb cuts, wheelchair access, connected sidewalks, and surface overlays.
- Safety projects that improve pedestrian crossing locations, including high visibility sidewalks along all sides of intersections, advanced signing to alert drivers to pedestrians, pedestrian refuge islands and medians, and curb extensions to reduce crossing distances.

AVIATION

The MTP/SCS plan area contains 18 public use airports. While most of these are smaller airports for general aviation, the region also hosts Sacramento International Airport (commercial passenger and cargo service) and Mather Airport (commercial cargo service). Additionally, Beale Air Force Base is located within the plan area, approximately eight miles east of Marysville.

Sacramento International Airport is owned by the County of Sacramento, occupies 6,000 acres, and has two 8,600-foot runways. The airport is bordered by I-5 to the south and is also located 8 miles from I-80, five miles from CA-99, and ten miles from CA-113. The airport served 8.9 million annual passengers (MAP) in 2012; this level of air passenger demand is forecasted to double by 2036. Service is available from twelve major air carriers.

Mather Airport is also owned by the County of Sacramento. The airport is located approximately twelve miles from downtown Sacramento and one mile from US-50. Mather occupies 2,253 acres.
approximately 12 miles from downtown Sacramento and has two parallel runways, one 11,301 feet long and one 6,040 feet long. Mather serves cargo carriers, notably United Parcel Service, and general aviation.9

Figure 16.4 shows the general aviation airports in the plan area.

The region’s 16 local general aviation airports include10:

- Auburn Municipal
- Blue Canyon – Nyack
- Cameron Airpark
- Georgetown
- Franklin Field
- Lincoln Regional
- McClellan
- Placerville
- Rancho Murieta
- Rio Linda
- Sacramento Executive
- Sutter
- University
- Watts/Woodland
- Yolo County
- Yuba County

NEW TRAVEL OPTIONS AND TECHNOLOGY CHANGES

Several new options for travel are emerging around the nation, including Sacramento: ride-sharing services (e.g. Uber, Lyft) and car-sharing services (e.g. Zip-car). Uber and Lyft are both increasingly prevalent in the region, and Zip-Car has services focused on the Sacramento State campus, Downtown Sacramento, and UC Davis. Other options that are appearing in other regions, but have not yet emerged significantly in the SACOG region include: bike-sharing; parking-sharing and parking-space-finding applications. Based on the popularity of some of these new options, especially ride-sharing services, these modes are likely to have an impact on future travel demand in the region.

Beyond new travel options, emerging vehicle technology will influence travel behavior and safety. For example, smart phone applications such as RideScout better inform travelers regarding travel options and comparative costs. Safety technology on some new vehicles, such as assisted braking and lane guidance on some new vehicles, will likely be standard equipment by 2036, leading to fewer collisions. Narrower lanes and shoulders may become more feasible due to these technology advancements reducing the need for physical capacity expansions. If collisions decline as expected, congestion would also be reduced since incidents and collisions are significant causes of congestion.

9 Source: Sacramento County, May 2013. From “Mather Airport Master Plan.”
10 Source: http://www.faa.gov/airports/airport_safety/airportdata_5010/menu/
Figure 16.4 Plan Area General Aviation Airports
Goods Movement

The major urbanized areas of the Sacramento region require millions of tons of goods each year to maintain their economic activities and quality of life. Wholesale and retail trade, transportation, and manufacturing support over 180,000 jobs in the region according to statistics provided by the State’s Employment Development Department. Located at the center of the Central Valley, a major agricultural region, the transport of agricultural commodities from farm to market is also a vital function for the regional economy. Therefore, freight transportation is essential for the region’s consumers and businesses.

Goods are transported by rail, air, truck, and ship into, out of, and through the MTP/SCS plan area, although pipelines also carry products such as fuel. An international port of entry is also located at the Sacramento International Airport. The goods movement system includes not only highways, railroads, sea lanes, and airways, but also truck terminals, railyards, warehousing, and other facilities serving these transportation routes. Within the MTP/SCS plan area, an estimated 90.6 percent of freight tonnage is carried by truck, 2.9 percent by rail, 0.4 percent by ship and 0.1 percent by air. The remainder is carried by some combination of modes or by pipeline. Almost all goods delivered to final destinations in the plan area involve trucks. Table 16.3 contains the detailed breakdown of tonnage by mode.

Table 16.3  
Sacramento Area Freight Hauled by Mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount (000)</td>
</tr>
<tr>
<td>Truck</td>
<td>126,928</td>
</tr>
<tr>
<td>Rail</td>
<td>4,106</td>
</tr>
<tr>
<td>Ship</td>
<td>619</td>
</tr>
<tr>
<td>Air</td>
<td>140</td>
</tr>
<tr>
<td>Other</td>
<td>8,332</td>
</tr>
</tbody>
</table>


Medium and Heavy-Duty Trucks

One of the key components of the region’s goods movement system is the fleet of medium- and heavy-duty trucks, defined as cargo-carrying vehicles with a gross weight rating in excess of 8,500

pounds (by the EPA) or 10,000 pounds (by the FHWA).\textsuperscript{15} Trucks provide a vital link in the distribution of all types of goods between the region’s airports, seaport, railroads, warehouses, factories, farms, construction sites and stores.

The industry uses the public highway system for over-the-road and local service. I-80 is the major east-west freeway through the Sacramento region, not only facilitating goods movement to and from the region but also connecting the ports and industry of the San Francisco Bay Area to much of the rest of the country. I-5 and SR 99 are the two major north-south corridors serving the region, facilitating goods movement through the Central Valley and connecting the Sacramento region to the rest of the state, the Pacific Northwest, and Mexico and Canada. Figure 16.5 shows the Goods Movement Routes for trucks in the plan area.

While trucks are essential to the goods movement for the region, they also create conflicts with neighbors when operated on roadways not designated for trucks, contribute to freeway and highway congestion, and contribute to air pollutant and GHG emissions.

\textit{Rail Transport}

The Sacramento region is served by both major railroads and shortline railroads, shipping products such as motor vehicles, lumber, chemicals, petroleum, agricultural products, cement, and aggregate. These railroads shipped 99 million tons of freight into California and 59 million tons of freight out of California in 2012.\textsuperscript{16}

The Union Pacific Railroad (UP) is the largest Class 1 railroad (defined as having operating revenues exceeding $452.7 million in 2012) serving the region. The UP links the Sacramento area to the rest of California and other United States regions, Mexico, and Canada, both directly via its major north/south and east/west lines passing through the region and via their connections with other railroads. The UP’s Roseville Yard is the largest rail facility on the West Coast and handles approximately 98 percent of all rail traffic moving through Northern California. The yard occupies 915 acres and includes a repair facility. A UP satellite yard is also located in Sacramento.\textsuperscript{17} An additional Class 1 railroad, BNSF Railway, also operates in the region through UP track rights.\textsuperscript{18}

Figure 16.5 Goods Movement Routes

Truck Route Classifications:
- **CA Legal Truck Route**: A truck tractor-semitrailer (or double) that can travel on virtually any route in California.
- **CA Legal Advisory Route**: Roads that allow California legal trucks, but are advised not to be used unless the truck's KPR is less than 40 feet.
- **Terminal Access and Local Routes**: State or local routes that have granted access to STAA trucks.
- **National Network**: Federal highways included in the National System of Interstate and Defense Highways. This network can accommodate STAA and CA Legal Trucks.
- **Restricted Routes**: Weight-restricted truck routes.
The Sierra Northern Railway is a shortline railroad with 17 miles of track between West Sacramento and Woodland. The railway connects customers to the UP and BNSF railways via its interchange location in West Sacramento. The railway also serves the Port of Sacramento.\(^{19}\)

Genesee & Wyoming owns the California Northern Railroad, which operates 261 miles of track in Northern California. This shortline railroad connects customers in Northern California to Sacramento and San Francisco Bay Area via links to the UP in Davis.\(^{20}\)

Patriot Rail operates the Sacramento Valley Railroad, which supports seven miles of tracks within McClellan Business Park, where it interchanges traffic with the UP and BNSF.\(^{21}\)

In addition to shipping other agricultural, commercial, and industrial goods, the region’s rail network has also begun to handle crude oil shipments. These shipments, connecting production fields in California, the rest of the US, and Canada to refineries and ports on the coast, are expected to grow in coming years with increasing North American oil production. In response to concerns about possible dangers from such shipments, including explosions and spills, state officials have requested the railroads handling these shipments provide plans showing that they can clean up any spills.\(^{22}\)

**AIR FREIGHT**

Air freight also arrives and departs the MTP/SCS plan area through two major cargo airports, Sacramento International and Mather. While the data above based on a 2008 regional study showed air carrying about 140,000 tons of freight, more recent information shows that the air service carried just under 125,000 tons. In 2012, Sacramento International handled 73,000 tons of cargo and Mather handled 51,500 tons of cargo. Additionally, Sacramento International handled 2,500 tons of airmail in 2012.\(^{23}\) UPS is the primary cargo carrier serving Mather.

**MARITIME PORT**

The inland Port of West Sacramento, managed by the City of West Sacramento, is located near the center of the Sacramento metropolitan area and thus also the Central Valley agricultural region. The port is connected to Suisun Bay and San Francisco by the 40-mile long, 30-foot deep Deep Water Ship Channel.\(^{24}\) The port is the primary handler of the region’s rice exports and handles other

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\(^{19}\) Source: Sierra Northern Railway, January 9, 2015. From “Sierra Northern Railway,” http://sierranorthern.com/.


\(^{23}\) Source: Sacramento County, December 2013. From “Sacramento County Airport System Summary of Activity.”

agricultural and industrial bulk products. As of 2012, the port averaged approximately 320,000 tons of cargo annually.25

16.2.3 Existing Conditions: Transportation Performance Measures

Regional conditions for a number of key performance indicators form the basis for the transportation impacts analysis presented in this EIR. These indicators include vehicle miles traveled (VMT), roadway congestion, shares of transit and non-motorized trips, transit productivity, and miles of bicycle and pedestrian routes. These indicators have been important performance measures throughout the development of the MTP/SCS, and all relate directly to the performance of the region’s transportation system, with the exception of aviation, goods movement, and transportation safety. In addition to the comparative indicators used in this EIR analysis, the discussion below includes some historical context on travel trends in the MTP/SCS plan area over the past decade.

**Vehicle Miles Traveled (VMT)**

A “VMT” is one vehicle traveling on a roadway for one mile. Regardless of how many people are traveling in the vehicle, each vehicle traveling on a roadway within the Sacramento region generates one VMT for each mile it travels. For the purposes of the EIR, VMT is estimated and projected for a typical weekday. VMT has been a primary indicator of travel for policy-makers and transportation professionals for decades. The primacy of this measure is due to several factors:

- First, it is relatively easy to measure by counting traffic on roadways at different locations. It is one of the few measures of transportation performance that has been consistently and comprehensively monitored and documented over time in the Sacramento region.
- Second, VMT bears a strong and direct relationship to vehicle emissions, although this relationship is becoming more complex as vehicular technologies evolve. State and federal policies pertaining to vehicle efficiency and formulation of vehicle fuels suggest that on a per VMT basis, emissions for most pollutants and greenhouse gases will decline relative to today. However, even with these per VMT improvements due to fuel and vehicle technology changes, lower VMT will mean lower emissions.
- Third, VMT can be influenced by policy in a number of different ways. By providing more attractive alternatives to driving alone, VMT can be reduced by shifting from vehicle to non-vehicle modes (i.e., from a car trip to a bike or walk trip), or from low occupancy to higher occupancy vehicles (i.e., from a single-occupant vehicle trip to a carpool or transit trip). VMT can be influenced by land use patterns as well. A better mix of residential, employment, education, and service uses in an area can allow people to accomplish their daily activities with less driving, and consequently less VMT. Locating land uses in closer proximity to each also makes walking and bicycling more viable, while also making transit more effective.

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Fourth, VMT correlates with congestion. The more miles people are driving their vehicles, the more vehicles on the roadways at any given time, and higher numbers of vehicles eventually result in congestion.

As displayed in Table 16.4, VMT declined 4.7% from 2005 to 2012 while the region's population continued to increase for the same period (+6.0%). The 2008/09 recession was a significant contributor to this result due to reduced economic activity and associated travel.

Table 16.4
Average Daily Vehicle Miles Traveled in SACOG Region, 2005-2012

<table>
<thead>
<tr>
<th>County</th>
<th>Daily VMT1 (thousands)</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
<td>2008</td>
</tr>
<tr>
<td>El Dorado 1</td>
<td>3,941</td>
<td>3,801</td>
</tr>
<tr>
<td>Placer 1</td>
<td>8,581</td>
<td>8,502</td>
</tr>
<tr>
<td>Sacramento</td>
<td>32,145</td>
<td>31,835</td>
</tr>
<tr>
<td>Sutter</td>
<td>2,374</td>
<td>2,444</td>
</tr>
<tr>
<td>Yolo</td>
<td>5,683</td>
<td>5,489</td>
</tr>
<tr>
<td>Yuba</td>
<td>1,849</td>
<td>1,787</td>
</tr>
<tr>
<td>Region</td>
<td>54,572</td>
<td>53,859</td>
</tr>
<tr>
<td>Pop. (thousands)2</td>
<td>2,140</td>
<td>2,215</td>
</tr>
<tr>
<td>VMT per Capita</td>
<td>25.5</td>
<td>24.3</td>
</tr>
</tbody>
</table>

1 Includes VMT from all sources (household-generated, commercial and external) on all roadways within the SACOG region. Estimates and forecasts from SACSIM regional travel demand model.

2 Only the portions of Placer and El Dorado counties outside the Tahoe Basin are reported. SACOG staff adjusted the full-county data reported in CPRD reports.

Source: SACOG, June 2015. From “California Public Road Data Reports”, assembled by SACOG.

Roadway congestion is typically used to describe conditions where the number of vehicles on a roadway exceeds the capacity of a specific segment. This condition leads to a reduction in travel speed below the free-flow or posted speed on the roadway. For freeways, typical signs of congestion are stop-and-go driving conditions or long queues at freeway on-ramp meters for vehicles waiting to enter the freeway. On the local arterial and collector system, congestion is most commonly experienced as waiting one or more cycles at a traffic signal.

The following definitions of congestion are useful for understanding the relationship between roadway network supply and demand (Littman, 2013):

- Urban economists consider congestion a symptom of underpricing. The roadway network has a fixed supply and as a “public network” is subject to excessive demand if the price of travel is not high enough to cause drivers to “conserve” trips such that drivers chose to avoid overcrowding. This perspective recognizes that if vehicle travel is underpriced, roadway capacity will do little to reduce congestion over the long run, and can exacerbate other external costs such as parking congestion, traffic crashes and pollution emissions.
Urban economists recognize congestion as a cost of proximity and density as more people and activities locate closer together to improve accessibility, vehicle travel speeds tend to decline. They recognize that traffic congestion tends to maintain equilibrium: it increases to the point that delays discourage additional peak-period vehicle trips. From this perspective, traffic congestion is a modest problem, provided that overall accessibility is optimized through local transport options (good walking, cycling, public transit, delivery services, etc.), transport network connectivity, land use proximity, and efficient pricing.

“Delay” in general refers to time spent traveling below “free-flow” or posted speeds. However, quantifying that delay requires some presumption of what time it should take to travel on a particular route, or a standard travel time that drivers and passengers should expect. Setting a standard by which delay can be quantified is a subjective exercise. For example, some might define a standard travel time as “free-flow” or totally uncongested conditions. The standard for freeways by this definition might be 60 mph or higher, and the “standard” travel time would be 1 minute for a one-mile stretch of freeway. If the actual travel speed, with congestion, was 40 mph, the travel time would be 1.5 minutes, and the delay for each driver and passenger in that condition would be 30 seconds. Others may define the standard as a modest or “tolerable” level of congestion. For the same one-mile stretch of freeway, 35 mph could be used as the standard for measurement of delay. With the same 40 mph travel speed in the previous example, no delay would be calculated, because the actual speed is higher than the standard.

For this and other reasons, SACOG has always focused more on the presence of congestion on roadways rather than amount of delay. Specifically, SACOG estimates and tracks how much of the total VMT occurs on roadways that are at or above an assigned capacity threshold. SACOG defines congested VMT (C-VMT) as VMT that occurs on roadways with volume-to-capacity (VC) ratios of 1.0 or greater. As such, C-VMT is a subset of total VMT. Capacity in this calculation is based on values used in the regional travel demand model (SACSIM) for trip assignment purposes and that vary by roadway functional classification (i.e., freeway lane capacities are higher than arterial lanes). The SACSIM average capacity values are not based on field measured traffic throughput at each location, but on reasonable values for roadways that are approaching their operating capacity. An example of C-VMT is a vehicle and its drivers and passenger going westbound on I-80 in the morning commute period between Madison Avenue and the I-80/Capital City Freeway “Split,” or on Hazel Avenue between Madison and Winding Way during commute hours and in the peak direction.

Table 16.5 provides observed and estimated data on congestion and delay in the Sacramento region for years 2000, 2005, 2008, and 2012. Two measures of delay are provided: one published annually by Caltrans, and one by the Texas Transportation Institute. Although these sources are collected by different means and for different parts of the roadway system in the Sacramento region, both show a similar trend between 2005 and 2008 with double-digit decreases in delay. From 2008 to 2012, freeway delay continued to decline but the delay across all roads started to increase. For the entire 2005 to 2012 period, congestion generally decreased largely due to reduce economic activity associated with the recession.

Also included in Table 16.5 is SACOG’s estimate of C-VMT, described above. C-VMT also declines over the entire 2005 to 2012 period but most of the decline occurs between 2008 and 2012.
Table 16.5
Weekday Congestion in the SACOG Region, 2005-2012

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State Highway Vehicle Hours Delay (yearly, in thousands) 1</td>
<td>n/a</td>
<td>5,399</td>
<td>3,448</td>
<td>2,989</td>
</tr>
<tr>
<td>All Roads Traveler Hours Delay (yearly, in thousands) 2</td>
<td>32,076</td>
<td>49,837</td>
<td>36,362</td>
<td>39,138</td>
</tr>
<tr>
<td>Congested VMT (weekday, in thousands) 3</td>
<td>2,541</td>
<td>3,314</td>
<td>3,264</td>
<td>2,250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Average Growth Rates</th>
<th>'00 to '05</th>
<th>'05 to '08</th>
<th>'08 to '12</th>
<th>'05 to '11/12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway VHD 1</td>
<td>n/a</td>
<td>-14%</td>
<td>-5%</td>
<td>-9%</td>
</tr>
<tr>
<td>All Roads THD 2</td>
<td>+9%</td>
<td>-10%</td>
<td>+2%</td>
<td>-4%</td>
</tr>
<tr>
<td>Congested VMT 3</td>
<td>+5%</td>
<td>-1%</td>
<td>-12%</td>
<td>-5%</td>
</tr>
</tbody>
</table>

1 Caltrans "Mobility Performance Report" series. Delay is defined as the difference in vehicle travel time, using travel time at 35mph as a standard. Geography is Caltrans District 3. Data only available to 2011.
2 Texas Transportation Institute "Urban Mobility Report" series. Delay is defined as the difference in travel time between actual and "free flow" time for each roadway. Geography is the urbanized area of the Sacramento region. Data only available to 2011.
3 SACOG estimates. Congested VMT is the subset of all VMT, which occurs on roadways where average service capacity is exceeded. Geography is the SACOG six-county area, excluding Tahoe Basin portions of El Dorado and Placer Counties.

Source: SACOG, June 2015

Travel by Bicycling, Walking, and Transit

Table 16.6 provides data and estimates on travel by walking, biking, and transit in the region. The commuter travel estimates are survey data from the Decennial Census and the American Community Survey. These data show that mode shares have remained relatively stable since 2005 although bicycling has increased notably while carpooling has declined. The other key change is that working at home has increased.
Table 16.6
Transit and Non-Motorized Weekday Mode Shares in the SACOG Region, 2005-2012

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2005/2007</th>
<th>2008</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commuter Travel</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Workers</td>
<td>1,001,600</td>
<td>1,020,500</td>
<td>968,200</td>
</tr>
<tr>
<td>Drive-Alone Commuters</td>
<td>754,530</td>
<td>767,175</td>
<td>729,452</td>
</tr>
<tr>
<td>Public Transit Commuters</td>
<td>129,219</td>
<td>126,717</td>
<td>110,789</td>
</tr>
<tr>
<td>Public Transit Commuters</td>
<td>23,938</td>
<td>26,104</td>
<td>24,780</td>
</tr>
<tr>
<td>Bicycle Commuters</td>
<td>12,938</td>
<td>14,932</td>
<td>17,046</td>
</tr>
<tr>
<td>Walk Commuters</td>
<td>21,373</td>
<td>21,617</td>
<td>20,543</td>
</tr>
<tr>
<td>Combined Bicycle and Walk Commuters</td>
<td>34,311</td>
<td>36,549</td>
<td>37,589</td>
</tr>
<tr>
<td>Worked at Home</td>
<td>47,874</td>
<td>50,963</td>
<td>55,129</td>
</tr>
<tr>
<td><strong>Mode Shares</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive-Alone</td>
<td>75.3%</td>
<td>75.2%</td>
<td>75.3%</td>
</tr>
<tr>
<td>Carpool</td>
<td>12.9%</td>
<td>12.4%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Public Transit</td>
<td>2.4%</td>
<td>2.6%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>1.3%</td>
<td>1.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Walk</td>
<td>2.1%</td>
<td>2.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Combined Bicycle and Walk</td>
<td>3.4%</td>
<td>3.6%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Worked at Home</td>
<td>4.8%</td>
<td>5.0%</td>
<td>5.7%</td>
</tr>
<tr>
<td><strong>All Travel</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Transit Trips</td>
<td>101,000</td>
<td>106,000</td>
<td>101,000</td>
</tr>
<tr>
<td>Bicycle Trips</td>
<td>137,000</td>
<td>157,000</td>
<td>166,000</td>
</tr>
<tr>
<td>Walk Trips</td>
<td>588,000</td>
<td>629,000</td>
<td>623,000</td>
</tr>
<tr>
<td>Total Person Trips (in thousands)</td>
<td>8,500</td>
<td>8,700</td>
<td>8,600</td>
</tr>
<tr>
<td>Public Transit Share</td>
<td>1.2%</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Bicycle Share</td>
<td>1.6%</td>
<td>1.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Walk Share</td>
<td>6.9%</td>
<td>7.2%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Combined Bicycle and Walk Share</td>
<td>8.5%</td>
<td>9.0%</td>
<td>9.2%</td>
</tr>
</tbody>
</table>

1 SACOG, April, 2010, based on data from the American Community Survey 3-year sample data releases for 2007, 2008 and 2012. Data shown are 6-county totals, including Tahoe Basin.
2 SACOG estimates based on passenger boardings data provided by operators.

Source: SACOG, June 2015.

The table also reports estimates of all-purpose (work and all non-work travel purpose) trips by walking, biking, or transit. All these numbers are estimates from the SACSIM travel demand model, calibrated to match available survey data. These estimates show bike trips increasing since 2005. These years bracketed a period of very volatile and generally increasing gasoline prices, with the historic high in prices ($4.59 in 2008 dollars) occurring in mid-2008 plus the 2008/09 recession.
AVIATION

An important air transportation performance measure is passengers served. In 2012, Sacramento International Airport enplaned 4,446,950 passengers and deplaned 4,445,874 passengers. Approximately 44,980 of these passengers were from international flights, which increased over 26 percent compared to 2011, while domestic flights increased less than one percent. International flights are projected to continue growing and overall forecast trends indicate that total demand may exceed 10 million annual passengers before 2040.

GOODS MOVEMENT

With trucks being the predominant goods movement mode, their volume on regional roadways is an important metric to monitor. Table 16.7 shows truck traffic volumes on key freeways in the SACOG region. I-5 carries the highest volume of trucks in the region followed by I-80.

Table 16.7
Truck Percentages on Freeways in the SACOG Region, 2012

<table>
<thead>
<tr>
<th>Interstate/Highway</th>
<th>Vehicle Average Annual Daily Traffic (AADT)</th>
<th>Truck AADT</th>
<th>Percentage of Trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-5 at I Street</td>
<td>186,000</td>
<td>17,856</td>
<td>9.60%</td>
</tr>
<tr>
<td>I-80 east of junction I-5</td>
<td>144,000</td>
<td>8,251</td>
<td>5.73%</td>
</tr>
<tr>
<td>U.S. 50 east of junction SR 99</td>
<td>205,000</td>
<td>7,606</td>
<td>3.71%</td>
</tr>
<tr>
<td>SR 99 south of junction U.S. 50</td>
<td>211,000</td>
<td>9,516</td>
<td>4.51%</td>
</tr>
<tr>
<td>Business 80 north of junction U.S. 50</td>
<td>156,000</td>
<td>8,440</td>
<td>5.41%</td>
</tr>
</tbody>
</table>

Source: Caltrans, 2012, http://traffic-counts.dot.ca.gov/

16.3 Regulatory Setting

16.3.1 Federal Regulations

MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY (MAP-21)

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law in July 2012 and reauthorized the federal highway and public transportation programs for fiscal years 2013 and 2014 for a total of $105 billion, holding funding flat relative to prior years. Since then, MAP-21 has been reauthorized three additional times: first in July 2014 through the Highway and Transportation Funding Act of 2014, next in May 2015 through the Highway and Transportation Funding Act of 2015, and finally in July 2015 through the Surface Transportation and Veterans Health Care Choice Improvement Act of 2015, which extends MAP-21 authorization to October 29, 2015. MAP-21

Source: Sacramento County, December 2012. From “Sacramento County Airport System Summary of Activity.”
marks a notable departure from prior surface transportation acts in several respects, most notably its 
short duration, elimination of earmarks, consolidation of programs, and introduction of 
performance measures into the federal transportation policy framework. While the bill retains many 
of the larger highway and transit programs of its predecessor—the Safe Accountable, Flexible, 
Efficient Transportation Equity Act, known as SAFETEA—it eliminates almost 100 smaller 
programs and distributes a much larger share of funds by formula (93 percent compared to 83 
percent under SAFETEA).

Under MAP-21, the U. S. Department of Transportation, Federal Highway Administration 
(FHWA), and Federal Transit Administration (FTA) require that Metropolitan Planning 
Organizations (MPOs) prepare and submit long-range transportation plans. In regions that are 
designated federal air quality non-attainment areas, these plans must be updated at least every four 
years. The federal requirements for metropolitan transportation plans include the following (23 U.S. 
Code, § 134(i)):

- **Identification of transportation facilities.** An identification of transportation facilities 
  (including major roadways, transit, multimodal and intermodal facilities, and intermodal 
  connectors) that should function as an integrated metropolitan transportation system, 
  giving emphasis to those facilities that serve important national and regional transportation 
  functions.

- **Mitigation activities.** A long-range transportation plan shall include a discussion of types 
  of potential environmental mitigation activities and potential areas to carry out these 
  activities, including activities that may have the greatest potential to restore and maintain 
  the environmental functions affected by the plan. The discussion shall be developed in 
  consultation with Federal, State, and tribal wildlife, land management, and regulatory 
  agencies.

- **Financial plan.** A financial plan that demonstrates how the adopted transportation plan 
  can be implemented, indicates resources from public and private sources that are 
  reasonably expected to be made available to carry out the plan, and recommends any 
  additional financing strategies for needed projects and programs. The financial plan may 
  include, for illustrative purposes, additional projects that would be included in the adopted 
  transportation plan if reasonable additional resources beyond those identified in the 
  financial plan were available. For the purpose of developing the transportation plan, the 
  metropolitan planning organization, transit operator, and State shall cooperatively develop 
  estimates of funds that will be available to support plan implementation.

- **Operational and management strategies.** Operational and management strategies to 
  improve the performance of existing transportation facilities to relieve vehicular 
  congestion and maximize the safety and mobility of people and goods.

- **Capital investment and other strategies.** Capital investment and other strategies to 
  preserve the existing and projected future metropolitan transportation infrastructure and 
  provide for multimodal capacity increases based on regional priorities and needs.

- **Transportation and transit enhancement activities.** Proposed transportation and 
  transit enhancement activities.
The National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code, § 4321 et seq.) requires federal agencies to assess the possible environmental consequences of projects that they propose to undertake, fund, or approve. While the MTP is not subject to NEPA, individual federally-funded programs or projects requiring federal approval will be subject to a NEPA evaluation at the time of project implementation.

### 16.3.2 State Regulations

State requirements for long-range transportation plans are similar to the federal regulations. However, key additional requirements described in Government Code Section 65080 include:

- compliance with CEQA;
- consistency with State Transportation Improvement Program;
- use of program level performance measures that include goals and objectives;
- inclusion of a policy element, an action element, and a financial element; and
- inclusion of a Sustainable Communities Strategy (see SB375 discussion below).

**California Transportation Commission Regional Transportation Plan Guidelines**

The California Transportation Commission (CTC) publishes and periodically updates guidelines for the development of long-range transportation plans that include SACOG’s MTP/SCS. Pursuant to Government Code Section 65080(d), each regional transportation planning agency (RTPA) is required to adopt and submit an updated regional transportation plan (RTP) to the CTC and the Department of Transportation (Caltrans) every four years. SACOG is the designated RTPA for Sacramento, Yolo, Sutter, and Yuba counties. The El Dorado County Transportation Commission (EDCTC) and the Placer County Transportation Planning Agency (PCTPA) are the RTPAs for their respective counties.

Under Government Code Section 14522, the CTC is authorized to prepare guidelines to assist in the preparation of RTPs. The CTC’s RTP guidelines suggest that projections used in the development of an RTP should be based upon available data (such as from the Bureau of the Census), use acceptable forecasting methodologies, and be consistent with the Department of Finance baseline projections for the region. The guidelines further state that the RTP should identify and discuss any differences between the agency projections and those of the Department of Finance.

The most recent update to the RTP guidelines was published in 2010, and includes new provisions for complying with Senate Bill 375 (see below), as well as new guidelines for regional travel demand modeling. The regional travel demand model guidelines are “scaled” to different sizes of MPO’s. SACOG is included in the “E” grouping of the MPO’s serving the largest populations in the state. The guidelines for regional travel demand modeling are the most ambitious for the “E” group, and include (among many other things):

- guidelines and standards for validation and sensitivity testing of the model;
- transition to an activity-based demand model;
- participate in peer review every ten years; and
- build a microeconomic land use model as soon as is practical.

SACOG has already transitioned to an activity-based demand model. The guidelines and standards for model validation and sensitivity testing are being followed. SACOG participated in a peer review for its SACSIM travel demand model in November 2008. SACOG is developing a spatial economic model which would meet the terms of the “microeconomic land use model” described in the guidelines, but the model was not ready for this update. SACOG intends to complete development and testing work in time to use the model in the next MTP/SCS update.

**Senate Bill 226**

Sen. Bill No. 226 (Stats. 2011, ch.469) (SB 226) revises the CEQA Guidelines to set forth a streamlined review process for infill projects, including performance standards to determine an infill project’s eligibility for that streamlined review. One of the requirements for streamlined review is the project be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy.

**Senate Bill 375**

Sen. Bill No. 375 (Stats. 2008, ch. 728) (SB 375) requires MPOs to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its greenhouse gas (GHG) reduction targets through integrated land use, housing and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the California Air Resources Board. Chapter 8 – Energy and Climate Change includes a more in-depth discussion of SB 375 and its implications for the proposed MTP/SCS.

**Senate Bill 743 (SB 743)**

Senate Bill 743 (Stats. 2013, ch. 386) (SB 743) imposes certain requirements on the Sacramento Entertainment and Sports Complex (ESC) project in order to streamline the CEQA process for that specific project. These include requirements linked to ensuring that the project results in no net increase in per-attendee GHG emissions in order to meet SACOG’s SB 375 target for cars and light-duty trucks. It also requires the City of Sacramento, as the lead agency under CEQA, to consider and implement if feasible and necessary, additional funding for transit serving the ESC to achieve GHG and traffic reduction objectives.

In addition to the ESC-specific provisions, SB 743 creates or encourages several statewide CEQA improvements. First, it requires the Governor’s Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas. Second, it authorizes OPR to adopt CEQA Guidelines for establishing alternative metrics to LOS outside of transit priority areas. Third, once the new CEQA Guidelines go into effect, vehicle LOS and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts. Finally, it establishes a new CEQA exemption for a residential, mixed-use, and employment center project a) within a transit priority area...
area, b) consistent with a specific plan for which an EIR has been certified, and c) consistent with an SCS. This exemption requires further review if the project or circumstances changes significantly.

16.3.3 Local Regulations

REGIONAL TRANSPORTATION PLANNING AGENCIES AND OTHER SUB-REGIONAL AGENCIES

Within the SACOG region are several sub-regional agencies that oversee some planning, programming, and administration functions related to transportation projects and coordinating directly with local agencies in their part of the SACOG region. In some cases, these sub-regional agencies also provide transportation services, such as transit. These sub-regional agencies include:

- Placer County Transportation Planning Agency (PCTPA) is designated in state law as the Regional Transportation Planning Agency (RTPA) for Placer County. PCTPA is also the county’s Congestion Management Agency (CMA), a statutorily designated member of the Capitol Corridor Joint Powers Authority (CCJPA), and the airport land use planning body and hearing board for Lincoln, Auburn, and Blue Canyon Airports. As part of their Joint Powers Agreement, PCTPA is the designated administrator for the South Placer Regional Transportation Authority (SPRTA). Under an agreement with the Sacramento Area Council of Governments (SACOG), PCTPA also represents Placer jurisdictions in federal planning and programming issues. Since the PCTPA has a local Agency-State Agreement for federal aid projects, it is also eligible to administer federal projects. PCTPA is also responsible for adopting and implementing the Regional Transportation Plan (RTP) for Placer County. As part of a memorandum of understanding with SACOG, PCTPA’s RTP is integrated into SACOG’s regional MTP/SCS.

- El Dorado County Transportation Commission (EDCTC) is designated in state law as the RTPA for El Dorado County. As the RTPA, the EDCTC serves as the planning and programming authority for transportation projects on the western slope of El Dorado County, excluding those areas within the Tahoe Regional Planning Agency boundaries. In 2008, the EDCTC was designated as the Airport Land Use Commission for the Placerville, Georgetown, and Cameron Park airports. EDCTC is also responsible for adopting and implementing the RTP for El Dorado County. As part of a memorandum of understanding with SACOG, EDCTC’s RTP is integrated into SACOG’s regional MTP/SCS.

- Sacramento Transportation Authority (STA) is a local transportation authority pursuant to the California Public Utilities Code Sections 131300—131304. The STA is primarily responsible for administering the Measure A program that is supported by a one-half percent sales tax in Sacramento County for transportation improvements. The STA also administers the Sacramento Metropolitan Freeway Service Patrol (FSP) program in cooperation with Caltrans and the California Highway Patrol. The FSP’s primary objective is to reduce the traffic congestion caused by roadway incidents. The STA Governing Board and staff also serve as the Governing Board and staff of the Sacramento Abandoned Vehicle Service Authority (SAVSA). SAVSA provides funding to participating local jurisdictions for the abatement of abandoned vehicles and vehicle parts on streets and private property.
LOCAL AGENCY GENERAL PLANS

State law requires cities and counties to adopt general plans, which must incorporate a transportation element. A general plan’s transportation element is an infrastructure plan and policy document used to determine the needed expansion or modification of the transportation network (including services) to accommodate planned population and employment growth. The elements generally address expectations for transportation network operations and safety based on goals and policies of the city or county. Transportation elements typically address the roadway network and its traffic operations, goods movement, public transit, bicycle facilities, and pedestrian facilities.

AIRPORT LAND USE COMPATIBILITY PLANS

Each public airport has an Airport Land Use Commission (ALUC) that is responsible for preparing Airport Land Use Compatibility Plans (ALUCP). The statutes governing ALUCs and ALUCPs are set forth in Division 9, Part 1, Chapter 4, Article 3.5, Sections 21670 – 21679.5 of the California Public Utilities Code (PUC).

The desired outcome or result of airport land use compatibility planning is to “minimize the public’s exposure to excessive noise and safety hazards” while providing for the “orderly expansion of airports” according to the California Airport Land Use Planning Handbook, Caltrans, October 2011. The ALUCPs influence land use and transportation decisions near airports and have been considered in the development of the proposed MTP/SCS. SACOG serves as the ALUC for airports in Yuba, Yolo, Sutter, and Sacramento Counties. The Placer County Transportation Planning Agency and the El Dorado County Transportation Commission serve as the ALUCs for their respective counties.

BICYCLE, PEDESTRIAN, AND TRAILS MASTER PLANS AND ACTIVE TRANSPORTATION PLANS

Bicycle, Pedestrian, Trails, and Active Transportation Plans are planning documents used to guide future development of a jurisdictions bicycle and pedestrian facilities. At a minimum, these plans usually contain an inventory of existing facilities, a discussion of the plan’s goals, recommendations for new projects, and an implementation plan. SACOG has worked with its member agencies to create the Regional Bicycle, Pedestrian, and Trails Master Plan, June 30, 2013. This regional plan complements the plans developed by local agencies and highlights those facilities with regional significance.

16.4 Impacts and Mitigation Measures

16.4.1 Methods and Assumptions

This analysis assesses the potential impacts to the transportation environment that could result from implementation of the proposed MTP/SCS. For each potential impact, implementation of the proposed MTP/SCS is analyzed on three levels. First, impacts are analyzed at the regional level. Second, the analysis breaks the region down into five Community Types: Center and Corridor Communities, Established Communities, Developing Communities, Rural Residential Communities, and Lands Not Identified for Development in the proposed MTP/SCS. Last, implementation of the proposed MTP/SCS is analyzed in terms of its impacts to the region’s TPAs. TPAs are areas of the
region that are within one-half mile of a major transit stop or high-quality transit corridor. For a full description of Community Types and TPAs in the region, refer to Chapter 2 – Project Description.

For each of the three levels of analysis (regional, Community Type, and TPAs), impacts are assessed in terms of both the proposed land use pattern and transportation network. By 2036, implementation of the proposed MTP/SCS will result in a land use pattern and transportation network that is different from existing conditions. "Existing conditions" in the proposed MTP/SCS refers to conditions in the baseline year of 2012, except in the analysis of impacts to C-VMT. For the analysis of impacts to C-VMT, the baseline year of 2008 was used because it is the most recent year for which data is available that represents normal economic activity and travel levels, while 2012 was influenced by the 2008/09 recession. A full discussion of the 2008 baseline year for C-VMT is in Section 16.4.3 under “Vehicle Miles Traveled on Congested Roadways per Capita.” For all other impact analyses, the proposed MTP/SCS uses 2012 because it is the most recent year for which comprehensive land use, demographic, traffic count and VMT data are available for the SACOG region. Chapter 1 – Introduction includes a more detailed discussion of the baseline year for the proposed MTP/SCS.

SB375 (see above) requires MPOs to explicitly account for the combined effects of land use and transportation projects in updates of the regional transportation plans. Informing the development of the MTP/SCS is a body of research and knowledge on relationship between characteristics of land use and travel behavior, often referred to as “the Ds.” The land use characteristics which are recognized as being the most influential to travel behavior are listed below.28

- **Regional Accessibility (“Destinations”)** is a way of quantifying how “connected” a given area is to the existing development in a region, and is usually stated as the number of jobs within an “average” auto commute drive time. It is a measure of how many activities are within a reasonable drive time from a given place of residence. In areas within the existing urbanized area, regional accessibility is usually higher, because these areas are surrounded by other development. In outlying areas or areas on the urban edge, where a major part of the area within a given travel time is undeveloped, this measure tends to be lower. This factor has the strongest potential effect on VMT; a 10 percent increase in this measure would, on average, result in a 2 percent decline in VMT for residents of an area.

- **Street Pattern/Urban Design (“Design”)** refers to how “walkable” a given area is, based on characteristics of the street pattern in that area. It is usually measured as the density of intersections in a given area. The greater the number of intersections, the smaller are the blocks and the more potential walking connections there are in that area. Although other factors (presence/absence of sidewalks, pedestrian amenities on the street, traffic volumes on streets, presence/absence of crosswalks, treatment of pedestrians at signalized intersections, etc.) affect walkability and walk mode share, street pattern has been used as a proxy in research, in part because it is relatively easy to assemble data. In

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terms of VMT reduction, this is the second strongest factor, with 10 percent improvement resulting in a 1.2 percent reduction in VMT, a 2 percent increase in trips made by transit, and a 4 percent increase in trips made by walking.

- **Mix of Use ("Diversity")** refers to the inclusion in an area of a range of complementary land uses, which allows for more activities (e.g., working, shopping, school, etc.) to be contained within that area. Good land use mix allows for reductions in VMT through shortening of vehicle trips or shifting to other non-vehicle modes of travel like walking. The most common measures of mix of use combine the relative proportions of residential, overall jobs, retail and other residential supporting land uses into an “entropy” formula. A 10 percent improvement in mix of use would, on average, result in a 0.9 percent reduction in VMT, and just over 1 percent increase in walk and transit trips.

- **Distance to Transit ("Distance")** refers to the distance from a residence to the nearest transit station or stop, with VMT declining, and both walking and transit use increasing, as distance to the nearest transit decreases. Although this factor has modest impact on VMT, with a 10 percent improvement resulting in, on average, a less-than-one percent decrease in VMT, the potential to increase transit trip-making is greater, with a nearly 3 percent increase.

- **Residential Density ("Density")** refers to the number of persons or dwellings clustered into a given area. Conceptually, density is quite easy to understand—it is the number of persons or dwelling located in a given area. However, because there are different definitions of area (net acreage, gross acreage, total area, etc.) the effects of density are often over- or under-stated. Recent research shows that a 10 percent increase density at the place of residence might reduce VMT by about 0.4 percent.

These land use and transportation factors are obviously not the only factors influencing travel in the SACOG region. Other important factors, which are accounted for in the modeling and forecasting tools described in greater detail below, include:

- demographic factors such as age, income, household size, and number of workers;
- household transportation costs, in particular costs of fuel and transit fares;
- characteristics of travel in neighboring regions and the amount and extent of external, or through, travel they might generate in the SACOG region;
- and geographic features such as rivers which may separate or divide areas.

Through the development of the proposed MTP/SCS, SACOG has taken into account the general land use and transportation relationships described above, and, along with other factors, applied them to the task of developing both the land use growth allocations on which the MTP/SCS plan area is based and the transportation projects and improvements which are intended to serve the region. In particular, the following principles guided development of the proposed MTP/SCS:

- The value of compact development and mixed use development to support an efficient transportation system and reduce the need for vehicle travel for future residents engaging in work, school and other activities within the region.
- The necessity of aligning transit services in corridors with sufficient density and concentration of uses in order to support more efficient, productive service.
The value of providing alternatives to driving alone, including bicycle routes, transit service, and land use patterns that allow for walking to activities near home or work, as an effective way to reduce vehicle travel.

The value of creating pleasant, high quality pedestrian environments to encourage residents to make more trips by walking.

Table 16.8 provides a tabulation of key land use characteristics reported above, for the baseline (2012) and for the proposed MTP/SCS (2036). The table provides information on the regional averages for all measures, categorized by the proposed MTP/SCS Community Types described in Chapter 2 -Project Description.

**Regional Accessibility (Destinations)** increases by 37 percent overall, with all community area types increasing by 37 percent or more, relative to 2012. Center and Corridor Communities have the highest level of regional accessibility in both 2012 and 2036 with implementation of the proposed MTP/SCS—in both years, accessibility to jobs is over 40 percent higher for residents of these areas, compared to the regional average. Accessibility to jobs declines for the remaining area types, with residents of Rural Residential Communities and Lands Not Identified for Development having the lowest accessibility in both 2012 and 2036 with implementation of the proposed MTP/SCS, having 60 percent or more below regional averages. This reflects the fact that Center and Corridor Communities are centrally located in the region, and in general are surrounded by urban development. Developing Communities, Rural Residential Communities, and Lands Not Identified for Development are located on the urban edge, or completely outside the urbanized area. Developing Communities, to the extent they are at the edge of the urbanized area, have access to jobs on only one side. These locational factors drive down regional accessibility, and, by extension, drive up VMT generation.

**Street Pattern (Design)** follows a similar pattern as regional accessibility, with Center and Corridor Communities being the highest in both 2012 and 2036 with implementation of the proposed MTP/SCS. Overall street pattern (in this case, intersection density) improves by 11.76 percent regionally. Each Community Type improves to some degree, except Developing Communities, which decrease by 4.29 percent.
<table>
<thead>
<tr>
<th>Land Use/Transportation Factor</th>
<th>Community Area Type</th>
<th>Center and Corridor</th>
<th>Established</th>
<th>Developing</th>
<th>Rural Residential</th>
<th>Regional Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 2012</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Accessibility¹</td>
<td>503,022</td>
<td>360,974</td>
<td>231,666</td>
<td>108,181</td>
<td>351,079</td>
<td></td>
</tr>
<tr>
<td>Street Pattern/Urban Design²</td>
<td>114</td>
<td>88</td>
<td>70</td>
<td>17</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Mix of Use³</td>
<td>37</td>
<td>34</td>
<td>16</td>
<td>10</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Transit⁴</td>
<td>0.15</td>
<td>0.41</td>
<td>1.03</td>
<td>2.98</td>
<td>0.61</td>
<td></td>
</tr>
<tr>
<td>Residential Density⁵</td>
<td>10.5</td>
<td>4.1</td>
<td>2.0</td>
<td>0.3</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td><strong>Year 2036 with Proposed MTP/SCS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Accessibility¹</td>
<td>703,961</td>
<td>496,573</td>
<td>342,029</td>
<td>152,655</td>
<td>482,644</td>
<td></td>
</tr>
<tr>
<td>Street Pattern/Urban Design²</td>
<td>134</td>
<td>99</td>
<td>67</td>
<td>18</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Mix of Use³</td>
<td>36</td>
<td>34</td>
<td>28</td>
<td>10</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Transit⁴</td>
<td>0.12</td>
<td>0.36</td>
<td>0.65</td>
<td>3.03</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Residential Density⁵</td>
<td>14.6</td>
<td>4.4</td>
<td>4.8</td>
<td>0.3</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td><strong>Change from 2012</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional Accessibility¹</td>
<td>39.95%</td>
<td>37.56%</td>
<td>47.64%</td>
<td>41.11%</td>
<td>37.47%</td>
<td></td>
</tr>
<tr>
<td>Street Pattern/Urban Design²</td>
<td>17.54%</td>
<td>12.50%</td>
<td>-4.29%</td>
<td>5.88%</td>
<td>11.76%</td>
<td></td>
</tr>
<tr>
<td>Mix of Use³</td>
<td>-2.70%</td>
<td>0.00%</td>
<td>75.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Distance to Nearest Transit⁴</td>
<td>-20.00%</td>
<td>-12.20%</td>
<td>-36.89%</td>
<td>1.68%</td>
<td>-11.48%</td>
<td></td>
</tr>
<tr>
<td>Residential Density⁵</td>
<td>38.29%</td>
<td>5.79%</td>
<td>140.92%</td>
<td>5.36%</td>
<td>23.96%</td>
<td></td>
</tr>
</tbody>
</table>

All numbers are averages for residences in each community area type across the region.
1 Total jobs within 30-minute drive from place of residence.
2 Intersection density, stated as intersections per square mile, within 1/2 mile of place of residence.
3 SACOG entropy index, 0 to 100 scale with 0 = homogenous, 100 = perfect mix of use.
4 Shown as distance from place of residence to nearest transit station or stop, in miles per resident.
5 Dwelling units per net residential acre, within 1/2 mile of place of residence.
Source: SACOG, June 2015.
- **Mix of Use (Diversity)** is highest in Center and Corridor Communities and Established Communities, largely because these areas are located near jobs and commercial centers. In 2012, Rural Residential Communities were very low in measured mix of land use (18) on the SACOG mix index\(^29\). In general, measured land use mix is low in this area because they are predominantly residential, with very little commercial, school or other supportive non-residential use within one-half mile of places of residence. The biggest change in mix of use between 2012 and 2036 with implementation of the proposed MTP/SCS occurs in Developing Communities—this change is reflective of a significant amount of growth, especially in non-residential development and schools, in the planning for these areas.

- **Distance to Transit (Distance)** as expected, is lowest (i.e., best) in Center and Corridor Communities, with distance to the nearest transit station or stop averaging less than one-sixth mile in 2012, and declining to about one-eighth mile by 2036 based on implementation of the proposed MTP/SCS. Average distance to transit also improves, declining from 0.61 miles in 2012 to 0.54 miles by 2036. Distance to transit is greatest in Rural Residential Communities, where average distance to transit is about 3 miles.

- **Residential density (Density)** of developed parcels increases overall by about 24 percent, from an average of 1.8 dwellings per net residential acre to just over two units per acre. The biggest changes occur in Developing Communities, where growth as a percentage of 2012 existing development is high, and growth is significantly higher in density than the baseline due to the fact that this land in the baseline is rural residential or undeveloped. Established Communities change little, simply because the amount of growth is relatively small compared to the amount of existing development in 2012. Center and Corridor Communities are both the highest in density and show significant change, increasing from about 10 units per net acre to about 15 units per acre by 2036.

### 16.4.2 Travel Demand Forecasting Model

SACOG utilized its regional travel demand model to compare the proposed MTP/SCS for 2036 conditions to the 2012 baseline conditions. SACOG’s primary model is the Sacramento Regional Activity-Based Simulation Model or “SACSIM.” SACOG periodically updates and improves SACSIM, and releases versions of the model and data for use by member agencies when the MTP/SCS is adopted, with versions numbered according to the year the version was finalized. SACSIM11 was used for the 2012 MTP/SCS. SACSIM15 was used for the analysis of this proposed MTP/SCS. \(^30\)

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\(^29\) SACOG’s mix index is a variant on an entropy index. It is defined as a residential mix, and measures the degree to which an optimal array of activities and services, which support residents are present within a one-half mile radius (i.e., 502.6 acres) around the place of residence. The measure includes total jobs per household, retail jobs per household, K-12 school enrollments per household, and medical jobs per household. An area with a perfect balance of each of these factors would score 100; a completely homogenous area, with no mix of use, would score 0.

\(^30\) Comprehensive documentation of the SACSIM model is available at SACOG for review during the comment period.
SACSIM includes four sub-models for predicting travel demand. The major sub-model is “DAYSIM,” which is an advanced-practice activity-based tour sub-model for predicting household-generated travel. DAYSIM is a demand micro-simulation, which represents travel activities as tours, or series of trips, connecting the activities a person engages in during the course of a normal day. DAYSIM allows for much more detailed representation of key factors influencing household-generated travel, such as detailed characteristics of land use in the region, age of residents, household income, cost of fuel, and other factors.

SACSIM also includes a more conventional, state-of-practice sub-model for predicting commercial vehicle travel. Two classes of commercial vehicles are modeled: two-axle commercial vehicles, and three-plus-axle commercial vehicles. Two-axle commercial vehicles include a wide range of vehicles, ranging from a passenger vehicle, which might be used to transport a computer repair person and their tools and equipment to an office to perform a repair, to a relatively small truck delivering produce to a restaurant or store. Three-plus-axle commercial vehicles also include a wide array of vehicles, ranging from medium-sized delivery trucks to large, five-axle tractor-trailer combinations. The common element tying these vehicles together is that they are used to transport goods and services, and are not used for personal (household-generated) travel.

SACSIM also includes state-of-practice sub-models for predicting air passenger ground access to the Sacramento International Airport, and for predicting external travel (including travel by residents of the region to locations outside the region, residents outside the region traveling to locations within the region, and travel that goes through the region, but does not stop within the region).

Travel demand (vehicle or passenger trips) estimated using SACSIM are combined for assignment to detailed computer representations of the region’s highway and transit networks using state-of-practice software and programs. The resulting assignments are used for evaluation of VMT on roadways, congested travel on roadways, and travel on the region’s transit system.

The analysis period of SACSIM is a “typical weekday.” A typical weekday is intended to represent weekday conditions during a non-summer month (i.e., a time period when most workers are at work, rather than on vacation, and when schools are normally in session). Where annual or other time periods are required, typical weekday estimates of travel are scaled up to represent those time periods. Within the typical weekday, are four demand periods: AM peak period (7:00-10:00AM); midday period (10:00AM to 3:00PM); PM peak period (3:00-6:00PM); and the late evening/overnight period (6:00PM to 7:00AM).

For impact analysis, all impacts and thresholds are defined as differences or changes between the baseline (2012, 2008 for CVMT) and the MTP/SCS horizon year (2036). If base year observed data are available for a performance measure, SACSIM estimates of baseline-to-2036 change are applied

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31 Advanced practice travel demand modeling is defined in TRB Special Report 298, “Metropolitan Travel Forecasting: Current Practice and Future Direction”.

32 Ibid.

33 Ibid.
to the baseline observed data to estimate 2036 totals. If observed data for baseline are unavailable for a performance measure, SACSIM estimates are used directly to estimate baseline and 2036 totals.

An overview of the SACSIM is included in Appendix C-4 of the MTP/SCS, with comprehensive documentation available at SACOG during the comment period. Year 2012 was utilized as the baseline for impact analysis for the reasons discussed in Chapter 1 – Introduction.

### 16.4.3 Key Performance Measures and Policy Objectives for Assessing the Transportation Impacts of the Proposed MTP/SCS

The impact analysis considers the roadway, transit, bicycle, pedestrian, aviation, agricultural, and goods movement components of the regional transportation system. Quantitative analysis focuses on the following performance measures derived from the forecasting results of the SACSIM model.

- Household-generated VMT;
- VMT that occurs on congested roadways;
- Number of person trips made by different non-private-vehicle modes (bicycling, walking or public transit); and
- Number of transit passenger boardings and amount of transit service provided.

In addition to these quantitative measures, qualitative analysis is included to address the overall connectivity of the pedestrian and bicycle system, the ability to move agricultural goods and farm products on roadways, aviation, goods movement, construction activity associated with MTP projects, and safety. Each of the quantitative and qualitative measures are described in more detail below.

**Vehicle Miles Traveled Per Capita**

The basic measure of the amount of vehicle travel generated by the project is VMT, defined and described above. Two slightly different measures of VMT are commonly used in analysis: household-generated VMT and total VMT. Both measures are directly from SACSIM model outputs.

Household-generated VMT is the VMT generated by residents of the SACOG region, for all of their travel within the region. Household-generated VMT includes travel by residents for all purposes (e.g., going to/from work, to/from school, shopping, personal business, social/recreational, etc.). Because this portion of travel is estimated using an advanced-practice travel demand micro-simulation, it is possible to tabulate all of the VMT generated by a household by tracing the trips of each resident of the household throughout the day (i.e., this includes trips the residents make away from the home such as trip from work to a restaurant for lunch). In general, about 75 percent of all VMT is household-generated (i.e., created by residents of the SACOG region). This capability is unique to travel demand micro-simulation models and allows for geographic comparisons of VMT generation by households, and evaluation of impacts for sub-areas within the region.

Total VMT includes household-generated, plus VMT from all other sources. SACSIM adds commercial vehicle, airport passenger ground access, and external travel to household-generated travel to estimate total VMT.
For the reasons described above, household-generated VMT is the measure used in the analysis of impacts for the plan. Although the absolute amount of household-generated VMT is reported, impact analysis is based on VMT normalized to population as “per capita” rates. This form of the metric provides a measure of travel efficiency and helps depict whether people are traveling more or less by vehicle over time. A goal of the proposed MTP/SCS is that VMT per capita decline, even though the absolute amount of VMT may increase. A per capita decline in VMT indicates that the transportation network is operating more efficiently, and that people have more travel choices.

**VEHICLE MILES TRAVELED ON CONGESTED ROADWAYS PER CAPITA**

The basic measure of congestion used is the subset of VMT that occurs on roadways that are near- or above capacity, defined and described above. For each of the travel categories used in the VMT analysis described above (household-generated and total), congested travel impacts are evaluated at the regional level. For household-generated travel only, congested travel impacts are evaluated at more detailed subareas below county level. As with VMT, the amount of C-VMT is converted to per capita values for impact analysis.

In the 2012 MTP/SCS regional C-VMT was projected to decline from 1.19 in 2008 to 1.07 in 2035. The proposed MTP/SCS continues the long-term trend of lower congestion from 2008. For purposes of the congestion impact evaluations, the applicable baseline is 2008, the most recent year for which economic activity is comparable to that of normal conditions in a non-recession year. The reason for this is the unique relationship between economic activity and congestion. Because a high percentage of work-related travel occurs during peak hours, and because work trips tend to be the longest trips people make on a daily basis, congestion levels tend to track employment levels, much more than other travel measures like total VMT or numbers of trips. Congestion is very sensitive to marginal changes during peak conditions, when many roadway facilities are at capacity. A small change in demand (e.g. a decrease related to higher unemployment levels) can result in a large change in delay experienced by all travelers. The connection between congestion and the level of economic activity is stated well in a 2015 report: “The national congestion recession is over. Urban areas of all sizes are experiencing the challenges seen in the early 2000s – population, jobs and therefore congestion are increasing”\(^{34}\). Without accounting for the level of economic activity, the congestion impact evaluation would show benefits for economic recession and would not address the fundamental causes of roadway congestion important to the MTP/SCS.

During the recession starting at the end of 2008, and extending through 2012 or 2013 in the Sacramento region, congestion levels dropped around the nation. In Sacramento, congestion levels, which had been increasing annually by 5 to 9 percent leading up to the start of the recession, began to decline. During this same time period, unemployment, which was stable at 5 to 6 percent prior to the recession, increased to nearly 13 percent by 2010 (Table 16.9). Total jobs dropped by 55 thousand (nearly 6 percent). The rate of employment, as measured by jobs per household, and workers per working age population, dropped by over eight percent. Although employment began

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\(^{34}\) Shrank, David, “2015 Urban Mobility Scorecard,” Texas A&M Transportation Institute.
to increase after 2011, and unemployment began to decline, congestion levels in 2012 were still well below conditions with a normal level of economic activity.

Table 16.9

Changes in Sacramento Region Economy, 2008 to 2012

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>Date</th>
<th>Changes, 2008 to 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
<td>2008</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>5.6%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Total Jobs (in 000's)</td>
<td>966.9</td>
<td>946.8</td>
</tr>
<tr>
<td>Jobs per Household</td>
<td>1.19</td>
<td>1.16</td>
</tr>
<tr>
<td>Workers per Working Age Pop.</td>
<td>0.66</td>
<td>0.67</td>
</tr>
</tbody>
</table>

Notes: Unemployment Rate: for 6-county SACOG area. From EDD Labor Market Information, annual averages. Jobs per Household: Jobs for 6-county SACOG area, from EDD “CREE” job forecasts. Not available for 2013. Households for 6-county area, from ACS 3-year samples. Workers per Working Age Population: Workers and working age population (aged 15-64) for 6-county area, from ACS 3-year samples. Total Jobs from EDD “CREE” jobs forecasts.

For purposes of the EIR analysis, 2008 is a more comparable baseline condition to normal levels of economic activity in the region. According to the 2015 mid-year report of the Sacramento Business Review, the Sacramento region is in its fifth year of post-recession recovery and close to recovering the jobs lost during that time. In light of this current condition, and the unique relationship between economic activity and congestion, a baseline year of 2008 is more appropriate as a point of comparison for congestion impacts; the 2008 level of economic activity is more comparable to the current conditions than 2012. As a benchmark year in SACOG’s data inventory, 2008 provides the most recent complete, integrated data portrait of congestion in the region.

PERSON TRIPS BY BICYCLE, WALK, OR TRANSIT MODES PER CAPITA

Estimates of person trips by walk, bike and public transit modes from SACSIM are the basic measure of non-private-vehicle travel for evaluating change in non-private-vehicle modes. A goal of the MTP/SCS is to enhance the region’s bike, walk and transit systems, and to promote growth and land uses that maximize the potential for shorter trips, which are more likely to be made by walking, biking or transit. As with VMT and C-VMT, because of expected population growth, total trips are normalized to population and reported as per capita rates for purposes of impact analysis.

An increase in bike, walk, and transit trips per capita indicate that the land use and transportation investments in the proposed MTP/SCS are effectively working together to improve the mode share of non-auto travel. Compact and mixed land uses more effectively serve transit, support higher rates of walking and biking, and generate less vehicle travel. While it is important that the regional bike,
walk, and transit trips increase per capita regionally, it is expected that local areas will see variations on that trend.

**Transit Passenger Boardings per Vehicle Service Hour**

The 2008/09 recession affected public transit operations funding that led to service cuts. This experience underscores the importance of ensuring that transit service be productive, and serve the greatest number of passengers possible. Transit vehicles also need to be well-utilized to reduce GHG and air pollution emissions. For example, buses operate on fixed schedules throughout the day regardless of how many passengers are onboard. Since buses are large and consume more fuel per mile than passenger cars, it is important for them to carry multiple passengers to achieve desired emissions reductions. It is a goal of the proposed MTP/SCS to increase the productivity and efficiency of transit service provided in the region through a combination of land use changes that would better support transit service and transit services that directly serve travel needs in the region. Passenger boardings per service hour is the most common and widely reported measure of the transit productivity and efficiency. In general, the more boardings per hour of transit service provided, the more productive and efficient is the system.

In addition to the performance measures described in the preceding section, the proposed MTP/SCS also includes other performance objectives, including the following two that are analyzed as part of this EIR:

**Connectivity of the Region’s Pedestrian and Bicycle System**

The proposed MTP/SCS contains a number of bicycle and pedestrian projects. These projects are generally designed to expand and complement the existing bicycle and pedestrian network. A goal for the proposed MTP/SCS is to increase connectivity of the bicycle and pedestrian networks through strategic investments and minimizing conflicts from proposed MTP/SCS land use or transportation changes on the bicycle and pedestrian system.

Although some land use and transportation changes may disrupt existing or planned bicycle and pedestrian system segments, supportive land uses and strategic investments in the proposed MTP/SCS are focused on improving the connecting of the bicycle and pedestrian system. If the proposed MTP/SCS was significantly interfering with bicycle and pedestrian facilities, trips per capita would decrease as individuals would be less likely or able to choose to walk or bicycle.

**Movement of Agricultural and Farm Products on Rural Roadways**

The movement of agricultural equipment and delivery of farm products to market are essential roles of the roadway system in many rural areas and parts of select urban areas. A goal of the proposed MTP/SCS is to preserve and, where possible, enhance the efficiency of these movements. One challenge to achieving this objective is where growth requires new or expanded roads that cut through existing agricultural lands, or disrupt agricultural equipment access to fields, processing destinations, or other agricultural goods movement routes.
**AVIATION**

Aviation service is an important part of moving people and goods in the SACOG region. The intent of the proposed MTP/SCS is to accommodate growth in aviation travel for people and goods, which is reflected in the plan's investment choices. From an environmental perspective, the goal is to avoid disrupting existing and planned aviation service due to the land use growth strategies in the proposed MTP/SCS or construction of other transportation projects in the MTP.

**GOODS MOVEMENT**

Many of the transportation projects in the proposed MTP/SCS are designed to help accommodate goods movement by rail, air, and roadway. Similar to aviation, the environmental impact assessment is focused on identifying potential disruption of existing or future goods movement.

**CONSTRUCTION ACTIVITY**

The transportation projects in the proposed MTP/SCS will require substantial construction activity during the life of the plan. For a regional plan, the environmental impact assessment recognizes the disruptive nature of construction and focuses on providing potential specifications for construction activity that implementing agencies can use to reduce travel disruptions.

**SAFETY**

Transportation safety is assessed based on how the proposed MTP projects will comply with applicable design standards of the implementing agencies.

**16.4.4 Criteria for Determining Significance**

For the purposes of this EIR, SACOG has determined that adoption and/or implementation of the MTP (including adoption of the MTP policies, adoption of the SCS, adoption of the transportation project list and financing plan) would result in significant impacts under CEQA, if any of the following would occur:

1. Cause an increase in vehicle miles traveled (VMT) per capita that exceeds the applicable baseline average.
2. Cause an increase in VMT on congested roadways (C-VMT) per capita relative to the applicable baseline for the area, and cause an increase in C-VMT per capita that exceeds the baseline regional average.
3. Cause combined bicycle, walk, and transit person trips per capita to be lower than the applicable baseline average, and cause a decline in the bicycle, walk, and transit person trips per capita that exceeds the baseline regional average.
4. Cause average transit passenger boardings per vehicle service hour to be lower than the applicable average.
5. Cause interference with existing or planned bicycle and pedestrian facilities.
6. Cause a disruption to the movement of agricultural products on rural roadways.
7. Cause a disruption to aviation access or service.
8. Cause a disruption to goods movement into or through the SACOG region.
9. Cause a disruption to the ongoing operations of the applicable regional or local area transportation system due to construction activities.
10. Result in inconsistency with project design standards related to traffic safety.

**16.4.5 Impacts and Mitigation Measures**

**IMPACT TRN-1: CAUSE AN INCREASE IN VEHICLE MILES TRAVELED (VMT) PER CAPITA THAT EXCEEDS THE APPLICABLE BASELINE AVERAGE.**

### Regional Impacts

A summary of land use and transportation changes for the proposed MTP/SCS plan area is provided in Chapter 2 – Project Description. The proposed MTP/SCS is based on a regional employment and population forecast and accommodates this growth through land use and transportation projects. It does not create the growth but is a strategy to accommodate it in a manner that increases transportation system efficiency and minimizes growth in vehicle miles traveled. While the proposed MTP/SCS does not create the forecasted growth, Chapter 19 considers whether the proposed MTP/SCS has the potential to induce growth beyond the current forecasted growth.

Table 16.10 provides estimates of household-generated VMT for the region as a whole. The proposed MTP/SCS results in household-generated VMT that increases by 11.8 million miles per weekday largely due to adding about 810,000 new residents. The household-generated VMT rate of increase at 27.5 percent over baseline is less than the 35.7 percent increase in population largely due to more effective travel choices and better travel efficiency.

**Table 16.10**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT¹</td>
<td>40,709,500</td>
<td>52,258,900</td>
</tr>
<tr>
<td>Population</td>
<td>2,268,100</td>
<td>3,078,800</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>17.9</td>
<td>17.0</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-5%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated VMT for all residents of the SACOG region, for travel within the region. This is a subset of total VMT. Estimates and forecasts from SACSIM regional travel demand model. Source: SACOG, June 2015.

Additional evidence of this trend is found in the VMT per capita changes. A decline in VMT per capita is a good indication that the system is operating more efficiently because individuals are driving less on a daily basis. The proposed MTP/SCS reduces household-generated VMT per capita for the region from 17.9 miles to 17.0 miles per weekday, a reduction of 5 percent (see Table 16.10). These declines indicate that the following land use changes and transportation investments in the
The proposed MTP/SCS reflects a more compact development form for the region. Compact land uses across the region in the proposed MTP/SCS are more effectively served by transit, support potentially higher rates of walking and biking, and generate less vehicle travel. In addition to compact development, the amount of complementary, mixed-use development in the proposed MTP/SCS further supports shorter vehicle trips and higher rates of non-motorized travel. Further benefits result from concentrating development in high-quality transit corridors, where residents are more likely to use available transit.

The proposed MTP/SCS places an emphasis on transit service and complete streets near transit, walk, and bicycle supportive land uses with higher density and a mix of uses most likely to generate a mix of travel modes. Road and highway projects concentrate on alleviating major bottlenecks and congestion points while other Blueprint supportive programs and transportation systems management (TSM) strategies, including technology and demand management programs, allow for greater optimization of existing transportation infrastructure.

Therefore, the VMT per capita changes related to land use and transportation changes from implementation of the proposed MTP/SCS at the regional level are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

Localized Impacts

Center and Corridor Communities

A summary of land use and transportation changes for the Center and Corridor Communities is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes in Center and Corridor Communities reduce the need to travel frequently or over long distances using single occupancy vehicles by putting people closer to jobs and other destinations and increasing opportunities to bicycle, walk, or ride transit. Table 16.11 provides estimates of household-generated VMT for Center and Corridor Communities. The proposed MTP/SCS reduces (relative to the baseline) household-generated VMT per capita in Center and Corridor Communities by 10 percent. Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Center and Corridor Communities are considered less than significant (LS) for Impact TRN-1. No mitigation is required.
Established Communities

A summary of land use and transportation changes for Established Communities is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes in Established Communities decrease household-generated VMT by 6 percent, relative to the baseline year (see Table 16.12). Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Established Communities are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

### Table 16.12
Local Area VMT Per Capita—Established Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT¹</td>
<td>30,520,100</td>
<td>33,378,600</td>
</tr>
<tr>
<td>Population</td>
<td>1,762,600</td>
<td>2,042,100</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>17.3</td>
<td>16.3</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>-6%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Includes household-generated VMT for all residents of the listed geography. Estimates and forecasts from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Developing Communities

A summary of land use and transportation changes for the Developing Communities is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes in Developing Communities experience a decline in household-generated VMT per capita. Table 16.13 provides estimates of household-generated VMT for Developing Communities. The proposed MTP/SCS reduces, relative to the baseline, household-generated VMT per capita in Developing Communities by 7 percent. Therefore, the VMT per capita impacts related to land use and transportation changes from
implementation of the proposed MTP/SCS in Developing Communities are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

### Table 16.13
Local Area VMT Per Capita—Developing Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT¹</td>
<td>1,957,900</td>
<td>8,156,600</td>
</tr>
<tr>
<td>Population</td>
<td>91,500</td>
<td>411,800</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>21.4</td>
<td>19.8</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>-7%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Includes household-generated VMT for all residents of the listed geography. Estimates and forecasts from SACSIM regional travel demand model.

Source: SACOG, June 2015.

### Rural Residential Communities
A summary of land use and transportation changes for the Rural Residential Communities is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes in Rural Residential Communities result in a decline in household-generated VMT, relative to 2012, of 1 percent (see Table 16.14). Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Rural Residential Communities are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

### Table 16.14
Local Area VMT Per Capita—Rural Residential Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT¹</td>
<td>5,102,200</td>
<td>5,657,800</td>
</tr>
<tr>
<td>Population</td>
<td>175,900</td>
<td>197,400</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>29.0</td>
<td>28.7</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>-1%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Includes household-generated VMT for all residents of the listed geography. Estimates and forecasts from SACSIM regional travel demand model.

Source: SACOG, June 2015.

### Lands Not Identified for Development in the Proposed MTP/SCS
A summary of land use and transportation changes for Lands Not Identified for Development is provided in Chapter 2 – Project Description.

With no growth and limited transportation investments, household-generated VMT per capita in these areas is not expected to change.
Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Lands not Identified for Development are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

Transit Priority Area Impacts

The proposed MTP/SCS analyzes localized impacts using household-generated VMT per capita, which constitutes about 75 percent of all VMT in the region. As discussed in the Methods and Assumptions section, regional non-household travel (commercial vehicles, airport access, thru traffic) is not attributable to specific sub-areas, including transit priority areas, leaving only household generated VMT for examining localized impacts.

Placer County Transit Priority Areas
A summary of land use and transportation changes for the Placer County TPAs is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes decrease household-generated VMT in Placer County TPAs, relative to 2012, by 7 percent (see Table 16.15). Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Placer County TPAs are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

Table 16.15
Local Area VMT Per Capita—Placer County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT(^1)</td>
<td>606,200</td>
<td>666,700</td>
</tr>
<tr>
<td>Population</td>
<td>39,900</td>
<td>46,900</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>15.2</td>
<td>14.2</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-7%</td>
</tr>
</tbody>
</table>

\(^1\) Includes household-generated VMT for all residents of the listed geography.

Estimates and forecasts from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Sacramento County Transit Priority Areas
A summary of land use and transportation changes for the Sacramento County TPAs is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes decrease household-generated VMT in Sacramento County TPAs, relative to 2012, by 7 percent (see Table 16.16). Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Sacramento County TPAs are considered less than significant (LS) for Impact TRN-1. No mitigation is required.
Table 16.16
Local Area VMT Per Capita—Sacramento County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT¹</td>
<td>9,118,000</td>
<td>11,257,000</td>
</tr>
<tr>
<td>Population</td>
<td>640,200</td>
<td>850,300</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>14.2</td>
<td>13.2</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-7%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated VMT for all residents of the listed geography. Estimates and forecasts from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Yolo County Transit Priority Areas

A summary of land use and transportation changes for the Yolo County TPAs is provided in Chapter 2 – Project Description.

The proposed MTP/SCS land use and transportation changes decrease household-generated VMT in Yolo County TPAs, relative to 2012, by 17 percent (see Table 16.17). Therefore, the VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Yolo County TPAs are considered less than significant (LS) for Impact TRN-1. No mitigation is required.

Table 16.17
Local Area VMT Per Capita—Yolo County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography / Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household-Gen. VMT¹</td>
<td>1,519,100</td>
<td>1,845,000</td>
</tr>
<tr>
<td>Population</td>
<td>104,900</td>
<td>153,700</td>
</tr>
<tr>
<td>HH-Gen VMT per Capita</td>
<td>14.5</td>
<td>12.0</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-17%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated VMT for all residents of the listed geography. Estimates and forecasts from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Mitigation Measures

None required.
**IMPACT TRN-2: CAUSE AN INCREASE IN VMT ON CONGESTED ROADWAYS (C-VMT) PER CAPITA RELATIVE TO THE APPLICABLE BASELINE FOR THE AREA AND CAUSE AN INCREASE IN C-VMT PER CAPITA THAT EXCEEDS THE BASELINE REGIONAL AVERAGE.**

**Regional Impacts**

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

Congested vehicle miles traveled (C-VMT) is a subset of total VMT. C-VMT comprises a similar share of total VMT in both 2008 and 2036, of 5.7 percent and 5.8 percent, respectively. As with VMT, the region’s population growth results in an absolute increase in the quantity of C-VMT by 2036 relative to the baseline year of 2008. Rather than basing plan performance on absolute VMT or C-VMT, this EIR analysis normalizes household-generated VMT and C-VMT to population as “per capita” rates to measure transportation system efficiency.

The proposed MTP/SCS compact and mixed-use land use strategy combined with the transportation investment choices will reduce the need to travel frequently or over long distances by using single occupancy vehicles. As a result, the impacts from C-VMT are minimized by compact and mixed land uses that locate people closer to their destinations and allow for more walk, bike and transit travel. Table 16.18 provides estimates of household-generated VMT on congested roadways for the SACOG region. As with VMT, the total amount of C-VMT increases by somewhat less than the increase in population (33 percent for C-VMT, compared to 39 percent for population).

The land use and transportation changes in the MTP/SCS result in a decline in household-generated C-VMT per capita from 1.15 miles in 2008 to 0.99 miles in 2036 per weekday, a 14 percent reduction. As discussed above under Methods and Assumptions, 2008 represented normal economic activity and travel levels while 2012 was influenced by the 2008/09 recession.

Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS at the regional level are considered less than significant (LS) for Impact TRN-2. No mitigation is required.

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)1</td>
<td>2,607,900</td>
<td>3,054,200</td>
</tr>
<tr>
<td>Population</td>
<td>2,215,000</td>
<td>3,078,800</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>1.15</td>
<td>0.99</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>-14%</td>
<td></td>
</tr>
</tbody>
</table>

1 Includes household-generated C-VMT for all residents of the SACOG region, for travel within the region. Estimates and forecasts from SACSIM regional travel demand model.

Source: SACOG, June 2015.
Local Impacts

The proposed MTP/SCS analyzes localized impacts using household generated C-VMT per capita. Household generated VMT constitutes about 75 percent of all VMT in the region. As discussed in the Methods and Assumptions section, regional non-household travel (commercial vehicles, airport access, thru traffic) is not attributable to specific sub areas, leaving only household generated VMT for examining localized impacts.

Center and Corridor Communities
A summary of land use and transportation changes for the Center and Corridor Communities is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in a 9 percent decrease in C-VMT per capita for Center and Corridor Communities (see Table 16.19). Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Center and Corridor Communities are considered less than significant (LS) for Impact TRN-2. No mitigation is required.

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)¹</td>
<td>180,200</td>
<td>311,200</td>
</tr>
<tr>
<td>Population</td>
<td>224,300</td>
<td>427,500</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>0.80</td>
<td>0.73</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-9%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model. Source: SACOG, June 2015.

Established Communities
A summary of land use and transportation changes for the Established Communities is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in a 15 percent decrease in C-VMT per capita for Established Communities (see Table 16.20). Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Established Communities are considered less than significant (LS) for Impact TRN-2. No mitigation is required.
Table 16.20
Congested VMT Per Capita—Established Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)¹</td>
<td>2,098,500</td>
<td>2,092,100</td>
</tr>
<tr>
<td>Population</td>
<td>1,747,700</td>
<td>2,042,100</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>1.20</td>
<td>1.02</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>-15%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model.
Source: SACOG, October 2011.

Developing Communities
A summary of land use and transportation changes for Developing Communities is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in a 20 percent decrease in C-VMT per capita for Developing Communities (see Table 16.21). Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Developing Communities are considered less than significant (LS) for Impact TRN-2. No mitigation is required.

Table 16.21
Congested VMT Per Capita—Developing Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)²</td>
<td>94,800</td>
<td>436,900</td>
</tr>
<tr>
<td>Population</td>
<td>71,700</td>
<td>411,800</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>1.32</td>
<td>1.06</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>-20%</td>
<td></td>
</tr>
</tbody>
</table>

² Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Rural Residential Communities
A summary of land use and transportation changes for the Rural Residential Communities is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in a 21 percent decrease in C-VMT per capita for Rural Residential Communities (see Table 16.22). Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Rural Residential Communities are considered less than significant (LS) for Impact TRN-2. No mitigation is required.
Table 16.22
Congested VMT Per Capita—Rural Residential Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)²</td>
<td>234,400</td>
<td>213,900</td>
</tr>
<tr>
<td>Population</td>
<td>171,100</td>
<td>197,400</td>
</tr>
<tr>
<td><strong>Cong. VMT per Capita</strong></td>
<td><strong>1.37</strong></td>
<td><strong>1.08</strong></td>
</tr>
<tr>
<td><strong>% Change from Baseline</strong></td>
<td></td>
<td><strong>-21%</strong></td>
</tr>
</tbody>
</table>

¹Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model.

Source: SACOG, June 2015.

Lands Not Identified for Development in the MTP/SCS
A summary of land use and transportation changes for Lands Not Identified for Development is provided in Chapter 2 – Project Description.

With no growth and limited transportation changes household generated C-VMT per capita in these areas is not expected to change.

Therefore, the congested VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in Lands Not Identified for Development are considered less than significant (LS) for Impact TRN-2. No mitigation is required.

Transit Priority Area Impacts

The proposed MTP/SCS analyzes localized impacts using household generated congested VMT per capita. Household generated VMT constitutes about 75 percent of all VMT in the region. As discussed in the Methods and Assumptions section, regional non-household travel (commercial vehicles, airport access, thru traffic) is not attributable to specific sub areas, leaving only household generated VMT for examining localized impacts.

Placer County Transit Priority Areas
A summary of land use and transportation changes for the Placer County TPAs is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in a 15 percent decrease in C-VMT per capita for the Placer County TPAs (see Table 16.23). Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in the Placer County TPAs are considered less than significant (LS) for Impact TRN-2. No mitigation is required.
Table 16.23
Congested VMT Per Capita—Placer County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)¹</td>
<td>65,800</td>
<td>67,200</td>
</tr>
<tr>
<td>Population</td>
<td>39,000</td>
<td>46,900</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>1.69</td>
<td>1.43</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-15%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model.

Source: SACOG, June 2015.

Sacramento County Transit Priority Areas
A summary of land use and transportation changes for the Sacramento County TPAs is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in a 13 percent decrease in C-VMT per capita for the Sacramento County TPAs (see Table 16.24). Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in the Sacramento County TPAs are considered less than significant (LS) for Impact TRN-2. No mitigation is required.

Table 16.24
Congested VMT Per Capita—Sacramento County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)¹</td>
<td>582,400</td>
<td>698,800</td>
</tr>
<tr>
<td>Population</td>
<td>619,800</td>
<td>850,300</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>0.94</td>
<td>0.82</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>-13%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model.

Source: SACOG, June 2015.

Yolo County Transit Priority Areas
A summary of land use and transportation changes for the Yolo County TPAs is provided in Chapter 2 – Project Description.

The MTP/SCS land use and transportation changes result in an 18 percent increase in C-VMT per capita for the Yolo County TPAs (see Table 16.25). However, Yolo County TPAs are 41 percent below the baseline regional average of 1.15 miles. Therefore, the C-VMT per capita impacts related to land use and transportation changes from implementation of the proposed MTP/SCS in
the Yolo County TPAs are considered less than significant (LS) for Impact TRN-2. No mitigation is required.

Table 16.25
Congested VMT Per Capita—Yolo Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2008)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cong. VMT (HH-Gen)¹</td>
<td>67,500</td>
<td>122,600</td>
</tr>
<tr>
<td>Population</td>
<td>99,100</td>
<td>153,700</td>
</tr>
<tr>
<td>Cong. VMT per Capita</td>
<td>0.68</td>
<td>0.80</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>18%</td>
</tr>
</tbody>
</table>

¹ Includes household-generated congested VMT for all residents of the SACOG region, for travel within the listed geography. Estimates and forecasts from SACSIM regional travel demand model. Source: SACOG, June 2015.

**Mitigation Measures**

None required.

**Impact TRN-3: Cause combined bicycle, walk, and transit person trips per capita to be lower than the applicable baseline average, and cause a decline in the bicycle, walk, and transit person trips per capita that exceeds the baseline regional average.**

**Regional Impacts**

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

Table 16.26 provides estimates of weekday person trips by bicycle, walk or transit modes for the region as a whole. Total weekday person trips by all three modes increase by 677,370 (a 77 percent increase from the baseline). This is achieved through compact land uses, which are more effectively served by transit and support potentially higher rates of walking and biking, and investment in supporting transportation infrastructure. In addition to compact development, the amount of complementary, mixed-use development in the proposed MTP/SCS further supports shorter vehicle trips and higher rates of non-motorized travel. Further benefits result from concentrating development in high-quality transit corridors, where residents are more likely to use available transit. Table 16.26 shows the proposed MTP/SCS increases per capita trips by bicycle, walk or transit from 0.39 in 2012 to 0.51, a 31 percent increase.

Therefore, the bicycle, walk, or transit person trips per capita impacts related to land use and transportation changes from implementation of the proposed MTP/ at the regional level are considered less than significant (LS) for Impact TRN-3. No mitigation is required.
Table 16.26
Regional Bicycle, Walk, or Transit Person Trips Per Capita

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>885,400</td>
<td>1,562,700</td>
</tr>
<tr>
<td>Population</td>
<td>2,268,100</td>
<td>3,078,800</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.39</td>
<td>0.51</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>31%</td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Local Impacts

Center and Corridor Communities
A summary of land use and transportation changes for the Center and Corridor Communities is provided in Chapter 2 – Project Description.

Table 16.27 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in Center and Corridor Communities by 43 percent from 0.76 in 2012 to 1.09 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS at the Center and Corridor Communities level are considered less than significant (LS) for Impact TRN-3. No mitigation is required.

Table 16.27
Bicycle, Walk, or Transit Person Trips Per Capita—Center and Corridor Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>179,900</td>
<td>467,500</td>
</tr>
<tr>
<td>Population</td>
<td>238,200</td>
<td>427,500</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.76</td>
<td>1.09</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>43%</td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Established Communities
A summary of land use and transportation changes for the Established Communities is provided in Chapter 2 – Project Description.

Table 16.28 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in Established Communities by 24 percent from 0.38 in 2012 to 0.47 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS at the Established
Communities level are considered less than significant (LS) for Impact TRN-3. No mitigation is required.

Table 16.28
Bicycle, Walk, or Transit Person Trips Per Capita—Established Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>668,600</td>
<td>961,100</td>
</tr>
<tr>
<td>Population</td>
<td>1,762,600</td>
<td>2,042,100</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.38</td>
<td>0.47</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>24%</td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Developing Communities
A summary of land use and transportation changes for the Developing Communities is provided in Chapter 2 – Project Description.

Table 16.29 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in Developing Communities by 29 percent from 0.21 in 2012 to 0.27 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS at the Developing Communities level are considered less than significant (LS) for Impact TRN-3. No mitigation is required.

Table 16.29
Bicycle, Walk, or Transit Person Trips Per Capita—Developing Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>19,600</td>
<td>110,300</td>
</tr>
<tr>
<td>Population</td>
<td>91,500</td>
<td>411,800</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.21</td>
<td>0.27</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>29%</td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Rural Residential Communities
A summary of land use and transportation changes for the Rural Residential Communities is provided in Chapter 2 – Project Description.

Table 16.30 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in Rural Residential Communities by 20 percent from 0.10 in
2012 to 0.12 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS at the Rural Residential Communities level are considered less than significant (LS) for Impact TRN-3. No mitigation is required.

Table 16.30
Bicycle, Walk, or Transit Person Trips Per Capita—Rural Residential Communities

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>17,300</td>
<td>23,800</td>
</tr>
<tr>
<td>Population</td>
<td>175,900</td>
<td>197,400</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.10</td>
<td>0.12</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Lands Not Identified for Development in MTP/SCS
A summary of land use and transportation changes for Lands Not Identified for Development in the MTP/SCS is provided in Chapter 2 – Project Description.

Because the proposed MTP/SCS does not forecast growth for this Community Type, there will be a very limited number of transportation investments in this Community Type by 2036. The focus for the limited investments is on road maintenance, safety enhancements, and other roadway operational improvements. These limited transportation investments in Lands Not Identified for Development will not measurably change bicycle, walk, or transit trips within these areas. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS in Lands Not Identified for Development are considered less than significant (LS) for Impact TRN-3. No mitigation is required.

Transit Priority Area Impacts

Placer County Transit Priority Areas
A summary of land use and transportation changes for the Placer County TPAs is provided in Chapter 2 – Project Description.

Table 16.31 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in the Placer County TPAs by 31 percent from 0.39 in 2012 to 0.51 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS in the Placer County TPAs are considered less than significant (LS) for Impact TRN-3. No mitigation is required.
Table 16.31
Bicycle, Walk, or Transit Person Trips Per Capita—Placer County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>15,500</td>
<td>24,000</td>
</tr>
<tr>
<td>Population</td>
<td>39,900</td>
<td>46,900</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.39</td>
<td>0.51</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>31%</td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Sacramento County Transit Priority Areas
A summary of land use and transportation changes for the Sacramento County TPAs is provided in Chapter 2 – Project Description.

Table 16.32 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in the Sacramento County TPAs by 45 percent from 0.51 in 2012 to 0.74 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS in the Sacramento County TPAs are considered less than significant (LS) for Impact TRN-3. No mitigation is required.

Table 16.32
Bicycle, Walk, or Transit Person Trips Per Capita—Sacramento County Transit Priority Areas

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips¹</td>
<td>323,600</td>
<td>633,000</td>
</tr>
<tr>
<td>Population</td>
<td>640,200</td>
<td>850,300</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>0.51</td>
<td>0.74</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td></td>
<td>45%</td>
</tr>
</tbody>
</table>

¹ Estimates of weekday person trips by mode from SACSIM regional travel demand model.
Source: SACOG, June 2015.

Yolo County Transit Priority Area
A summary of land use and transportation changes for the Yolo County TPAs is provided in Chapter 2 – Project Description.

Table 16.33 shows that the proposed MTP/SCS land use and transportation changes increases per capita trips by bicycle, walk or transit in the Yolo County TPAs by 24 percent from 1.22 in 2012 to 1.51 in 2036. Therefore, the impacts to bicycle, walk, or transit trips related to land use and transportation changes from implementation of the proposed MTP/SCS in the Yolo County TPAs are considered less than significant (LS) for Impact TRN-3. No mitigation is required.
Table 16.33
Bicycle, Walk, or Transit Person Trips Per Capita—Yolo County
Transit Priority Area

<table>
<thead>
<tr>
<th>Geography/Variable</th>
<th>Baseline (2012)</th>
<th>2036 MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday Bike+Walk+Transit Trips&lt;sup&gt;1&lt;/sup&gt;</td>
<td>128,500</td>
<td>232,300</td>
</tr>
<tr>
<td>Population</td>
<td>104,900</td>
<td>153,700</td>
</tr>
<tr>
<td>Trips Per Capita</td>
<td>1.22</td>
<td>1.51</td>
</tr>
<tr>
<td>% Change from Baseline</td>
<td>24%</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup> Estimates of weekday person trips by mode from SACSIM regional travel demand model.

Source: SACOG, June 2015.

**MITIGATION MEASURES**

None required.

**IMPACT TRN-4: CAUSE AVERAGE TRANSIT PASSENGER BOARDINGS PER VEHICLE SERVICE HOUR TO BE LOWER THAN THE APPLICABLE AVERAGE.**

**Regional Impacts**

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

The land use changes in the proposed MTP/SCS, in combination with the transportation changes, improve transit productivity throughout the region. This is achieved by emphasizing transit service and complete streets near transit, walk, and bicycle supportive land uses with higher density and a mix of uses most likely to generate a mix of travel modes. Table 16.34 provides estimates of weekday passenger boardings, vehicle service hours, and passenger boarding per vehicle service hour for each county and the plan area as a whole. Transit productivity, as measured by passenger boardings per service hour, increases regionally by 66 percent.

Therefore, the impacts to transit passenger boardings per service hour related to land use and transportation changes from implementation of the proposed MTP/SCS at the regional level are considered less than significant (LS) for Impact TRN-4. No mitigation is required.
Table 16.34
Passenger Boardings Per Service Hour for All Weekday Transit Service—Regional and Local Area

<table>
<thead>
<tr>
<th>County/Service</th>
<th>Passenger Boardings</th>
<th>Vehicle Service Hours</th>
<th>Passenger Boardings Per Service Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2036 MTP/SCS</td>
<td></td>
</tr>
<tr>
<td>El Dorado</td>
<td>1,230</td>
<td>1,871</td>
<td>110</td>
</tr>
<tr>
<td>Placer</td>
<td>3,102</td>
<td>18,346</td>
<td>312</td>
</tr>
<tr>
<td>Sacramento</td>
<td>103,594</td>
<td>416,753</td>
<td>2,439</td>
</tr>
<tr>
<td>Sutter</td>
<td>1,921</td>
<td>6,812</td>
<td>107</td>
</tr>
<tr>
<td>Yolo</td>
<td>26,474</td>
<td>60,946</td>
<td>711</td>
</tr>
<tr>
<td>Yuba</td>
<td>2,019</td>
<td>6,430</td>
<td>103</td>
</tr>
<tr>
<td>Total</td>
<td>138,340</td>
<td>511,158</td>
<td>3,782</td>
</tr>
</tbody>
</table>

1 Includes all fixed route/fixed schedule transit services operating in the SACOG region.
Source: SACOG, June 2015.

Local Impacts

Center and Corridor Communities, Established Communities, and Developing Communities
While SACOG does not model passenger boardings and vehicle service hours at the Community Type level, Table 16.34 illustrates significant increases in transit productivity throughout the region with the exception of El Dorado County. The regional and county level transit productivity improvements are expected to extend to the Community Types with Centers and Corridors, Established and Developing Communities each experiencing an increase in high quality local and commuter transit service and more transit-supportive land uses in 2036, as compared to the baseline.

Rural Residential Communities
Regional and county level transit productivity improvements discussed above and illustrated in Table 16.34 will also extend to Rural Residential Communities. Although transit trips will remain a small share of travel in these areas, strategic investments made to lifeline rural and commuter bus services that serve these areas are more productive in 2036, as compared to the baseline.

Lands Not Identified for Development in the MTP/SCS
Since no growth is assumed in the proposed MTP/SCS in this Community Type, the proposed MTP/SCS will make a very limited number of transportation investments in this Community Type by 2036. The limited number of transportation investments focus on road maintenance, safety enhancements, and other roadway operational improvements. With little to no transit service currently in these areas, the transportation investments in the proposed MTP/SCS will not negatively affect transit passenger boardings per service hour.

Transit Priority Area Impacts

Placer County Transit Priority Areas
A summary of land use and transportation changes for the Placer County TPAs is provided in Chapter 2 – Project Description.
In addition to compact development, the amount of complementary, mixed-use development in the proposed MTP/SCS further supports shorter vehicle trips and higher rates of non-motorized travel in the Placer County TPAs. Further benefit results from concentrating development in high-quality transit corridors, where residents are more likely to use available transit.

Table 16.35 provides estimates of weekday passenger boardings, vehicle service hours, and passenger boarding per vehicle service hour for the Placer County TPAs. The table reflects only that transit service that meets the SB375 requirements for high quality transit service of 15 minutes or better headways or rail transit of any frequency. Boardings per vehicle service hour on this type of transit service increase 347 percent from 6.3 in 2012 to 28.2 in 2036.

Therefore, the impacts to transit passenger boardings per service hour related to land use and transportation changes from implementation of the proposed MTP/SCS in the Placer County TPAs are considered less than significant (LS) for Impact TRN-4. No mitigation is required.

<table>
<thead>
<tr>
<th>County/Service</th>
<th>Passenger Boardings</th>
<th>Vehicle Service Hours</th>
<th>Passenger Boardings Per Service Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placer</td>
<td>662</td>
<td>4,330</td>
<td>105</td>
</tr>
</tbody>
</table>

Table 16.35

**Passenger Boardings Per Service Hour for TPA-Qualifying All Service**—Placer County TPAs

1 “TPA Qualifying” transit service is defined in SB375 legislation as any transit service operating at 15-minute or better headway (i.e., 4 schedules per hour) during the peak period, or rail transit service of any service frequency.

**Sacramento County Transit Priority Areas**

A summary of land use and transportation changes for the Sacramento County TPAs is provided in Chapter 2 – Project Description.

In addition to compact development, the amount of complementary, mixed-use development in the proposed MTP/SCS further supports shorter vehicle trips and higher rates of non-motorized travel in the Sacramento County TPAs. Further benefit results from concentrating development in high-quality transit corridors, where residents are more likely to use available transit.

Table 16.36 provides estimates of weekday passenger boardings, vehicle service hours, and passenger boarding per vehicle service hour for the Sacramento County TPAs. The table reflects only that transit service that meets the SB375 requirements for high quality transit service of 15 minutes or better headways or rail transit of any frequency. Boardings per vehicle service hour on this type of transit service increase 90 percent from 58 in 2012 to 110.4 in 2036.

Therefore, the impacts to transit passenger boardings per service hour related to land use and transportation changes from implementation of the proposed MTP/SCS in the Sacramento County TPAs are considered less than significant (LS) for Impact TRN-4. No mitigation is required.
**Table 16.36**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacramento</td>
<td>81,694</td>
<td>322,219</td>
<td>1,409</td>
<td>2,920</td>
<td>58.0</td>
<td>110.4</td>
<td>+90%</td>
</tr>
</tbody>
</table>

1“TPA Qualifying” transit service is defined in SB375 legislation as any transit service operating at 15-minute or better headway (i.e., 4 schedules per hour) during the peak period, or rail transit service of any service frequency. Source: SACOG, June 2015.

**Yolo County Transit Priority Areas**

A summary of land use and transportation changes for the Yolo County TPAs level is provided in Chapter 2 – Project Description.

In addition to compact development, the amount of complementary, mixed-use development in the proposed MTP/SCS further supports higher rates of non-motorized travel in the Yolo County TPAs. Further benefit results from concentrating development in high-quality transit corridors, where residents are more likely to use available transit.

Table 16.37 provides estimates of weekday passenger boardings, vehicle service hours, and passenger boarding per vehicle service hour for the Yolo County TPAs. The table reflects only that transit service that meets the SB375 requirements for high quality transit service of 15 minutes or better headways or rail transit of any frequency. Boardings per vehicle service hour on this type of transit service increase 18 percent from 50.2 in 2012 to 59.5 in 2036.

Therefore, the impacts to transit passenger boardings per service hour related to land use and transportation changes from implementation of the proposed MTP/SCS in the Yolo County TPAs are considered less than significant (LS) for Impact TRN-4. No mitigation is required.

**Table 16.37**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yolo</td>
<td>17,774</td>
<td>37,742</td>
<td>354</td>
<td>635</td>
<td>50.2</td>
<td>59.5</td>
<td>+18%</td>
</tr>
</tbody>
</table>

1“TPA Qualifying” transit service is defined in SB375 legislation as any transit service operating at 15-minute or better headway (i.e., 4 schedules per hour) during the peak period, or rail transit service of any service frequency. Source: SACOG, June 2015.

**Mitigation Measures**

None required.
**IMPACT TRN-5: CAUSE INTERFERENCE WITH EXISTING OR PLANNED BICYCLE AND PEDESTRIAN FACILITIES.**

### Regional Impacts

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

Compact land uses are more effectively served by transit, support potentially higher rates of walking and biking, and generate less vehicle travel. In addition to compact development, the amount of complementary, mixed-use development in the proposed MTP/SCS supports higher rates of non-motorized travel. Table 16.38 provides estimates for total bicycle and walk trips and trips per capita in 2012 and 2036. Bicycle person trips are projected to increase 51.1 percent from 165,550 in 2012 to 250,220 by 2036 in the proposed MTP/SCS. Walk person trips increase 57.6 percent from about 618,400 to about 974,300. Bicycle and walk trips per capita increase by 14 and 19 percent, respectively.

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2012</th>
<th>2036 Proposed MTP/SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weekday Person Trips by Walk/Bike</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle Trips</td>
<td>165,500</td>
<td>250,200</td>
</tr>
<tr>
<td>Walk Trips</td>
<td>618,400</td>
<td>974,300</td>
</tr>
<tr>
<td>Population</td>
<td>2,268,100</td>
<td>3,078,800</td>
</tr>
<tr>
<td><strong>Bicycle Trips Per Capita</strong></td>
<td>0.07</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Walk Trips Per Capita</strong></td>
<td>0.27</td>
<td>0.32</td>
</tr>
<tr>
<td><strong>Percent Change in Trips Per Capita from 2012</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle Trips</td>
<td>n/a</td>
<td>14%</td>
</tr>
<tr>
<td>Walk Trips</td>
<td>n/a</td>
<td>19%</td>
</tr>
</tbody>
</table>

*Source: SACOG, June 2015.*

In terms of transportation investments, the proposed MTP/SCS invests in a number of improvements to the transportation system in the plan area. These investments include $3.6 billion (inflation adjusted) in exclusively bicycle and pedestrian investments and additional bicycle and pedestrian infrastructure as part of roadway projects in the proposed MTP/SCS. An estimated 8 percent of road capital projects in the proposed MTP/SCS include bicycle and pedestrian improvements and all projects awarded funds managed by SACOG are anticipated to maintain or improve bicycle and pedestrian travel. Despite this policy support for bicycle and pedestrian travel, some of these roadway projects in the proposed MTP/SCS may interfere with the existing or planned bicycle or pedestrian system. Interferences may include:

- roadway improvement projects or land use changes which result in higher vehicle volumes or speeds adjacent to Class 1, Class 2, or Class 3 bike facilities;
- roadway improvement projects that eliminate Class 1, Class 2, or Class 3 bike facilities;
- projects that make pedestrian or bicycle traffic crossing roadways more difficult by increasing roadway width or resulting in higher volumes of vehicles;
- projects that interfere with the right-of-way or construction of future planned bike or pedestrian facilities, including Class 1 bike routes; and
- other projects which may interfere with or interrupt bike routes or pedestrian facilities.

Although some proposed MTP/SCS projects may interfere with existing or planned bicycle and pedestrian system elements, Table 16.38 illustrates significant increases in bike and walk trips in the plan area. As a result of proposed MTP/SCS investments for bicycle and pedestrian supportive transportation infrastructure and the underlying land use patterns, the plan is forecasted to increase regional bicycle and pedestrian trips per capita. If the proposed MTP/SCS was significantly interfering with bicycle and pedestrian facilities, trips per capita would decrease as individuals were less likely or able to choose to walk or bicycle.

The proposed MTP/SCS will also result in a significant expansion of the region’s bicycle and pedestrian system. Table 16.39 provides tabulation of baseline mixed-use trail (Class I) and on road bicycle route (Class II) mileage, and an estimate of the increase in mileage, which could be funded through the proposed MTP/SCS. Total mileage increases 77 percent combining both Class I and Class II route types, and 27 percent on a per capita basis. Because the proposed MTP/SCS expands the network of Class I and Class II routes well above population growth, implementation of the proposed MTP/SCS will improve overall connectivity of the region’s bicycle system. It is also possible that the region will fund new Class IV bikeways, which have already been constructed in Davis. These are a new classification with evolving design standards so a specific forecast of planned miles was not available for this plan update.

While Class I routes serve both bicyclists and pedestrians, they do not fully represent the full investment in pedestrian specific improvements such as sidewalks, crossing signals, and other intersection improvements. Although no quantifiable accounting of the region’s pedestrian system is available, the overall improvements in land use pattern and street pattern described above will make walking a more attractive option.

Support for emphasizing bicycle and pedestrian travel can also be found in the proposed MTP/SCS policies related to investment strategies. Key policies are listed below.

13. Policy: SACOG invests federal and state funds that come to SACOG to achieve regional policies and priorities…

29. Policy: SACOG encourages locally determined developments consistent with Blueprint principles and local circulation plans to be designed with walking, bicycling and transit use as primary transportation considerations

31. Policy: As long as the existing funding and program structure remains essentially as it is today, SACOG intends to invest funds that are at SACOG’s discretion, following these policy guidelines:

31.1. Strategy: Continue to use funds coming through SACOG to fund regional objectives for air quality, community design, transportation demand management, and bicycle and pedestrian programs. The funding level should be proportionally at least as great as programming levels since the regional programs began in 2003.
Table 16.39
Bicycle Facility Miles

<table>
<thead>
<tr>
<th>County</th>
<th>Class I&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Class II</th>
<th>Both Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Dorado&lt;sup&gt;2&lt;/sup&gt;</td>
<td>11</td>
<td>20</td>
<td>31</td>
</tr>
<tr>
<td>Placer&lt;sup&gt;2&lt;/sup&gt;</td>
<td>102</td>
<td>215</td>
<td>317</td>
</tr>
<tr>
<td>Sacramento</td>
<td>280</td>
<td>638</td>
<td>918</td>
</tr>
<tr>
<td>Sutter</td>
<td>10</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Yolo</td>
<td>65</td>
<td>170</td>
<td>235</td>
</tr>
<tr>
<td>Yuba</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Region</td>
<td>478</td>
<td>1,095</td>
<td>1,573</td>
</tr>
<tr>
<td>Miles Per 100k Population</td>
<td>21.1</td>
<td>48.3</td>
<td>69.4</td>
</tr>
<tr>
<td>2036 MTP/SCS&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Dorado&lt;sup&gt;2&lt;/sup&gt;</td>
<td>70</td>
<td>225</td>
<td>295</td>
</tr>
<tr>
<td>Placer&lt;sup&gt;2&lt;/sup&gt;</td>
<td>232</td>
<td>308</td>
<td>540</td>
</tr>
<tr>
<td>Sacramento</td>
<td>527</td>
<td>1,499</td>
<td>2,026</td>
</tr>
<tr>
<td>Sutter</td>
<td>28</td>
<td>80</td>
<td>108</td>
</tr>
<tr>
<td>Yolo</td>
<td>137</td>
<td>305</td>
<td>442</td>
</tr>
<tr>
<td>Yuba</td>
<td>37</td>
<td>58</td>
<td>95</td>
</tr>
<tr>
<td>Region</td>
<td>1,032</td>
<td>2,476</td>
<td>3,508</td>
</tr>
<tr>
<td>Miles Per 100k Population</td>
<td>33.5</td>
<td>80.4</td>
<td>113.9</td>
</tr>
<tr>
<td>Change from 2012</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Dorado&lt;sup&gt;2&lt;/sup&gt;</td>
<td>536%</td>
<td>1025%</td>
<td>852%</td>
</tr>
<tr>
<td>Placer&lt;sup&gt;2&lt;/sup&gt;</td>
<td>127%</td>
<td>43%</td>
<td>70%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>88%</td>
<td>135%</td>
<td>121%</td>
</tr>
<tr>
<td>Sutter</td>
<td>180%</td>
<td>100%</td>
<td>116%</td>
</tr>
<tr>
<td>Yolo</td>
<td>111%</td>
<td>79%</td>
<td>88%</td>
</tr>
<tr>
<td>Yuba</td>
<td>311%</td>
<td>427%</td>
<td>375%</td>
</tr>
<tr>
<td>Region</td>
<td>116%</td>
<td>126%</td>
<td>123%</td>
</tr>
<tr>
<td>Miles Per 100k Population</td>
<td>59%</td>
<td>66%</td>
<td>64%</td>
</tr>
</tbody>
</table>

<sup>1</sup>2012 route mileage from SACOG’s regional GIS centerline data.
<sup>2</sup>El Dorado and Placer Counties exclude the Tahoe Basin portions.
<sup>3</sup>Estimates of 2035 MTP/SCS are based on explicitly identified bicycle lane projects, plus an estimate of currently adopted bicycle master plans, which may be funded or implemented through other transportation projects, or as stand-alone projects.

Source: SACOG, June 2015.
Therefore, the impacts to the connectivity of the region’s bicycle and pedestrian system related to land use and transportation changes from implementation of the proposed MTP/SCS at the regional level are considered less than significant (LS) for Impact TRN-5. No mitigation is required.

Local Impacts

Center and Corridor Communities, Established Communities, and Developing Communities
A summary of land use and transportation changes for the Center and Corridor, Established, and Developing Communities is provided in Chapter 2 – Project Description.

As discussed in the regional impacts section above, all Community Types will have various transportation improvements by 2036 and a limited number of these projects may create interference to the existing or planned bicycle or pedestrian system. Due to a land use pattern that is supportive of non-motorized travel and strategic investments in the plan area, the proposed MTP/SCS is forecasted to increase regional transit, bicycle and pedestrian trips per capita. If the proposed MTP/SCS was significantly interfering with bicycle and pedestrian facilities, trips per capita would decrease as individuals were less likely or able to choose to walk or bicycle.

It is anticipated that the regional and county level transit productivity improvements summarized in Table 16.34 will extend to the Community Type level. Centers and Corridors, Established and Developing Communities will each experience a substantial increase in bicycle and pedestrian infrastructure and more compact and mixed land uses in 2036 that are more supportive of walking and biking. Table 16.27, Table 16.28, and Table 16.29 in the preceding impact discussion demonstrates that the combined walk, bike and transit mode shares increase significantly in each of these three Community Types by 2036.

Combined with the land use changes in these Community Types, the transportation investments in the proposed MTP/SCS will improve connectivity of the bicycle and pedestrian systems in these areas.

Therefore, the impacts to the connectivity of the region’s bicycle and pedestrian system related to transportation changes from implementation of the proposed MTP/SCS at the Center and Corridor, Established, and Developing Communities level are considered less than significant (LS) for Impact TRN-5. No mitigation is required.

Rural Residential Communities
A summary of land use and transportation changes for the Rural Residential Communities is provided in Chapter 2 – Project Description.

As discussed in the regional impacts section above, all Community Types will have various transportation improvements by 2036 and a limited number of these projects may create interference to the existing or planned bicycle or pedestrian system. Most existing and planned bicycle and pedestrian facilities in Rural Residential Communities consist of Class III bicycle routes along rural roadways and limited sidewalks or shoulder paths. It is unlikely that the limited transportation improvements or traffic increases in these areas will significantly interfere with these types of facilities. If the proposed MTP/SCS was significantly interfering with bicycle and pedestrian
facilities, trips per capita would decrease as individuals were less likely or able to choose to walk or bicycle.

It is anticipated that the regional per capita increase in bike and walk travel identified in Table 16.38 will extend to the local level in Rural Residential Communities given the limited land use changes in these areas and the transportation investment focus on safety and road rehabilitation investments along county roads that also include Class III bicycle facilities. Furthermore, Table 16.30 demonstrates that the combined walk, bike and transit mode shares increase in Rural Residential Communities by 2036, as compared to the baseline. Combined with the land use patterns in Rural Residential Communities, the transportation investments in the proposed MTP/SCS will improve connectivity of the bicycle and pedestrian systems in these areas.

Therefore, the impacts to the connectivity of the region’s bicycle and pedestrian system related to land use and transportation changes from implementation of the proposed MTP/SCS at the Rural Residential level are considered less than significant (LS) for Impact TRN-5. No mitigation is required.

Lands Not Identified for Development in the MTP/SCS
A summary of land use and transportation changes for the Lands Not Identified for Development is provided in Chapter 2 – Project Description.

Since no growth is assumed in the proposed MTP/SCS in this Community Type, the proposed MTP/SCS will make a very limited number of transportation investments in this Community Type by 2036. The limited number of transportation investments focus on road maintenance, safety enhancements, and other roadway operational improvements that would not disrupt the minimal bicycle and pedestrian system in these areas.

Therefore, the impacts to the connectivity of the region’s bicycle and pedestrian system related to land use and transportation changes from implementation of the proposed MTP/SCS at the Rural Residential level are considered less than significant (LS) for Impact TRN-5. No mitigation is required.

Transit Priority Area Impacts

Placer County, Sacramento County, and Yolo County TPAs
A summary of land use and transportation changes for the Placer County TPAs, Sacramento County TPAs, and Yolo County TPAs is provided in Chapter 2 – Project Description.

The regional per capita increase in non-motorized travel identified in Table 16.38 is expected to apply in all the TPAs given the land uses in these areas and the focus on bicycle and pedestrian investments. Furthermore, Table 16.31 Table 16.32, and Table 16.33 demonstrate that the combined walk, bike and transit mode shares increase in each of the three county TPAs by 2036, as compared to 2012.

The land use changes in transit priority areas, in combination with the transportation investments, will improve the connectivity of the bicycle and pedestrian systems in these areas.

Therefore, the impacts to the connectivity of the region’s bicycle and pedestrian system related to land use and transportation changes from implementation of the proposed MTP/SCS in the Placer
County TPAs, Sacramento County TPAs, and Yolo County TPAs are considered less than significant (LS) for Impact TRN-5. No mitigation is required.

**MITIGATION MEASURES**

None required

**IMPACT TRN-6: CAUSE A DISRUPTION TO THE MOVEMENT OF AGRICULTURAL PRODUCTS ON RURAL ROADWAYS.**

**Regional Impacts**

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

In terms of rural areas, less than two percent of the growth in housing and employment takes place in Rural Residential Communities keeping the makeup of the land use patterns in these areas largely the same as they are in the 2012 baseline. Forecasted growth along the urban/rural edge, however, will lead to some conversion of agricultural lands. Transportation projects to accommodate growth in these areas, however, may disrupt the movement of agricultural and farm products on rural roadways in the following situations:

- new or expanded roads that cut through existing agricultural lands and access roads; and
- new or expanded roads that disrupt agricultural or farm equipment access to, along or across roads used for accessing fields, processing destinations, or other agricultural goods movement routes.

In cases where transportation projects may interfere with the movement of agricultural or farm products, the proposed MTP/SCS includes a regional policy and related strategies to support transportation investments that help implement the Rural-Urban Connections Strategy (RUCS). This policy support has been reflected in the last two SACOG regional funding rounds that included funding support for regionally important farm-to-market goods movement travel investments.

Little growth and limited roadway expansions in the proposed MTP/SCS occur in rural areas away from the edge or urban development. Also, rural roadways are a small share of the regional transportation network lane miles and an even smaller share of overall travel for both the baseline and 2036 horizon year. Two of the region’s Community Types (Centers and Corridors and Established Communities) comprise the largest share of baseline and 2036 population, lane miles and travel demand. Neither of these Community Types contains agricultural land uses or rural roadways.

Therefore, the impacts to the movement of agricultural and farm products on rural roadways related to land use or transportation changes from implementation of the proposed MTP/SCS at the regional level are considered less than significant (LS) for Impact TRN-6. No mitigation is required.

**Local Impacts**

**Center and Corridor Communities and Established Communities**

A summary of land use and transportation changes for Center and Corridor and Established Communities is provided in Chapter 2 – Project Description.
Center and Corridor and Established Communities do not contain rural land uses or rural roadways. Therefore, the impacts to the movement of agricultural and farm products on rural roadways related to land use changes from implementation of the proposed MTP/SCS for lands in the Center and Corridor and Established Communities are considered less than significant (LS) for Impact TRN-6. No mitigation is required.

**Developing Communities**

A summary of land use and transportation changes for the Developing Communities is provided in Chapter 2 – Project Description.

Developing communities will not see the same mix of transportation projects as Center and Corridor Communities and Established Communities. Developing Communities will see more road widening projects and newly constructed road projects adjacent to agricultural areas to serve the new residential and employment developments that will be built by 2036. Therefore, there is a greater risk of disrupting the movement of agricultural products on rural roadways.

Transportation projects to serve development in Developing Communities may interfere with the movement of agricultural and farm products on rural roadways in the following situations:

- new or expanded roads that cut through existing agricultural lands and access roads; and
- new or expanded roads that disrupt agricultural or farm equipment access to, along or across roads used for accessing fields, processing destinations, or other farm-to-market goods movement routes.

These disruptions are partially addressed through policies and investments to support agricultural goods movement travel. In cases where transportation projects may interfere with the movement of agricultural or farm products, the proposed MTP/SCS includes a regional policy and related strategies to support transportation investments that help implement the Rural-Urban-Connections-Strategy (RUCS). This policy support has been reflected in the last two SACOG regional funding rounds that included funding support for regionally important farm-to-market goods movement travel investments.

Despite a regional policy commitment to efficient agricultural and farm product movement on rural roadways, a significant share of the new growth in the MTP/SCS is in areas adjacent to farmland and agricultural operations. The planning, design, construction and operation of expanded roadways adjacent to agricultural lands may take into account the needs of agricultural activity. Nevertheless, it is possible that some of the new and expanded roadways in Developing Communities will have a negative impact on the movement of agricultural and farm products.

Therefore, the impacts to the movement of agricultural and farm products on rural roadways related to land use and transportation changes from implementation of the proposed MTP/SCS at the Developing Communities level are considered potentially significant (PS) for Impact TRN-6. Mitigation is described below.

**Rural Residential Communities**

A summary of land use and transportation changes for the Rural Residential Communities is provided in Chapter 2 – Project Description.
Rural Residential Communities will have significantly less growth than Developing Communities and limited new or expanded roadways. Disruptions to the movement of agricultural and farm equipment on rural roadways are possible, however, because virtually all growth in these areas will be near or adjacent to agricultural lands and the largest share of passenger travel increases will be on rural roadways that also support agricultural truck and equipment movements. These disruptions can be minimized through RUCS policies and investments to support agricultural goods movement travel.

As described in the preceding Developing Communities impact discussion, some of the proposed MTP/SCS transportation improvements may interfere with the movement of agricultural and farm products on rural roadways. It is possible that some of the MTP/SCS improvements will have a negative impact on the movement of agricultural and farm products in Rural Residential Communities. For example, an increase in higher-speed traffic volumes along rural roads may reduce safety and access to farm fields for agricultural vehicles.

Therefore, the impacts to the movement of agricultural and farm products on rural roadways related to land use and transportation changes from implementation of the proposed MTP/SCS at the Developing Communities level are considered potentially significant (PS) for Impact TRN-6. Mitigation is described below.

**Lands Not Identified for Development in the MTP/SCS**

A summary of land use and transportation changes for the Lands Not Identified for Development is provided in Chapter 2 – Project Description.

Since no growth is assumed in the proposed MTP/SCS in this Community Type, the proposed MTP/SCS will make a very limited number of transportation investments in this Community Type by 2036. The limited number of transportation investments focus on road maintenance, safety enhancements, and other roadway operational improvements.

Therefore, the impacts to the movement of agricultural and farm products on rural roadways related to land use and transportation changes from implementation of the proposed MTP/SCS in Lands Not Identified for Development are considered less than significant (LS) for Impact TRN-6. No mitigation is required.

**Transit Priority Area Impacts**

*Placer County, Sacramento County, and Yolo County TPAs*

The transit priority areas do not contain rural land uses or rural roadways.

Therefore, the impacts to the movement of agricultural and farm products on rural roadways related to land use changes from implementation of the proposed MTP/SCS for lands in the MTP/SCS transit priority areas are considered less than significant (LS) for Impact TRN-6. No mitigation is required.

**Mitigation Measures**

As part of planning, design, and engineering for projects that result from the proposed MTP/SCS, the implementing agency shall ensure that transportation and traffic impacts are treated in accordance with applicable federal, state and local laws and regulations. SACOG does not have
authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following measure(s) at a project-level would reduce the impacts to the transportation system as they relate to the movement of agricultural products on rural roadways and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code, § 21081).

Mitigation Measure TRN-1: Strategies to support the movement of agricultural products on rural roadways near growth areas.

Implementing agencies shall require implementation of best practice goods movement standards regarding agricultural products transport and apply recommended applicable mitigation measures as defined by state and federal agencies for new growth in Developing Communities or Rural Residential Communities. Examples of mitigation measures should include, but are not limited to, the following:

To reduce the impacts to the movement of agricultural products on rural roadways related to land use and transportation changes from the implementation of the proposed MTP/SCS, one or more of the following measures shall be implemented by local agencies for new growth in Developing Communities or Rural Residential Communities.

- Consider access needs for agricultural uses in the site design and phasing of development adjacent to rural roads. Balancing the needs from increased passenger vehicle travel in Developing Communities with the preservation of key access points for trucks and agricultural equipment can increase safe and efficient agricultural operations.
- Prioritize safety and design improvements along rural roadways that are important farm-to-market routes and projected to accommodate future traffic increases from growth in Developing Communities and Rural Residential areas. Focusing available local funding improvements to make these roadways consistent with local design standards (such as horizontal curvature, site distance, etc.) improves safety and reduces friction between agricultural operations, trucks, and passenger vehicles on the corridors with the greatest need.
  - Reduce the growth in passenger vehicle miles traveled (VMT) in Developing Communities and Rural Residential areas through increased local investments in transit and non-motorized improvements. Implementing transportation demand management strategies identified in Mitigation Measure TRN 2. that divert some single occupancy auto trips to alternative modes reduces friction with travel for agricultural operations along rural roadways.

**SIGNIFICANCE AFTER MITIGATION**

If the implementing agency adopts this mitigation measure, Impact TRN-6 may be reduced to a less than significant (LS) level. The strategies identified are programmatic; they would need to be refined and matched to local conditions in any subsequent project level environmental analysis. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation will reduce the impact to less than significant.
However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact TRN-6 remains significant and unavoidable (SU) for purposes of this program-level review.

**IMPACT TRN-7: CAUSE A DISRUPTION TO AVIATION ACCESS OR SERVICE.**

**Regional Impacts**

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

The proposed MTP/SCS contains various projects that would modify or expand the regional transportation network. These projects were developed based on existing deficiencies and anticipated future needs given projected population, employment, and travel growth in the region. Anticipated future needs accounted for growth in aviation demand for moving people and goods and the proposed MTP/SCS includes projects to improve existing aviation access and service, such as an extension of light rail to the Sacramento International Airport and a lengthened deceleration lane on the Airport Boulevard northbound off-ramp from Interstate 5. A full list of transportation projects contained in the MTP/SCS is available in Appendix A-1.

Therefore, the proposed MTP/SCS transportation changes at the regional level are considered less than significant (LS) for Impact TRN-7. No mitigation is required.

**Local Impacts**

Local impacts would be identical to the regional impact conclusion.

**Transit Priority Area Impacts**

TPA impacts would be identical to regional impacts.

**MITIGATION MEASURES**

None required.

**IMPACT TRN-8: CAUSE A DISRUPTION TO GOODS MOVEMENT INTO OR THROUGH THE SACOG REGION.**

**Regional Impacts**

A summary of land use and transportation changes for the proposed MTP/SCS is provided in Chapter 2 – Project Description.

The proposed MTP/SCS contains various projects that would modify or expand the regional transportation network. These projects were developed based on existing deficiencies and anticipated future needs given projected population, employment, and travel growth in the region. Anticipated future needs accounted for growth in goods movement and the proposed MTP/SCS includes projects to improve existing transportation facilities associated with the increased demand, such as construction of a third track along the Union Pacific mainline between Sacramento and
Placer Counties, a truck climbing lane on I-80 near Colfax, and a number of highway improvements that will benefit both passenger vehicles and trucks. A full list of transportation projects contained in the MTP/SCS is available in Appendix A-1.

Therefore, the proposed MTP/SCS transportation changes at the regional level are considered less than significant (LS) for Impact TRN-8. No mitigation is required.

Local Impacts

Local impacts would be identical to the regional impact conclusion.

Transit Priority Area Impacts

TPA impacts would be identical to regional impacts.

**Mitigation Measures**

None required.

**Impact TRN-9: Cause a Disruption to the Ongoing Operations of the Applicable Regional or Local Area Transportation System Due to Construction Activities.**

Regional Impacts

A summary of land use and transportation changes for the MTP/SCS plan area is provided in Chapter 2 – Project Description.

Construction activities from the implementation of the proposed MTP/SCS will be short term, intermittent, and dispersed geographically. At the regional level, these disruptions will likely impact a very small portion of the overall roadway network and will not significantly impact the operations of the overall regional transportation system.

Therefore, construction activities that interfere with the ongoing operations of the transportation system from the proposed MTP/SCS land use and transportation changes at the regional level are considered less than significant (LS) for Impact TRN-9. No mitigation is required.

Local Impacts

*Center and Corridor Communities, Established Communities, Developing Communities, Rural Residential Communities, and Lands Not Identified for Development in the MTP/SCS*

The construction activities associated with implementing the land use and transportation changes in the proposed MTP/SCS would potentially interfere with the normal operations of the localized transportation system. These construction activities include land development projects and new transit, non-motorized and roadway projects. Interference with the normal operations of a local transportation system could occur from detours or bottlenecks where activities disrupt traffic in one or more travel lanes, sidewalks, or bicycle routes. Also, certain large construction projects may increase travel on local roads not designed for heavier traffic volumes as workers and supplies travel to and from the sites.
Large numbers of construction projects occurring at the same time in a local area, or the construction of many projects consecutively in a local area, could result in localized delay impacts or emergency response delays. These potential impacts should be evaluated at the project level as more information about the timing, design, scope and construction program are available.

Therefore, construction activities that interfere with the ongoing operations of the transportation system from the proposed MTP/SCS land use and transportation changes at the localized level are considered potentially significant (PS) for Impact TRN-9. Mitigation Measure TRN-2 is described below.

Transit Priority Area Impacts

Placer County, Sacramento County, and Yolo County TPAs
TPA impacts would be identical to localized impacts.

Therefore, construction activities that interfere with the ongoing operations of the transportation system from the proposed MTP/SCS land use and transportation changes in the TPAs are considered potentially significant (PS) for Impact TRN-9. Mitigation Measure TRN-2 is described below.

MITIGATION MEASURES

As part of planning, design and engineering for projects that result from the proposed MTP/SCS, the implementing agency shall ensure that transportation and traffic impacts are treated in accordance with applicable federal, state and local laws and regulations. SACOG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of another public agency. However, implementation of the following mitigation measures at a project-level would reduce the impacts from construction activities on the transportation system and traffic, and agencies with jurisdiction to adopt these measures should do so (Pub. Resources Code, § 21081).

Mitigation Measure TRN-2: Apply best practice strategies to reduce the localized impact from construction activities on the transportation system.

Implementing agencies shall require implementation of best practice strategies regarding construction activities on the transportation system and apply recommended applicable mitigation measures as defined by state and federal agencies. Examples of mitigation measures should include, but are not limited to, the following:

- Apply special construction techniques to minimize impacts to traffic flow and provide adequate access to important destinations in the area.
  - Develop circulation and detour plans to minimize impacts to local street impacts from construction activity on nearby major arterials. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone.
  - Establish truck “usage” routes that minimize truck traffic on local roadways to the extent possible.
  - Schedule truck trips outside of peak morning and evening commute hours.
- Route truck trips to avoid roadway segments with at risk or failed pavement conditions.
- Limit the number of lane closures during peak hours to the extent possible.
- Identify detours for bicycles and pedestrians in all areas potentially affected by project construction and provide adequate signage to mark these routes.
- Install traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones.
- Develop and implement access plans for potentially impacted local services such as police and fire stations, transit stations, hospitals, schools and parks. The access plans should be developed with the facility owner or administrator. To minimize disruption of emergency vehicle access, affected jurisdictions should be asked to identify detours for emergency vehicles, which will then be posted by the contractor.
- Store construction materials only in designated areas that minimize impacts to nearby roadways.
- Coordinate with local transit agencies for temporary relocation of routes or bus stops in works zones, as necessary.
- Conduct a public information campaign about how to use transit and other methods to reduce single-occupant vehicle use.

**Significance After Mitigation**

If the implementing agency adopts this mitigation measure, Impact TRN-9 may be reduced to a less than significant (LS) level. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation will reduce the impact to less than significant. However, SACOG cannot require the implementing agency to adopt this mitigation measure, and it is ultimately the responsibility of the implementing agency to determine and adopt project-specific mitigation. Therefore, Impact TRN-9 remains significant and unavoidable (SU) for purposes of this program-level review.

**TRN-10: Result in Inconsistency with Project Design Standards Related to Traffic Safety.**

**Regional Impacts**

The proposed MTP/SCS contains various projects that would modify or expand the regional transportation network. These projects were developed to address existing deficiencies and/or in anticipation of future needs given projected population, employment, and travel growth in the region. The proposed MTP/SCS projects are required to conform to the design standards of the public agency responsible for implementation. Design standard conformance is a key part of developing networks that provide safe and efficient travel. These standards cover all aspects of the transportation right-of-way including physical and operational features as well as appropriate actions during construction activity. Nothing in this proposed MTP/SCS would change the applicable design standards of the implementing agencies; therefore, implementation of the proposed MTP/SCS would not result in inconsistency with design standards related to traffic safety.
Therefore, the proposed MTP/SCS transportation changes at the regional level are considered less than significant (LS) for Impact TRN-10. No mitigation is required.

**Local Impacts**

Local impacts would be identical to the regional impact conclusion.

**Transit Priority Area Impacts**

TPA impacts would be identical to regional impacts.

**MITIGATION MEASURES**

None required.