Draft Report

2025 San Mateo County Congestion Management Program

City/County Association of Governments of San Mateo County

September 9, 2025

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EXECUTIVE SUMMARY

The 2025 Congestion Management Program (CMP) Update is a document of the City/County Association of Governments of San Mateo County (C/CAG), the designated Congestion Management Agency (CMA) for San Mateo County. The 2025 biennial update is required by State statute. Following are highlights of this document.

Pedestrians crossing at SR-92/Main St in Half Moon Bay

Chapter 1: Introduction

This section introduces the CMP legislation and outlines the various elements/sections of this CMP.

Chapter 2: Designated Roadway System

The designated CMP roadway system in San Mateo County has not changed in this update. In total, the 464.7 directional miles of the CMP designated roadway network contains 301.4 miles of arterials/highways, 163.3 miles of freeways, and 16 intersections. New to this CMP is the Companion Monitoring Network (Companion Network), which includes an additional 10 roadway segments and 38 intersections not included in the CMP network. It will be monitored for informational purposes.

Chapter 3: Roadway System Level of Service (LOS)

This section also summarizes the results of monitoring the CMP Network as well as the Companion Network. Full details are located in the 2025 CMP Monitoring Report in **Appendix F**.

A total of 53 roadway segments and 16 intersections were monitored as part of the CMP Network in this report during the AM and PM peak periods. In the 2025 Monitoring Cycle, one multi-lane highway segment, one two-lane highway segment, and ten freeway segments fell below the LOS standard prior to the interregional trips exemptions. However, all roadway segments met the LOS standard after interregional trips exemptions.

Chapter 4: System Performance

C/CAG has adopted four performance measures: LOS; Travel Times for Single Occupancy Vehicles, Express Lanes, and Transit; Pedestrian and Bicycle Improvements, and Ridership/Person Throughput of Transit. Each of these performance measures is described in this chapter. Full details are located in the 2025 CMP Monitoring Report in **Appendix F**.

Chapter 5: Trip Reduction and Travel Demand Element

Transportation Demand Management (TDM) strategies are utilized to improve efficiency of the existing transportation systems without significant expansion of the infrastructure. These strategies focus on ways to reduce solo driving and/or eliminate the need for driving altogether. Some of the commonly used strategies that aim at reducing solo driving include carpool, vanpool, walking, bicycling, transit, and shared Uber/Lyft rides. Strategies to reduce vehicle miles traveled (VMT) include alternatives such as remote working, flexible work schedules, parking cash-out programs and incentives for choosing alternate travel options. Improving a balance between available jobs and employed residents within a community can help to shorten commutes. Use of TDM strategies help cities and counties in their attempt to balance the growing need for transportation and availability of limited transportation dollars, knowing we can't build our way out of congestion. San Mateo County's TDM agency, Commute.org, is primarily responsible for implementing TDM measures countywide. This chapter includes a full description of these programs, as well as others being offered by local jurisdictions.

Chapter 6: Land Use Impact Analysis Program

The CMP includes three tiers of the Land Use Analysis Program: Tier 1 (Long Range Planning Analysis), Tier 2 (Individual Large Development Analysis), and Tier 3 (Cumulative Development Analysis). All of these require local government participation and cooperation. The chapter also includes a detailed summary of the new TDM Policy adopted by C/CAG in 2022.

Chapter 7: Deficiency Plan Guidelines

Local jurisdictions must meet the CMP conformance requirements to receive funding from several State programs. The conformity process has not substantially changed in the 2025 CMP. Given that no segments or intersections are considered deficient, no jurisdiction is considered out of conformance at this time. C/CAG's adopted Congestion Relief Plan also serves as the countywide deficiency plan and relieves all cities/towns and the County from the need to prepare deficiency plans.

Chapter 8: Capital Improvement Program

A CMP is required to have a seven-year Capital Improvement Program (CIP) to maintain or improve the performance of the multimodal system for the movement of people and goods and to mitigate regional transportation impacts identified through the Land Use Analysis Program. Any project receiving State or Federal funding must be included in the CMP's CIP. This part of the CMP must be submitted first to the Metropolitan Transportation Commission (MTC) in the Bay Area and then to the California Transportation Commission (CTC) and/or the Federal Highway Administration (FHWA) so that funding from State and Federal programs can be allocated for the projects included in the CIP.

The 2024 CIP primarily includes projects programmed in the 2024 State Transportation Improvement Program (STIP), and lists other sources of funding for San Mateo County transportation projects.

Chapter 9: Database and Travel Demand Model

CMP requirements include maintaining and utilizing a travel demand model that is consistent with the regional model and available for use in corridor and development studies. The C/CAG-VTA Model is the transportation model used by C/CAG and is described in its chapter along with its role in the CMP, and its conformity with the MTC model.

Chapter 10: Monitoring and Updating the CMP

This section details the elements that must be updated biennially per CMP legislation, as well as the procedure to find a jurisdiction in non-conformance with the CMP requirements.

Chapter 11: Measure M - $10 Vehicle Registration Fee Program

This section summarizes the Measure M program and details the current expenditure plan, which is a $10 fee on motor vehicles registered in San Mateo County.

Chapter 12: Traffic Impact Analysis (TIA) Policy

This section summarizes C/CAG's adopted TIA Policy.

CHAPTER 1: INTRODUCTION

1.1 Background

Cycle track approaching intersection of El Camino Real (SR-82) and Ralston Avenue in Belmont

In 1990, California voters approved Propositions 111 and 108, which included a requirement that every urban county within California designate a CMA that would prepare, implement, and biennially update a CMP. In San Mateo County, C/CAG was designated as the CMA. Subsequent legislation (AB 2419) allowed existing Congestion Management Agencies to discontinue participation in the Program; however, C/CAG voted to continue to participate in and adopt a CMP.

According to the state legislation, the purpose of CMPs is to develop a procedure to alleviate or control anticipated increases in roadway congestion and to ensure that "federal, state, and local agencies join with transit districts, business, private and environmental interests to develop and implement comprehensive strategies needed to develop appropriate responses to transportation needs."[1] The first CMP for San Mateo County was adopted by C/CAG in 1991. It has been updated and amended on a biennial basis. The last CMP update was in 2023.

When the California Legislature defined the requirements for CMPs, they set in motion the following actions:

- A political process that encourages local jurisdictions (cities/towns and the County) to discuss and seek resolution of anticipated transportation supply problems.

[1]California Government Code Section 65088(e).

- A political process that requires that all types of measures, including the possibility of implementing land use changes, creating TDM actions, and providing transit, ridesharing, and other modal alternatives to driving, be considered in conjunction with building or widening roadways as effective ways to address future urban transportation needs.
- A technical process to provide consistent and timely information to elected officials about the possible consequences of planned or proposed land developments, and of the costs and benefits of optional ways to resolve anticipated congestion problems.

This CMP describes the framework for the ongoing process that will be followed by C/CAG, the County of San Mateo, and the cities/towns in San Mateo County to implement state and federal requirements concerning the CMP. The overall goal of this CMP is to help C/CAG promote countywide solutions to transportation problems based upon cooperation and mutual support.

1.2 Elements of the CMP

Each CMA is charged with developing, adopting and updating a CMP on a regular basis. The following elements must be included in a CMP:

Roadway System

The CMA must specify a system of highways and roadways for which traffic LOS standards shall be established. The CMP's Roadway System shall include at a minimum all state highways and principal arterials. No highway or roadway designated as a part of the CMP Roadway System shall be removed from the system (in future CMPs).

Traffic LOS Standards

LOS standards intended to measure roadway congestion must be established for all state highways and principal arterials included in the CMP's Roadway System. LOS is a qualitative description of roadway operations ranging from LOS A, or free flow conditions, to LOS F, or gridlocked conditions. The CMP may not establish any standard below LOS E unless a corridor operated at LOS F at the time that the standard was established in 1991. LOS must be monitored on the CMP network biennially.

Performance Element

The Performance Element was added in 1994 through passage of AB 1963. This element includes performance measures to evaluate current and future multimodal system performance for the movement of people and goods in San Mateo County. For C/CAG, this includes the four designated performance measures: LOS, Multi-Modal Travel Times, Pedestrian and Bicycle Improvements, and Ridership/Person Throughput for Transit.

Trip Reduction and Travel Demand Element

The CMP must contain an element promoting the use of alternative transportation modes and ways to reduce future travel demand. Improving a county's jobs/employed residents balance and implementing TDM strategies are specifically mentioned as ways of attaining the objectives of this element of the CMP.

Land Use Impact Analysis Program

The purpose of this element of the CMP is to create and implement a program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems. Estimates of the costs associated with mitigating the projected impacts must be included in the CMP, with some exceptions.[2]

Seven-Year Capital Improvement Program (CIP)

The CMP must contain a seven-year program of projects expected to maintain or improve traffic LOS and transit performance, and to mitigate the impacts of local land use decisions. Projects contained in the CIP must also conform to transportation-related air quality mitigation measures.

Other Items

In addition to these elements, a CMP must also include a uniform database and a computer-based transportation model that will be used to determine the quantitative impacts of proposed or planned land developments on a county's transportation systems. Finally, C/CAG is charged with monitoring the implementation of all elements of the CMP and determining conformance with the CMP's requirements and recommendations.

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[2]According to statute, interregional trips will be excluded from this cost estimate. Credit will also be given to local, public, and private contributions for improvement to the roadway system.

CHAPTER 2: DESIGNATED ROADWAY SYSTEM

2.1 Purpose and Intent of Legislation

The CMP was established as part of the legislated Transportation Blueprint of 1990 and became a requirement for CMAs across California to fulfill.

University Avenue (SR-109) south of Kavanaugh Drive in East Palo Alto

C/CAG established the CMP roadway network in 1991. The designated CMP roadway system includes all state highways and principal arterial roadways in San Mateo County, including freeways, multilane highways, two-lane highways, arterials, and intersections. California Government Code Section 65089(b)(1)(A) states that once a highway or roadway has been designated as part of the CMP system, it cannot be removed. Furthermore, Section 60589(b)(4) requires that the regional transportation system is part of the required land use program defined by State statute.

The CMP roadway system is a network designed to monitor the performance of established Level of Service (LOS) standards. The network must be created at a level such that impacts can be identified, and a connection can be made between proposed projects and their specific impacts on the network. The network can neither be too small, as impacts would be unidentifiable, nor too large, as there would be logistical issues in monitoring network performance.

2.2 Relationship to Regional Plans

The CMP is a short-range document containing elements that are required for consistency with long term regional transportation plans. The CMP is required to be consistent with long range regional transportation plans in the following areas:

- Goals and objectives established in MTC's Regional Transportation Plan (RTP)

- System definition with adjoining counties
- Federal and State air quality plans
- MTC travel demand modeling database and methodologies, and
- RTP financial assumptions.

Plan Bay Area 2050 is the RTP developed by MTC, the San Francisco Bay Area's regional transportation planning agency. The San Mateo CMP roadway system is consistent with the RTP, which was adopted in October 2021.

2.3 Designated CMP Network

The CMP Network incorporates the CMP Roadway System adopted in 1991, plus 16 intersections adopted in 1993, and one additional roadway segment adopted in 1999. The roadways adopted by C/CAG to be part of the CMP's Roadway System are roadways in San Mateo County that fulfill at least one of the following requirements:

- They are routes that are part of the California State Highway System. (Some of the State Highways in San Mateo County serve as principal arterials).
- They extend from the San Mateo County/San Francisco County line to the San Mateo County/Santa Clara County line.
- They extend from San Francisco Bay to the Pacific Ocean and/or connect two major north/south routes.
- They connect directly with the roadways included in the CMP networks of adjacent counties (as is the case with Mission Street, Geneva Avenue, and Bayshore Boulevard with San Francisco's CMP network).
- They are principal arterials, which in San Mateo County were defined as those roadways that are not freeways, contain six or more lanes for a length of at least one mile and carry average daily traffic (ADT) volumes of at least 30,000 vehicles.

Figure 1 illustrates all designated CMP roadway facilities within San Mateo County. The following roadways are designated as the San Mateo County CMP roadway network:

- State Route (SR)-1 – from San Francisco County Line to Santa Cruz County Line
- SR-35 – from San Francisco County Line to Santa Clara County Line
- SR-82 (El Camino Real) – from San Francisco County Line to Santa Clara County Line
- SR-84 – from SR-1 to Alameda County Line
- SR-92 – from SR-1 to Alameda County Line

- US 101 – from San Francisco County Line to Santa Clara County Line
- SR-109 – from Kavanaugh Drive to SR-84
- SR-114 – from US 101 to SR-84
- I-280 – from San Francisco County Line to Santa Clara County Line
- I-380 – from US 101 to I-280
- Mission Street – from San Francisco County Line to SR-82
- Geneva Avenue – from San Francisco County Line to Bayshore Boulevard
- Bayshore Boulevard – from San Francisco County Line to Geneva Avenue

As noted above, 16 intersections were added to the CMP network in 1999. These intersections are listed below and also shown in **Figure 1**:

1. Bayshore Boulevard/Geneva Avenue
2. SR-35/John Daly Boulevard
3. SR-82/Hillside Boulevard/John Daly Boulevard
4. SR-82/San Bruno Avenue
5. SR-82/Millbrae Avenue
6. SR-82/Broadway
7. SR-82/Peninsula Avenue/Park Road
8. SR-82/Ralston Avenue
9. SR-82/Holly Street
10. SR-82/Whipple Avenue
11. University Avenue/SR-84
12. Willow Road/SR-84
13. Marsh Road/SR-84
14. Middlefield Road/SR-84
15. SR-1/SR-92
16. SR-92/Main Street

Tables 1 and 2 provide details of the San Mateo County CMP network. In total, the 464.7 directional miles of the CMP designated roadway network contains 301.4 miles of arterials/highways and 163.3 miles of freeways. Detailed descriptions of the roadways included in this CMP's Roadway System are presented in **Appendix A**. The results of the *2025 CMP Monitoring Report* with the current LOS are contained in **Appendix F**.

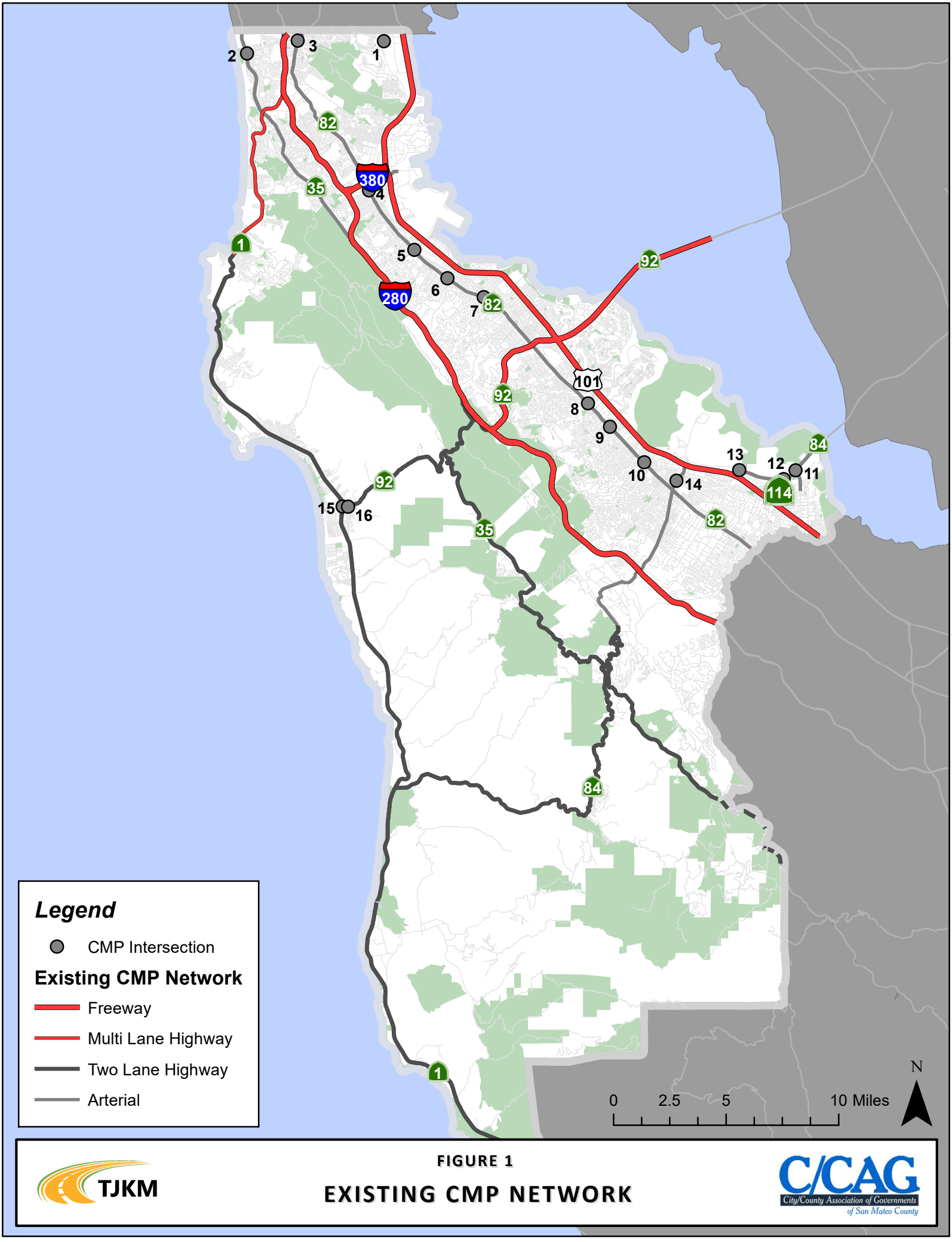

FIGURE 1

EXISTING CMP NETWORK

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C/CAG City/County Association of Governments of San Mateo County

Table 1: CMP Network Segments

ID	Route	From	To	Facility Type
1	SR-1	San Francisco County Line	Linda Mar Blvd	Multi-Lane Highway
2	SR-1	Linda Mar Blvd	Frenchmans Creek Rd	Two-Lane Highway
3	SR-1	Frenchmans Creek Rd	Miramontes Rd	Two-Lane Highway
4	SR-1	Miramontes Rd	Santa Cruz County Line	Two-Lane Highway
5	SR-35	San Francisco County Line	Sneath Ln	Arterial
6	SR-35	Sneath Ln	I-280	Arterial
7	SR-35	I-280	SR-92	Two-Lane Highway
8	SR-35	SR-92	SR-84	Two-Lane Highway
9	SR-35	SR-84	Santa Clara County Line	Two-Lane Highway
10	SR-82	San Francisco County Line	John Daly Blvd	Arterial
11	SR-82	John Daly Blvd	Hickey Blvd	Arterial
12	SR-82	Hickey Blvd	I-380	Arterial
13	SR-82	I-380	Trousdale Dr	Arterial
14	SR-82	Trousdale Dr	3rd Ave	Arterial
15	SR-82	3rd Ave	SR-92	Arterial
16	SR-82	SR-92	Hillsdale Ave	Arterial
17	SR-82	Hillsdale Ave	42nd Ave	Arterial
18	SR-82	42nd Ave	Holly St	Arterial
19	SR-82	Holly St	Whipple Ave	Arterial
20	SR-82	Whipple Ave	SR-84	Arterial
21	SR-82	SR-84	Glenwood Ave	Arterial
22	SR-82	Glenwood Ave	Santa Cruz Ave	Arterial
23	SR-82	Santa Cruz Ave	Santa Clara County Line	Arterial
24	SR-84	SR-1	Portola Rd	Two-Lane Highway
25	SR-84	Portola Rd	I-280	Two-Lane Highway
26	SR-84	I-280	Alameda de las Pulgas	Arterial
27	SR-84	Alameda de las Pulgas	US-101	Arterial
28	SR-84	US-101	Willow Rd	Arterial
29	SR-84	Willow Rd	University Ave	Arterial
30	SR-84	University Ave	Alameda County Line	Arterial
31	SR-92	SR-1	I-280	Two-Lane Highway
32	SR-92	I-280	US-101	Freeway
33	SR-92	US-101	Alameda County Line	Freeway
34	US-101	San Francisco County Line	I-380	Freeway
35	US-101	I-380	Millbrae Ave	Freeway
36	US-101	Millbrae Ave	Broadway	Freeway
37	US-101	Broadway	Peninsula Ave	Freeway

ID	Route	From	To	Facility Type
38	US-101	Peninsula Ave	SR-92	Freeway
39	US-101	SR-92	Whipple Ave	Freeway
40	US-101	Whipple Ave	Santa Clara County Line	Freeway
41	SR-109	Kavanaugh Dr	SR-84	Arterial
42	SR-114	US-101	SR-84	Arterial
43	I-280	San Francisco County Line	SR-1 (North)	Freeway
44	I-280	SR-1 (North)	SR-1 (South)	Freeway
45	I-280	SR-1 (South)	San Bruno Ave	Freeway
46	I-280	San Bruno Ave	SR-92	Freeway
47	I-280	SR-92	SR-84	Freeway
48	I-280	SR-84	Santa Clara County Line	Freeway
49	I-380	I-280	US-101	Freeway
50	I-380	US-101	Airport Access Rd	Arterial
51	Mission St	San Francisco County Line	SR-82	Arterial
52	Geneva Ave	San Francisco County Line	Bayshore Blvd	Arterial
53	Bayshore Blvd	San Francisco County Line	Geneva Ave	Arterial

Table 2: CMP Network Intersections

ID	Jurisdiction	Intersection
1	Daly City/Brisbane	Bayshore Blvd/Geneva Ave
2	Daly City	SR-35/John Daly Blvd
3	Daly City	SR-82/Hillside Blvd/John Daly Blvd
4	San Bruno	SR-82/San Bruno Ave
5	Millbrae	SR-82/Millbrae Ave
6	Burlingame	SR-82/Broadway
7	Burlingame/San Mateo	SR-82/Peninsula Ave/Park Rd
8	Belmont	SR-82/Ralston Ave
9	San Carlos	SR-82/Holly St
10	Redwood City	SR-82/Whipple Ave
11	Menlo Park	University Ave/SR-84
12	Menlo Park	Willow Rd/SR-84
13	Menlo Park	Marsh Rd/SR-84
14	Redwood City	Middlefield Rd/SR-84
15	Half Moon Bay	SR-1/SR-92
16	Half Moon Bay	SR-92/Main St

2.3 Companion Monitoring Network

The 2025 CMP Update established a new "Companion Monitoring Network" (Companion Network) consisting of 10 roadway segments and 38 intersections not in the CMP network where C/CAG desired to see additional congestion monitoring. The purpose of the network is to monitor congestion in other parts of the county that are not necessarily on a state highway, or intersections that are not currently monitored. These locations will be monitored for informational purposes only.

The network was developed based on a set of criteria that considered roadway classification/function, past collision history, bicycle Level of Traffic Stress, facilities that were identified in local road safety plans, local city/county plans, and locations that connected to existing CMP segments that had a failing LOS in 2023. All 20 cities/towns and towns in San Mateo County have at least one location (either a roadway segment or intersection), as well as several in unincorporated San Mateo County. The Companion Network is detailed in **Tables 3** and **4**, and mapped in **Figure 2**.

Table 3: Companion Network Roadway Segments

ID	Jurisdiction	Name	Extent
R1	Belmont	Ralston Avenue	US-101 to Alameda de las Pulgas
R2	Unincorporated San Mateo County (North Fair Oaks), Atherton, Redwood City	Middlefield Road	SR-84 to Marsh Road
R3	Burlingame	California Drive	Broadway to Peninsula Avenue
R4	Brisbane	Bayshore Boulevard	Geneva Ave to US-101 NB Off-Ramp
R5	Daly City	John Daly Boulevard	SR-35 to Mission Street
R6	Foster City	Foster City Boulevard	E. 3rd Avenue to Beach Park Boulevard
R7	Hillsborough	Chateau Drive/Ralston Avenue	I-280 to El Camino Real
R8	Millbrae	Millbrae Avenue	SR-82 to Old Bayshore Highway
R9	Pacifica	Sharp Park Boulevard	SR-1 to SR-35
R10	San Bruno	Sneath Lane	SR-35 to Huntington Avenue

Table 4: Companion Network Intersections

ID	Jurisdiction	Intersection
17	San Mateo	SR 82 / 3rd Avenue
18	Unincorporated San Mateo County	Skyline Boulevard (SR-35) / SR-92
19	San Carlos	Holly Street / Industrial Road
20	Redwood City	Whipple Avenue / Veterans Boulevard
21	Atherton	Middlefield Road / Marsh Road
22	Menlo Park	Sand Hill Road / Santa Cruz Avenue
23	East Palo Alto	Bay Road / University Avenue
24	Woodside/Redwood City	SR 84 / Alameda de las Pulgas
25	Portola Valley	Alpine Road / Portola Road
26	Unincorporated San Mateo County	SR 35 / SR 92
27	Colma	El Camino Real / Mission Road
28	Half Moon Bay	CA-1 / Main Street
29	South San Francisco	El Camino Real / Westborough Boulevard
30	Unincorporated San Mateo County (El Granada/Coastside)	SR 1 / Capistrano Boulevard
31	Unincorporated San Mateo County (SFO Airport)	S. Airport Boulevard / San Bruno Avenue
32	Pacifica	SR 1 / Reina del Mar Avenue
33	Unincorporated San Mateo County (Moss Beach/Coastside)	SR 1 / Cypress Avenue
34	Atherton	El Camino Real /Selby Lane
35	Belmont	Davis Drive /Ralston Avenue
36	Brisbane	Bayshore Boulevard / San Bruno Avenue
37	Colma	Serramonte Boulevard / NB Hwy 280 on-ramp
38	East Palo Alto	University Avenue / Weeks Street
39	Foster City	Chess Drive / Foster City Boulevard
40	Half Moon Bay	Highway 1 / Poplar Street
41	Hillsborough	Skyline / Skyfarm
42	San Carlos	Brittan Avenue / Cordilleras Avenue
43	Woodside	Woodside Road / Lindenbrook Road
44	Daly City	Mission Street /E. Market Street/San Pedro Road
45	Menlo Park	Willow Road/ O'Brien Drive
46	Millbrae	Rollins Road / Millbrae Avenue
47	Pacifica	Fasler Avenue / Highway 1
48	Portola Valley	Alpine Road / Golden Oak Drive
49	San Bruno	El Camino Real / Sneath Lane
50	San Mateo	Poplar/Humboldt

ID	Jurisdiction	Intersection
51	South San Francisco	Westborough Boulevard at I-280/Juniper Serra Boulevard
52	Burlingame	Old Bayshore Highway / Mahler Road
53	San Mateo County	Middlefield Road/ Fifth Avenue
54	Redwood City	El Camino Real / Jefferson Avenue

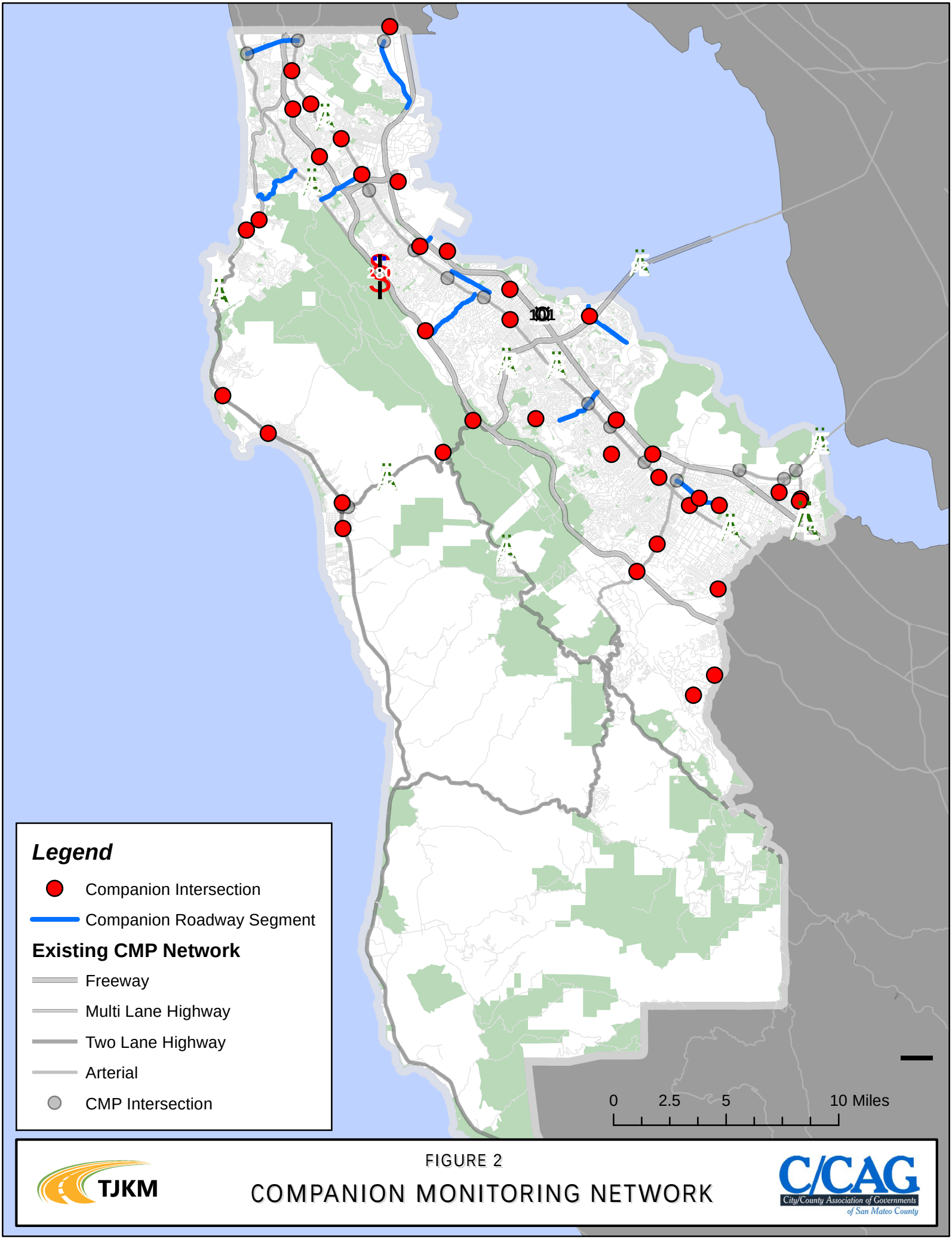

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FIGURE 2

COMPANION MONITORING NETWORK

C/CAG City/County Association of Governments of San Mateo County

CHAPTER 3: ROADWAY SYSTEM LOS

3.1 Legislative Requirements

California Government Code Sections 65089.1 (A) and (B) requires that LOS standards be established by the responsible County CMA, in this case, C/CAG for the roadways and intersections designated to be in the CMP Roadway System. Furthermore, roadway LOS are to be measured by methods described in one of the following documents: The Transportation Research Board's *Circular 212,* the latest version of the *Highway Capacity Manual (HCM),* or a uniform methodology adopted by the CMA that is consistent with the *HCM.*

The CMP legislation stipulates that the CMP's LOS standards can be set at any LOS - A through F. However, only roadway segments or intersections operating at LOS F when the CMP was established in 1991 may have a LOS F standard set for them.

3.2 Discussion and Roadway Segments LOS Standards

LOS is a qualitative term used to describe a roadway's operating condition. The LOS of a road or street is designated by a letter grade ranging from A to F, with LOS A representing free-flow conditions with little or no delay and LOS F representing forced flow with excessive delays. An explanation of the various LOS levels is shown below in **Table 5.**

Table 5: LOS Definitions

LOS Level	Description
A	Free-flow conditions with unimpeded maneuverability.
B	Reasonably unimpeded operations with slightly restricted maneuverability.
C	Stable operations with somewhat more restrictions. Motorists will experience appreciable tension while driving.
D	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed.
E	Unstable flow at or near capacity levels with poor levels of comfort and convenience.
F	Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. Characterized by stop-and-go waves and poor travel times.

Sources: San Mateo C/CAG Traffic LOS Calculation Methods, HCM, & Virginia DOT

The purpose of setting LOS standards is to evaluate changes in congestion, to be measured on the designated system of CMP roadways via LOS calculations. Existing LOS are to be calculated every two years as part of the CMP's traffic operations monitoring program. The results of the monitoring of existing LOS in 2025 for the CMP roadway segments and intersections are presented in **Appendix F**.

When monitoring conformance with this CMP's recommendations, a significant increase in congestion is defined as a change in the measured LOS to any level worse than the specified LOS standard. Therefore, nonattainment of the CMP's Roadway LOS standards would occur whenever the LOS for a roadway segment or intersection included in the CMP Roadway System is monitored as falling below the LOS standard established for that roadway facility. With one exception, this would occur regardless of the LOS standard set by C/CAG for a roadway. The exception would be that for a roadway where the standard was set to be LOS F, further decreases in their LOS would not be measured as falling below this CMP's standards.

The following LOS standards were selected for the roadway segments.

- If the existing (1990/91) LOS was F, then the standard was set to be LOS F.
- If the existing LOS was E or better in 1991, the standard was set at LOS E.
- The standard for roadway segments near the San Francisco, Santa Clara, and Alameda County borders, with one exception,[3] was set to be LOS E to be consistent with the recommendations in those counties' 1991 CMPs. This standard applies unless those roadway segments were already operating at LOS F.
- On SR-82 (El Camino Real), the standard was set to be LOS E.
- For the remaining roadway segments, the standard was set to be one letter designation worse than the LOS projected for the year 2000 when the CMP was established in 1991.

The LOS standards established for San Mateo County vary by roadway segment. By adopting LOS standards based on geographic differences, C/CAG signaled that it intends to use the CMP process to prevent future congestion levels in San Mateo County from getting worse than currently anticipated. At the same time, the

[3]For I-280 south of SR 84, the adopted standard is LOS D.

variations in LOS standards by geographic area conform to current land use plans and development differences between the Coastside and Bayside, and between older downtowns near Caltrain stations and other areas of San Mateo County.

Local cities and towns must consider the impacts that land use decisions have on LOS on the designated CMP network. C/CAG works with local government agencies to determine whether a change in land use affects LOS negatively and how to mitigate any anticipated deficiencies. A systems approach may have to be examined when considering LOS of the entire system. Cities/towns and counties may be responsible for funding improvements and programs that benefit the system as a whole. Note that while VMT became the required metric for analyzing the impact of development on the transportation system on July 1, 2020 (as part of SB 743), specific guidance has not been released for incorporating VMT into the CMP and as such LOS is still used. Additional discussion on the Land Use Analysis Program is presented in Chapter 6.

3.3 Intersection LOS Standards

The CMP Roadway System first adopted in 1991 included 16 intersections. Intersection LOS standards were selected based on the following considerations:

- If the existing LOS was F, then the standard was set to be LOS F.
- If the existing LOS was E, then the standard was set to be E.
- The standard of the intersections near the San Francisco, Santa Clara, and Alameda Counties was set at LOS E to be consistent with the LOS standards adopted in those counties.
- On SR 82 (El Camino Real), the standard was set to be LOS E to be consistent with the roadway segment standards.
- For the remaining intersections, the standard was set to be LOS E to correspond to the standard established for the adjacent roadway segment. (All the segments on which these intersections are located have standards set to LOS E.)

Should the LOS of any particular segment fall below the established standard, it moves on to a second process of volume reductions before determining deficiencies. For purposes of determining deficiencies, as required by law, the impacts of the following will be excluded:

1) interregional travel,
2) construction, rehabilitation, or maintenance of facilities that impact the system,
3) freeway ramp metering,
4) traffic signal coordination by the state for multi-jurisdictional agencies,
5) traffic generated by the provision of low- and very low-income housing,
6) traffic generated by high-density residential development located within one-fourth mile of a rail passenger station, and
7) traffic generated by any mixed-use development located within one-fourth mile of a fixed rail passenger station, if more than half of the land area, or floor area, of the mixed-use development is used for high-density residential housing, as determined by the agency.

LOS standards apply only to the CMP segments and intersections during the established weekday AM and PM peak periods. Locations and time periods outside of this, including the Companion Network or weekend monitoring as discussed in Chapter 3, do not have an established LOS standard and are monitored for

informational purposes only. The LOS standards for roadway segments and intersections is mapped below in **Figure 3**.

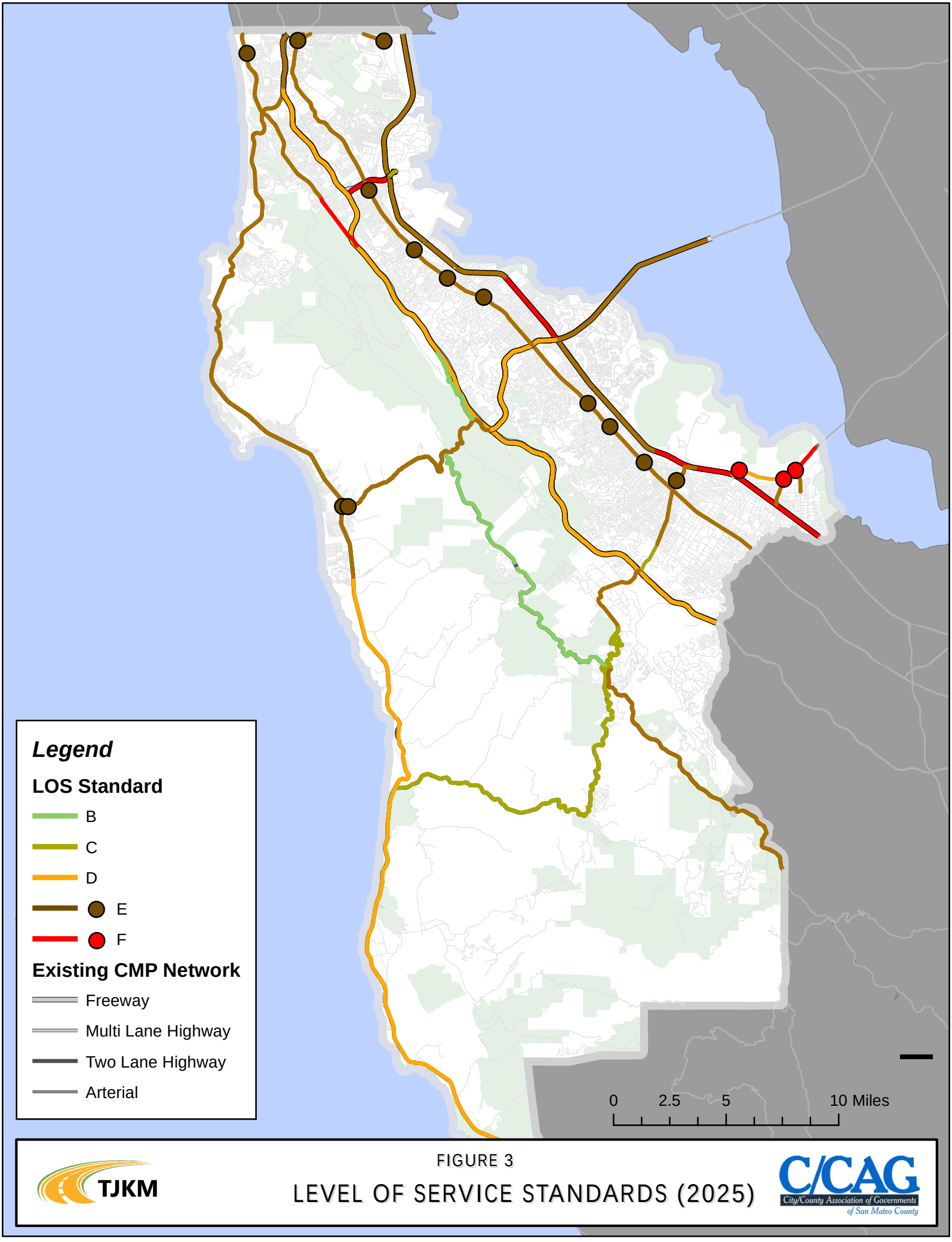

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FIGURE 3

LEVEL OF SERVICE STANDARDS (2025)

C/CAG City/County Association of Governments of San Mateo County

3.4 LOS Analysis Methodology

Each biennial update of the CMP is accompanied by LOS monitoring of the CMP network. The San Mateo County CMP network includes five types of facilities, each with its own monitoring methodologies: freeways, multilane highways, two-lane highways, arterials, and intersections. Data collection for LOS monitoring took place in April and May 2025 on mid-week days (Tuesday-Thursday) during the established AM (7am-9am) and PM (4pm-6pm) peak periods. Data collection included: INRIX commercial speed data, turning movement counts, 72-hour volume counts, general purpose lane and HOT express lane floating car surveys. Additional data collection occurred on Saturday and Sunday at certain Coastside locations to conduct informational weekend monitoring. A description of the data collected and LOS analysis methodology for each is summarized below in **Table 6**.

Table 6: LOS Monitoring Methodology

Facility Type	Data and Analysis Methodology
Freeways	Freeways were monitored using average speeds from commercially available INRIX data during the months of April-May 2025. Data was pulled and analyzed for the AM and PM peak periods. LOS was calculated based on average speed on each segment using HCM 1994 procedures and reported for the worst case direction in each peak period.
Multilane Highways	Data used and methodology was similar to freeways. LOS was determined from average INRIX average speed data and calculated using HCM 1994 procedures. LOS was assigned based on the worst case direction in each peak period.
Two-Lane Highways	Two-lane highways were monitored using data from 72-hour traffic counts taken on each segment countywide. The highest one hour volume across the three days in each peak period was used to calculate a V/C ratio. LOS was assigned based on HCM 1994 methodologies for two-lane highways and takes into account percent no passing and terrain (level, rolling, or mountainous).
Arterials	Arterials were monitored using data from 72-hour traffic counts or turning movement counts taken on each segment countywide. As with two-lane highways, the highest one hour volume across the three days in each peak period was used to calculate a V/C ratio. Where volumes from a turning movement count is used, data from the peak hour was used. LOS was assigned based on HCM 1994 methodology for arterials.
Intersections	Turning movement counts were collected at each intersection during the AM and PM peak periods. Each intersection was analyzed in Synchro software and assigned and LOS using HCM 7th Edition, methodologies (Note: where signal parameters did not allow the use of HCM 7th Edition, HCM 2000 was used). LOS was reported for both peak periods alongside the delay (in seconds).
Companion Network	The Companion Network was monitored using the same methodologies as the CMP network. 72-hour traffic counts were taken at Companion Network arterials, while turning movement counts were taken at Companion Network Intersections. For arterials, HCM 1994 was used to assign LOS

Facility Type	Data and Analysis Methodology
	based on a V/C ratio. Intersections were modeled in Synchro and used HCM 7th Edition (or, if needed, HCM 2000), to assign LOS.
Weekend Monitoring	At four roadway segments and eight intersections on the Coastside, data collection and analysis was done on the weekend for informational purposes. Roadway segments used 48-hour counts on Saturday and Sunday, while intersections were counted in the AM, Mid-Day (11am-1pm), and PM peak periods. The same methodologies to calculate LOS on the CMP network were used.

3.5 2025 Monitoring Results

Monitoring for the 2025 CMP was conducted for C/CAG by TJKM Transportation Consultants. This CMP Update relies on data from the 2025 Monitoring Cycle, as documented in the *2025 CMP Monitoring Report* in **Appendix F**.

Recovery from the COVID-19 pandemic has seen an increase in traffic volumes closer to pre-pandemic levels across San Mateo County. In 2025, only 12 roadway segments were failing before the interregional trips exemptions were applied (all of which improved to an acceptable LOS after interregional trips exemptions). However, these 12 failing segments in 2025 do not reflect the same level of traffic congestion compared to pre-pandemic conditions as there were 19 failing segments in 2019.

Volumes from roadway segment 72-hour traffic counts reduced by an average of 1% when compared to available data from 2023. However, when comparing 2023 volumes to 2017 volumes, average traffic counts decreased by an average of 14%. Therefore, based on the 72-hour traffic counts, traffic volumes are still slightly below pre-pandemic conditions.

Intersection turning movement count volumes increased by an average of 2% when compared to 2023 data. However, from 2019 to 2025, intersection turning movement count volumes decreased 22% which indicated traffic volumes are similar to pre-pandemic levels.

Table 7 below summarizes the results of the CMP Network monitoring. Maps of the monitoring results are shown in **Figure 4** (AM Roadway Segment LOS), **Figure 5** (PM Roadway Segment LOS), **Figure 6** (AM Intersection LOS), and **Figure 7** (PM Intersection LOS).

Table 7: 2025 CMP Network Monitoring Results

Roadway Type	# of CMP Segments	Before Interregional Exemption		After Interregional Exemption	
		LOS Standard Met	LOS Standard Not Met	LOS Standard Met	LOS Standard Not Met
Arterials	27	27	0	27	0
Multilane Highways	1	0	1	1	0
Two-Lane Highways	9	9	1	9	0
Freeways	16	6	10	16	0
Intersections	16	15	0	16	0
TOTAL	**69**	**57**	**12**	**69**	**0**

The results of the 2025 Monitoring Cycle show that 12 segments were failing before interregional reductions were considered. After the reductions, all rose to an acceptable LOS above their respective standard. Therefore, no segment or intersection is considered deficient.

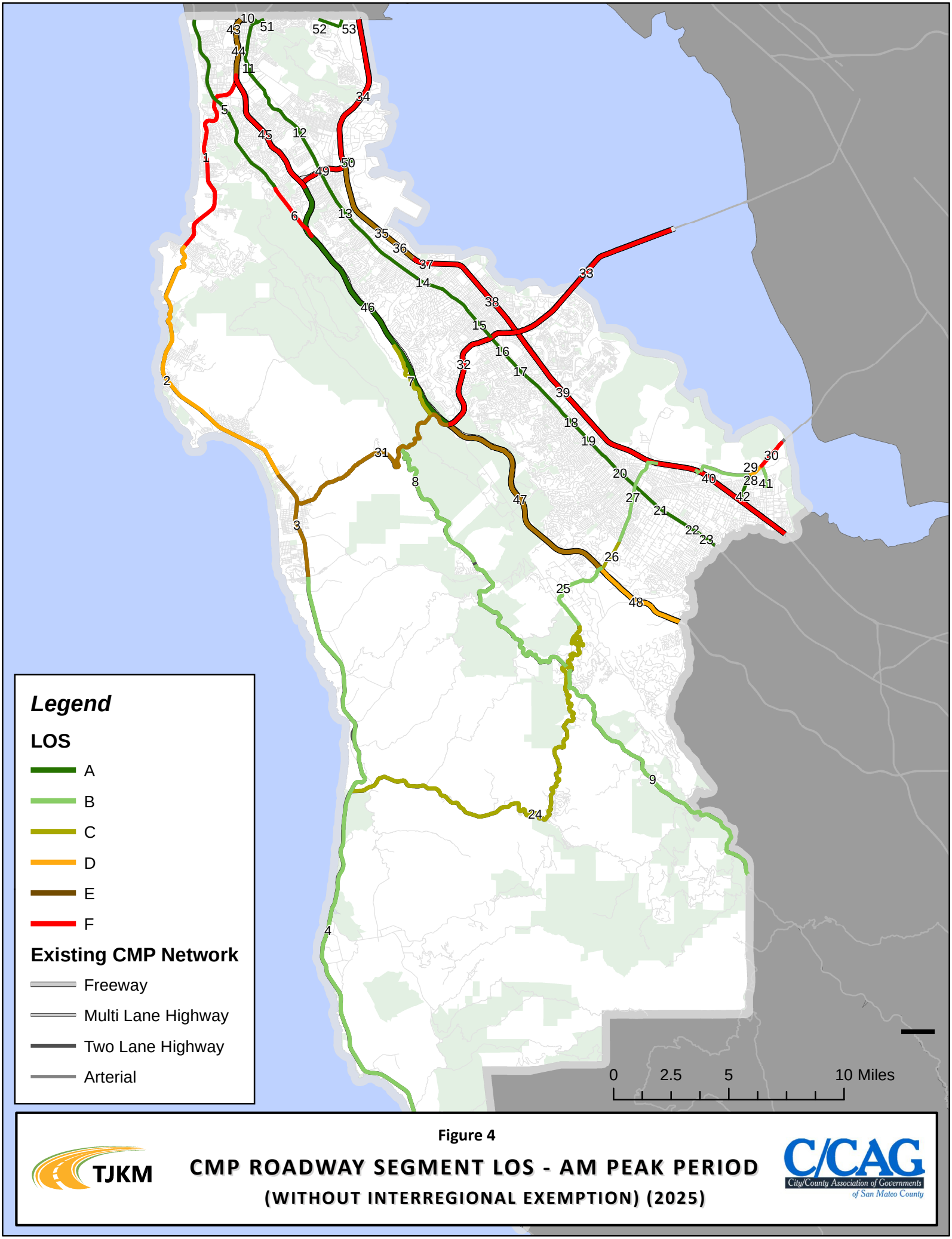

Figure 4

CMP ROADWAY SEGMENT LOS - AM PEAK PERIOD

(WITHOUT INTERREGIONAL EXEMPTION) (2025)

TJKM

C/CAG City/County Association of Governments of San Mateo County

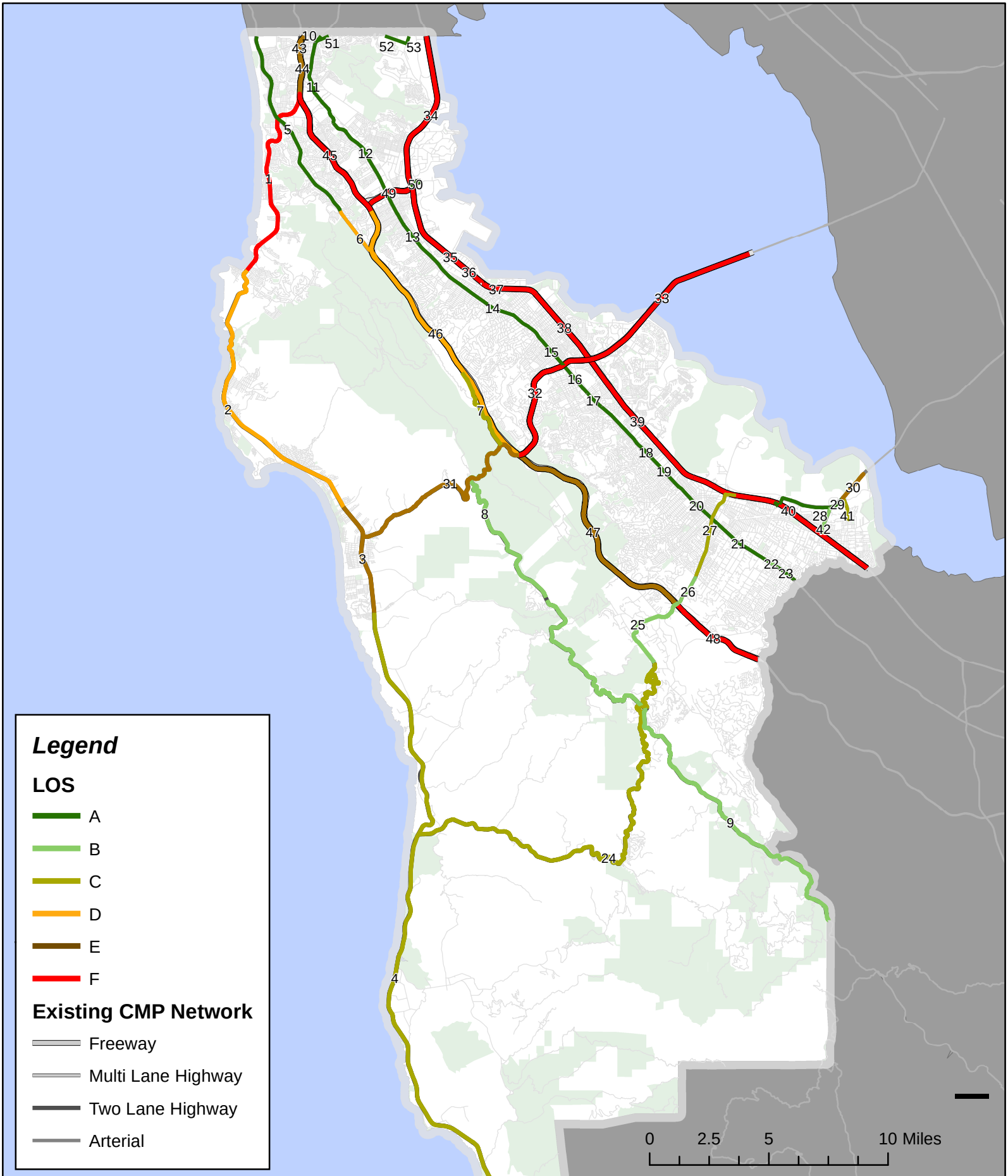

Figure 5

CMP ROADWAY SEGMENT LOS - PM PEAK PERIOD

(WITHOUT INTERREGIONAL EXEMPTION) (2025)

TJKM

C/CAG City/County Association of Governments of San Mateo County

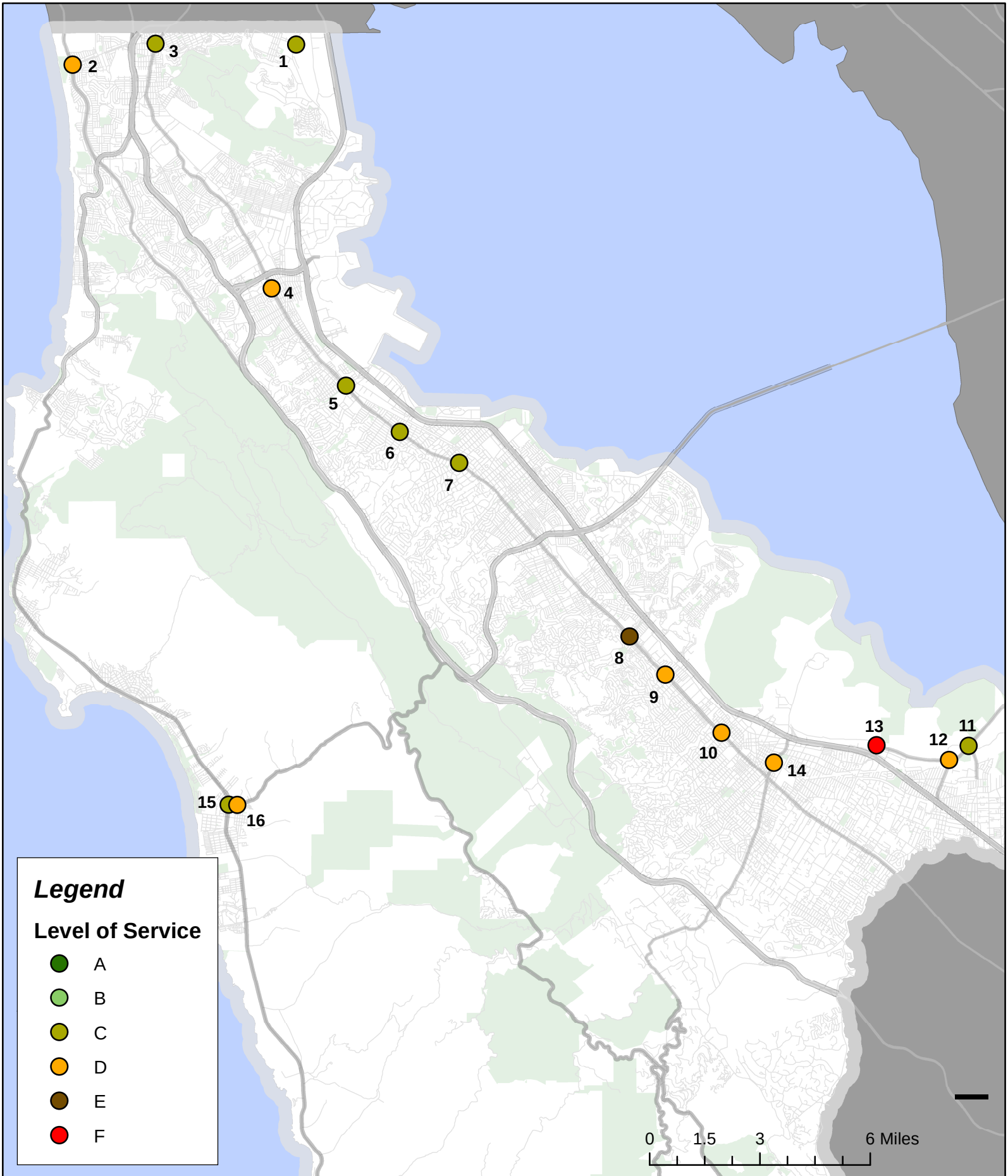

Figure 6

CMP INTERSECTION LOS - AM PEAK PERIOD

(WITHOUT INTERREGIONAL EXEMPTION (2025)

TJKM

C/CAG City/County Association of Governments of San Mateo County

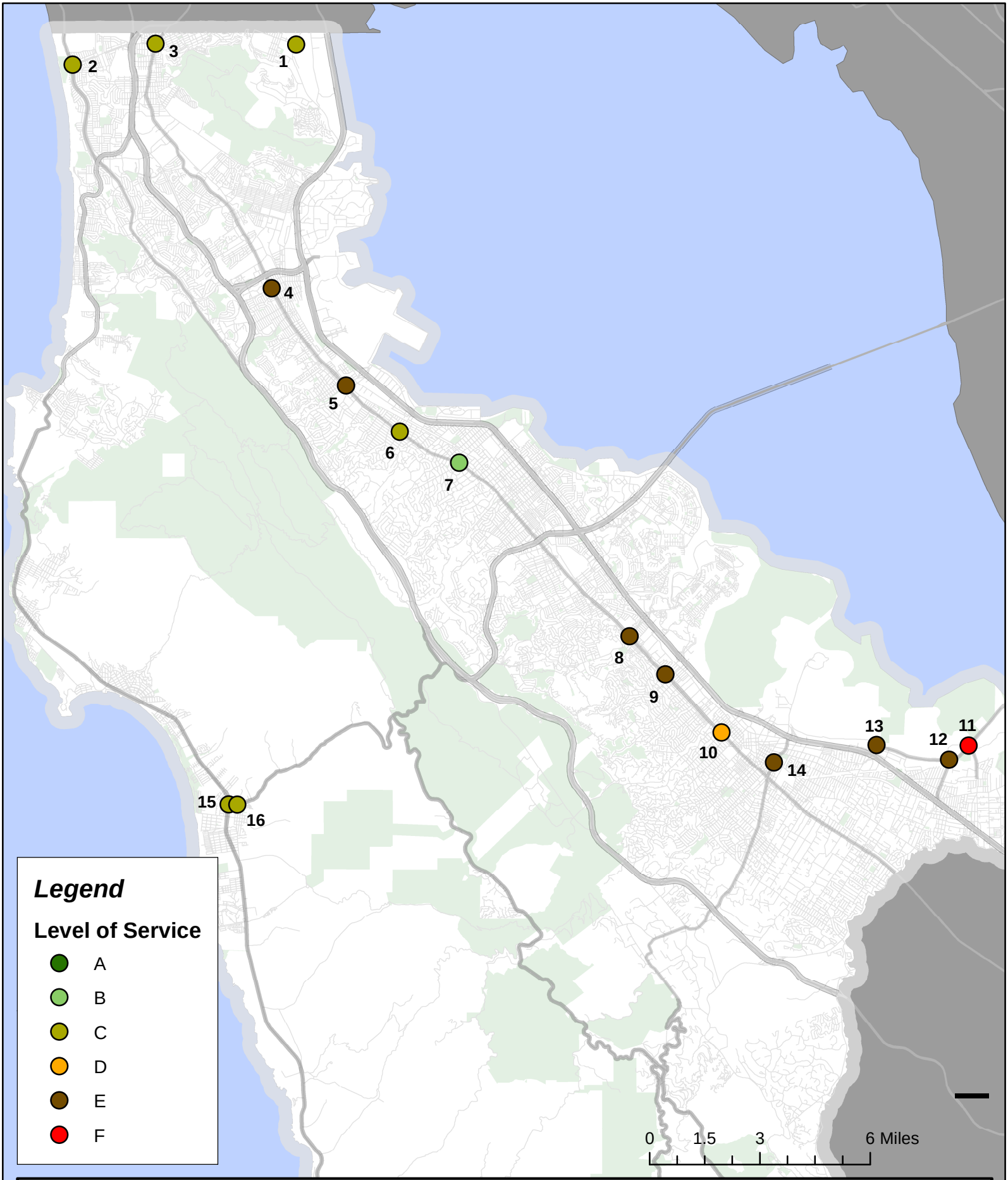

Figure 7

CMP INTERSECTION LOS - PM PEAK PERIOD

(WITHOUT INTERREGIONAL EXEMPTION (2025)

TJKM

C/CAG City/County Association of Governments of San Mateo County

Companion Network

In addition to the biannual monitoring of the CMP network, the 2025 CMP monitoring efforts included monitoring the new Companion Network. This network includes roadway segments and intersections that C/CAG wanted to monitor congestion on, but are not included in the CMP network. It is provided for informational purposes only. The results of the monitoring of the Companion Network are summarized below in **Table 8** (AM peak period) and **Table 9** (PM peak period).

Table 8: 2025 Companion Monitoring Results (AM Peak Period)

Facility Type	# of Segments/Intersections	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Roadway Segments	10	8	0	1	1	0	0
Intersections	38	2	8	7	11	6	4

Table 9: 2025 Companion Monitoring Results (PM Peak Period)

Facility Type	# of Segments/Intersections	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Roadway Segments	10	7	1	2	0	0	0
Intersections	38	2	7	9	12	2	6

Weekend Monitoring

At four roadway segments and eight intersections on the Coastside (CMP and Companion Networks), weekend monitoring was conducted to analyze the effects of tourist traffic. The results of Weekend monitoring are summarized below in **Table 10** (AM peak period), **Table 11** (Mid-Day Peak Period), and **Table 12** (PM peak period).

Table 10: 2025 Weekend Monitoring Results (AM Peak Period)

Facility Type	# of Segments/Intersections	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Roadway Segments	4	0	1	0	2	1	0
Intersections	8	0	2	5	1	0	0

Table 11: 2025 Weekend Monitoring Results (Mid-Day Peak Period)

Facility Type	# of Segments/Intersections	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Roadway Segments	4	0	0	0	1	3	0
Intersections	8	0	0	2	3	0	3

Table 12: 2025 Weekend Monitoring Results (PM Peak Period)

Facility Type	# of Segments/Intersections	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Roadway Segments	4	0	0	1	1	2	0
Intersections	8	0	1	1	4	0	2

Full details of the 2025 CMP monitoring efforts can be found in the *2025 CMP Monitoring Report* in **Appendix F**.

CHAPTER 4: SYSTEM PERFORMANCE

4.1 Purpose and Intent of Legislation

The California Government Code Section 65089(b)(2) requires each CMA to establish performance measures to evaluate current and future multimodal system performance for the movement of people and goods. At a minimum, these performance measures shall incorporate highway and roadway system performance, and measures established for the frequency and routing of public transit, and for the coordination of transit services provided by separate operators. These performance measures shall support mobility, air quality, land use, and economic objectives, and shall be used in the development of the CIP, deficiency plans, and the land use impact analysis program.

Caltrain serves most of San Mateo County, with stops in all cities along the US 101 corridor

Consistent with past CMPs, performance measures are included in this CMP and described in this chapter. The measures should not be confused with "standards," as no level of performance is required. Rather, measures simply indicate the levels of performance at a given time.

4.2 San Mateo County Performance Measures

The below performance measures help determine whether the goals of the CMP are being met. The goals relate to supporting mobility, air quality, land-use, and economic objectives. These measures are also used in the development of a CIP, deficiency plan, and the land-use analysis program. The *2025 CMP Monitoring Report* in **Appendix F** contains detailed results of the monitoring of each performance measure.

Four performance measures were selected for the 1997 CMP and retained for subsequent CMPs. Beginning with the 2003 CMP, the Pedestrian and Bicycle Improvement performance measure was incorporated in new transportation improvement projects. Monitoring will be done biennially. The results will be used for planning purposes and to identify where additional measures may be needed to better assess the degree to which congestion is improving or worsening.

These measures will be evaluated for peak commute periods (7am-9am and 4pm-6pm), when congestion levels are at their highest. The four measures are:

Roadway Level of Service (LOS)

This performance measure provides an assessment of the operating level of the roadway system in San Mateo County. It is already included in the CMP and LOS standards have been set for selected roadway segments and intersections. Roadway LOS is measured using commercially available INRIX average speed data, 72-hour traffic counts, and intersection turning movement counts. Roadway segment LOS is calculated using either average speeds (freeways/multilane highways), or a V/C ratio (two-lane highways and arterials) and assigned a performance rating from A to F based on HCM 1994 methodology. Intersections are modeled in Synchro software and assigned LOS based on HCM 7th Edition methodologies (or HCM 2000 where signal parameters prevented use of HCM 7th Edition). A summary of the 2025 monitoring results is located in Chapter 3, while the complete *2025 CMP Monitoring Report* is included in **Appendix F**.

Travel Times for Single-Occupant Automobiles, Carpools, and Transit

This performance measure determines the amount of time required to traverse the US 101 corridor utilizing a variety of modes. Travel times were measured from the County's north border to the south border. Four modes were included: single occupancy vehicle, carpools, Caltrain, and SamTrans bus. Floating car surveys were conducted in the general purpose lane, and express lane (HOT) on US 101 between the Santa Clara County Line and San Francisco County Line. Transit schedules in effect during the monitoring period of June 2025 were used to determine travel times for Caltrain and SamTrans Route EPX (August 2025). Full details of this analysis is available in the *2025 CMP Monitoring Report* in **Appendix F**.

Pedestrian and Bicycle Improvements

The purpose of this measure is to ensure that pedestrian and bicycle travel is being incorporated in new transportation improvement projects. This measure will be accomplished by considering pedestrian and

bicycle facilities in the design for all transportation projects in the CMP's CIP. If a new transportation improvement project does not incorporate pedestrian and bicycle travel, it must provide justification for such.

A summary of current bicycle/pedestrian planning efforts in San Mateo County, bicycle/pedestrian counts at the CMP and Companion Network intersections, and historical bicycle/pedestrian volume comparisons can be found in Chapter 4 of the *2025 CMP Monitoring Report* in **Appendix F.**

Ridership/Person Throughput for Transit [4]

This measure will evaluate the numbers of individuals that use transit during peak periods. It will be measured by accumulating available ridership data from transit agencies that provide service in San Mateo County. It will be used to determine whether transit ridership is growing, and how the various transit modes (SamTrans, Caltrain, BART) compare among themselves. Details are provided in Chapter 4 of the *2025 CMP Monitoring Report* in **Appendix F.**

4.3 California Senate Bill (SB) 743

SB 743 (Steinberg) was signed into law in 2013 by Governor Jerry Brown and aimed to replace the metric used to measure the transportation impact assessment in the California Environmental Quality Act (CEQA) process from a delay-based metric such as traffic LOS to another metric such as VMT. Initial guidance regarding transportation impact assessment under CEQA guidelines was released in December 2018 with statewide application beginning on July 1, 2020.

CMP legislation requires use of a delay-based metric, (LOS), to measure roadway performance. However, separate and unrelated efforts to the CMP, such as the recently adopted CEQA guidelines based on Senate Bill (SB) 743 require (VMT) as the primary metric for traffic impacts under CEQA. Hence, different metrics are currently used to report roadway and traffic conditions depending if the analysis is required to meet CEQA requirements. It is anticipated that CMP legislation will be amended at some point in the future to better align with the changes to VMT as the metric.

[4] There are several private companies located within the county offering private bus/shuttle services for their employees that contribute to the reduction of "Drive Alone" trips.

Since the CMP legislation has not been updated to provide new guidance with regard to performance metrics, no changes in methodology in this regard have been implemented for the 2025 CMP monitoring cycle.

C/CAG has developed a SB 743 VMT Regional Baseline Study and VMT Estimation Tool, which will assist in understanding baseline VMT data in San Mateo County and assessing the potential VMT of a proposed project. It is possible this will play a role in the transition to VMT as the primary metric.

CHAPTER 5: TRIP REDUCTION AND TRAVEL DEMAND ELEMENT

5.1 Purpose and Intent of Legislation

Commute.org operates 29 shuttle routes throughout San Mateo County, such as this one at Oyster Point in South San Francisco (Source: Commute.org)

TDM strategies are utilized to improve efficiency of the existing transportation systems without significant expansion of the infrastructure. These strategies focus on ways to reduce solo driving and/or eliminate some of the need for driving altogether. Some of the commonly used strategies aimed at reducing single occupant vehicles include carpool, vanpool, walking, bicycling, transit, shared Uber/Lyft rides, and park and ride lots. Strategies to reduce VMT include alternatives such as telecommuting, flexible work schedules and parking cash-out programs. Improving a balance between available jobs and housing also encourages non-auto modes of transportation. Use of TDM strategies help cities and counties to balance the growing need for transportation and availability of limited transportation dollars for system expansion and ongoing maintenance.

The CMP is required to include all elements identified in the California Government Code Section 65089(b) Subsection (3) that outlines projects and strategies that promote alternate modes of transportation and thereby help reduce traffic congestion and improve air quality.

As local governments review new development proposals and make key decisions on planning and zoning matters, they have an opportunity to ensure that TDM measures are adequately factored into the decision making process. As they develop and adopt their annual operating and capital budgets, they can allocate necessary funds so that the TDM strategies are adequately financed and implemented in a timely manner. Although not required, local governments may also choose to support (through resolution or other means) regional TDM measures, including carpool lanes and ridesharing facilities and programs, which could be implemented by other agencies, such as C/CAG or MTC.

5.2 Measure A and Measure W

In June 1988, the San Mateo County voters approved Measure A that created the San Mateo County Transportation Authority (SMCTA) and authorized a half-cent increase in the local sales tax for a period of 20 years to finance specified transportation improvements. The improvements, including transit and highway projects, were listed in the Transportation Expenditure Plan and were incorporated into the ballot measure. Measure A also required SMCTA to adopt, in conjunction with the cities/towns and the County of San Mateo, a Transportation System Management (TSM) Plan. The San Mateo County Transportation System Management Plan was developed and adopted in 1990.

In November 2004, the County voters approved the continuation of Measure A to be in effect from 2009 to 2033. The continuation of Measure A includes the Bicycle and Pedestrian Program ($45 million over 25 years) which will provide safe paths for bicyclists and pedestrians and the alternative Congestion Relief Program ($15 million over 25 years) which allocates one percent of the total revenue to fund traffic management projects and creative congestion relief programs. Improvements funded by Measure A include public transit and highway projects, alternative congestion relief, and local programs. In addition, the extension of Measure A also includes bicycle and pedestrian improvements.

Measure A

Measure A mandated that every jurisdiction in San Mateo County has a TSM/TDM plan/program in order to be eligible to receive Measure A funds. The Measure A TSM Plan is the mandated TSM/TDM program for San Mateo County and the primary funding source for this effort. A summary of the Transportation Expenditure Plan for Measure A extension is included in **Appendix H**.

Measure W

In 2018, San Mateo County voters approved Measure W, which authorized a half-cent sales tax increase to improve transit and relieve traffic congestion. 50% of the funds are administered by SamTrans and utilized for public transit services. The remaining 50% is administered by SMCTA and is used for countywide highway congestion relief (22.5%), local safety, pothole, and congestion relief improvements (12.5%), bicycle/pedestrian improvements (5%), and regional transit connections (10%).

Projects/programs implemented under Measure W must follow its core principles:

- Relieve traffic congestion countywide

- Invest in a financially sustainable public transportation system that increases ridership, embraces innovation, creates more transportation choices, improves travel experience, and provides quality, affordable transit options for youth, seniors, people with disabilities, and people with lower incomes
- Implement environmentally-friendly transportation solutions and projects that incorporate green stormwater infrastructure and plan for climate change
- Promote economic vitality, economic development, and the creation of quality jobs
- Maximize opportunities to leverage investment and services from public and private partners
- Enhance safety and public health
- Invest in repair and maintenance of existing and future infrastructure
- Facilitate the reduction of VMT, travel times and greenhouse gas emissions
- Incorporate the inclusion and implementation of complete street policies and other strategies that encourage safe accommodation of all people using the roads, regardless of mode of travel
- Incentivize transit, bicycle, pedestrian, carpooling and other shared-ride options over driving alone
- Maximize traffic reduction potential associated with the creation of housing in high-quality transit corridors

5.3 Current TSM/TDM Programs in San Mateo County

C/CAG recognizes that as a result of regional job and population growth patterns and increased travel demand, the peak-period travel speeds will continue to deteriorate on freeways and arterials within the County. Due to limited availability of funds and opportunities for system expansion, it is critical that various TDM strategies are utilized to address the growing transportation needs of County residents and businesses. Along with improving roadway operations and expanding local transit service in response to this forecasted growth in traffic, it is also important to implement TDM measures to improve the operating efficiency of the existing county transportation system. The TDM element of the CMP encourages an on-going process that promotes local and regional planning to reduce traffic congestion.

Local governments in San Mateo County implement trip reduction programs in response to the requirements under Measure A to, among other things, maintain eligibility for Measure A funds. The 19 cities and towns as wells as the County of San Metro are members of the Peninsula Traffic Congestion Relief Alliance, also known as Commute.org, which is the TDM agency in the County. Commute.org and its partners aim to promote, encourage, and incentivize the use of transportation alternatives to driving alone. The primary objective of

Transportation Demand Management (TDM) programs is to reduce single-occupancy vehicle trips and support more sustainable travel options such as walking, biking, public transit, telecommuting, and ridesharing.

By working closely with employers, commuters, residents, and community organizations, Commute.org helps individuals identify and adopt alternatives to solo driving. These efforts contribute to reduced traffic congestion and improved air quality across the region.

To further decrease the number of single-occupant vehicles on San Mateo County roads, Commute.org offers a variety of commute alternative programs that encourage the use of public transit, vanpools, carpools, employer shuttles, bicycles, and telework.

Commute.org is funded by the City/County Association of Governments of San Mateo County, the San Mateo County Transportation Authority, and the Bay Area Air Quality Management District. Additionally, Commute.org receives funding from over 50 private employers, residential property developers and commercial property managers.

Specific programs offered through Commute.org include:

Shuttles

Commute.org operates shuttle services that connect commuters to transit stations throughout San Mateo County, including BART, Caltrain, and the South San Francisco Ferry Terminal. These shuttles provide critical "first and last mile" transportation that makes commuting via public transit a viable alternative to and from the county.

Funding is provided through a combination of grants and the financial contributions from employers, property managers, cities, and transit agencies.

When developers consider building residential or commercial space or businesses explore relocating to San Mateo County, Commute.org's staff meets with them to review options for first/last mile service to their locations. Options typically include:

- Joining an existing shuttle consortium
- Establishing a new shuttle
- Funding the expansion of an existing route

Employer Programs

Commute.org's Engagement team works with employers to address commute-related issues, including local and regional TDM regulations and commuter pre-tax benefit programs. By developing strong relationships with employers and becoming a trusted partner, Commute.org can leverage those relationships and reach significantly more commuters in San Mateo County.

The Engagement team is the conduit between the employer and the TDM programs that are offered by the agency. Services provided by the team include:

- **Transportation Surveys** - Commute.org assists employers with the creation and distribution of transportation surveys to obtain data necessary to design or update effective transportation programs.
- **Employee Assistance During On-Site Events** - Commute.org participates in health and benefits fairs, open enrollment events, and special programs, assisting employees one-on-one at employer worksites.
- **Bay Area Commuter Benefit Program Compliance** – Commute.org works with employers in San Mateo County to make sure that they register for the program and remain compliant.
- **Best Workplaces for Commuters** – Commute.org works with employers to achieve recognition is this prestigious, nationally-known program. In order to receive this designation, an employer must meet very stringent criteria which translates into more employees having better options for commuting.
- **Bicycle Safety and Training Workshops** - Commute.org works with employers, property managers, and community groups to conduct bicycle safety workshops. The primary goal is to encourage commuters to consider bicycling as a safe and healthy alternative to driving alone and as a first/last mile alternative when they use public transit.
- **Commuter Programs Platform** – Commute.org provides employers and community partners with the opportunity to have their own STAR (Support, Track and Reward) platform "network" for their employees and/or tenants. This allows employers to provide their employees with incentives and rewards that are unique to the employer while at the same time allowing the employees to take advantage of the broad suite of programs available to the public through the STAR platform. It is particularly useful when an employer is looking to create a peer-to-peer carpool or vanpool program for employees.

Commuter Programs

The Commuter Programs team develops, promotes and supports a wide range of incentives, rewards, challenges and insurance programs aimed at any who commutes to or from San Mateo County.

Other programs provided by the Commuter Programs team include:

- **Commute STAR Tool** – Most commuter programs operate through STAR, an online platform available to both commuters and employers. Its goal is to encourage the use of alternatives to driving alone to work. STAR can be accessed online at my.commute.org or via the Commute Tracker app. Through STAR, commuters can explore and plan various commute options such as carpooling, vanpooling, public transit, shuttles, biking, and walking. By logging their trips in their STAR account, commuters can earn rewards, participate in challenges, and access incentive programs. Employers can create private networks within STAR to promote carpooling among their staff, offer customized incentives or challenges, and generate commute impact reports. Overall, STAR provides commuters with free access to a web and mobile app that supports planning, tracking, and coordinating sustainable commute options.
- **Guaranteed Ride Home (GRH) Program** - The GRH program reimburses commuters who chose to carpool, vanpool, take transit, bicycle or walk to work or college in San Mateo County with a free trip home, up to $60 per trip (4 times a year), in the event of a qualified emergency.
- **Ridematching** – Commute.org facilitates the process of finding carpool and vanpool partners using the STAR platform's trip planning tools.
- **Bike, Carpool, and Vanpool Incentive** – Commuters who carpool or vanpool can receive up to $100 per year in e-gift cards. For each 10 days that someone carpools or vanpools (driver or passenger), they can receive a $25 reward up to four times in each calendar year.
- **Try Transit Program** - Employees and residents who do not currently use public transit to commute can try transit for free under this program. Commute.org distributes tickets provided by public transit agencies such as Caltrain, SamTrans, and San Francisco Bay Ferry, to encourage people to try transit as an alternative to driving alone.
- **Caltrain GoPass Distribution Program** – Commute.org partners with Caltrain to distribute GoPass tickets to income qualifying commuters. The program is part of Caltrain's fare equity program. Commute.org engages with over 30 community organizations to publicize the program to its

members. Commute.org promotes the program to essential businesses in San Mateo County and works closely with a range of program partners to find commuters who can benefit from free Caltrain tickets and use Caltrain as an alternative to driving alone.

- **Commute Planning** – Commuters can receive personalized trip planning services from the Commute.org TDM team. The staff assists the applicants with options to driving alone from their origin to their work location.

Annual Events

Commute.org coordinates several large-scale annual events in San Mateo County. The events include:

- **Annual TDM Symposium** – Host a half-day symposium each year, alternating the target audience between employers and jurisdiction staff within San Mateo County. The event highlights best practices and success stories in Transportation Demand Management (TDM), featuring insights from industry experts and local leaders who have successfully implemented impactful TDM programs and policies.
- **Commuter Challenges** – Organize quarterly challenges designed to motivate commuters to choose sustainable transportation options. Participants log their trips on CommuteStar to enter raffle prize drawings, encouraging ongoing engagement and behavior change.
- **Bike to Work Day** – Support and promote this annual event each May to encourage bicycling as a viable commute option. Commute.org sponsors the event and collaborates with local bicycle organizations to raise awareness and promote both Bike Month and Bike to Work Day across San Mateo County.

In addition to services and programs offered by Commute.org, other agencies are operating programs to reduce auto trips and promote alternative modes of transportation. Several programs area briefly discussed below.

Safe Routes to School (SR2S)

The San Mateo County Office of Education (SMCOE) operates the SR2S Program in San Mateo County. The goal of the program is to enable and encourage children to walk or bike to school by implementing projects and activities to improve health and well-being, safety, and reduce traffic congestion due to school-related trips. Typical activities of the SR2S program include classroom education, special events (such as bike rodeos), infrastructure projects near schools, crossing guards, countywide events (such as International Walk to School Day), and more.

The SR2S program has been in operation in San Mateo County for over a decade and partners with 13 school districts, as well as cities/towns, regional and state agencies, and organizations to implement its vision. The program hosts events such as bicycle rodeos, assemblies, and conducts walkability and bikeability audits. Funding for SR2S is provided by C/CAG through various grant sources.

Bicycle and Pedestrian Planning

Bicycling and walking is a critical component of reducing single-occupancy vehicle usage and is a sustainable mode to commute to work. C/CAG, the cities/towns, and the County are active in implementing the vision for more bicycling and walking infrastructure in San Mateo County. The San Mateo County Comprehensive Bicycle and Pedestrian Plan was updated and adopted by the C/CAG Board in June 2021. The updated plan proposes 250 miles of bicycle projects and pedestrian projects that address gaps to transit, between jurisdictions, or are within pedestrian priority areas. In addition to the C/CAG plan, at least 13 cities/towns in San Mateo County have their own bicycle/pedestrian plans.

5.4 Local TSM/TDM Programs

Measure A includes a Local Transportation Services element, which provides funding to increase the use of public transit by the residents of each local community, thereby reducing local congestion. Local jurisdictions are encouraged to participate in experimental efforts to provide transportation services for its residents that meet the unique characteristics such as disabilities and needs of that jurisdiction. The following section details some of the TSM/TDM being implemented by local agencies/employers:

City of Menlo Park Shuttles

The City of Menlo Park has always strived to enhance the quality of life for its residents, employees and visitors by encouraging commute alternatives. Menlo Park was the first city along the Peninsula to establish a shuttle program, which transports employees from the Caltrain station to business parks. It was also the first city to launch a Midday shuttle program, which has become a popular local service for many.

The City of Menlo Park manages the following free services/programs:

- Two Caltrain shuttles (M3 Marsh Rd and M4 Willow Rd shuttles): Operates during AM and PM peak hours taking passengers from Caltrain to their businesses, schools, shopping or appointments.
- M1 Crosstown Shuttle: Operates from Belle Haven and Sharon Heights via downtown Menlo Park, downtown Palo Alto, and the Stanford Shopping Center/Stanford Medical Center area. The M1 Crosstown shuttle operates Monday through Friday, approximately every 1-2 hours between 8am and 5pm.
- Shoppers Shuttle: Picks up passengers door-to-door to shopping, medical appointments, the library, etc. Operates in Menlo Park on Wednesdays and Saturdays from 9:30AM to 12:30PM, and travels to Redwood City on Tuesdays from 9:30AM to 1:30PM.

City of South San Francisco TDM Ordinance

The City of South San Francisco has adopted a comprehensive and enforceable TDM ordinance to address transportation related impacts of new development by requiring projects to provide amenities and features that will foster a better bicycle/pedestrian environment, support transit, and make it easier and more appealing for residents, employees, and visitors to use alternatives to driving or driving alone.

City of Belmont TDM Program

The City of Belmont has implemented a TDM program that requires most new developments to incorporate TDM measures within their development plans.

The City has adopted a points-based system to evaluate proposed projects, which must achieve a points target based on their type and size. TDM measures are each worth a certain number of points and new projects must include a combination of measures whose total points meet the target for its proposed uses.

San Francisco International Airport (SFO)

SFO initiated a successful BART discount program for all badged Airport employees in October 2010. The discount card was further expanded to all Airport employees in summer of 2019. The Airport works closely with its tenants, the San Francisco Department of the Environment, and Commute.org toward participation of tenants in the mandated SFO Commuter Benefits Program, offering employers a choice of subsidizing part of their employees' transit or vanpool costs, or offering employees a pretax savings program through payroll

deductions. The Airport is also looking at promoting and incentivizing more vanpools, shuttles, and other non-single occupancy vehicle modes to get employees to work.

5.5 Jobs and Employed Residents Balance

An important component of managing transportation demand is to strive for a good balance between jobs and employed residents in a city or county. Counties with more jobs than local workers often attract commuters from neighboring areas, while those with more employed residents than available jobs tend to send commuters elsewhere for work. This section explores commute modes among San Mateo County residents, projected jobs/employees, and where work trips to, from, and through San Mateo County are coming from/going to.

Data for mode of transportation to work by San Mateo County employed residents from the US Census Bureau are presented in **Table 13**.

Table 13: San Mateo County Employed Residents – Commute to Work by Mode

Mode of Transportation	2023	% of Total	2021	% of Total	2019	% of Total	2017	% of Total
Drive Alone	222,613	58%	246,243	61%	274,524	67%	274,829	67%
Carpool	33,843	9%	37,463	9%	38,805	9%	44,651	11%
Public Transportation	24,630	6%	34,575	9%	49,538	12%	46,772	11%
Walked	9,047	2%	9,833	2%	9,495	2%	11,565	3%
Motorcycle	11,731	3%	12,820	3%	15,274	4%	12,763	3%
Bicycle								
Other Means								
Work at Home	84,741	22%	59,555	15%	25,182	6%	19.341	5%
Total Employed Residents	**386,605**		**400,489**		**412,818**		**409,921**	
Total Population	764,442 (2020)		764,442 (2020)		764,442 (2020)		769,545	

Source: US Census American Community Survey 2023

The table shows that over time, the percentage of employees who are commuting by single-occupancy vehicle is slowly decreasing. **Table 13** shows that 22% of employed residents worked from home in 2023 compared to only 6% in 2019; more than three times as a result of the changed commuting behavior post COVID-19 pandemic. Commute trips made by transit declined by 6 percent and drive alone trip declined by 9% from

2019 to 2023. The number of commute trips by walking and carpooling remained steady at 2% and 9% of total commute trips, respectively.

Another of the actions recommended in AB 471 to reduce roadway congestion is to try to improve an area's (in this case, San Mateo County's) balance between available jobs and housing opportunities. The intent of this legislative requirement is to reduce the number of long-distance commute trips that typically results from poor job/housing balance causing long distance commuting from areas with affordable housing to the distant, job-rich employment centers.

The Association of Bay Area Governments (ABAG) projected, as shown in **Table 14**, the number of jobs in San Mateo County will grow faster than the number of county residents seeking employment. An ideal "Employment-to-Employed Residents" ratio is 1.0, which indicates that every resident seeking a job can find one within the community. An "Employment-to-Employed Residents" ratio greater than 1.0 indicates that the community provides more jobs than it has residents seeking jobs. Conversely, a ratio of less than 1.0 indicates a community has fewer jobs than Employed Residents demanding employment. As the table below shows, the current balance between jobs and employed residents is 1.04, but is projected to steadily decrease over the next two decades to 0.94.

Out of balance conditions in either scenarios would likely result in traffic congestion associated with either more people coming to jobs from outside the County or more residents needing to commute outside the County for employment.

Table 14: Projected Jobs and Employed Residents in San Mateo County

	2020	2025	2030	2035	2040
Employment (Total Jobs)	399,275	415,305	423,005	436,205	472,045
Employed Residents	415.275	420,235	433,655	437,190	446,040
Ratio of Employment to Employed Residents	1.04	1.01	1.02	1.0	0.94

Source: ABAG/MTC Projections 2040 from Plan Bay Area 2040.

Table 13 does not take into account the fact that not all San Mateo County employed residents work in the county and not all jobs in San Mateo County are filled by its residents. **Tables 15, 16,** and **17** present the different types of work-related trips in San Mateo County which include people commuting within San Mateo County, people commuting from San Mateo County to other counties, people commuting from outside

counties into San Mateo County, and people commuting through San Mateo County. All data is based on the C/CAG-VTA Model.

Table 15: Trips to Work by San Mateo County Residents

	2015	% of Total	2040	% of Total	Increase in Trips	Percent Change
Within San Mateo County	307,957	57.9%	364,483	56.6%	+ 56,526	+ 18.4%
To North	117,859	22.2%	155,235	24.1%	+ 37,376	+ 31.7%
To East	22,937	4.3%	28,946	4.5%	+ 6,009	+ 26.2%
To South	82,989	15.6%	94,900	14.8%	+ 11,911	+ 14.4%
Total Trips	**531,742**		**643,564**		**+ 111,822**	**+ 21.03%**

Table 16: Trips to Work in San Mateo County Originating from Outside the County

	2015	% of Total	2040	% of Total	Increase in Trips	Percent Change
From North	75,542	34.7%	88,860	34.1%	+ 13,318	+ 17.6%
From East	75,652	34.7%	82,409	31.7%	+ 6,757	+ 8.9%
From South	66,666	30.6%	89,028	34.2%	+ 22,362	+ 33.5%
Total Trips	**217,860**		**260,297**		**+ 42,437**	**+ 19.5%**

Table 17: Trips to Work through San Mateo County

	2015	% of Total	2040	% of Total	Increase in Trips	Percent Change
Through to North & to East	20,733	34.6%	36,256	46.5%	+ 15,523	+ 74.9%
Through to South	39,176	65.4%	41,670	53.5%	+ 2,494	+ 6.4%
Total Trips	**59,909**		**77,926**		**+ 18,017**	**+ 30.1%**

Source: C/CAG-VTA Model

One thing that can be observed by these tables is that while there is a significant increase in the number of trips that will be generated in 2040, the change in the distribution of those trips is not projected to significantly change, with the exception being trips through San Mateo County. Residents commuting to other areas outside the county will slightly increase in 2040, but not significantly when compared to the number of trips being added (over 111,000 in total).

TDM is critical to encouraging alternative modes and shorter commutes, where possible. The data in this section shows that San Mateo County is going to increase number of jobs, but not similar increase in number of employees to fill those jobs. With increasing travel needs, TDM can help new commuters in utilizing different transportation modes, and thereby, reducing the traffic congestion.

CHAPTER 6: LAND USE IMPACT ANALYSIS PROGRAM

6.1 Legislative Requirements

US 101 in Burlingame

Section 65089(b)(4) of the California Government Code requires that a CMP includes a program to analyze the impacts of land use decisions made by local jurisdictions on the regional transportation system (both highways and transit).

The Land Use Analysis Program must include an estimated cost to mitigate impacts of development on the highway and transit systems. The legislation allows the cost of mitigating interregional travel (trips that do not begin in San Mateo County or trips that travel entirely through San Mateo County) to be excluded from the mitigation cost estimate. Public and private (developer) contributions to the regional transportation improvements may be credited.

The legislation does not modify the role of local jurisdictions in making land use decisions and in determining the responsibilities of project proponents to mitigate those impacts. The legislation, however, does place the C/CAG in the role of monitoring congestion on the CMP network and requiring the preparation of deficiency plans when LOS has been degraded below the adopted standards. Further guidance on the Land Use Analysis Program is found in the Congestion Management Resource Handbook (Caltrans, November 1990, pages 36-38).

The Land Use Analysis Program is particularly important because it affects, or is affected by:

- The CMP Designated Transportation System and Roadway LOS standards (see Chapters 2 and 3)
- Performance Measures (see Chapter 4)
- C/CAG-VTA Model, which can be used to analyze the impacts of land use changes on both highways and transit (see Chapter 9, and
- The CIP (see Chapter 8).

The intent of the Land Use Analysis Program is to improve the linkage between local land use decisions and regional transportation facility decisions; to better assess the impacts of development in one community on another; and to promote information sharing between local governments when the decisions made by one jurisdiction have an impact on another.

6.2 TDM Policy Update

In March 2025, the C/CAG Board voted to adopt an updated TDM Policy and incorporate it into the CMP Land Use Impact Analysis Program. The C/CAG TDM Policy requires new development projects that generate at least 100 Average Daily Trips (ADT) to complete a TDM Checklist committing them to reduce vehicle trips to the site by implementing TDM measures. All C/CAG member jurisdictions must comply unless expressly exempt by C/CAG due to local requirements meeting or exceeding the trip reduction targets set by the Policy.

To support the TDM Policy, C/CAG identified Commute.org as the partner agency responsible for providing guidance to local jurisdictions and project applicants. Commute.org developed a monitoring and compliance reporting program to ensure that developers and their tenants follow through on their TDM commitments.

In addition, Commute.org administers the **Certified Development Program**, which formally recognizes development projects that actively engage in Commute.org's TDM initiatives. The program offers developers access to valuable resources, technical assistance, and ongoing opportunities for collaboration to support the achievement of their TDM goals. Certified projects are monitored through the OneCommute platform, and jurisdictions are notified if a project's certification status lapses.

6.3 Land Use Impact Analysis Program

C/CAG has adopted a three-tiered process to analyze the impact of land use developments on the regional transportation network. These tiers will provide C/CAG and jurisdictions with the technical and policy-making means necessary to determine the impacts of land use proposals on the CMP network. These tiers are as follows:

- Tier 1: Long Range Planning Analysis
- Tier 2: Individual Large Development Analysis
- Tier 3: Cumulative Development Analysis

Each tier has been broken down into steps to follow, as described below.

Tier 1: Long Range Planning Analysis

Step 1: Testing the Impact of Future Land Use Changes

Tier 1 Analysis will determine what transportation improvements will be needed on the CMP network in the year 2040 based on a county wide land use plan, which reflects desired levels and types of development. This analysis will be conducted for both CMP and the Countywide Transportation Plan (CTP).

The C/CAG-VTA Model will be used to identify the impacts of future land use and transportation alternatives on the CMP network. Specifically, it will test what the impacts are of ABAG 2040 population and employment projections. These ABAG projections will be modified on a city-by-city basis to reflect more realistic existing and future land use conditions based on recently collected data from all jurisdictions in the County.

Step 2: Development of CIPs and Financial Plan

The CTP indicates which projects should be included in the future CIPs to relieve congestion the most effectively. C/CAG will make recommendations to the cities/towns, County, SamTrans, SMCTA, and the Joint Powers Board when they formulate future CIPs. The C/CAG Board adopted the most recent San Mateo County Transportation Plan 2040 (SMCTP 2040) at the February 2017 meeting.

The SMCTP 2040 Follow-up Implementation Phase includes the effort of convening a Working Group. It is anticipated that the Working Group will discuss and refine strategies by learning, obtaining, providing input, and advising C/CAG staff on the following key follow-up items:

- Alignment of funding with vision statement established by the SMCTP 2040;
- Consider additional strategies to analyze equity; and
- Consider potential additional performance measures and targets to support goals, vision, and objectives set out in the SMCTP 2040.

Tier 2: Individual Large Development Analysis

Step 1: Applicability

All new development project anticipated to generate 100 weekday ADT or more will be required to implement TDM measures in accordance with the C/CAG TDM Policy Update Approach, which has been adopted as part of the San Mateo County Congestion Management Program (CMP). The complete policy and an implementation guide are included in Appendix I.

Step 2: Notification

At the beginning of the CEQA process, or within 10 days of receipt of an application, local jurisdictions will notify C/CAG of all development applications that are expected to generate 100 or more weekday Average Daily Trips (ADT) on the CMP network. Such notice shall include a brief project description (land use type, size, location), and acknowledgement that the project will be subject to the TDM Policy Requirements outlined in Appendix I. Projects will be divided into two groups (Small Projects and Large Projects) depending on the size of the project and the number of ADT. **Table 18** details the approximate thresholds for various land use types and typical project sizes (in sq. ft., number of employees, or number of units).

Table 18: ADT Thresholds, Correlated with Project Size Characteristic

	Small Projects	Large Projects
Non Residential**: Office, Industrial, & Institutional**	100-499 ADT (10,000-49,999 sq. ft.)	500+ ADT (50,000+ sq. ft.)
Non-Residential**: Medical & Lodging**	100-499 ADT (10,000-49,999 sq. ft.)	500+ ADT (50,000+ sq. ft.)
Non-Residential**: Retail**	100-499 ADT (30-99 employees)	500+ ADT (100+ employees)
Residential**: Multi-Family**	100-499 ADT (20-49 units)	500+ ADT (50+ units)

Small projects and large projects will be subject to different goals and monitoring and reporting requirements. The tiered approach allows C/CAG to expand the reach of the TDM policy, improve monitoring and reporting, and minimize financial and administrative burdens to developers, property manages, local agencies, and C/CAG staff.

Step 3: Analysis of Large Development Proposals

In addition to local streets and roads, local jurisdictions will assess the impacts of large development proposals on the CMP network during their CEQA review process. All jurisdictions will report the findings of their analyses to C/CAG.

Jurisdictions may use their own site TIAs, their own travel forecasting models, or the C/CAG-VTA Model to assess the impacts of large development proposals on the CMP network. If a jurisdiction uses its own travel forecasting model to assess impacts, it must be consistent with MTC's regional model and C/CAG's modeling and measurement standards. C/CAG will make consistency findings as needed.

Step 4: Mitigation and Conformance

Local jurisdictions must ensure that the developer and/or tenants will mitigate the ADT generated by the project by selecting one or more of the options below. It is up to the local jurisdiction working with the project sponsor to choose the methods that will be compatible with the intended purpose of the project. This list is not all inclusive. Additional measures may be proposed for consideration by C/CAG in advance of approving the project.

- Reduce the scope of the project so that it will generate less than 100 weekday ADT.
- Build adequate roadway and/or transit improvements so that the added trips will have no measurable impact on the CMP roadway network.
- Contribute an amount per trip to a special fund for improvements to the CMP roadway network. This amount will be set annually by C/CAG based on a nexus study.
- Require the developer and all subsequent tenants to implement TDM programs that mitigate the ADT through implementation of a set of TDM measures identified in one of the following TDM Checklists, based on land use and ADT:
    - Large Non-Residential (Office, Industrial, Institutional)
    - Small Non-Residential (Office, Industrial, Institutional)
    - Large Residential
    - Small Residential
    - Large Non-Residential (Medical/Lodging)
    - Small Non-Residential (Medical/Lodging)
    - Large Non-Residential (Retail)
    - Small Non-Residential (Retail)

    (Note that for Mixed Use projects, the land use type that generates the majority of ADT will define the TDM checklist that should be utilized, but the combined ADT of all the uses will determine whether the project is defined as "small" or "large".)

- Applicants shall select all "Required" TDM measures and enough "Additional Recommended" measures within the Checklist to meet the minimum targeted trip reduction requirement.

Table 19: Vehicle Trip Reduction Targets for TDM Plans

	Small Projects	Large Projects	Transit Oriented Development (Small & Large)
Non-Residential: Office, Industrial, & Institutional	35%	35%	25%
Non-Residential: Medical & Lodging	35%		
Non-Residential: Retail	35%		
Residential: Multi-Family	25%		

Step 5: Credit for Contribution

If a jurisdiction is required to prepare a deficiency plan for a CMP roadway segment or intersection for which it has previously used local public or private funds to help prevent the degradation of LOS, then C/CAG will give that jurisdiction credit for its prior contribution and appropriately reduce the amount of mitigation required by the deficiency plan. C/CAG will develop and adopt a procedure for calculating the amount of credit to be provided.

Tier 3: Cumulative Development Analysis

Step 1: Notification

Once every two years, local jurisdictions will inform C/CAG of all development proposals or land use changes that will replace or add to current or projected levels of development. This process will update the land use data base used by the C/CAG-VTA Model every two years.

Step 2: Testing of Cumulative Impacts

Each update of the C/CAG-VTA Model (generally done every two to four years) will include a test of the impacts of cumulative development as projected by ABAG throughout the County on the CMP network. Results of this analysis will be reported to C/CAG and local jurisdictions in San Mateo County.

Step 3: Analysis of Results

This cumulative analysis may be used to determine existing LOS on the CMP network or to project future LOS. This analysis may be used for several purposes: (1) identifying where existing LOS has been degraded, (2) anticipating future congested hot spots on the CMP network, (3) shifting project priorities in CIPs, and (4) providing data for jurisdictions to use in the development of site TIAs and environmental assessments.

Step 4: Reporting Changes

The results of the analysis in Step 3 will be provided to local jurisdictions to alert them of locations within their boundaries where the amount of congestion is approaching the LOS standard. Hopefully this information can be used to avert the need for the development of some deficiency plans.

Compliance Monitoring

A copy of the Guidelines for implementing the land use component of the CMP, the revised TDM Policy, and the status of the land use impact analysis compliance monitoring is in **Appendix I**.

CHAPTER 7: DEFICIENCY PLAN GUIDELINES

California Government Code Sections 65089.3, 65089.4, and 65089.5 govern the CMP conformance process. These sections require that C/CAG determine every two years whether San Mateo County, including cities/towns within the county, conform to the requirements of the CMP based on information obtained through monitoring. A CMP roadway segment or intersection can be found to violate the LOS standard when levels of service are monitored biennially.

Scenic section of I-280 Northbound approaching SR-92

The monitoring program occurs during the AM (7am-9am) and PM (4pm-6pm) peak periods. For the 2025 CMP Update, traffic counts were taken in April-May 2025. The LOS analysis based on these counts is consistent with the LOS methods outlined in the highway LOS standards (Chapter 3). Full details of the results of the monitoring program are in **Appendix F**.

The LOS standards for the roadway segments and intersections included in San Mateo County's CMP are presented in Chapter 3. When deterioration of the LOS on a given CMP roadway segment or intersection has not been prevented and a violation is identified through the monitoring process, the legislation provides local jurisdictions with the following two options for them to remain in conformance with the CMP:

- Implementation of a specific plan to correct the LOS deficiency on the affected network segment; or
- Implementation of other measures intended to result in measurable improvements in the LOS on the system-wide CMP network and to contribute to significant improvements in air quality.

With regard to the second option, in some situations, meeting the CMP's LOS standards may be impossible or undesirable. For these situations, deficiency plans allow local jurisdictions to adopt innovative and comprehensive transportation strategies for improving the traffic LOS on a system-wide basis rather than adhering to

strict, site-specific traffic LOS standards that may contradict other community goals. In other words, deficiency plans allow a violation of the traffic LOS to occur on one particular CMP roadway segment or intersection in exchange for improving other transportation facilities or services (e.g., transit, bicycles, walking, or TDM). For example, it may be impossible to modify a CMP roadway to meet its LOS standard because there is insufficient right-of-way available to add the number of lanes that would be necessary for that roadway segment or intersection to operate acceptably at the desired LOS. Should deficiency plans need to be prepared, alternate goals, such as higher density development near transit stations or better transit service, can be pursued.

Deficiency plans provide local agencies with an opportunity to implement many programs and actions that will improve transportation conditions and air quality. Some of these programs and actions include:

- Directly coordinating the provision of transportation infrastructure with planned land uses
- Building new transit facilities and enhancing transit services
- Providing bicycle facilities connecting with other transportation systems (transit stations, park-n-ride lots)
- Strengthening TDM programs, and
- Encouraging walking by providing safe, direct, and enjoyable walkways between major travel generators.

In addition, having to produce deficiency plans will affect the local land use approval process. For example, a local jurisdiction may have the discretion to deny approval of a development project if it is shown to negatively affect an already deficient CMP system roadway or intersection. Alternatively, to be approved, the sponsor of the development project could participate in the implementation of those actions emanating from a deficiency plan.

It is the intent of C/CAG to encourage local jurisdictions that may be responsible for the preparation of deficiency plans to connect the actions of deficiency plans with the overall countywide transportation planning process. Doing so will ensure that the action items in the deficiency plan are consistent with the goals of the CMP to increase the importance of transit, ridesharing, TDM measures, bicycling, and walking as ways to improve air quality and reduce congestion.

More information on the legislative requirements surrounding deficiency plans, as well as details on how/why a deficiency plan should be prepared, are located in **Appendix D**.

7.1 Current Deficiencies

C/CAG retained TJKM Transportation Consultants to conduct the 2025 congestion monitoring of the 53 roadway segments and 16 intersections that comprise the CMP Roadway System in San Mateo County. A copy of the *2025 CMP Monitoring Report* is included in **Appendix F**.

The results of the 2025 Monitoring indicate 12 roadway segments exceeded their LOS standard before the reduction of interregional trips. After the reduction of interregional trips, all failing segments rose to acceptable LOS above their standards. Therefore, ***no CMP roadway segment is considered deficient for the 2025 CMP***.

Tables 20 and **21** detail the current 2025 LOS for all CMP roadway segments and intersections both with and without interregional trips reductions.

Table 20: 2025 CMP Roadway Segment LOS

Route	Roadway Segment	LOS Standard	2025 LOS		LOS with Interregional Reduction - AM	LOS with Interregional Reduction - PM
			AM Peak Period	PM Peak Period		
SR-1	San Francisco County Line to Linda Mar Blvd	E	F	F	E	E
SR-1	Linda Mar Blvd to Frenchmans Creek Rd	E	D	D	-	-
SR-1	Frenchmans Creek Road to Miramontes Rd	E	E	E	-	-
SR-1	Miramontes Rd to Santa Cruz County Line	D	B	C	-	-
SR-35	San Francisco Co Line to Sneath Ln	E	A	A	-	-
SR-35	Sneath Ln to I-280	F	F	D	-	-
SR-35	I-280 to SR-92	B	C	C	B	B
SR-35	SR-92 to SR-84	B	B	B	-	-
SR-35	SR-84 to Santa Clara County Line	E	B	B	-	-
SR-82	San Francisco County Line to John Daly Blvd	E	A	A	-	-
SR-82	John Daly Blvd to Hickey Blvd	E	A	A	-	-
SR-82	Hickey Blvd to I-380	E	A	A	-	-
SR-82	I-380 to Trousdale Dr	E	A	A	-	-
SR-82	Trousdale Dr to 3rd Ave	E	A	A	-	-
SR-82	3rd Ave to SR-92	E	A	A	-	-
SR-82	SR-92 to Hillsdale Ave	E	A	A	-	-
SR-82	Hillsdale Ave to 42nd Ave	E	A	A	-	-
SR-82	42nd Ave to Holly St	E	A	A	-	-
SR-82	Holly St to Whipple Ave	E	A	A	-	-
SR-82	Whipple Ave to SR-84	E	A	A	-	-
SR-82	SR-84 to Glenwood Ave	E	A	A	-	-
SR-82	Glenwood Ave to Santa Cruz Ave	E	A	B	-	-
SR-82	Santa Cruz Ave to Santa Clara County Line	E	A	A	-	-
SR-84	SR-1 to Portola Rd	C	C	C	-	-
SR-84	Portola Rd to I-280	E	B	B	-	-
SR-84	I-280 to Alameda de las Pulgas	C	C	C	-	-

Route	Roadway Segment	LOS Standard	2025 LOS		LOS with Interregional Reduction - AM	LOS with Interregional Reduction - PM
			AM Peak Period	PM Peak Period		
SR-84	Alameda de las Pulgas to US-101	E	C	B	-	-
SR-84	US-101 to Willow Rd	D	B	A	-	-
SR-84	Willow Rd to University Ave	E	D	A	-	-
SR-84	University Ave to Alameda County Line	F	F	E	-	-
SR-92	SR-1 to I-280	E	E	E	-	-
SR-92	I-280 to US-101	D	F	F	D	D
SR-92	US-101 to Alameda County Line	E	F	F	C	E
US-101	San Francisco County Line to I-380	E	F	F	D	D
US-101	I-380 to Millbrae Ave*	E	E	F	-	C
US-101	Millbrae Ave to Broadway*	E	E	F	-	D
US-101	Broadway to Peninsula Ave*	E	F	F	D	D
US-101	Peninsula Ave to SR-92*	F	F	F	-	-
US-101	SR-92 to Whipple Ave*	E	F	F	D	D
US-101	Whipple Ave to Santa Clara County Line	F	F	F	-	-
SR-109	Kavanaugh Dr to SR-84 (Bayfront Expwy.)	E	B	C	-	-
SR-114	US-101 to SR-84 (Bayfront Expressway)	E	A	B	-	-
I-280	San Francisco County Line to SR-1 (north)	E	E	E	-	-
I-280	SR-1 (north) to SR-1 (south)	E	E	E	-	-
I-280	SR-1 (south) to San Bruno Ave	D	F	F	D	D
I-280	San Bruno Ave to SR-92	D	A	D	-	-
I-280	SR-92 to SR-84	D	E	E	C	C
I-280	SR-84 to Santa Clara County Line	D	D	F	-	C
I-380	I-280 to US-101	F	F	F	-	-
I-380	US-101 to Airport Access Road	C	A	A	-	-
Mission St	San Francisco County Line to SR-82	E	A	A	-	-
Geneva Ave	San Francisco County Line to Bayshore Blvd	E	A	A	-	-
Bayshore Blvd	San Francisco County Line to Geneva Ave	E	A	A	-	-

Table 21: 2025 CMP Intersection LOS

ID	Intersection	LOS Standard	2025 LOS		AM LOS with Interregional Trip Reduction	PM LOS with Interregional Trip Reduction
			AM	PM		
1	Bayshore Blvd/Geneva Ave	E	C	C	-	-
2	SR 35/John Daly Blvd	E	D	C	-	-
3	SR 82/Hillside	E	C	C	-	-
4	SR 82/San Bruno Ave	E	D	E	-	-
5	SR 82/Millbrae Ave	E	C	E	-	-
6	SR 82/Broadway	E	C	C	-	-
7	SR 82/Park Rd/Peninsula Ave	E	C	B	-	-
8	SR 82/Ralston Ave	E	E	E	-	-
9	SR 82/Holly St	E	D	E	-	-
10	SR 82/Whipple Ave	E	D	D	-	-
11	University Ave/SR 84	F	C	F	-	-
12	Willow Rd/SR 84	F	D	E	-	-
13	SR 84/Marsh	F	F	E	-	-
14	SR 84/Middlefield Rd	E	D	E	-	-
15	SR 1/SR92	E	C	C	-	-
16	Main St/SR 92	E	D	C	-	-

7.2 San Mateo County Congestion Relief Plan (CRP)

The C/CAG Board approved the CRP, which is a countywide deficiency plan to address any future deficiencies. The Plan, which was initiated in July, 2002 and updated in July 2023, is designed to provide support to all San Mateo County jurisdictions - CMP deficiency plans aim to reduce congestion and improve mobility in specific locations where additional support may be needed. Therefore, as the countywide deficiency plan, the CRP aims to achieve a similar goal across a broader area. Under the umbrella of improving mobility countywide, the CRP addresses four major goals:

1. Provide local transportation service in order to provide alternatives to driving and improve access to transportation options.

2. Reduce vehicle trips through Transportation Demand Management (TDM) and other planning efforts discouraging single occupancy trips.

3. Expand and support innovative mobility solutions to increase travel efficiency.

4. Support land use efforts that reduce GHG emissions by reducing or eliminating trips where appropriate.

Full details of the CRP, including its elements, funding amounts, and assessments on member jurisdictions, is included in **Appendix D**.

CHAPTER 8: CAPITAL IMPROVEMENT PROGRAM

8.1 Purpose and Intent of Legislation

CMPs are required by California Government Code Section 65089(b)(5) to include a seven-year CIP to maintain or improve the performance of the multimodal system for the movement of people and goods and to mitigate regional transportation impacts identified through the Land Use Analysis Program. Capital improvement projects must conform to transportation-related vehicle emissions and air quality mitigation measures. In the Bay Area, such TCMs are contained in the Bay Area 2017 Clean Air Plan.

Any project depending on State or Federal funding must be included in the CMP CIP. This part of the CMP must be submitted first to the MTC in the Bay Area and then to the CTC and/or the FHWA so that funding from State and Federal programs can be allocated for the projects included in the CIP.

8.2 Federal and State Funding Sources

Funding is made available from the State and Federal governments for transportation system maintenance and improvement projects. The CIP that is included in each CMP may be somewhat different from the CIP included in previous CMPs because of changes in the funding programs or the evaluation criteria. (The status of prior years' CMP CIP projects is discussed in the Monitoring Report in **Appendix G**.) The following paragraphs present a summary of the current federal and state funding sources available for the current CMP.

Federal Transportation Funding

The current federal transportation funding bill is the Infrastructure Investment and Jobs Act, authorized in 2021.

It includes two primary funding sources for local projects: the Surface Transportation Block Grant Program (STBG; formerly the Surface Transportation Program) and the Congestion Mitigation and Air Quality Program (CMAQ).

Projects that are currently funded under these programs are listed in **Appendix G**. The STBG and CMAQ programs are expected to continue.

State Transportation Funding

State funding for local transportation projects is available primarily through the STIP. The California Transportation Commission (CTC) adopted the 2024 STIP in March 2024. C/CAG recommends a list of projects to the MTC for incorporation into the Regional Transportation Improvement Program (RTIP) to the California Transportation Commission (CTC).

The STIP includes allocations for each of California's counties. The share for San Mateo County includes both general program and specific project amounts. The most recently adopted CTC allocations for San Mateo County projects are shown in **Table 22**. The most recent STIP has allocations from FY 2024/25 until FY 2028/29. The 2024 STIP includes projects using COVID shares since this funding was not part of the Fund estimate.

Table 22: 2024 STIP Programming in San Mateo County ($1,000's)

Project	Agency	Program Amount	Prior	FY 25	FY 26	FY 27	FY 28	FY 29
2022 STIP Programming or Prior								
ITS Improvements in Daly City, Brisbane, Colma	DC/Bris/ Colma	7,900	7,900	-	-	-	-	-
US 101/Produce Avenue Interchange Reconstruction (EXT 3-21)	South SF	5,000	5,000	-	-	-	-	-
US 101 Managed Lanes	C/CAG	5,477	5,477	-	-	-	-	-
US 101 Managed Lanes	Caltrans	3,000	3,000	-	-	-	-	-
US 101 Managed Lanes	Caltrans	(2,320)	(2,320)	-	-	-	-	-
US 101 Managed Lanes	Caltrans	1,700	-	-	1,700	-	-	-
SR-92/US 101 Interchange Improvements – Phase 2	Caltrans	5,628	5,628	-	-	-	-	-
Planning, Programming, and Monitoring	C/CAG	72	72	-	-	-	-	-
Planning, Programming, and Monitoring	C/CAG	586	-	195	195	196		
Planning, Programming, and Monitoring	C/CAG	236	236	-	-	-	-	-
Planning, Programming, and Monitoring	MTC	88	88	-	-	-	-	-
Planning, Programming, and Monitoring	MTC	85	85	-	-	-	-	-
Planning, Programming, and Monitoring	MTC	277	-	91	92	94	-	-
Total 2022 STIP Programming		**27,729**	25,166	286	1,987	290	-	-
2022 STIP COVID Programming								
ITS Improvements in Daly City, Brisbane, Colma	DC/Bris/ Colma	3,097	3,097	-	-	-	-	-
Planning, Programming, and Monitoring	C/CAG	163	163	-	-	-	-	-
Total 2022 COVID STIP Programming		**3,260**	3,260	-	-	-	-	-
2024 STIP Programming								
Planning, Programming, and Monitoring	MTC	(277)	-	(91)	(92)	(94)	-	-
Planning, Programming, and Monitoring	MTC	471	-	91	92	94	96	98
Planning, Programming, and Monitoring	C/CAG	(586)	-	(195)	(195)	(196)	-	-
Planning, Programming, and Monitoring	C/CAG	1,504	-	308	308	309	309	270
		1,112		113	113	113	405	368
Active Transportation Project: Manor Drove Overcrossing Improvements	PACIFICA	5,000	-	-	-	-	5,000	-
Active Transportation Project: Story-Keyes Complete Streets	SAN JOSE	1,598	-	-	-	1,598	-	-
		6,598	-	-	-	1,598	5,000	-
Total 2024 STIP Programming		**7,710**	-	-	-	-	-	-

Source: California Transportation Commission, 2024 STIP

Negative program funding is shown in brackets.

Regional Measure 3 Funding

Regional Measure 3 (RM3), a voter approved measure in 2018, increased tolls on all Bay Area bridges (except the Golden Gate Bridge) from $5 to $8 in one dollar increments each, on January 1 of 2019, 2022 and 2025. Additional funds raised by the measure would be used to pay for congestion relieving projects across the nine county Bay Area. This includes region-wide projects such as BART improvements, ferry enhancements, express lanes, Capitol Corridor, SF Bay Trail, and Clipper Transit fare payment systems. The measure was approved by a majority of Bay Area voters in June 2018. The 2024 Regional Measure 3 Expenditure Plan authorized $130M for Dumbarton Corridor Improvements and $50M for US 101/SR-92 Interchange Improvements.

8.3 Other Funding Sources for San Mateo County

There are several other sources of funds for transportation projects in San Mateo County. Other sources of potential funding for transportation improvements and maintenance projects are as follows:

- Measure M - $10 Vehicle Registration Fee (Details in Chapter 11)
- Proposition 111 - Gas tax revenues allocated to local jurisdictions
- Transportation Fund for Clean Air (TFCA) – Funds programs and infrastructure to enhance air quality, revenue is generated from increased vehicle registration fees
- One Bay Area Grant (OBAG) – Federal transportation funding from the FHWA distributed by MTC to the nine Bay Area counties
- Bridge Replacement and Rehabilitation funds
- Transportation Development Act (TDA) funds
- State Transit Assistance (STA) funds
- Transit Capital Improvement funds
- Transit operator funds

In addition to these, many competitive grant programs will pay for transportation projects, such as (but not limited to): the Highway Safety Improvement Program (HSIP), Active Transportation Program (ATP), Transit and Intercity Rail Capital Program (TIRCP), and more.

8.4 Regional Planning Efforts

Goals and Objectives Established in the RTP

In October 2021, MTC adopted Plan Bay Area 2050, which is the RTP/ Sustainable Communities Strategy (SCS) for the nine-county Bay Area. It represents the transportation policy and action statement of how the Bay Area will approach the region's transportation, housing, economic, and environmental needs over the next 30 years. Plan Bay Area is a vision of what the Bay Area transportation network should look like in 2050. The purpose and goals of the Plan Bay Area is to provide the framework for this vision. It was prepared by MTC in partnership with ABAG, BAAQMD, and the Bay Conservation and Development Commission (BCDC), and in collaboration with Caltrans, the nine county-level CMAs or substitute agencies, over two dozen Bay Area transit operators, and numerous transportation stakeholders and the public. The purpose of Plan Bay Area is to encourage and promote the safe and efficient development, operation and maintenance of a regional intermodal transportation system that will serve the mobility needs of people and goods.

Plan Bay Area 2050 incorporates a set of strategies to guide its recommendations, as shown below:

Table 23: Plan Bay Area 2050 Strategies

Strategy	#	Sub-Strategy
Housing	H1	Further strengthen renter protections beyond state law.
	H2	Preserve existing affordable housing.
	H3	Allow a greater mix of housing densities and types in Growth Geographies.
	H4	Build adequate affordable housing to ensure homes for all.
	H5	Integrate affordable housing into all major housing projects.
	H6	Transform aging malls and office parks into neighborhoods.
	H7	Provide targeted mortgage, rental, and small business assistance to Equity Priority Communities.
	H8	Accelerate reuse of public and community-owned land for mixed income housing and essential services.
Economic	E1	Implement a statewide universal basic income.
	E2	Expand job training and incubator programs.

Strategy	#	Sub-Strategy
	E3	Invest in high-speed internet in underserved low-income communities.
	E4	Allow greater commercial densities in Growth Geographies.
	E5	Provide incentives to employers to shift jobs to housing-rich areas well served by transit.
	E6	Retain and invest in key industrial lands.
Transportation	T1	Restore, operate, and maintain the existing system.
	T2	Support community-led transportation enhancements in Equity Priority Communities.
	T3	Enable a seamless mobility experience.
	T4	Reform regional transit fare policy.
	T5	Implement per-mile tolling on congested freeways with transit alternatives.
	T6	Improve interchanges and address highway bottlenecks.
	T7	Advance other regional programs and local priorities.
	T8	Build a Complete Streets network.
	T9	Advance regional Vision Zero policy through street design and reduced speeds.
	T10	Enhance local transit frequency, capacity, and reliability.
	T11	Expand and modernize the regional rail network.
	T12	Build an integrated regional express lanes and express bus network.
Environmental	EN1	Adapt to sea level rise.
	EN2	Provide means-based financial support to retrofit existing residential buildings.
	EN3	Fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings.
	EN4	Maintain urban growth boundaries.

Strategy	#	Sub-Strategy
	EN5	Protect and manage high-value conservation lands.
	EN6	Modernize and expand parks, trails and recreation facilities.
	EN7	Expand commute trip reduction programs at major employers.
	EN8	Expand clean vehicle initiatives.
	EN9	Expand transportation demand management initiatives.

Source: Plan Bay Area 2050.

C/CAG, along with other CMAs and regional agencies, including MTC, ABAG, and the BAAQMD, will be addressing new requirements from Senate Bill 375 (SB 375) relevant to the reduction in Green House Gas (GHG) emissions generated by cars and light trucks. The following will be taken into consideration in future planning processes.

Senate Bill 375 (SB 375)

SB 375 request metropolitan transportation organizations to develop a Sustainable Communities Strategy (SCS) – a new element of the RTP – to strive to reach the GHG reduction target established for each region by the California Air Resource Board. The target for the Bay Area is a 7% per capita reduction by 2025 and a 15% per capita reduction by 2035. Plan Bay Area 2050 is the current SCS for the nine-county Bay Area.

Plan Bay Area promotes compact, mixed-used commercial and residential developments that is walkable, bikeable and close to mass transit, jobs, schools, shopping, parks, recreation and other amenities. The San Mateo County CMP acknowledges the SCS process, along with the regional focus approach, and specifically recognizing the planned and potential Priority Development Areas (PDAs) and Priority Conservation Areas (PCAs) within San Mateo County.

Bay Area 2017 Clean Air Plan (CAP)

The Bay Area 2017 CAP provides a comprehensive plan to improve Bay Area air quality, protect public health, and protect the climate. The CAP defines a control strategy that the Air District and its partners will implement to:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources;
- Reduce emissions of "super-GHGs" such as methane, black carbon, and fluorinated gases;
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas)
    a. Increase efficiency of our industrial processes, energy, and transportation systems
    b. Reduce demand for vehicle travel, and high-carbon goods and services
- Decarbonize energy system
    a. Make the electricity supply carbon-free
    b. Electrify the transportation and building sectors

CHAPTER 9: DATABASE AND TRAVEL DEMAND MODEL

9.1 Purpose and Intent of Legislation

Intersection of SR-1 at SR-92 in Half Moon Bay

California Government Code Section 65089(c) requires that every CMA, in consultation with the regional transportation planning agency (MTC in the Bay Area), cities, and the county, develop a uniform database on traffic impacts for use in a countywide travel demand model. The State statute also requires the countywide model to be the basis for transportation models used for county sub-areas and cities, and that all models be consistent with the modeling methodology and databases used by the regional transportation planning agency. The CMA also approves sub-county area transportation models and models used by local jurisdictions for land-use impact analysis, if local jurisdictions decide to develop them.

9.2 Discussion

This chapter describes the C/CAG-VTA Model and Database Element. It contains the following sections:

- C/CAG-VTA Model and Database Legislative Requirements
- Overview of the C/CAG-VTA Model

Transportation models are analytical tools that can be used to assess the impacts of land use and development decisions on the transportation system. Transportation models are based on a complex interaction of relationships between certain variables: for example, the relationship between the price of gasoline and the number of vehicle-miles traveled or transit ridership. They are tools that can be used to project future transportation conditions, and the need for and effectiveness of transportation projects and infrastructure improvements. If the basic relationships established in a base year model validation remain well behaved over

time, a well-designed and validated transportation model should predict transportation conditions with some degree of confidence.

The CMP transportation database consists of data that in effect document existing and future transportation network conditions and socioeconomic characteristics in a quantitative manner. The databases are a basic input for the C/CAG-VTA Model and are typically updated based on changes to the regional socioeconomic data sets provided by ABAG and through periodic updates of the transportation networks through development of long-range planning efforts and for specific projects and corridors.

The C/CAG-VTA Model serves several purposes:

- Evaluating the transportation impacts of major capital improvements and land use developments on the countywide CMP System.
- Establishing transportation system characteristics for use by member agencies in performing transportation impact analyses, developing local transportation models, and preparing deficiency plans.
- Developing roadway vehicle volume and transit ridership to support planning studies for C/CAG and member agencies for corridor and project analysis.

9.3 CMP Transportation Model and Database Legislative Requirements

The CMP Statute requires C/CAG to develop a uniform database and model for evaluating transportation impacts. The Statute specifies the following three requirements for the CMP database and model:

- The CMP must develop a uniform database and model for use throughout the County.
- The CMP must approve local jurisdictions' computer models that are used to determine transportation impacts of land use decisions on the CMP System.
- The CMP database and model must be consistent with the MTC regional transportation database and model.

Each of these requirements is discussed below.

Uniform Database and Model

The legislative requirement for a uniform countywide model and database is critical to the success of the overall CMP. The C/CAG-VTA Model is used to assist in the land use impact analysis program, evaluate projects for inclusion in the CIP, evaluate system-level improvements to the CMP System due to deficiency plans and assist with C/CAG and member agencies in project planning and transit service planning.

Local Model Consistency

In addition to the requirement for developing a countywide model, the CMP Statute requires that models developed by member agencies for local transportation analysis be consistent with the C/CAG-VTA Model and database. This is a logical requirement that helps assure that all member agencies are using uniform techniques to evaluate the impacts of development projects.

Returning to the concept of transportation models as tools, local transportation models will serve a similar purpose. Local models, however, operate on a different scale. While a countywide model may be able to predict future traffic volumes on a roadway, a local model would can predict the number of vehicles at a much finer detail, for example traffic turning movements at specific intersections. In general, since local transportation models can include more background information they provide more detailed "city-specific" information than a countywide model.

Regional Transportation Model and Database Consistency

Consistency with the regional transportation model and database is one of the most important requirements of the CMP Statute. This section describes the regional model and database and consistency requirements.

9.4 Regional Models

MTC Regional Transportation Model

MTC has developed a series of transportation models for the region for well over 50 years and is currently responsible for developing and maintaining the Bay Area's regional transportation model. MTC has recently converted the regional models from trip-based to tour-based models (MTC Travel Model One) and is expected to refine the full transition to activity-based models in the very near future (Travel Model Two). The C/CAG-VTA Model, however, are based on the previous version of the MTC transportation planning models known as BAYCAST-90. The BAYCAST-90 travel model demand system was originally developed using 1990 Census data

and data from the 1990 regional household travel survey incorporating travel diary data from more than 10,000 households.

ABAG Database

The MTC models use socioeconomic data prepared by ABAG. ABAG projections provide estimates of employment, land use, housing, population, and household income at regional, county and census tract levels. ABAG updates its database forecasts every four years. These updates are based on surveys of local land use and development policies as well as revised national, state, and regional forecasting assumptions. The most recent version of ABAG's officially adopted database for congestion management application is Projections 2040 (P2040). The P2040 series provide forecasts at five-year intervals from year 2010 to the year 2040. The C/CAG-VTA Model uses the ABAG Projections 2013 socioeconomic data as the basis for the 2040 long-range forecasts for San Mateo County as provided by MTC at the MTC 1454 zone level. The MTC zone level allocations were then sub-allocated to the smaller C/CAG zones based on local development characteristics. As such, the C/CAG socioeconomic data inputs are consistent at both the MTC zone level and the ABAG census tract level.

CMP Model and Database Consistency

The C/CAG-VTA Model and database are developed to be consistent with the MTC BAYCAST-90 model and the ABAG 2013 socioeconomic database. MTC recently updated the consistency requirements and key assumptions as part of the 2013 CMP development. The revised MTC Checklist for Modeling Consistency is used to evaluate the 2025 CMP. Summaries of the checklist outputs are provided to MTC in a separate submittal. More details regarding specific consistency issues are described in the following sections.

9.5 Overview of the C/CAG-VTA Model

The current C/CAG-VTA Model is based on the corridor model developed for the Grand Boulevard Initiative (GBI) Multi-modal Corridor Study by the Santa Clara VTA in 2009. The GBI study evaluated the impacts of enhanced transit service (bus rapid transit) and enhanced developed strategies in the El Camino Real corridor to transform an existing auto-oriented commercial transportation corridor into a more transit-oriented mixed-use transportation corridor. The GBI model was essentially the VTA Countywide model with added zone and network detail to improve upon what was network and zone detail based on the MTC regional models for San

Mateo County. The basis for the network and zone refinements applied to the VTA Countywide models within San Mateo County were the previous C/CAG Countywide models originally developed in the mid-1990s.

The addition of zone and network detail in San Mateo County required the recalibration of the trip distribution and mode choice models and a validation of the highway and transit assignments to observed road volumes and transit boarding. Using the VTA Countywide model estimated trips tables for the year 2005 (which were calibrated to year 2000 census journey-to-work for home-based work trips), new trip distribution and mode choice models were estimated for the GBI model.

For the recently updated C/CAG models, the GBI model was applied using ABAG P 2013 socioeconomic data to produce an updated base year 2013 calibration and validation with selected model enhancements. These enhancements included calibration of the auto ownership models to American Community Survey (ACS) 2010 county-level data, addition of bicycle network infrastructure (bike lanes and paths) in the networks, travel time skims, mode choice and bicycle assignments and development of a toll modeling procedure to estimate express lane vehicle volumes. The model was validated to year 2013 screenline volumes for the AM and PM peak periods and to year 2013 observed transit boardings.

Consistency with MTC Model

As noted previously, the C/CAG-VTA Model was designed to be consistent with the previous MTC Travel Demand Model forecasting system BAYCAST-90 model. This section provides a general overview of the C/CAG-VTA Model and describes several basic modeling characteristics that are shared between the models.

Transportation Analysis Zones (TAZ's) - The current C/CAG-VTA Model has a more refined zone system in San Mateo County and Santa Clara County than the MTC regional models. Additional zones were added to more accurately reflect and support the added roadway network and to provide more detail in transit rich corridors and dense central business districts. In all, an additional 156 zones were added in San Mateo County and an additional 1,122 zones were added in Santa Clara County. The new model maintains the use of MTC's zone system in the remaining seven Bay Area counties but enlarges the full model region and zones to include Santa Cruz, San Benito, Monterey, and San Joaquin Counties.

Highway Network and Transit Network - The roadway network used by the C/CAG-VTA Model includes additional detail in both San Mateo and Santa Clara Counties. The current C/CAG-VTA Model also includes detailed stop, station and route detail in the transit network for San Mateo and Santa Clara Counties, and maintains the MTC roadway and transit networks in the remaining Bay Area counties. The Association of

Monterey Bay Area Governments (AMBAG) provided the basis for roadway networks in Monterey, San Benito, and Santa Cruz counties and the San Joaquin County COG provided roadways for San Joaquin County, however, the detailed networks were simplified to match the coarser zone structure in each of those four added counties. Express lane facilities, representing the MTC 'Backbone' express lanes system for 2040, were also coded in the network with a toll facility indicator based on the highway corridor segment and the direction of travel. Differential toll facility codes were required to apply specific toll rates to optimize utilization of the express lanes to preserve level-of-service for free carpool users. The C/CAG-VTA Model also includes a representation of the bicycle network infrastructure in the base year and 2040 forecast year for San Mateo, Santa Clara, San Francisco and southern Alameda Counties, explicitly representing existing and future bike lanes and bike paths in travel time development, mode choice and bicycle assignments.

Capacities and Speed - The current C/CAG-VTA Model incorporates the area type and assignment group classification system published by MTC in BAYCAST-90. Input free-flow speeds for expressways are slightly lower in the C/CAG-VTA Model to more accurately match the travel time for the expressway segments during model validation and improve the assignment match of estimated to observed expressway volumes.

Trip Purposes - The current C/CAG-VTA Model uses the same trip purposes used in the BAYCAST-90 model and uses additional trip purposes not modeled by MTC. C/CAG-VTA Model trip purposes include the following:

- Home-based work trips
- Home-based shop and other trips
- Home-based social/recreation trips
- Non-home-based trips
- Home-based school: grade school, high school, and college trips
- Light, medium and heavy duty internal to internal zone truck trips

The C/CAG-VTA Model uses MTC BAYCAST-90 trip generation equations for trip production and trip attraction functions for all trip purposes listed above. To address special markets not included in the MTC trip purposes, the C/CAG-VTA Model includes several additional trip purposes beyond those modeled by MTC, including:

- Air-passenger trips to San Francisco International Airport (SFO) and San Jose/Mineta International Airport (SJC); and
- Light, medium and heavy-duty external truck trips.

Market Segments - The C/CAG-VTA Model adopts the BAYCAST-90 disaggregate travel demand model four income group market segments for the home-based work trip purpose in trip generation, distribution and mode choice. In addition, the C/CAG-VTA Model also maintains the three workers per household (0, 1 and 2+ workers) and three auto ownership markets (0, 1 and 2+ autos owned) used in the MTC worker/auto ownership models. Trips by peak and off-peak time period are also stratified in the trip distribution, mode choice and highway and transit assignment models.

External Trips - The C/CAG-VTA Model uses a different approach for incorporating inter-regional commuting estimates than MTC. For external zones coincident with the MTC model, MTC interregional vehicle volumes were applied for base year 2000 and adjusted to the future by assuming a 1% growth rate per year. For external gateways from San Joaquin County and Santa Cruz, Monterey and San Benito Counties, the incorporation of those counties as internal modeled areas obviated the development of external vehicle volumes for those areas of the C/CAG-VTA Model.

Pricing - The C/CAG-VTA Model uses MTC pricing assumptions for transit fares, bridge tolls, parking charges, and auto operating costs as assumed in the current MTC RTP Plan Bay Area. All prices are expressed in year 1990 dollar values in the models. The C/CAG-VTA Model also uses regional express lane toll charges for the AM and PM peak periods that are based on optimizing the level-of-service in the carpool lanes. Depending on the level of utilization, these toll charges would vary by direction, time of day and by specific corridor.

Auto Ownership - The current C/CAG-VTA Model applies BAYCAST-90 for auto ownership models to estimate the number of households with 0, 1, and 2+ autos by four income groups in each traffic analysis zone. Walk to transit accessibility measures were incorporated in the auto ownership models consistent with MTC BAYCAST-90 to more logically associate low auto ownership households with transit services. The auto ownership models were recently calibrated to the 2010 American Community Survey to match workers per household and auto ownership by county.

Mode Choice - The mode choice models for BAYCAST-90 include the use of nested structures for most trip purposes, however, explicit estimation of nested structures to consider transit sub modes were not included in the model specification. The C/CAG-VTA Model adds a nesting structure for transit sub modes of local bus, express bus, Bus Rapid Transit (BRT), light rail, heavy rail and commuter rail underneath the MTC BAYCAST-90 nested structures. Consistent with the BAYCAST-90, mode choice coefficients are preserved by constraining the model to the BAYCAST-90 parameters, except those in transit sub mode structure.

Peak Hour and Peak Periods for Highway Assignments - The C/CAG-VTA Model uses a three-hour peak period (6am-9am) as the basis for determining drive alone, shared-ride, and transit travel times for input to the trip distribution and mode choice models. This was assumed since peak hour travel volumes tend to produce extremely congested conditions for forecast years producing unrealistic volume to capacity ratios and travel times, thus significantly overestimating forecast transit probabilities. The highway assignments produce AM and PM peak hour volumes, AM and PM peak period volumes (5am-9am and 3pm-7pm, respectively – each coincident with the time periods of operation for carpools), midday volumes (9am-3pm) and evening volumes (7pm-5am). The four time period volumes are then added together to develop daily vehicle volumes.

Vehicle and Transit Assignments - The current C/CAG-VTA Model incorporates a methodology analogous to the MTC "layered," equilibrium assignment process, which distinguishes standard mixed-flow lanes from high-occupancy-vehicle (HOV) lanes. The equilibrium assignment process used in the current CMP model is functionally equivalent to the MTC methodology. The C/CAG-VTA Model includes additional vehicle classes in the highway assignments for park-and-ride vehicles and drive-alone and carpool toll vehicles.

Drive-alone and carpool toll vehicles for AM and PM peak periods are estimated using a toll model post-processor that estimates toll volumes based on a comparison of the non-toll and toll travel times and costs. This procedure assumes that toll choice occurs after the decision to choose auto versus transit has already been considered, and therefore does not influence transit mode choice. A toll choice constant for drive-alone and carpool modes was developed based on a calibration of toll volumes estimated by application of the toll model to the I-680 Express Lane facility and comparison of estimated to observed express lane volumes. It should be noted that by 2035, to maintain the operational feasibility of implementing regional express toll lanes, it was assumed that only 3+ occupant carpools would be allowed to travel in the carpool lanes for free. This was assumed for all carpool facilities in the model region.

In the current C/CAG-VTA Model, transit passengers are assigned with a methodology analogous to that used by MTC, with separate assignments for each transit sub mode and access mode. Assignments are also performed separately for peak and off-peak conditions. A total of 18 separate transit assignments are run to cover the full combination of transit sub mode and access modes as well as to estimate transit ridership for air-passengers and external home-based work transit trips from the San Joaquin (ACE, BART, and San Joaquin SMART bus) and AMBAG (Caltrain and Monterey Express) model regions.

Model Validation with 2013 Traffic and Transit Volumes - The current C/CAG-VTA Model is validated to year 2013 traffic volumes for county-level screenlines and specific major transportation facilities. Two time periods are validated for county screenlines: AM peak period (5am-9am) and PM peak period (3pm-7pm). Peak hour validation was performed for US 101 and SR-82 (El Camino Real) using traffic counts provided by Caltrans. Daily transit boardings were validated for the year 2013 at the system level for major regional transit operators (Caltrain, BART, MUNI, VTA, and AC Transit) and at the route level for SamTrans express and local routes.

Compliance and Conformance

To be in conformance with the CMP, member agencies must ensure that their models are consistent with the C/CAG-VTA Model. C/CAG encourages the use of the C/CAG-VTA Model by the local member agencies to ensure consistency, however, member agencies are free to develop their own local models but will be required to produce documentation to demonstrate consistency with the C/CAG-VTA Model. C/CAG must also ensure that the C/CAG-VTA Model is consistent with the MTC regional models. To demonstrate compliance and conformance, MTC has developed a checklist of outputs that are to be produced from the C/CAG-VTA Model and compared to a comparable MTC regional forecast year model run. C/CAG has prepared the checklist outputs from the most recent 2040 model runs and will provide the results in a separate submittal to MTC.

CHAPTER 10: MONITORING AND UPDATING THE CMP

There are several elements of the CMP that must be monitored. Changes in travel patterns, increases in employment or population, and increases or modifications to the supply of transportation facilities or services could result in changes being made or needing to be made to the following CMP elements:

Intersection of El Camino Real (SR-82) and Holly Street in San Carlos

- Traffic LOS standards (Described in Chapters 2 and 3)
- Trip Reduction and Travel Demand Element (Chapter 5)
- Land Use Impact Analysis Program (Chapter 6)
- Deficiency Plans (Chapter 7)

The processes to be applied to monitor each of these elements are described in its applicable chapter. A jurisdiction may be found in nonconformance with the CMP if these processes are not adhered to. The CMP will be updated every two years.

California Government Code Sections 65089.3, 65089.4, and 65089.5 govern the conformance process. These sections require that C/CAG determine every two years whether San Mateo County, including cities and towns within the county, conform to the requirements of the CMP based on information obtained through monitoring.

If C/CAG believes that a local government is not conforming to CMP requirements, it must then hold a noticed public hearing to determine areas of nonconformance. If after the public hearing C/CAG still believes that the local government is not conforming to CMP requirements, it must provide written notice to the local government citing the specific instances of nonconformance. The local government then has 90 days to remedy the instances of nonconformance. If after 90 days the local government has not remedied the

nonconformance instances, C/CAG will make a finding of nonconformance and notify the State Controller to withhold certain gas tax subvention funds.

Once a finding of nonconformance is made by C/CAG, the local jurisdiction would not receive its funds from the additional gas tax (enacted by California Proposition 111) or (the Federal) FAST Act funding until the jurisdiction is again found to be in conformance. If the city or county does not come into conformance with the CMP's standards or requirements within a 12-month period, its gas tax allocations are forfeited irrevocably.

CHAPTER 11: MEASURE M - $10 VEHICLE REGISTRATION FEE PROGRAM

Senate Bill 83 (SB 83) authorizes C/CAG, as the countywide transportation planning agency, to impose an annual fee of up to ten dollars ($10) on motor vehicles registered in San Mateo County, through a majority vote ballot measure, for transportation-related congestion mitigation and pollution mitigation programs and projects.

Funding for local streets and roads is a key component of Measure M

(Shown: Millbrae Avenue in Millbrae)

C/CAG placed Measure M on the November 2, 2010, ballot to impose an annual fee of ten dollars ($10) on motor vehicles registered in San Mateo County for transportation-related congestion mitigation and water pollution mitigation programs. Measure M, which was approved by the voters of San Mateo County, enables C/CAG to generate an estimated $6.7 million annually ($167 million over the next 25 years) to help fund various transportation programs for the 20 cities/towns and the County. Collection of the $10 fees began May 2011.

The C/CAG Board approved an update of the Measure M 5-Year Implementation Plan for fiscal years 2021/22 to 2025/26. Under the Expenditure Plan, 50% of the net proceeds will be allocated to cities/towns and the County for local streets and roads and 50% will be used for countywide transportation programs such as transit operations, regional traffic congestion management, water pollution prevention, and safe routes to school programs. The percentages in the updated Implementation Plan are slightly different from the prior years plans as follows:

- Reduce Transit Operations/Senior Mobility from 22% to 18%
- Increase Technology/Smart Corridor from 10% to 11%
- Increase Stormwater (NPDES/MRP) from 12% to 15%

The Plan defines the percentages breakdown and estimated revenue for the respective categories and programs as follows:

Table 24: Measure M Expenditure Plan

Category / Programs	Approved for FY 2022-2027		
	Allocation	Annual Revenue (Million)	5-Year Revenue (Million)
Transit Operations and/or Senior Transportation*	18%	$1.22	$6.13
Intelligent Transportation System (ITS) and Smart Corridors*	11%	$0.75	$3.75
Safe Routes to Schools (SR2S)*	6%	$0.41	$2.04
National Pollutant Discharge Elimination System (NPDES) and Municipal Regional Permit (MRP)*	15%	$1.02	$5.11
Total		**$3.40**	**$17.03**

* Countywide Transportation Programs (50% of net revenue)

The allocations for the Countywide Transportation Programs are derived based on anticipated needs and estimated implementation cost to fund each respective programs and projects, annually and over the 5-year implementation period. It is the intent that each countywide transportation program and project will be evaluated at the end of each year to determine whether the initial funding level (allocations) was adequate or whether it requires adjustments based on the actual expenditures incurred during the previous year. The complete Measure M Implementation Plan and 5-Year Performance Report is included in **Appendix M**.

CHAPTER 12: TRAFFIC IMPACT ANALYSIS (TIA) POLICY

SR-1 near Moss Beach in unincorporated San Mateo County

The intent of the TIA policy is to provide uniform procedures to analyze traffic impacts on the CMP network from projects and cumulative traffic impacts on the CMP network from General Plans and Specific Area Plans, and to set thresholds for mitigations. The Policy provides clear direction to local jurisdictions on how to analyze CMP impacts resulting from roadway changes or land use decisions, determine feasible and appropriate mitigations. The purpose of this policy is to preserve acceptable performance on the CMP roadway network, and to establish community standards for consistent system-wide transportation review.

Adopted by the C/CAG Board in August 2006, the TIA Policy helps agencies determine traffic impacts on the CMP roadway network. The policy applies to the following types of projects:

- Roadway changes
- General Plan Updates/Amendments and Specific Area Plans
- Land Use development projects

The TIA Policy is intended to work together with the Land Use Impact Analysis Program (described in Chapter 6). The TIA Policy can be found in **Appendix L**.