

## 3.15 TRANSPORTATION

This section describes the current transportation conditions and examines the effects of implementation of the proposed Plan's forecasted land use development pattern, sea level rise adaptation infrastructure, and transportation projects on transportation conditions in 2050. The study area consists of the existing and proposed elements of the transportation system for the nine-county Bay Area, including highways, local roads, rail, bus and ferry transit, bicycle and pedestrian facilities, and airports and seaports. This section evaluates the impacts related to transportation including conflicts with applicable plans and policies, hazards, changes in vehicle miles traveled (VMT) per capita, and emergency vehicle access that may result from the implementation of the proposed Plan.

Comments received in response to the Notice of Preparation expressed concerns around the impacts of COVID-19, consideration of hazards and evacuation routes (see Section 3.15.3, "Impact Analysis," and Section 3.9, "Hazards and Wildfire"); diversity of travel demand management (TDM) strategies for mitigation measures (see Section 3.15.3, "Impact Analysis"); consideration and coordination with other plans and studies (see Section 3.14.2, "Regulatory Setting," and Section 3.15.3, "Impact Analysis"); consideration of interregional and interstate travel (see Section 3.15.3, "Impact Analysis"); transportation impact analysis options and VMT (see Section 3.15.2, "Regulatory Setting," and Section 3.15.3, "Impact Analysis"); alternative scenarios with transportation strategies, including expanded transit options and increased managed lanes (see Chapter 4, "Alternatives").

The CEQA Guidelines note that comments received during the NOP scoping process can be helpful in "identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in an EIR and in eliminating from detailed study issues found not to be important." (CEQA Guidelines Section 15083) Neither the CEQA Guidelines nor Statutes require a lead agency to respond directly to comments received in response to the NOP, but they do require that they be considered. Consistent with these requirements, the comments received in response to the NOP have been carefully reviewed and considered by MTC and ABAG in the preparation of impact analysis in this section. Appendix B includes all NOP comments received.

### 3.15.1 Environmental Setting

#### EXISTING REGIONAL TRANSPORTATION CONDITIONS 2015

The Bay Area features a robust transportation network, allowing for multimodal access across the region. The transportation system includes interstate and State highways, local arterial roadways, local streets and roads, public transit systems, bicycle and pedestrian facilities, seaports, and airports. In combination, these facilities allow for the movement of people and goods throughout the region. The various elements of the Bay Area transportation system are described below using the most recent data readily available from public sources or using transportation outputs from the regional travel model for the baseline year (2015). Note that the descriptions are representative of the transportation system prior to the coronavirus (COVID-19) pandemic, as the social distancing and stay-at-home orders have resulted in continually changing travel behaviors that are not appropriate for long-range planning comparisons.

**Roadway Network:** The Bay Area currently contains over 650 miles of limited-access highways, which include both interstates and State highways (Caltrans 2019). These facilities provide access to major employment centers and to destinations outside of the Bay Area. In addition to providing mobility for

automobiles, these facilities also support express bus services and freight movement. The major limited-access highways in the Bay Area are listed in **Table 3.15-1**. In addition, the Bay Area has over 20,000 miles of arterials and local streets, providing access to communities, and accommodating on-street parking and loading activities. Together, these roadway facilities carry 165 million vehicle miles each weekday (Caltrans 2019). The road network also serves nearly 660,000 vehicles that travel into or out of the region from adjacent areas (2017 data, Vital Signs website, MTC 2020). **Figure 3.15-1** depicts the major roadway facilities in the Bay Area.

**Table 3.15-1: Major Limited-Access Highways in the Bay Area**

Route	Highway Limits		Bay Area Counties Served
Interstate 80	San Francisco	Teaneck, NJ	SF, ALA, CC, NAP, SOL
Interstate 280	San Francisco	San José	SF, SM, SCL
Interstate 380	San Bruno	South San Francisco	SM
Interstate 580	San Rafael	Tracy	MRN, CC, ALA
Interstate 680	Fairfield	San José	SOL, CC, ALA, SCL
Interstate 780	Vallejo	Benicia	SOL
Interstate 880	Oakland	San José	ALA, SCL
Interstate 980	Oakland	Oakland	ALA
Interstate 238	San Leandro	Castro Valley	ALA
Interstate 505	Dunnigan	Vacaville	SOL
U.S. Route 101	Olympia, WA	Los Angeles	SON, MRN, SF, SM, SCL
State Route 1	Leggett	Dana Point	SON, MRN, SF, SM
State Route 4	Hercules	Markleeville	CC
State Route 12	Sebastopol	San Andreas	SON, NAP, SOL
State Route 17	San José	Santa Cruz	SCL
State Route 24	Oakland	Walnut Creek	ALA, CC
State Route 29	Upper Lake	Vallejo	NAP, SOL
State Route 37	Novato	Vallejo	MRN, SON, NAP, SOL
State Route 85	Mountain View	San José	SCL
State Route 87	San José	San José	SCL
State Route 92	Half Moon Bay	Hayward	SM, ALA
State Route 160	Sacramento	Antioch	SOL, CC
State Route 237	Mountain View	Milpitas	SCL
State Route 242	Concord	Concord	CC

Notes: Highway limits reflects the overall route limits, rather than the limits of the limited-access segment; County abbreviations used: ALA (Alameda), CC (Contra Costa), Marin (MRN), NAP (Napa), San Francisco (SF), San Mateo (SM), Santa Clara (SCL), Solano (SOL), and SON (Sonoma)

Source: Data compiled by MTC and ABAG in 2020.

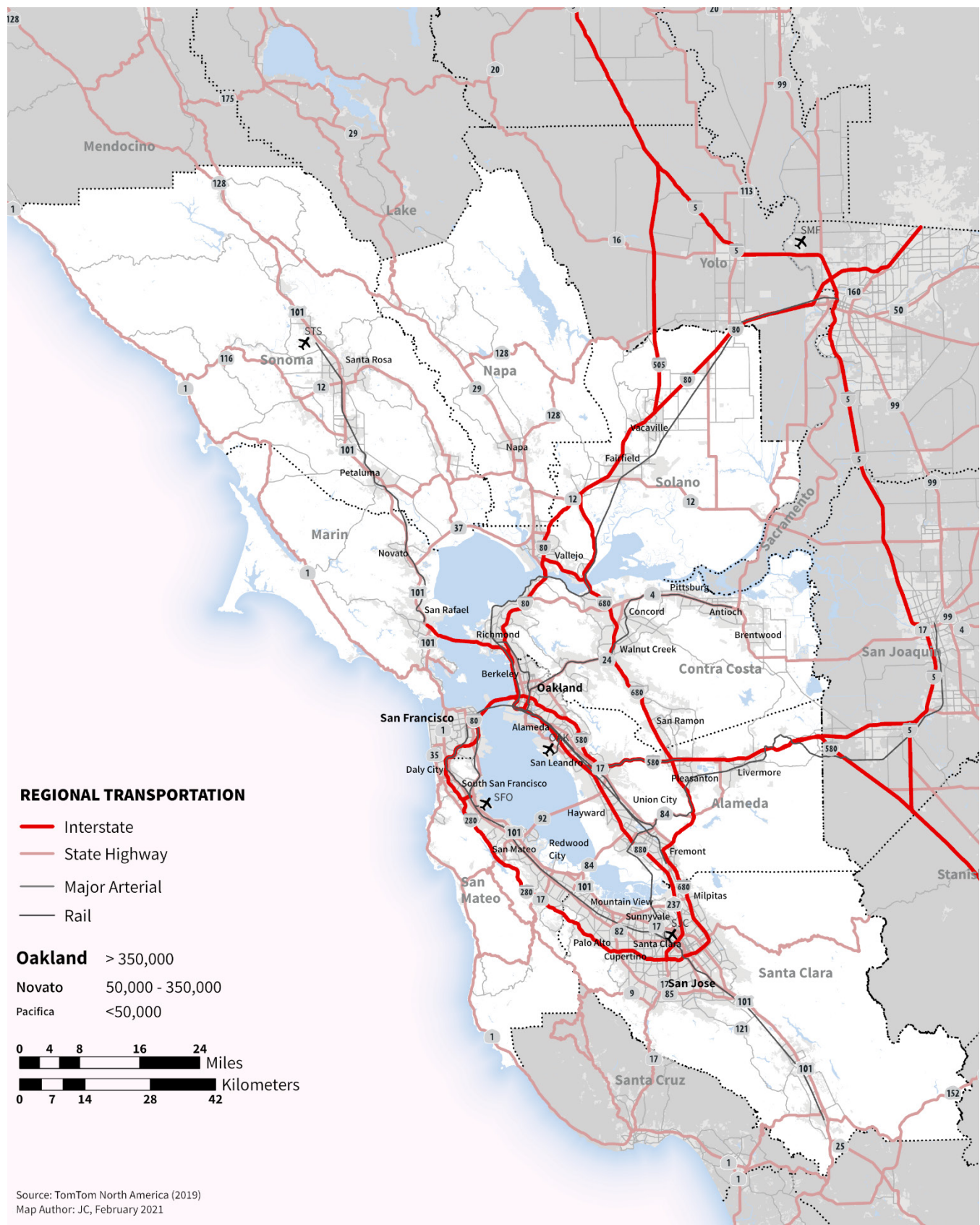


Figure 3.15-1: Major Road Facilities

**Public Transit Systems:** The Bay Area public transit system includes a combination of heavy rail (e.g., BART), light rail (e.g., Muni Metro and Santa Clara Valley Transportation Authority [VTA] Light Rail), commuter rail (e.g., Caltrain and ACE), diesel and electric buses, cable cars, and ferries. This public transit system accommodates a total of over 1.7 million passengers a day, with about 45 percent of daily passengers (744,000) on Muni, about 26 percent of daily passengers (427,000) on BART, 11 percent (180,000) on AC Transit, and 7 percent (121,000) on VTA (**Table 3.15-2**). **Figure 3.15-2** shows the areas served by each of the Bay Area transit operators. A list of the public transit operators and average weekday ridership is shown in **Table 3.15-2**.

**Table 3.15-2: Public Transit Operators in the Bay Area**

Transit System	Mode	Average Weekday Ridership	Bay Area Counties Served
SFMTA	Local/express bus; Light rail; Cable car/streetcar/trolley	744,000	MRN, <b>SF</b> , SM
BART	Heavy rail	427,000	ALA, CC, SCL, SF, SM
AC Transit	Local/transbay bus	180,000	<b>ALA, CC</b> , SCL, SF, SM
VTA	Local/express bus; Light rail	121,000	ALA, <b>SCL</b> , SM
Caltrain	Commuter rail	61,000	SCL, SF, SM
SamTrans	Local/express bus	38,000	SCL, SF, <b>SM</b>
Golden Gate Transit	Local/express bus; Ferry	19,000	<b>MRN, SF, SON</b>
County Connection	Local/express bus	11,000	ALA, <b>CC</b>
Marin Transit	Local bus	10,000	MRN
WETA	Ferry	10,000	ALA, CC, SF, SM, SOL
Tri Delta Transit	Local/express bus	7,000	CC
Santa Rosa CityBus	Local bus	6,000	SON
LAVTA Wheels	Local/express bus	6,000	<b>ALA, CC</b>
ACE	Commuter rail	5,000	ALA, SCL
SolTrans	Local/express bus	5,000	CC, <b>SOL</b>
WestCAT	Local bus; Express/transbay bus	4,000	<b>CC</b> , SF
VINE	Local/express bus	4,000	<b>NAP</b> , SOL
Sonoma County Transit	Local/express bus	3,000	SON
FAST	Local/express bus	3,000	CC, <b>SOL</b>
SMART	Commuter rail	2,000	MRN, SON
Vacaville City Coach	Local bus	1,000	SOL
Petaluma Transit	Local bus	1,000	SON
Union City Transit	Local bus	1,000	ALA
Dixon Readi-Ride	Local bus	< 1,000	SOL
Rio Vista Delta Breeze	Local/express bus	< 1,000	CC, <b>SOL</b>
Pleasanton Paratransit	Local bus	< 1,000	CC

Note: Average weekday ridership has been rounded to the nearest 1,000; Figures may not sum due to independent rounding; Average weekday ridership is calculated by taking the total annual ridership and dividing by 300, an assumption which is consistent with MTC travel modeling procedure; Primary counties served by operator are marked in bold.

Source: Data compiled by MTC and ABAG in 2020 based on data from Unlinked Passenger Trips and National Transit Database 2019



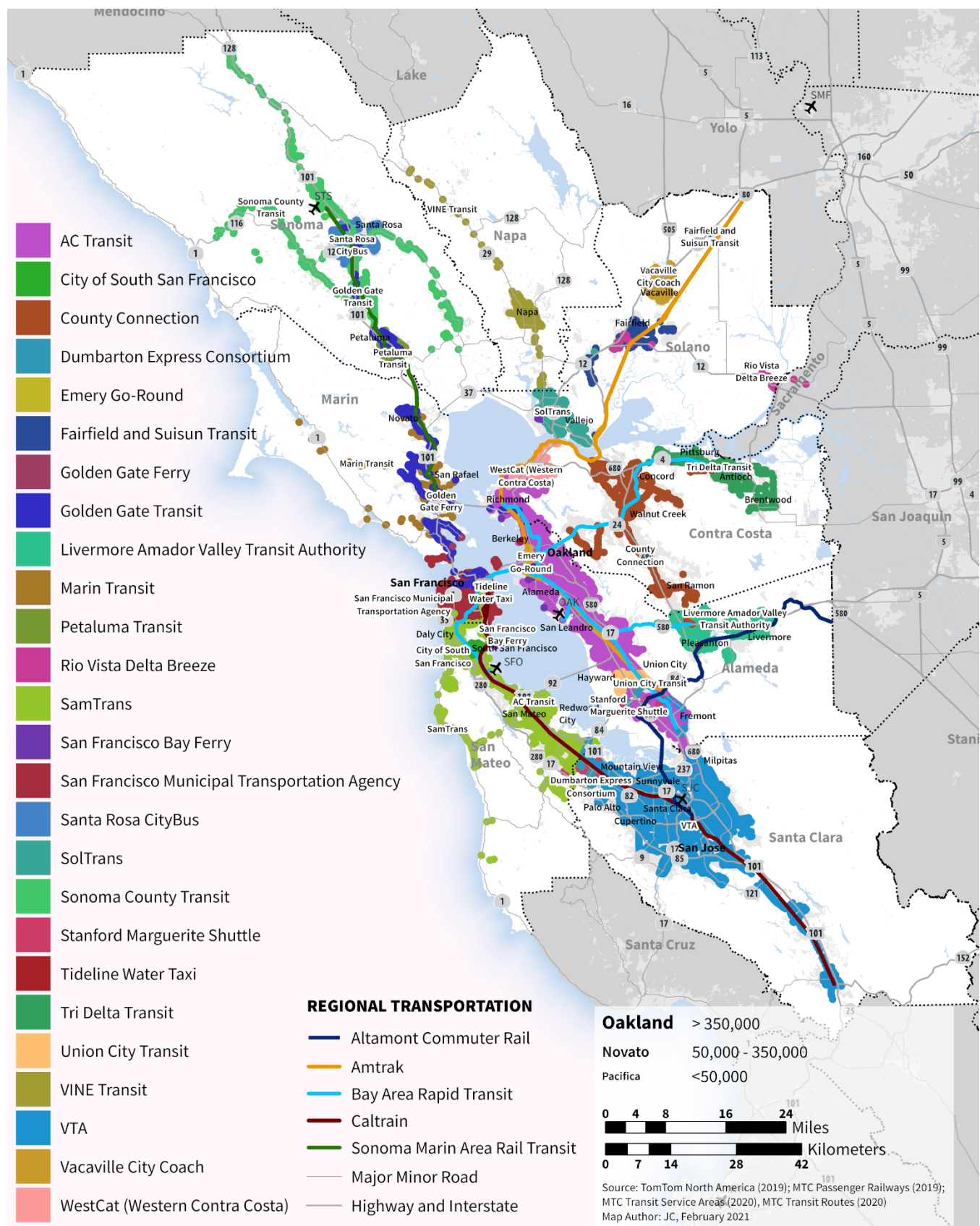


Figure 3.15-2: Transit Lines and Areas Served by Transit

Amtrak provides long-distance passenger rail services to the Bay Area via the Capitol Corridor, San Joaquin, Coast Starlight, and California Zephyr lines, connecting the region to the Central Valley, Southern California, the Pacific Northwest, and the Midwest.

California High-Speed Rail service is planned to begin revenue operations during the timeframe of the proposed Plan. As currently planned, by 2029, the system will run from San Francisco to the Los Angeles basin in under three hours. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. Within the Bay Area region, the High-Speed Rail stations will provide development opportunities in the existing downtown cores of San Francisco, Millbrae, San Jose, and Gilroy.

**Private Transit:** In addition to public transit systems and operators, private transit options have expanded over recent years in the Bay Area. Private transit services include privately operated commuter shuttles (e.g. Apple, Google, Genentech) and publicly accessible private shuttles (e.g., Emery Go-Round, San Francisco Mission Bay Shuttles, Stanford University Marguerite).

**Emerging Transportation Technology:** New transportation technologies can have an important influence on regional and national transportation systems, and some have already started to change longstanding transportation behaviors. Transportation innovations include the following: on-demand ridesharing; bike-sharing; powered scooter-sharing; connected and autonomous vehicles; mobility aggregation applications that provide users with one source for mobility services (e.g., Moovel, CityMapper); transportation network companies (TNCs) (i.e., Lyft, Uber); coordinated and adaptive traffic signals; active traffic management, which provides the ability to dynamically manage traffic through use of strategies such as adaptive ramp metering and adaptive traffic signal control; and unmanned aircraft systems. These and other emerging technologies have the potential to transform mobility choices and alter the transportation landscape. For example, the expansion of TNC use and the deployment of autonomous vehicles could introduce zero-passenger vehicle miles as a significant source of car travel on roadways. The effect these technologies will have on the transportation system is uncertain and will be shaped by regulations and policies surrounding their use.

**Bicycle and Pedestrian Facilities:** The Bay Area has an extensive system of pedestrian facilities including multi-use paths, sidewalks, crosswalks, walkways, stairs, and ramps. Other pedestrian facilities include pedestrian signals, pedestrian refuge islands and medians, and curb extensions.

In addition to pedestrian facilities, the Bay Area has a bikeway network consisting of four classes of bikeways, defined in the California Highway Design Manual (California Department of Transportation, updated July 2020), as follows:

- ▲ **Class I Bikeway (Bike Path):** completely separated right-of-way for exclusive use of bicycles and pedestrians,
- ▲ **Class II Bikeway (Bike Lane):** dedicated lane for bicycle travel on a street or highway,
- ▲ **Class III Bikeway (Bike Route):** shared lane for bicycle travel on a street or highway, and
- ▲ **Class IV Bikeway (Separated Bikeway/Cycle Track):** separated or protected lane for bicycle travel on a street or highway.

**Figure 3.15-3** shows the location of various bikeways through the Bay Area.

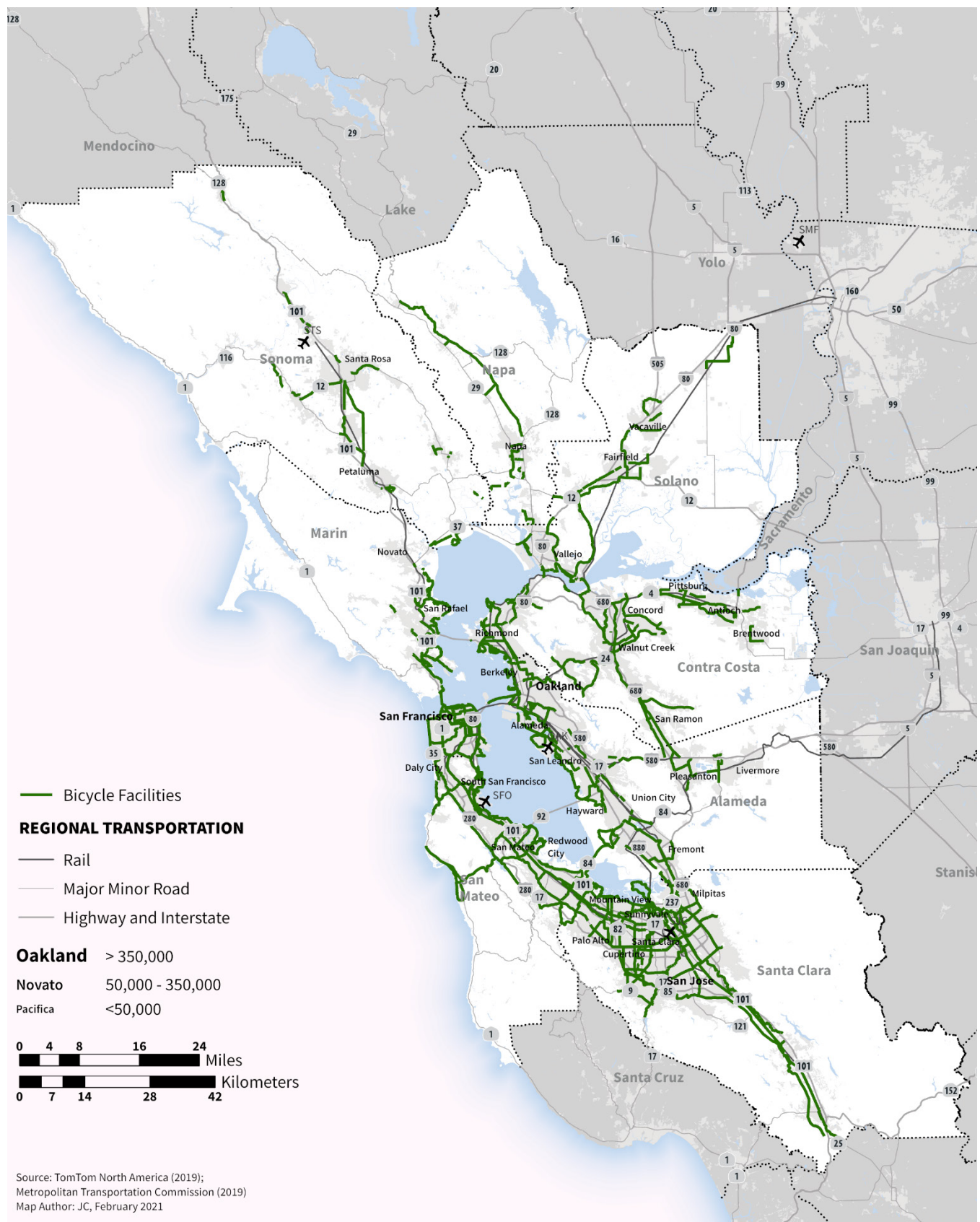


Figure 3.15-3: Bay Area Bicycle Facilities



MTC's Regional Bicycle Plan, updated in 2009, includes a Regional Bikeway Network. As of December 2018, 1,450 miles of the 2,140-mile network were completed. MTC is currently developing a regional Active Transportation Plan (AT Plan) to serve as a blueprint to strategically guide investments in active transportation infrastructure and regional policy development and implementation. The AT Plan will set specific active transportation and goals to increase usage of bicycles, scooters, and skateboards, including those with electric assistance, and will identify regional infrastructure gaps to be closed, policies requiring updating or creation, and funding scenarios to help achieve the AT Plan's goals.

**Seaports and Airports:** The Bay Area is served by five seaports, which provide the opportunity for intermodal transfers to trucks and railcars. The Port of Oakland, the largest of the five, is the third largest U.S. seaport on the West Coast (after the Ports of Los Angeles and Long Beach). Other seaports include the Port of San Francisco, the Port of Richmond, the Port of Benicia, and the Port of Redwood City. These seaports are supported by freight railroad services operated by Union Pacific and Burlington Northern Santa Fe.

The Bay Area is also served by three international airports: San Francisco International Airport, Oakland International Airport, and Norman Y. Mineta San José International Airport. Each of these airports provides mobility for people and freight nationally and internationally. The region is also served by one smaller airport with limited commercial service, Charles M. Schulz Sonoma County Airport, as well as numerous smaller general aviation airports.

**Goods Movement:** Goods movement supports global supply chains and regional industries that trade in international, domestic, and local markets. The types of goods moved, how the goods are moved, and where they are moved between, is a function of the regional economic activity and what transportation options are available. The movement of goods in the Bay Area region involves intermodal systems of air cargo, maritime, rail, and roadways. Efficient goods movement requires access and connectivity to logistics centers and terminals to ensure movement onto and off the network. The regional goods movement infrastructure includes the country's eighth-busiest container port (Port of Oakland), two of the most active air cargo airports (San Francisco International Airport and Oakland International Airport), major rail lines and terminals operated by Union Pacific and Burlington Northern Santa Fe Railway, and highways that carry high volumes of trucks (Port of Oakland 2020, MTC 2016).

Caltrans District 4 led the *San Francisco Bay Area Freight Mobility Study* in 2014, which provides detailed information regarding the region's multimodal goods movement system. The Alameda County Transportation Commission developed a long-range *Countywide Goods Movement Plan* (January 2016) and MTC has produced the *San Francisco Goods Movement Plan* (February 2016). MTC also partnered with the planning agencies for the Sacramento area, San Joaquin County, and the Monterey Bay area to study goods movement across the broader economic cluster and recommend strategies to support the mega-region in the *Northern California Mega-Region Goods Movement Study*. Additionally, MTC formed the Regional Freight New Technologies Task Force in September 2015 and studied freight strategies to develop the *Freight Emissions Reduction Action Plan* (July 2017).

## TRANSPORTATION PERFORMANCE MEASURES

Regional conditions for a number of performance measures form the basis for the transportation impact analysis presented in this EIR. These measures include daily VMT and VMT per capita, mode share, and daily vehicle trips. These performance measures are described and summarized in more detail in this section. The existing conditions analysis in this EIR refers to conditions modeled in the



baseline year 2015. MTC utilized its regional travel demand model (Travel Model 1.5) to compare the proposed Plan for 2050 conditions to the 2015 baseline conditions.

**Regional Travel Patterns:** The Bay Area transportation system includes infrastructure supporting travel by numerous modes and routes for the movement of people and goods. **Table 3.15-3** provides some key metrics regarding Bay Area travel behavior in 2015 based on the simulation results from the travel model.

**Table 3.15-3: Modeled Bay Area Travel Behavior (2015)**

Daily Trips	
Commute Trips	8,360,000
Non-Commute Trips	17,939,000
Total Daily Trips	26,299,000
Daily Vehicle Trips	20,896,000
Daily Vehicle Miles Traveled (VMT)	155,006,000
Daily Vehicle Miles Traveled per Capita	20.4
Daily Vehicle Hours of Recurring Delay	264,500
Daily Transit Boardings	1,703,000
Daily Transit Passenger Miles	11,292,000

Note: Figures may not sum due to independent rounding; Daily metrics are measures for a typical weekday; Vehicle trips reflect interzonal trips assigned directly to the network and includes intraregional and commercial vehicle trips; Population statistics reflect the total Bay Area population able to travel on the region's transport network and does not include immobile, involuntary populations such as prison inmates.

Source: Data compiled by MTC and ABAG in 2021.

## Vehicle Miles Traveled

The basic measure of the amount of vehicle travel generated is VMT. One vehicle traveling one mile constitutes one vehicle mile, regardless of its size, fuel type, or the number of passengers. Vehicle miles traveled is a term used throughout this EIR and refers to the number of VMT within the region (or a specified geographic area) during a typical weekday and includes VMT for all trip types (commute, shopping, social/recreational, school, goods movement). The VMT reported in this EIR reflects the mileage accrued within the nine county Bay Area region and not necessarily all VMT created by the residents of the region (for example, it would not include the VMT generated by a Bay Area resident driving in Los Angeles or Stockton). The VMT reported for a large nine county regional area includes the vast majority of VMT generated by Bay Area residents and employees. A portion of the regional VMT can be accrued by through (or interregional) trips. VMT is a common measure of roadway use and economic activity and has a strong correlation with congestion and emissions.

An area's per capita (or per person) VMT as applied in this EIR is the total VMT divided by the population of that area and is a measure of the average vehicle miles each person travels on a typical weekday. Per capita VMT tends to increase as a result of greater overall economic activity in the region, higher levels of per-household automobile ownership, and/or a jobs-housing imbalance that contributes to longer average commute distances.

As shown in **Table 3.15-3**, the region sees 155 million VMT on a typical weekday in the 2015 base year, or 20.4 VMT per capita.

## Mode Share and Daily Trips

Of the trips made by Bay Area residents, the MTC travel model forecasts that 32 percent are for work, 14 percent for college or school, and 13 percent for shopping, as shown below in **Table 3.15-4**. The average one-way commute trip for the region is about 10 miles and takes 20 minutes, as shown in **Table 3.15-5**. The average one-way transit commute trip is just above the regional average distance, but almost double the regional average time.

**Table 3.15-4: Modeled Typical Weekday Daily Person Trips by Purpose (2015)**

Purpose	Trips	Percent of Total
Commute	8,360,000	32%
Shopping	3,478,000	13%
School	2,764,000	11%
Escort (pick-up/drop-off passengers)	2,393,000	9%
At Work	1,900,000	7%
Eat Out	1,088,000	4%
Social/Recreational	827,800	3%
College	663,600	3%
Other	4,826,000	18%
Non-Commute Subtotal	17,939,000	68%
Regional Total	26,299,000	100%

Note: Whole numbers have been rounded (between 1,000 and 1,000,000 to the nearest 100 and over 1,000,000 to the nearest 1,000).

Figures may not sum due to independent rounding; Metrics are measures for a typical weekday.

Source: Data compiled by MTC and ABAG 2021.

**Table 3.15-5: Average One-Way Commute Trip by Mode (2015)**

Purpose	Average Commute Distance (miles)	Average Commute Time (minutes)
Auto	10.3	18.0
Walk	0.8	16.2
Transit	11.0	37.2
Bicycle	2.4	12
Regional Average	9.8	19.7

Note: Metrics are measures for a typical weekday.

Source: Data compiled by MTC and ABAG in 2021.

According to U.S. Census Bureau data, Bay Area residents use a variety of transportation modes to get to their workplaces, as shown below in **Table 3.15-6**. While nearly two in three Bay Area residents drive alone to get to work on a typical day, twelve percent of residents rely on public transit and six percent either walk or bike to work.

Over the past nearly three decades, the share of workers driving alone to work has been fairly constant at the regional level, remaining at around 68 percent between 1990 and 2010, with a decrease of four percentage points to 64 percent in 2018. Carpooling has decreased in popularity in the Bay Area over the past decade compared to other commute options, declining from thirteen percent in 1990 to ten percent in 2018. Transit mode share has increased by two percentage points, from ten percent to twelve percent, while bicycling to work and working from home have doubled from one percent to two percent and from three percent to six percent, respectively.

**Table 33.15-6: Bay Area Resident Workers Categorized by Means of Transportation to Work (1990-2015)**

Year	1990 Number (Percent of Total)	2000 Number (Percent of Total)	2010 Number (Percent of Total)	2018 Number (Percent of Total)
Drive Alone	2,105,000 (68%)	2,248,000 (68%)	2,243,000 (68%)	2,539,000 (64%)
Carpool	400,000 (13%)	427,000 (13%)	354,000 (11%)	393,000 (10%)
Transit	294,000 (10%)	321,000 (10%)	333,000 (10%)	473,000 (12%)
Walk	112,000 (4%)	106,000 (3%)	112,000 (3%)	146,000 (4%)
Bike	32,000 (1%)	36,000 (1%)	50,000 (2%)	66,000 (2%)
Other	37,000 (1%)	36,000 (1%)	35,000 (1%)	80,000 (2%)
Work at Home	105,000 (3%)	133,000 (4%)	194,000 (6%)	252,000 (6%)
Total Workers	3,086,000 (100%)	3,306,000 (100%)	3,321,000 (100%)	3,949,000 (100%)

Notes: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, over 1,000,000 to the nearest 1,000.

Source: Data compiled by MTC/ABAG in 2020 based on data from U.S. Census Bureau 1990 and 2000 and American Community Survey 2010 and 2018 (B08301: Means of Transportation to Work, 1-Year Estimates)

## 3.15.2 Regulatory Setting

### FEDERAL REGULATIONS

#### Fixing America's Surface Transportation Act

Since Moving Ahead for Progress in the 21st Century (MAP-21), a longer term 5-year federal funding bill, Fixing America's Surface Transportation (FAST) Act was signed into law in December 2015 and extended for one year through September 2021. The FAST Act expands the scope of consideration of the metropolitan planning process to include—consideration of intercity transportation (including intercity buses, intercity bus facilities, and commuter vanpool providers); improving transportation system resiliency and reliability; reducing (or mitigating) the stormwater impacts of surface transportation; and enhancing travel and tourism. In addition, it newly requires strategies to reduce the vulnerability of existing transportation infrastructure to natural disasters.

#### Metropolitan Planning General Requirements

Under the FAST Act/MAP-21, the U.S. Department of Transportation requires that metropolitan planning organizations, such as MTC, prepare long-range transportation plans (RTPs) and update them every four years if they are in areas designated as “nonattainment” or “maintenance” for federal air quality standards. Before enactment of MAP-21, the primary federal requirements regarding RTPs were included in the metropolitan transportation planning rules—Title 23 CFR Part 450 and 49 CFR Part 613. The FAST Act/MAP-21 makes a number of changes to the statutes that underpin these regulations. Key federal requirements described in Title 23 CFR 134 and California Transportation Commission guidelines for long range plans include the following:

- ▲ RTPs must be developed through an open and inclusive process that ensures public input; seeks out and considers the needs of those traditionally under served by existing transportation systems; and consults with resource agencies to ensure potential problems are discovered early in the RTP planning process;
- ▲ RTPs must be developed for a period of not less than 20 years into the future; RTPs must reflect the most recent assumptions for population, travel, land use, congestion, employment, and economic activity;

- ▲ RTPs must have a financially constrained element, transportation revenue assumptions must be reasonable, and the long-range financial estimate must take into account construction-related inflation costs;
- ▲ RTPs must include a description of the performance measures and performance targets used in assessing the performance of the transportation system;
- ▲ RTPs must include a system performance report evaluating the condition and performance of the system with respect to performance targets adopted by the State that detail progress over time;
- ▲ RTPs may include multiple scenarios for consideration and evaluation relative to the State performance targets as well as locally-developed measures.
- ▲ RTPs must conform to the applicable federal air quality plan, called the State Implementation Plan (SIP), for ozone and other pollutants for which an area is not in attainment; and
- ▲ RTPs must consider planning factors and strategies in the local context.

## STATE REGULATIONS

### California Transportation Commission Regional Transportation Plan Guidelines

California law relating to the development of the RTPs is primarily reflected in Government Code Section 65080. 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 for MPOs (see Senate Bill [SB] 375 discussion below).

Pursuant to Government Code Section 65080(d), MPOs, such as MTC, that are located in nonattainment and monitoring areas for transportation-air quality must update their RTPs at least every four years. If the current RTP is determined to be adequate such that an update is not warranted, the MPO may re-adopt the current RTP.

Under Government Code Section 14522, the California Transportation Commission (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 and applicable guidelines are the 2017 RTP Guidelines for MPOs (CTC 2017).



### Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008) (SB 375) has diversified the areas of study from past RTPs to include land use impacts and climate change issues. Specifically, 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. The SCS must identify a transportation network that, when integrated with the forecasted development pattern for the Plan area, will reduce GHG emissions from automobiles and light trucks in accordance with targets set by CARB. See Section 3.6, “Climate Change, Greenhouse Gases, and Energy,” for a more in-depth discussion of SB 375 and its implications for the proposed Plan. In 2018, CARB revised the previously established per-capita passenger vehicle GHG emission reduction targets for MPOs across the state. The Bay Area’s revised reduction targets were set as 10 percent per capita by 2020 and 19 percent per capita by 2035 (CARB 2018). However, in the statewide 2017 Climate Change Scoping Plan and during CARB’s 2018 update to SB 375 greenhouse gas emission reduction targets, CARB acknowledges that MPOs meeting their regional SB 375 targets alone will not achieve the emission reductions necessary to meet the statewide goal of 25 percent per capita greenhouse gas emission reductions by 2035; collectively, achieving the regional targets would only achieve a 19 percent reduction statewide (CARB 2018). The State expects to achieve the remaining reductions through additional State-level policies and measures.

Under SB 375, some development and transportation projects assumed as a part of the proposed Plan may be eligible to use a streamlined version of the environmental review process. Among other criteria, these projects must be consistent with the land use designation, density, intensity, and policies of Plan Bay Area, and fall within the identified criteria for development and transportation projects.

### Senate Bill 226

CEQA Streamlining for Infill Projects (SB 226) sets forth a streamlined review process for infill projects and includes performance standards that will be used to determine an infill project’s eligibility for streamlined review. The purpose of SB 226 and updated CEQA Guideline Section 15183.3 is to streamline the environmental review process by “limiting the topics subject to review at the project level where the effects of infill development have been addressed in a planning level decision or by uniformly applicable development policies.” Residential, commercial and retail, public office buildings, transit stations, and schools are eligible for this streamlining provided they: (1) are located in an urban area on a site that has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site’s perimeter; (2) satisfy the performance standards provided in Appendix M [of CEQA]; and, (3) are 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, with some exceptions.

Under SB 226, some development and transportation projects assumed as a part of the proposed Plan may be eligible to use a streamlined version of the environmental review process. Among other criteria, these projects must be consistent with the land use designation, density, intensity, and policies of Plan Bay Area, and fall within the identified criteria for development and transportation projects.

### Senate Bill 743

SB 743 (2013) changes the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an

environmental impact. (See PRC Section 21099(b)(2) [“automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA]”].)

Under SB 743, the Governor’s Office of Planning and Research (OPR) established vehicle miles traveled (VMT) as the preferred metric for measuring transportation impacts of most projects in place of vehicle level of service (LOS) or related measures of congestion as the primary metric. The use of VMT for determining significance of transportation impacts has become commonplace since the certification of this provision and the release of OPR’s Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 and, as of July 1, 2020, is the required metric Statewide.

For land use projects, SB 743 provides opportunities to streamline transportation analysis under CEQA for qualifying urban infill development near major transit stops in metropolitan regions Statewide. The legislation established a new CEQA exemption for a residential, mixed-use, or employment center project if it is: (1) proposed in a transit priority area, or TPA (i.e., an area within one-half mile of a major transit stop that is existing or planned); (2) consistent with a specific plan for which an EIR was certified, and (3) consistent with the use, intensity, and policies of an SCS or Alternative Planning Strategy (APS) that is certified by the California Air Resources Board as meeting its greenhouse gas reduction targets. This exemption requires further review if the project or circumstances change substantially. Additionally, the legislation establishes that aesthetic and parking impacts of these projects are not considered significant impacts on the environment.

SB 743 can also significantly affect the review of transportation projects under CEQA. Some projects, such as expanding facilities for bicycle, pedestrian, or transit-only use, will not result in negative transportation impacts because they are assumed not to significantly increase automobile trips. However, for roadway capacity projects, the CEQA guidelines (Section 15064.3) give lead agencies some discretion over what metric is used to evaluate transportation impacts, as some roadway expansion projects can induce vehicle travel. If using a metric besides VMT, however, the change in vehicle travel should still be reported. A program-level assessment of roadway projects in a regional plan may also be used to streamline project-level analysis (OPR 2018).

Caltrans has provided two guidance documents to address VMT impacts on the state highway system consistent with the requirements of SB 743 and the OPR Technical Advisory:

- ▲ The Transportation Analysis under CEQA (TAC) provides information to support CEQA practitioners in making CEQA significance determinations for transportation impacts of projects on the state highway system. These could include land use projects or transportation projects.
- ▲ The Transportation Analysis Framework (TAF) guides the preferred approach for analyzing the VMT attributable to proposed projects (induced travel) in various project settings, with particular focus on the analysis of induced travel associated with transportation projects which would add road capacity to the transportation system.

### **Senate Bill 1339 and Senate Bill 1128**

Senate Bill 1339 authorized the Bay Area Air Quality Management District (BAAQMD) and MTC to adopt and implement a regional commuter benefits ordinance on a pilot basis. BAAQMD and MTC adopted the Bay Area Commuter Benefits Program, which requires Bay Area employers with 50 or more full-time employees in the Bay Area to offer commute benefits with the goal of reducing single-occupant vehicle commute trips, traffic congestion, and vehicle emissions. Under this program, large employers offer commuter benefits to their employees such as pre-tax contributions towards public transit passes

or commute shuttle services. Senate Bill 1128 authorized BAAQMD and MTC to make the Bay Area Commuter Benefits Program permanent.

### Assembly Bill 1358

Assembly Bill 1358, also known as the Complete Streets Bill, amended the California Government Code Section 65302 to require that all major revisions to a city or county's Circulation Element include provisions for accommodation of all roadway users, including bicyclists and pedestrians.

### California Bicycle Transportation Act

The California Bicycle Transportation Act (1994) requires all cities and counties to have an adopted bicycle master plan to apply for Bicycle Transportation Account funding source.

### Senate Bill 1014

The Clean Miles Standard and Incentive Program (SB 1014) requires the California Public Utilities Commission (CPUC) and California Air Resources Board (CARB) to establish and implement greenhouse gas emission reduction targets and goals for transportation network companies (TNCs). The State is establishing targets in 2021. TNCs will be required to develop GHG emission reduction plans beginning January 1, 2022, with targets and goals starting in 2023. In the proposed rulemaking, TNCs will be able to comply with the rule through any combination of electrification, reduction of miles without passengers, increased ridesharing, and optional credits.

## REGIONAL AND LOCAL REGULATIONS

### Congestion Management Agency Transportation Plans

Each of the nine Bay Area counties has a congestion management agency (CMA) designated to manage traffic congestion through implementation of multimodal transportation projects. These agencies work with MTC to advance road, bicycle, pedestrian, and transit projects in line with regional objectives. In addition, many CMAs develop county transportation plans that should be consistent with the Regional Transportation Plan adopted by MTC. MTC has developed guidelines to be used in the preparation of countywide transportation plans. MTC published the *Guidelines for Countywide Transportation Plans* in September 2014. The intent of the guidelines is to inform the relationship between countywide transportation plans and the RTP/SCS, assist implementation of SB 375 and MAP-21/FAST, and identify appropriate content to include in the development of countywide transportation plans. Many of the CMAs are currently in the process of updating their countywide plans. The most recent countywide transportation plans are listed below.

- ▲ Alameda County Transportation Commission: *2020 Countywide Transportation Plan* (adopted November 2020);
- ▲ Contra Costa Transportation Authority: *2017 Countywide Comprehensive Transportation Plan* (adopted September 2017);
- ▲ Transportation Authority of Marin: *Moving Forward A 25-Year Transportation Vision for Marin County* (update in progress);
- ▲ Napa Valley Transportation Authority: *Advancing Mobility 2045* (update in progress, draft released February 2021, anticipated completion in 2021);
- ▲ San Francisco County Transportation Authority: *San Francisco Transportation Plan 2050* (update in progress, anticipated completion in 2021);

- ▲ City/County Association of Governments of San Mateo County: *San Mateo Countywide Transportation Plan 2040* (adopted February 2017);
- ▲ Santa Clara Valley Transportation Authority: *Valley Transportation Plan 2040* (adopted October 2014);
- ▲ Solano Transportation Authority: *Solano Comprehensive Transportation Plan 2040* (adopted June 2020); and
- ▲ Sonoma County Transportation Authority: *Comprehensive Transportation Plan: Moving Forward 2050* (update in progress).

### City and County General Plans

State law requires cities and counties to adopt general plans, which must include a transportation, or circulation, element and a land use element. The circulation and land use elements must correlate such that each must address changes in the other. The circulation element describes the existing and proposed transportation facilities and must “plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan” (Government Code Section 65302). Local circulation elements should reflect the regional transportation plan and sustainable community strategy to be consistent with regional greenhouse gas reductions and ensure access to transportation funds (OPR 2017). This EIR does not examine consistency with the general plans of jurisdictions within the Bay Area; rather, it addresses issues of overall system performance from a regional perspective.

### City and County Modal Plans

City- and county-wide bicycle and pedestrian master plans, active transportation plans, freight/goods movement plan, and other mode-specific plans serve as policy documents to guide the development and maintenance of the transportation network, support facilities, and non-infrastructure programs. These plans describe the acceptable operating standards, levels of service, facility classifications, and mode-specific goals and policies of a given city or county.

## 3.15.3 Impact Analysis

### SIGNIFICANCE CRITERIA

The following significance criteria are based on CEQA Guidelines Appendix G, OPR’s Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), the criteria used in the Plan Bay Area 2040 EIR (2017), and professional judgment. Under these criteria, implementation of the proposed Plan would have a potentially significant adverse impact if it would:

- ▲ conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (Criterion TRA-1);
- ▲ conflict or be inconsistent with CEQA Guidelines section 15064.3(b) (Criterion TRA-2);
- ▲ substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (Criterion TRA-3); or
- ▲ result in inadequate emergency access (Criterion TRA-4).



## METHOD OF ANALYSIS

This program-level EIR evaluates potential transportation impacts based on the location of the proposed Plan's footprint associated with the forecasted development pattern (i.e., the land use growth footprint), sea level rise adaptation infrastructure (i.e., sea level rise adaptation footprint), and transportation projects (i.e., transportation system footprint). The baseline for this analysis reflects existing conditions when the EIR Notice of Preparation was released in September 2020. However, impacts relying on analysis from Travel Model 1.5 (e.g., VMT), reflect a baseline year of 2015, because it is the most recent year for which comprehensive land use, demographic, transit ridership and traffic volumes are available for the Bay Area region.

This evaluation of transportation impacts assumes that construction and development under the proposed Plan would adhere to applicable federal, State, and local regulations and would conform to appropriate standards in the industry, as relevant for individual projects. Where existing regulatory requirements or permitting requirements exist that are law and binding on responsible agencies and project sponsors, it is reasonable to assume that they would be implemented, thereby reducing impacts.

### Vehicle Miles Traveled

Changes in VMT for this analysis are based on travel forecasts developed using the MTC travel demand forecasting model, known as Travel Model 1.5, which is integrated with the regional land use forecasting model, known as Bay Area UrbanSim 2.0, to produce forecasts of travel behavior and vehicle activity (see Section 2.3.3, "Analysis Tools," in Chapter 2 for more detail).

Travel Model 1.5 considers numerous factors that influence travel behavior and vehicle activity in the region which in turn affect the roadway network assignment, including:

- ▲ demographic factors – age, income, household size, number of workers;
- ▲ population, household, and employment forecasts;
- ▲ land use and development patterns – density, intensity, mix of uses, distance to transit;
- ▲ transportation costs – gas prices and transit fares;
- ▲ travel characteristics of adjacent regions – including the amount and extent of external, or interregional, and through travel;
- ▲ geographic features and topography – such as rivers, mountains, and valleys; and
- ▲ transportation systems characteristics – including number of lane miles and posted speed, transit service schedules and station locations.

The integrated model framework of UrbanSim 2.0 and Travel Model 1.5 address short- and long-run induced travel demand. For example, short-run induced travel demand can be caused by a new transportation facility creating additional capacity, thus inducing new trips due to shortened travel times to destinations in the months or years after construction. Long-run induced demand can be caused by residential and employment location changes as a result of transportation investments, such as a new rail station inducing development of new office buildings in the vicinity over a period of years or decades. Major transportation projects are implemented in Travel Model 1.5 on top of the region's existing transportation system, resulting in changes to accessibility. The change in accessibility affects short-run induced travel, which is accounted for in Travel Model 1.5 through

changes to trip length, travel routes, and trip modes, as well as the generation of new trips. The integrated model system also captures long-run induced demand through feedback loops between Travel Model 1.5 and UrbanSim 2.0. The land use development forecasts generated by Bay UrbanSim 2.0 are informed by Travel Model 1.5's transportation accessibility measure, which are altered as transportation projects are implemented into the model. Changes in accessibility can affect the land use development pattern and ultimately the forecasts of travel behavior and vehicle activity.

These effects of induced demand are captured in both the land use growth pattern, and in the regional travel forecast summaries shown in Section 2.2.2, "Conditions Under the Proposed Plan." This includes VMT, which in the context of this analysis refers to network VMT. Network VMT is an aggregation of each vehicle trip multiplied by the distance of its respective path, based upon Travel Model 1.5's forecast of travel behavior and vehicle activity. VMT is quantified in the same manner for both existing and forecasted conditions and the increment of change is then calculated.

Travel Model 1.5 is not sensitive to the full range of strategies in the proposed Plan. Marketing and education campaigns, as well as non-capacity-increasing transportation investments like bikeshare programs (i.e., Strategy EN09, "Expand Travel Demand Management Strategies"), are examples of strategies with the potential to change behavior in ways that result in reduced VMT and vehicle emissions. Travel Model 1.5 and EMFAC do not estimate reductions in VMT and emissions in response to these types of changes in traveler behavior. As such, an "off-model" approach was used to quantify the VMT and GHG reduction benefits of these important programs. Off-model analyses are standard element of an SCS and have been included in all previous MTC SCS. CARB provides guidance on the off-model analyses in the Final Sustainable Communities Strategy Program and Evaluation Guidelines Appendix D (November 2019) and reviews "the development, quantification, and effectiveness and potential adjustments of the MPO's off-model strategies" as part of the evaluation of MTC's SCS technical methodology (CARB 2019c).

## IMPACTS AND MITIGATION MEASURES

### **Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (LTS)**

#### **Land Use, Sea Level Rise Adaptation, and Transportation System Impacts**

The proposed Plan includes several elements to leverage the region's transportation network—including transit, bicycle, and pedestrian systems—to achieve regional goals. Note that the assessment of the proposed Plan's impact on vehicle miles traveled (VMT) is discussed in TRA-2.

As described in Chapter 2, "Project Description," the regional growth forecast for the Bay Area projects that by 2050 the region will support an additional 2.7 million residents and 1.4 million jobs, resulting in 1.4 million new households. The proposed Plan designates growth geographies and identifies a set of land use strategies to accommodate the projected growth that would result in focused housing and job growth concentrated primarily in or adjacent to already developed areas and along existing transit corridors. As described in Section 2.3.4, "Proposed Plan Growth Geographies," the proposed Plan would focus forecasted growth within infill locations with access to transit. Planning for future growth in Priority Development Areas (PDAs) near transit helps the region accommodate future growth while meeting the region's SB 375 greenhouse gas emissions reduction target. In addition to PDAs, Transit Rich Areas (TRAs) and High-Resource Areas (HRAs) were added as designated growth geographies to accommodate the regional growth forecast near transit, thereby allowing more

people access to sustainable transportation options. The PDAs build on local and regional planning efforts and include 216 locally nominated areas within the nine-county Bay Area.

In 2005, MTC adopted Resolution 3434, a transit-oriented development (TOD) policy for regional transit expansion projects. This policy requires the establishment of a minimum level of development around stations and corridors and the development of station area plans before regional funds can be programmed and allocated to the transit expansion project. The proposed Plan PDA planning policies align with the TOD Policy's intent to direct regional growth into areas with transit access.

In 2012, MTC developed the One Bay Area Grant Program (OBAG 1), adopted under Resolution 4035. OBAG 1 aligned FY 2012-13 through FY 2016-2017 federal funding with the Sustainable Communities Strategy by promoting transportation investments in PDAs. With Resolution 4202, MTC established the second round of OBAG (OBAG 2) for funding FY 2017-18 to FY 2021-22. OBAG 2 continued similar policies as OBAG 1, including targeting project investments to PDAs to support the SCS goals. Under the program, counties must direct at least 50 to 70 percent of allocated OBAG funds to PDAs.

MTC adheres to longstanding transportation investment approaches, which include a “Fix It First” commitment to direct most funding to repair, maintain, and operate the existing roadway and transit system; focused growth in PDAs connected to the transportation network; developing a modern transit network; and protecting our climate by reducing our transportation-related emissions.

The proposed Plan aligns with this investment framework through its transportation strategies, which include the following:

- ▲ T01. Restore, Operate and Maintain the Existing System,
- ▲ T10. Enhance Local Transit Frequency, Capacity and Reliability,
- ▲ T11. Expand and Modernize the Regional Rail Network, and
- ▲ T12. Build an Integrated Regional Express Lane and Express Bus Network.

Most of the proposed Plan's \$579 billion transportation investments are committed to these strategies.

In addition to investments for transit infrastructure, capital, and maintenance, the proposed Plan includes strategies to improve the use of the existing transit network, which aligns with the overall goals to focus on more cost-effective operation approaches. These strategies include:

- ▲ T03. Enable a Seamless Mobility Experience, and
- ▲ T04. Reform Regional Transit Fare Policy.

These strategies align with existing programs and plans to increase transit use in the region. Existing programs and plans include MTC's activities to streamline fare payment and trip planning across transit operators, including managing a Transit Fare Coordination and Integration Study and a Fare Integration Task Force to identify practical steps toward integrating the fare structure and policies of the Bay Area's more than two dozen transit agencies to explore ways to make the region's transit network better coordinated, more affordable, and more attractive. Similarly, MTC is leading the modernization of the Clipper transit fare payment system. The proposed Plan includes continued support for Clipper as part of its strategy to Advance Other Regional Programs and Local Priorities.

**Table 2-11** in Chapter 2, “Project Description,” summarizes the change in forecasted daily transit boardings and daily transit passenger miles. Both transit metrics are forecasted to more than double, 133 percent and 168 percent respectively, from baseline (2015) to proposed Plan conditions (2050).

Similarly, transit trips are forecasted to double between 2015 and 2050 and increase transit mode share from six to nine percent of all trips in 2050 (see **Table 2-14**).

The proposed Plan's strategies support the region's road network, primarily focusing on repairing and maintaining roadways and making more efficient use of the existing capacity through an expanded managed lane network, which includes carpool and express lanes. In addition to Restore, Operate and Maintain the Existing System, the strategies to improve the road network include:

- ▲ T05. Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives,
- ▲ T06. Improve Interchanges and Address Highway Bottlenecks, and
- ▲ T12. Build an Integrated Regional Express Lane and Express Bus Network.

The Bay Area Infrastructure Financing Authority (BAIFA), a joint powers authority between MTC and the Bay Area Toll Authority (BATA), manages the Bay Area Express Lanes Network, which currently includes 118 miles with plans for over 600 miles of express lanes by 2035. The proposed Plan leverages the express lanes network with strategies to help manage traffic, VMT, and mode choice.

In addition to managed lanes, MTC also has a number of other programs to help improve travel times, maintain optimal speeds, reduce congestion, and reinforce efforts to reduce GHG emissions on the region's roadways. These programs include the Freeway Performance Initiative (FPI); the Arterial Operations Program; and the "Forward" commute initiatives, which include Bay Bridge Forward, Dumbarton Forward, Napa Valley Forward and Richmond-San Rafael Forward. These initiatives include strategies such as intelligent transportation systems, metering, traffic monitoring, all-electronic tolling, extensions of High Occupancy Vehicle (HOV) lanes, dedicated transit lanes, transit signal prioritizing and adaptive signal timing, increased express bus service, carpool and vanpool programs, commuter parking programs to encourage carpooling, and programs to encourage biking and walking. Along with improving interchanges and addressing bottlenecks, the proposed Plan's transit, managed lanes, transportation demand management, and bicycle and pedestrian strategies align with and support these programs by reducing the demand on the roads. As discussed in Chapter 2, "Project Description," minimal changes to roadway capacity, coupled with increases in commuters and other drivers leads to more hours of vehicle delay on the region's roadway systems. However, the proposed Plan's land use and transportation strategies lead to shifts in travel mode choice decisions, as summarized in **Table 2-14** and **Table 3.15-3**, with auto mode shares—drive alone, carpool and ride hail—decreasing as a share over time, from a combined share of 79-percent in the baseline (2015) to 70-percent in 2050.

The proposed Plan includes strategies to support pedestrians, bicyclists, scooter users, and skateboard users, including those with electronic assistance, as well as strategies designed to reduce reliance on driving. These strategies include:

- ▲ T08. Build a Complete Streets Network, and
- ▲ T09. Advance Regional Vision Zero Policy through Street Design and Reduced Speeds.

As part of the Complete Streets vision, the proposed Plan includes building out 10,000 miles of bike lanes or multi-use paths across the region. The strategies to reduce speeds and design roads that are safe for all users also support the efforts to increase use of roadways by cyclists and pedestrians.

These strategies reflect and support several existing and developing regional programs, plans, and policies. Adopted in 2006 under Resolution 3765, MTC has a Complete Streets policy requiring that all projects funded with regional funds consider the accommodation of pedestrians, cyclists, public transit users and drivers as part of project planning, design, funding, and construction. As part of this



policy, project sponsors must have a complete streets policy or updated circulation element of their local General Plan in place and must complete a Complete Streets Checklist for the project to access regional funding such as OBAG and the Active Transportation Program (ATP), the state funding program for bike and pedestrian projects. MTC administers the region's share of the State's ATP funding, which allows cities, counties, transit agencies, and other public agencies to compete for grants to build bicycle/pedestrian paths, install bike racks and implement other projects and programs that make walking or biking easier, safer, and more convenient. MTC also administers the Bay Area Safe Routes to School program, which taps federal money to provide approximately \$5 million each year in grants for cities, counties, and congestion management agencies to fund bike and pedestrian paths that connect with schools; on-street bike lanes; bike racks or other secure bike parking; traffic calming projects; bike safety programs; and education and outreach for students and families.

MTC is developing the Bay Area's first regional Active Transportation Plan (AT Plan) to serve as a blueprint to strategically guide investments in active transportation infrastructure and regional policy development and implementation. Prior to this effort, MTC adopted a Regional Bicycle Plan, which established the Regional Bikeway Network and served to prioritize and guide bicycle-related investments on key bicycle facilities in the region; by 2018, two-thirds of the key bike facilities identified in the Regional Bicycle Plan had been built. The AT Plan will set specific active transportation and micromobility goals, and will identify regional infrastructure gaps to be closed, policies requiring updating or creation, and funding scenarios to help achieve the AT Plan's goals. The AT Plan will directly support the proposed Plan strategy to build a Complete Streets Network, as well as help to meet the proposed Plan mode shift, safety, equity, health, resilience, and climate goals.

The proposed Plan forecasts substantial increases in the number of bicycle trips as a share of total trip making. **Table 2-14** in Chapter 2, "Project Description," details a 300-percent projected increase in bicycle trips from baseline (2015) to future conditions (2050). This increase would result in bicycle trips growing from two percent of all trips in the baseline to seven percent of all trips in future conditions. The proposed Plan includes a number of other transportation-related strategies aside from those specifically targeting transit, roads, bicycle, and pedestrian facilities:

- ▲ EN07. Expand Commute Trip Reduction Programs at Major Employers, and
- ▲ EN09. Expand Transportation Demand Management Initiatives.

In partnership with the Bay Area Air Quality Management District, MTC administers the Commuter Benefits Program (CBP), requires that employers with 50 or more employees in the Bay Area provide commuter benefits to employees with the goal of reducing VMT and greenhouse gas emissions, as authorized by Senate Bills 1339 and 1128. The proposed Plan includes continued support for the CBP as part of its strategy to Expand Commute Trip Reduction Programs at Major Employers.

MTC's Climate Initiatives Program funds activities with the primary goal to reduce greenhouse gas emissions from the transportation sector and help the Bay Area meet its regional emission reduction targets. This program includes a set of transportation demand management (TDM) approaches, such as developing targeted outreach and incentives to shift away from vehicle trips and expanding car share locations alongside mobility hubs. MTC also operates regional vanpool and carpool programs and is the contract administrator for the regional bike share system. These TDM initiatives are continued with expanded investments in the proposed Plan.

To provide increased mobility options to historically marginalized communities, the proposed Plan also includes transportation Strategy T02. Support Community-Led Transportation Enhancements in Communities of Concern. This strategy relies on identifying and addressing the transportation needs

identified by the community. This aligns with the longstanding Community-Based Transportation Plan (CBTP) program, in which MTC awards funds to county transportation agencies for the development of plans for low-income neighborhoods based on engagement with local residents, community organizations, and transportation agencies together to identify their most important transportation challenges and develop strategies to overcome them. MTC also programs federal and State funds to implement elements of a CBTP through its Lifeline Transportation Program.

Local jurisdictions and transit agencies also develop plans that affect the circulation system. County Transportation Agencies (CTA)/Congestion Management Agencies (CMA) develop Congestion Management Plans (CMP) and/or Countywide Transportation Plans (CTP), which are required to be consistent with the RTP/SCS. To this end, MTC issues guidance to ensure that the local and regional plans are aligned. Additionally, any substantial projects included in local plans are incorporated into the RTP, either in the development of the proposed Plan or through amendments to the existing Plan. Through this coordinated planning process, the proposed Plan is not expected to conflict or be inconsistent with local plans.

MTC also participates in multijurisdictional planning for goods movement, including the impact of this economic activity on land use, the transportation network, and the environment. In 2016, MTC released the San Francisco Bay Area Goods Movement Plan, which responded to the evolving economic context, the need to balance between PDAs and industrial land uses, and greenhouse gas and environmental justice issues associated with goods movement. Prior goods movement planning efforts inform the proposed Plan's transportation network.

The proposed Plan includes investments to protect communities and transportation facilities vulnerable to sea level rise. These adaptation strategies align with other regional adaptation and resiliency plans. MTC coordinated with the Bay Conservation and Development Commission and their Adapting to Rising Tides Program on a series of projects to understand the vulnerability and consequences of sea level rise inundation and storm event flooding on transportation infrastructure and the program's products were used to inform the proposed Plan.

### **Conclusion**

The proposed Plan approach and strategies align with other regional programs, plans, and policies, including MTC programs administering State and federal programs. MTC partners with BAAQMD and other regional agencies to assure alignment of transportation strategies. The core approach of directing regional growth to infill areas and providing sustainable transportation options to reduce emissions, improve mobility and access, reduce congestion, and increase safety on the transportation system is reflective of federal, State, and local efforts. Implementation of the proposed Plan is not expected to substantially conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and the impact would be **less than significant (LTS)**.

### **Mitigation Measures**

None required.

### **Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) (PS)**

As noted in CEQA Guidelines Section 15064.3(a), in general, vehicle miles traveled is the most appropriate measure of transportation impacts. CEQA Guidelines Section 15064.3(b) provides the criteria for analyzing and determining transportation impacts, as follows:

*b. Criteria for Analyzing Transportation Impacts.*

- 1. Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact.*
- 2. Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.*
- 3. Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.*
- 4. Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.*

The criteria in Section 15064.3(b) are primarily directed toward the assessment of project-level impacts, whereas the proposed Plan is a regional long-range plan integrating a region-wide suite of projects, programs, and policies, and the proposed Plan is analyzed using regional models.

While VMT has been established as the new measure of transportation impacts under SB 743 (see Section 3.15.2, "Regulatory Setting," for further discussion of SB 743), CEQA allows lead agencies to determine the methodology for evaluating VMT (CEQA Guidelines Section 15064.3(b)(4) and to establish a threshold of significance (CEQA Guidelines Section 15064.7).

The State has developed resources to help lead agencies evaluate impacts and establish impact thresholds under the new VMT standard. Key guidance relevant to transportation impacts and VMT include the California OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) and the California Air Resources Board's (CARB) *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (January 2019).

OPR's Technical Advisory provides guidance on determining significance thresholds and assessing VMT. The Technical Advisory is directed to specific projects by project type (i.e., residential, retail, office, etc.) and local plans (i.e. general plans), and includes recommendations for evaluating transportation impacts. OPR uses the Statewide greenhouse gas targets established through 2050 by State laws and

executive orders as the basis for its recommended VMT significance thresholds. For project-level analyses, OPR recommends that “a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold” based on their review of relevant research on project-level impact mitigation measures. The OPR guidance addresses general plans (and lesser area plans), but not regional plans: “A general plan, area plan or community plan may have a significant impact on transportation if proposed new residential office, or retail land use would, in aggregate, exceed the respective thresholds” for the project level thresholds, a per capita VMT that is fifteen percent below existing development.

In the *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, CARB describes VMT estimates associated with a scenario developed for the 2017 Scoping Plan Update. The scenario assumed a combination of vehicle technologies, vehicle fuels, and slower VMT growth that would achieve the Statewide 2050 GHG emission reductions targets (80% below 1990 levels by 2050, as established under EO S-03-05). The assessment is based on a scenario CARB developed that would achieve the GHG goals through a combination of cleaner vehicles and fuels and slower VMT growth. Based on the scenario assessment, CARB found that for light-duty vehicle travel, per-capita VMT would need to be 16.8 percent lower than existing levels (Statewide 2015-2018 average VMT per capita) by 2050, and for overall vehicle travel, per-capita VMT would need to be 14.3 percent lower than existing levels to be consistent with the 2050 State climate goals (CARB 2019). However, CARB also stresses that the VMT developed in these estimates “is not household-generated VMT, and the values are not directly comparable to output from a local or regional travel demand model.”

Based on the above, no thresholds for assessing significant impacts in VMT at the regional level, such as for an RTP/SCS, have been established by the State. Despite this, the proposed Plan meets other associated State targets. Pursuant to CARB’s target setting under SB 375, the proposed Plan must achieve at least a 19 percent per-capita reduction in forecasted GHG emissions from light- and medium-duty vehicle in 2035 relative to 2005. The proposed Plan meets and exceeds this target (see Criterion GHG-4 in Section 3.6, “Climate Change, Greenhouse Gases, and Energy”). The GHG emission reductions are primarily achieved by land use, transportation, and a subset of environmental strategies in the proposed Plan to slow VMT growth as opposed to vehicle technology and vehicle fuels improvements. However, in the 2017 Climate Change Scoping Plan, CARB acknowledges that the GHG emission reduction needed to meet the Statewide goals is 25 percent by 2035 but the targets established for the MPOs under SB 375 collectively are only expected to achieve 19 percent reduction Statewide (CARB 2018). Although the SB 375 GHG emission reduction target does not equate to a VMT reduction threshold, the proposed Plan’s GHG reductions are representative of substantial reductions in VMT per capita in the proposed Plan.

Although the reduction amounts developed by OPR and CARB may not apply to significance thresholds for an RTP/SCS, they establish standards that may be used for lead agencies as guidance, subject to lead agency discretion as discussed above.

### **Land Use, Sea Level Rise Adaptation, and Transportation System Impacts**

The proposed Plan is designed to reduce GHG emissions pursuant to SB 375, through complementary land use and transportation strategies. The core land use strategy of the proposed Plan is to accommodate forecasted changes in population, households, and employment through “focused growth” in existing communities along the existing transportation network, particularly in communities with proximity to frequent, robust transit service. As discussed in detail in Chapter 2, “Project Description,” the proposed Plan designates approximately five percent of the region’s land to accommodate the Bay Area’s regional growth forecast (see Impact TRA-1) and identifies a series of housing and economic strategies to affect the regional growth pattern. The growth geographies in



the proposed Plan accommodate 85 percent of the 1.4 million new households and 55 percent of the 1.4 million new jobs. Over 50 percent of the designated growth geographies also qualify as areas that would meet the State’s guidelines as TPAs (see **Table 2-21** in Chapter 2, “Project Description”). The proposed Plan’s combination of designated growth geographies and land use strategies focus housing and job growth primarily into infill areas with access to transit and other mobility options while also encouraging a more balanced jobs-housing ratio. The regional growth forecast along with the proposed Plan’s growth geographies, strategies, and ensuing forecasted development pattern leads to a shift from automobile travel to public transit and non-motorized modes over the Plan horizon (2050) in order to achieve SB 375’s mandate to reduce GHG emissions (see Section 2.2.3, “Conditions Under the Proposed Plan,” for a complete summary of regional travel forecasts).

The focused growth approach is articulated in strategies in the Housing and Economy Elements of the proposed Plan, discussed in Chapter 2, “Project Description.” The Housing Element includes a set of strategies that spur increased housing density in growth geographies, particularly Strategy H03, “Allow a Greater Mix of Housing Densities and Types in Growth Geographies.” To support growth and the ability for households of all incomes to have transit access, the suite of strategies spurs affordable housing development and preservation in addition to increased renter protections. The Economy Element includes strategies—strategies EC04, “Allow Greater Commercial Densities in Growth Geographies” and EC05, “Provide Incentives to Employers to Shift Jobs to HTAs Well Served by Transit”—to encourage improved jobs-housing ratios, locating jobs and housing closer to each other and potentially reducing the commute distances throughout the region.

The housing and economy strategies result in the proposed Plan’s forecasted development pattern, which informs travel patterns in 2050. These travel patterns, when coupled with the transportation strategies, are simulated in the regional travel model, Travel Model 1.5, to derive a series of forecasted travel metrics to contrast to simulated baseline conditions (2015). Metrics include summaries of trips by mode, their average travel time and distance, and the purpose of the trip. **Table 3.15-7** summarizes auto trips by purpose—commute versus non-commute—and their respective average travel distances. Overall, implementation of the proposed Plan would lead to shorter auto trip distances for both commute and non-commute trips. Auto commute trip distances are expected to decrease by four percent and non-commute trips are forecasted to decrease by five percent between 2015 and 2050.

**Table 3.15-7: Average Travel Distance per Auto Trip by Purpose**

	2015 Baseline (miles)	2050 Proposed Plan (miles)	Change (2015 to 2050)	
			Numerical	Percent
Commute	10.3	9.9	-0.4	-4%
Non-Commute	5.5	5.2	-0.3	-5%

Source: Data compiled by MTC and ABAG in 2021

In addition to shorter auto trips, the proposed Plan’s land use strategies result in increases in higher density, multi-family housing units in developed areas, where services tend to be closer to residences, walking and biking become more viable travel options, and transit is relatively more available. This type of development allows for households to reduce their reliance on automobile travel, as summarized in **Table 3.15-8**. Implementation of the proposed Plan would lead to higher shares of households with zero or one vehicle relative to existing conditions and reduce the share of households with multiple autos.

**Table 3.15-8: Household Auto Ownership**

	2015 Baseline	2050 Proposed Plan	Change (2015 to 2050)	
			Numerical	Percent
Share of Households with Zero Autos	9%	13%	+4%	44%
Share of Households with One Auto	31%	34%	+3%	+10%
Share of Households with Multiple Autos	59%	53%	-6%	-10%
Average Number of Vehicles by Household	1.54	1.48	-0.06	-4%

Note: Figures may not sum due to independent rounding; Population statistics reflect the total Bay Area population able to travel on the region's transport network; it does not include immobile, involuntary populations such as prison inmates.

Source: Data compiled by MTC and ABAG in 2021

In addition, the proposed Plan includes an array of transportation strategies that affect access to non-auto transportation modes, travel times and trip costs, and ultimately mode choice. The Transportation Element includes substantial investments in transit capital, infrastructure, and operations and maintenance and in bicycle and pedestrian facilities. In addition to investments in physical systems, the proposed Plan advances improvements to make transit and other non-auto modes more convenient and attractive through integrated fare policies, streamlined multimodal trip planning and fare payment, and transportation demand management (TDM) strategies. These strategies include (see Chapter 2, "Project Description," for more detail on the strategies):

- ▲ T03. Enable a Seamless Mobility Experience,
- ▲ T04. Reform Regional Transit Fare Policy,
- ▲ T05. Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives,
- ▲ T08. Build a Complete Streets Network,
- ▲ T09. Advance Regional Vision Zero Policy through Street Design and Reduced Speeds,
- ▲ EN07. Expand Commute Trip Reduction Programs at Major Employers, and
- ▲ EN09. Expand Transportation Demand Management Initiatives.

These transportation and environmental strategies in combination with the housing and economy strategies described earlier, would shift trips throughout the Bay Area away from driving and towards transit, walk, and bike modes. As shown in **Table 3.15-9**, auto trips (drive alone, carpool, and ride hail) make up 79 percent of all trips in 2015 and would make up 70 percent in 2050 under the proposed Plan.

**Table 3.15-9: Count and Share of Daily Trips by Mode**

Mode	2015 Baseline		2050 Proposed Plan	
	Trips	% of Total	Trips	% of Total
Drive Alone	12,030,000	46%	13,417,000	40%
Carpool	8,318,000	32%	9,190,000	27%
Ride Hail	548,100	2%	879,300	3%
Auto "Vehicle" Subtotal	20,896,000	79%	23,487,000	70%
Walk	3,348,000	13%	4,611,000	14%
Transit	1,472,000	6%	3,087,000	9%
Bike	583,800	2%	2,336,000	7%
Total Trips	26,299,000	100%	33,521,000	100%

Note: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum due to independent rounding; Trips and mode share do not account for expected trip reductions from the implementation of Strategy EN09 due to modeling limitations.

Source: Data compiled by MTC and ABAG in 2021

Similarly, the proposed Plan results in a lower share of workers in the Bay Area commuting by auto in 2050 compared to 2015. As shown in **Table 3.15-10**, the share of workers commuting to work by auto (drive alone, carpool, and ride hail) would drop from 70 percent in 2015 to 53 percent in 2050 in the proposed Plan. Despite the addition of 1.4 million new jobs in the region, implementation of the proposed Plan would result in fewer workers commuting by driving alone relative to baseline conditions. In addition to shifting to transit, walk, and bike modes, a greater share of workers in the proposed Plan are expected to telecommute in 2050. The mode shift in commute trips is particularly impactful on overall VMT as commute trips are longer on average than trips for other purposes (see **Table 3.15-7**).

**Table 3.15-10: Share of Workers by Commute Mode**

Mode	2015 Baseline	2050 Proposed Plan
	% of Total	% of Total
Drive Alone	51%	36%
Carpool	19%	17%
Ride Hail	1%	<1%
Auto "Vehicle" Subtotal	70%	53%
Walk	2%	3%
Transit	13%	20%
Bike	3%	7%
Telecommute	10%	17%

Note: Whole numbers have been rounded (between 0 and 10 to the nearest whole number, between 11 and 999 to the nearest 10, between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000). Figures may not sum due to independent rounding; Trips and mode share do not account for expected trip reductions from the implementation of Strategy EN09 due to modeling limitations.

Source: Data compiled by MTC and ABAG in 2021

The proposed Plan includes major highway projects that add capacity ("lane miles") to the region's freeways and expressways. As detailed in **Table 2-9** in Chapter 2, "Project Description," the proposed Plan adds approximately 460 new lane miles (two percent increase). Most of those new lane miles are attributed to express lanes on the region's freeways. Adding lane miles is known to induce more auto travel. The proposed Plan includes land use, transportation, and environmental strategies to reduce the anticipated induced travel from implementing capacity-increasing highway projects. The proposed Plan includes targeted strategies aimed at suppressing and/or shifting auto travel, including:

- ▲ T03. Enable a Seamless Mobility Experience,
- ▲ T04. Reform Regional Transit Fare Policy,
- ▲ T05. Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives,
- ▲ T08. Build a Complete Streets Network,
- ▲ T10. Enhance Local Transit Frequency, Capacity and Reliability,
- ▲ T11. Expand and Modernize the Regional Rail Network,
- ▲ EN07. Expand Commute Trip Reduction Programs at Major Employers, and
- ▲ EN09. Expand Transportation Demand Management Initiatives.

These strategies help reduce regional daily vehicle trips per capita by 19 percent and VMT per capita by 17 percent, as shown in **Table 3.15-11**, below. The net impact of the transportation strategies, including investments in transit, bicycle and pedestrian infrastructure expansion, priced roads, and other strategies is an overall reduction in VMT per capita relative to baseline conditions.

**Table 3.15-11: Summary of Baseline and Proposed Plan 2050 Vehicle Trips and VMT**

	2015 Baseline	2050 Proposed Plan	Change (2015 to 2050)	
			Numerical	Percent
Total Population	7,581,000	10,368,000	+2,786,000	+37%
Daily Vehicle Trips without Strategy EN09	20,896,000	23,487,000	+2,591,000	+12%
Daily Vehicle Trips with Strategy EN09	20,896,000	23,222,000	+2,326,000	+11%
Daily Vehicle Trips per Capita without Strategy EN09	2.8	2.3	-0.5	-18%
Daily Vehicle Trips per Capita with Strategy EN09	2.8	2.2	-0.5	-19%
Daily VMT without Strategy EN09	155,006,000	181,917,000	+26,911,000	+17%
Daily VMT with Strategy EN09	155,006,000	175,497,000	+20,491,000	+13%
Daily VMT per Capita without Strategy EN09	20.4	17.5	-2.9	-14%
Daily VMT per Capita with Strategy EN09	20.4	16.9	-3.5	-17%

Note: Numbers have been rounded (between 1,000 and 1,000,000 to the nearest 100, above 1,000,000 to the nearest 1,000); Figures may not sum due to independent rounding; Population statistics reflect the total Bay Area population able to travel on the region's transport network; it does not include immobile, involuntary populations such as prison inmates.

Source: Data compiled by MTC and ABAG in 2021

As noted in the methodology, Travel Model 1.5 is not sensitive to the full range of strategies in the proposed Plan. As a result, the VMT reduction benefits of Strategy EN09, "Expand Transportation Demand Management Initiatives," are calculated "off-model." The implementation of Strategy EN09 would result in additional VMT reductions as disclosed in **Table 3.15-11**, and includes supporting the expansion of regional bike share service; developing assistance for car share implementation along with assistance for mobility hub development; providing targeted transportation alternatives programs to provide personalized information and encouragement to shift individual travel choices from driving alone to ridesharing, transit, biking, or walking; supporting vanpool programs, including assistance for ridematching, startup and operations, and employer outreach; and supporting the development of parking management approaches and fees to discourage solo driving.

Implementation of sea level rise adaptation infrastructure under the proposed Plan's Strategy EN01, "Adapt to Sea Level Rise," is not expected to have an effect on VMT, because the adaptation infrastructure would elevate roadways from future inundation and would not increase capacity on the roadways. Instead, the adaptation infrastructure would alleviate risk from inundation of existing and forecasted land use development and transportation assets and support the proposed Plan's core land use strategy to "focus growth" in existing communities along the existing transportation network. Without the adaptation infrastructure, rising sea levels could result in inundation of these transportation assets, reducing access to destinations which could require longer trip routes with corresponding increases in VMT, and could have a long-term effect on the land use growth pattern and the forecasts of travel behavior and vehicle activity.

### **Conclusion**

Overall, the impact of the proposed Plan's forecasted land use growth pattern, sea level rise adaptation infrastructure, and proposed transportation projects and strategies result in an increase in total regional VMT and a decrease in regional per-capita VMT between the base year and 2050, as shown in **Table 2-12** of Chapter 2, "Project Description," and combined in part in **Table 3.15-11** above. Implementation of the proposed Plan would result in a VMT per capita rate 17 percent lower in 2050 than in 2015.

If implemented, the proposed Plan's comprehensive suite of land use, transportation, and environmental strategies would result in regional per-capita VMT reductions and would not impede

achievement of additional Statewide VMT reductions required to meet the State's statutory GHG emission targets.

The ability to facilitate further reductions in per capita VMT relies on local jurisdictions as they review and entitle individual land use and transportation projects. OPR notes in its Technical Advisory that "at present, consistency with RTP/SCSs does not necessarily lead to a less-than-significant VMT impact" because of the gap in the SB 375 targets and the GHG reductions necessary to achieve the Statewide goals (OPR 2018). As discussed earlier, OPR and CARB provide guidance on VMT impact evaluations and suggested significance thresholds that are applicable to project level assessments. Additionally, the SB 743 and the CEQA Guidance include CEQA streamlining opportunities for land use projects located near transit, and transportation projects that reduce VMT, such as transit and bicycle infrastructure projects, are assumed to have impacts that are less than significant.

Nevertheless, because there is a gap between the GHG emissions reductions that can be achieved from targets established by CARB pursuant to SB 375 and the GHG emissions reductions needed to achieve Statewide GHG reduction goals, and because the ability to bridge this gap relies on "new State-initiated VMT reduction strategies" (CARB 2018) and on implementation of land use, TDM and other strategies that can only be employed at the local jurisdictional level, MTC and ABAG cannot conclude that the reductions would be sufficient to meet the State's climate goals. Therefore, Impact TRA-2 would be **potentially significant (PS)**. Mitigation Measures TRA-2a and TRA-2b address this impact and are described below.

### Mitigation Measures

The State recognized that additional State policy actions and funding would be required to close the VMT gap between what the MPOs could achieve through implementation of their SCSs and reductions needed to meet State goals (CARB 2018). Though the State must initiate these additional actions and funding programs, the exact form of the policies and funding programs must be collaboratively developed with input from MPOs, local agencies, and other organizations to ensure they provide the tools and incentives necessary to go beyond the SCSs in reducing VMT. MTC shall be an active participant in this process to develop and explore pathways to implement State-level VMT reduction strategies, such as those outlined in Appendix C [2017 Scoping Plan] through a transparent and inclusive interagency policy development process to evaluate and identify implementation pathways for additional policies to reduce VMT and promote sustainable communities.

**Mitigation Measure TRA-2a** MTC shall work with state and local agencies to ensure implementation of components of the Plan that will help to reduce regional VMT, particularly projects that improve and/or expand transit service, as well as bicycle and pedestrian facilities. These transportation projects, in conjunction with land use policies included in the Plan, will help the region to achieve the projected decreases in regional VMT per capita and achieve the region's SB 375 targets for GHG emissions. MTC will collaborate with state and other agencies to explore the feasibility of new programs for reducing VMT such as VMT fees, banks, and exchanges.

**Mitigation Measure TRA-2b** Implementing agencies and/or project sponsors shall implement measures, where feasible and necessary based on project- and site-specific considerations, consistent with MTC's "Key SB 743 Implementation Steps for Land Use Projects" that include but are not limited to those identified below:

- Transportation demand management (TDM) strategies shall be incorporated into individual land use and transportation projects and plans, as part of the planning process. These TDM measures are strategies not included in EN09, rather they are measures that could and should be implemented



by the local agency based on land use authority that neither MTC nor ABAG has. Local agencies shall incorporate strategies identified in the Federal Highway Administration's publication: Integrating Demand Management into the Transportation Planning Process: A Desk Reference (August 2012) into the planning process (FHWA 2012). For example, the following strategies may be included to encourage use of transit and non-motorized modes of transportation and reduce vehicle miles traveled on the region's roadways:

- include TDM mitigation requirements for new developments;
- incorporate supporting infrastructure for non-motorized modes, such as, bike lanes, secure bike parking, sidewalks, and crosswalks;
- provide incentives to use alternative modes and reduce driving, such as universal transit passes, road and parking pricing;
- implement parking management programs, such as parking cash-out, priority parking for carpools and vanpools;
- develop TDM-specific performance measures to evaluate project-specific and system-wide performance;
- incorporate TDM performance measures in the decision-making process for identifying transportation investments;
- implement data collection programs for TDM to determine the effectiveness of certain strategies and to measure success over time; and
- set aside funding for TDM initiatives.

#### **Mitigation Measure TRA-2c Implement Mitigation Measure GHG-3**

##### **Significance after Mitigation**

The ability to close the gap between the SB 375 targets and the targets needed to meet State GHG reduction goals linked to transportation is tied to local jurisdictions and their ability to meet VMT targets in compliance with thresholds they set to meet CEQA Guidelines Section 15064(3)(b). However, there is no assurance that implementation of the proposed mitigation measures would be enough to achieve the regional reductions needed to attain the statewide 2050 targets. Additional regulatory action that results in substantial GHG reductions throughout all sectors of the State economy and based on State-adopted regulations would likely be needed to attain such goals, and they are beyond the feasible reach of MTC and ABAG and local jurisdictions.

Projects taking advantage of the CEQA Streamlining provisions of SB 375 (PRC Sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above, as applicable, to address site-specific conditions. The implementing agency would ensure that TDM measures are incorporated into projects to the extent feasible. Implementation of the mitigation measure at a project-level would encourage sustainable modes of transportation and reduce the potential for the proposed Plan to increase VMT on the regional transportation network. However, MTC and ABAG cannot require local implementing agencies to adopt the above mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt mitigation. In addition, the State has indicated that additional State policy actions and funding would be required to close the VMT gap between what the MPOs could achieve through implementation of their SCSs, and reductions needed to meet State

goals. Therefore, this impact would be **significant and unavoidable (SU)** for purposes of this program-level review.

### **Impact TRA-3: Substantially increase hazards due to geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (LTS)**

#### **Land Use, Sea Level Rise Adaptation, and Transportation System Impacts**

The regional growth pattern of the proposed Plan does not define design-level features of roadways. While the proposed Plan expands development and increases density in growth geographies, this growth would not impact geometric design features or roadway uses in a consistent way, as those design standards and uses are established and enforced at the local jurisdictional level. Specific transportation projects under the proposed Plan would be subject to and expected to follow the design guidelines and allowable uses established by the State or the local jurisdiction with authority over the project.

Construction activities from implementation of the proposed Plan would be short term, intermittent, and geographically dispersed. At the regional level, these disruptions would be localized, and impacts would be limited and would not represent a significant impact to the operations of the regional transportation system. At the local level, construction activities could increase travel on local roads and result in detours or increased congestion in certain locations. The actual construction details of land use development projects and proposed transportation projects are not known because the projects are in the early stages of planning. Construction impacts should be evaluated at the project level as more information about the timing, design, scope, and construction program are available. Generally, construction activities for land use development and transportation projects would be required to be conducted in accordance with, and subject to review by, all applicable State and/or local jurisdictions with authority over the project; thus, ensuring projects would be designed to minimize the potential for hazardous conditions and to ensure safe travel by all modes.

Local safety planning efforts are supported by regional policies and strategies. MTC's Regional Safety/Vision Zero Policy, established under Resolution 4400 in June 2020, affirms MTC's commitment to working collaboratively with partner agencies at the county and local levels to encourage and support equitable and data-driven actions achieving the target of eliminating traffic fatalities and serious injuries in the Bay Area by 2030. The Vision Zero framework serves as the basis for MTC's approach to establishing the regional safety performance measures and targets required under the FHWA and FTA Transportation Performance Management Program.

Complete Streets policies and programs also support reducing hazards on roadways and preventing incompatible uses by designing roads for all trip purposes, including for more vulnerable users such as cyclists and pedestrians. MTC also has a regional Complete Streets policy, adopted in 2006 under Resolution 3765, requiring that all projects funded with regional funds consider the accommodation of pedestrians, cyclists, public transit users and drivers as part of project planning, design, funding, and construction. As part of this policy, project sponsors must have a complete streets policy or updated circulation element of their local General Plan in place and must complete a Complete Streets Checklist for the project to access regional funding such as OBAG and the ATP.

In accordance with the Regional Safety/Vision Zero and Complete Streets policies, the proposed Plan includes proposed investments directed towards designs and enforcement efforts that would improve safety on the roads (Strategy T9) and investments for an expanded Complete Streets network (Strategy T8). These investments would go to local jurisdictions committing to projects that install

design elements that lower driving speeds or implement road diets and to projects that make biking and walking safer.

### **Conclusion**

The proposed Plan is not expected to negatively impact the design of transportation facilities. Rather, investments are expected to incentivize design improvements to make roadways safer. Therefore, the potential of the proposed Plan to substantially increase hazards due to geometric design features or incompatible uses would be **less than significant (LTS)**.

### **Mitigation Measures**

None required.

### **Impact TRA-4: Result in inadequate emergency access (LTS)**

#### **Land Use, Sea Level Rise Adaptation, and Transportation System Impacts**

The proposed Plan's impact on emergency response plans and evacuation plans is analyzed under Impact HAZ-6 in Section 3.9, "Hazards and Wildfire." The proposed Plan's core strategy remains "focused growth" in existing communities along the existing transportation network encouraging more dense development in a developed areas. Dense development in developed areas is generally more efficient at serving the public for emergency response. This is often because developed areas tend to be well served with these facilities and also because the denser land use pattern better facilitates access to specific sites.

The sea level rise adaptation infrastructure included in the proposed Plan would be anticipated to benefit emergency access by protecting areas from potential hazards, including flooding, that could otherwise impair emergency access using transportation facilities.

Transportation infrastructure plays a key role in providing access to destinations during emergencies. These systems must be able to provide access for emergency response vehicles, personnel, and equipment. In widespread disasters, the Bay Area's roads and other transportation networks can determine the success or failure of the region during the emergency and in the recovery.

Land use and transportation projects will require construction activities that may cause temporary impairments or increased congestion on transportation facilities that are used for emergency access, such as construction equipment for a building project blocking part of a street or construction of a new roadway lane temporarily redirecting travel on an alternate route. All transportation projects in the proposed Plan would be expected to comply with local regulations regarding the maintenance of emergency access during construction. Road closures would be temporary and would be coordinated with emergency responders so that alternative evacuation routes could be developed and employed. Construction associated with implementation of the proposed Plan would not likely hinder emergency access. Although construction activities could temporarily impair roadways used for emergency response and evacuation, standard construction procedures for development of a construction management plan would address these conditions and would require development of alternative routes. Projects requiring encroachment permits for temporary construction activities in public roadways that could be used for emergency response or evacuation are generally required to prepare traffic mitigation plans that address traffic control during the period when project construction is occurring within public right-of-way. To address any temporary road closures that would be required during construction, standard construction procedures include notification of emergency responders and development of alternative routes for emergency access.

The actual design details of land use development projects and proposed transportation projects are not known because the projects are in the early stages of planning. However, local jurisdictions have design standards for new and existing development and roadways to ensure adequate passage of emergency vehicles. Standards include specifications related to clear width, effective turning radius, and turnouts. Further, emergency access for land use development and transportation projects would be subject to review by State and/or local jurisdictions with authority over the project as well as responsible emergency service agencies; thus, ensuring projects would be designed to meet all applicable emergency access and design standards.

### **Conclusion**

While implementation of the proposed Plan's land use development pattern, sea level rise adaptation infrastructure, and transportation projects could temporarily impede emergency access at those project locations during construction periods, construction projects must conform to local regulations requiring maintenance of emergency access during construction. Therefore, the potential of the proposed Plan to result in inadequate emergency access would be **less than significant (LTS)**.

### **Mitigation Measures**

None required.

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