

FINAL
SAN MATEO COUNTY
CONGESTION MANAGEMENT PROGRAM
2009

City/County Association of Governments of San Mateo County

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2009 Congestion Management Program

Executive Summary

The City/County Association of Governments (C/CAG), as the Congestion Management Agency for San Mateo County, is required to prepare and adopt a Congestion Management Program (CMP) on a biennial basis. The purpose of the CMP is to identify strategies to respond to future transportation needs, develop procedures to alleviate and control congestion, and promote countywide solutions. The CMP is required to be consistent with the Metropolitan Transportation Commission (MTC) planning process that includes regional goals, policies, and projects for the Regional Transportation Improvement Program (RTIP). The 2009 CMP, which is developed to be consistent with MTC's Transportation 2035 Plan, provides updated program information and performance monitoring results for the CMP roadway system.

The CMP roadway system comprises of 53 roadway segments and 16 intersections. The roadway network includes all of the State highways within the County in addition to Mission Street, Geneva Avenue, and Bayshore Boulevard. The intersections are located mostly along El Camino Real. (Chapter 2) Baseline Level of Service (LOS) Standards were adopted for each of the roadway segments and intersections on the system wherein five roadway segments and four intersections were designated LOS F (F designated as the worse possible congestion). (Chapter 3)

In addition to the roadway system LOS, the CMP also includes other elements to evaluate the performance of the roadway and transit network such as travel time to traverse the length of the County by single-occupant vehicle, carpool, and transit in addition to transit ridership during the peak periods (Chapter 4). Monitoring is completed every two years to determine compliance with the adopted LOS standards and changes to the performance elements are measured.

The results of the 2009 Monitoring indicate that two (2) roadway segments exceeded

their LOS Standards (at SR 1 – San Francisco County line to Linda Mar Blvd and SR 84 – US 101 to Willow Road). Two roadway segments exceeded their LOS Standards in 2007 also. One roadway segment is operating at LOS F (at SR 1 – SF Co. to Linda Mar Blvd). Regarding intersections. All locations are in compliance with their LOS Standards. Three intersection locations improved and five worsened when compared to 2007 results. Four intersections are operating at their LOS Standards, including three intersections operating at LOS F (at Bayfront Expressway). Twelve (12) intersections are operating better than their LOS Standards.

The 2009 travel times for single-occupancy auto and carpool, when compared to 2007 figures, decreased by up to seven minutes in the southbound direction in either peak period and increased by up to four minutes in the northbound direction in either peak period. Ramp metering continues to improve congestion and directly contributes to the improved travel times in the southbound direction.

Travel times for bus and passenger rail modes were estimated based on SamTrans and Caltrain published schedules for travel between County lines during peak commute periods. Travel times for Caltrain service decreased by up to four minutes and SamTrans travel time have increased by up to eight minutes as compared to 2007 figures. The 2009 transit ridership data indicates that total annual as well as daily ridership for SamTrans, Caltrain, and BART has increased when compared to 2007 levels. (The complete 2009 Monitoring results are included in Appendix F)

The CMP includes C/CAG's programs and policies regarding transportation systems management (TSM) and transportation demand management (TDM), which address efforts to increase efficiency of the existing system and encourage utilization of alternative modes of transportation. The TSM/TDM programs under Measure A, the Alliance, TFCA, local cities, and C/CAG are updated in the 2009 CMP to reflect the current status. (Chapter 5)

Also included in the CMP is the C/CAG Land Use Impact Analysis Program policy, which address long-range planning, individual large developments (generating 100

or more net peak period trips on the CMP network), and cumulative developments. The Policy provides procedures for local jurisdictions to analyze and mitigate potential impacts to the CMP network resulting from land use decisions. (Chapter 6 and Appendix I)

As part of the CMP, the Countywide Congestion Relief Plan (CRP), reauthorized through June 2011, was developed to address the roadway system deficiencies (or violations of LOS Standards) on a countywide basis. The CRP relieves individual jurisdictions from the need to develop individual deficiency plans to mitigate (or reduce) existing congestion on specific locations. Elements contained in the CRP includes provisions for Countywide programs such as local shuttle service, transit pass subsidies and expansion of transit use, Intelligent Transportation System (ITS), Ramp Metering, and the El Camino Real Incentive Program. (Chapter 7)

The seven-year Capital Improvement Program (CIP) consists of projects programmed in the updated 2008 State Transportation Improvement Program (STIP). The current 2008 STIP project list can be found in Chapter 8, Table 8-1.

The C/CAG's San Mateo Countywide Travel Demand Forecasting Model is utilized to project the potential impacts of local land development decisions on the CMP roadway system. The current Model, which utilizes updated ABAG Projections 2005 for all future years and ABAG Projections 2003 for base year validation, is verified and compared with the MTC's updated Travel Demand Modeling Checklist for regional consistency. (Chapter 9)

Other elements included in the 2009 CMP are updates to the \$4 Vehicle License Fee (VLF) Program. The VLF Program, initially adopted in 2005, provides San Mateo County jurisdictions funding for the management of traffic congestion and stormwater pollution prevention. Through legislation, the VLF Program was reauthorized for a period of four years until January 1, 2013. (Chapter 11.)

The Traffic Impact Analysis (TIA) Policy, which provides uniformed procedures to

analyze traffic impacts on the CMP network, is added to the 2009 CMP. The TIA Policy applies to all General Plan updates, Specific Area Plans, and modifications to the CMP roadway network. (Chapter 12 and Appendix L)

CHAPTER 1

Introduction

In the summer of 1989, the California Legislature approved and Governor Deukmejian signed legislation enacting a comprehensive reform of the Gann spending limit and an \$18.5 billion Transportation Financing Program. That financing program and accompanying transportation planning and development measures were presented to the voters as Propositions 111 and 108. Both propositions were approved by California's voters in June of 1990.

The funding package associated with Propositions 111 and 108 included a requirement that every urban county within California designate a Congestion Management Agency (CMA) that would prepare, implement, and biennially update a Congestion Management Program (CMP). In San Mateo County, the City/County Association of Governments (C/CAG) was designated as the CMA. Subsequent legislation (AB 2419) allowed existing Congestion Management Agencies to discontinue participation in the Program. San Mateo County C/CAG voted to continue to participate in and adopt a CMP.

In 1997, SB 45 was passed, significantly revising State transportation funding policies. These changes included reducing the duration of the State Transportation Improvement Program (from 7 years to 4 years), giving Regional Transportation Planning Agencies more responsibility for project selection through the Regional Transportation Improvement Program, and creating the Interregional Improvement Program.

Congressional Reauthorization of ISTEA in 1998, known as the Transportation Equity Act for the 21st Century (TEA-21), preserved funding flexibility, increased funding levels, and established several new planning considerations (access to jobs, consistency with the Intelligent Transportation System national architecture, etc.).

According to the state legislation (AB 471, AB 1791, AB 1963, AB 2419 and SB 45) that calls for Congestion Management Programs to be prepared, 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 2007. This is the tenth CMP for San Mateo County. It describes the decisions adopted by C/CAG in previous CMPs to comply with the applicable sections of AB 471, AB 1791, AB 1963, SB1636 and to include new provisions required by SB 45 and TEA-21.

When the California Legislature defined the requirements for Congestion Management Programs, they set in motion the following actions:

1. A political process that encourages local jurisdictions (cities and the County) to discuss and seek resolution of anticipated transportation supply problems.
2. A political process that requires that all types of measures, including the possibility of implementing land use changes, creating travel demand management 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.
3. 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 the County of San Mateo and the cities in San Mateo County to implement the requirements of AB 471, AB 1791, AB 1963, SB 1636, SB 45, and TEA-21. The decisions made by the

¹California Government Code Section 65088(e).

City/County Association of Governments are intended to clearly describe the intent of C/CAG to make this process work by adopting CMP elements that emphasize communication and cooperation and provide a flexible approach to resolving issues. The overall goal of this CMP is to help C/CAG promote countywide solutions to transportation problems based upon cooperation and mutual support.

Elements of the CMP

Each Congestion Management Agency is charged with developing, adopting and updating a Congestion Management Program.² The following elements must be included in a congestion management program:

- **Roadway System**

The Congestion Management Agency must specify a system of highways and roadways for which traffic level of service 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).³

- **Traffic Level of Service (LOS) Standards**

Level of Service Standards intended to measure roadway congestion must be established for all state highways and principal arterials included in the CMP's Roadway System.⁴ Level of service is a qualitative description of roadway operations ranging from LOS A, or free flow conditions, to LOS F, or completely jammed conditions. The Congestion Management Program may not establish any standard below Level of Service E unless the level of service was F at the time that the standard was established.

²California Government Code Section 65089(a). By State statute, CMPs need not be changed every year, but must be formally amended and readopted every two years.

³California Government Code Section 65089(b)(1)(A).

⁴ibid.

- **Performance Element**

The Performance Element was added by 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.⁵

- **Trip Reduction and Travel Demand Element**

The Congestion Management Program must contain an element promoting the use of alternative transportation modes and ways to reduce future travel demand. Improving a county's jobs/housing balance and implementing travel demand management strategies are specifically mentioned as ways of attaining the objectives of this element of the CMP.⁶

- **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.⁷ Estimates of the costs associated with mitigating the projected impacts must be included in the CMP, with some exceptions.⁸

- **Seven-Year Capital Improvement Program (CIP)**

The CMP must contain a seven-year program of projects expected to maintain or improve traffic levels of service 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.⁹

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

⁵California Government Code Section 60589(b)(2).

⁶California Government Code Section 65089(b)(3).

⁷California Government Code Section 65089(b)(4).

⁸According 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.

⁹California Government Code Section 65089(b)(5).

proposed or planned land developments on a county's transportation systems. Finally, the Congestion Management Agency (C/CAG in San Mateo County) is charged with monitoring the implementation of all elements of the CMP and determining conformance with the CMP's requirements and recommendations.

Organization of this CMP

This report, which describes the 2009 Congestion Management Program for San Mateo County, is divided into the following chapters that correspond to the listing of CMP requirements included in AB 1791 and AB 1963:

1. The roadways and intersections that comprise San Mateo County's CMP Roadway System to be monitored for traffic operating conditions are described in Chapter 2.
2. The Level of Service Standards for the CMP's roadway segments, which were designated in the 1991 CMP (one additional segment was added in the 1999 CMP), and the standards for the intersections, which were designated in the 1993 CMP, are presented in Chapter 3.
3. The measures adopted by C/CAG to evaluate San Mateo County's multimodal system performance for the movement of people and goods are described in Chapter 4.
4. The key features of San Mateo County's efforts to encourage commuters to use alternatives to driving alone -- carpools, vanpools or transit -- are explained in Chapter 5.
5. The process to be used to analyze and mitigate the impacts on San Mateo County's transportation systems of potential or planned land use changes is presented in Chapter 6.
6. The guidelines for deficiency plans, should those need to be prepared in the future, are explained in Chapter 7. Also included in this Chapter is a listing of the deficiencies that were identified during the monitoring of the 2009 CMP.
7. The process for projects to be considered for funding as part of this CMP's Capital Improvement Program is presented in Chapter 8. This chapter also includes the transportation goals adopted in the Metropolitan Transportation Commission (MTC) *Transportation 2035 Plan for the San Francisco Bay Area*.

8. The features of the San Mateo Countywide Travel Demand Forecasting model are described in Chapter 9.
9. The procedures that C/CAG will use to monitor conformance with the CMP are described in Chapter 10.
10. The Vehicle License Fee Program (\$4 fee on motor vehicles registered in San Mateo County) for a program for the management of traffic congestion and stormwater pollution within San Mateo County in Chapter 11.
11. The Traffic Impact Analysis (TIA) Policy is added in Chapter 12 and the complete TIA Policy is included in Appendix L.
12. The results of the 2009 Monitoring Report are presented in Appendix F.

CHAPTER 2

CMP Roadway System

Legislative Requirements

California Government Code Section 65089 (b)(1)(A) requires that the Congestion Management Agency specify a system of roadways for which level of service standards will be set and monitored. All state highways and principal arterials are to be included in the Congestion Management Program's (CMP's) Roadway System. However, this statute does not specifically define what constitutes a principal arterial. Once a roadway is included in the CMP's Roadway System, the roadway cannot be removed (in a future CMP).

Discussion

Designating the CMP system of roadways is one of the key decisions affecting the CMP, because this action by C/CAG defines which roadways in San Mateo County will have their traffic level of service monitored. In effect, the C/CAG's adoption of a system (network) of roadways establishes the following framework for the subsequent, but related actions taken by C/CAG:

1. The C/CAG has identified which freeways, streets, highways,¹ and intersections in San Mateo County it has deemed to be important enough to have their existing and future traffic operating conditions monitored. The roadways incorporated into the CMP Roadway System serve the vast majority of trips made by driving from, to or through San Mateo County.
2. C/CAG has indicated which freeways, streets, highways, and intersections in San Mateo County the C/CAG will be expecting to receive nominations of actions or will help

¹Freeways (e.g., U.S. 101 and I-280) are roadways that are completely grade separated from other highways and that do not permit access directly from abutting land uses. Streets (e.g., El Camino Real), also called arterials in this CMP, allow access directly from abutting land uses and are almost never grade-separated from other roadways, (except freeways). Highways, as used in this CMP, refer to roads located in rural areas (e.g., Highway 1 south of Half Moon Bay).

formulate actions intended to maintain or attain traffic flow standards designated for those roadways. Possible actions that could be defined to mitigate potential operational or capacity problems on specific roadways include new roadway construction, transit improvements related to the travel origins and destinations served by that roadway, travel demand management actions, or land use changes.²

CMP Roadway System

The CMP Roadway System incorporates the CMP Roadway System adopted in 1991 plus the 16 intersections adopted in 1993 and the 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:

1. 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.)
2. They extend from the San Mateo County/San Francisco County line to the San Mateo County/Santa Clara County line.
3. They extend from San Francisco Bay to the Pacific Ocean and/or connect two major north/south routes.
4. They connect directly with the roadways included in the CMP networks of adjacent counties.
5. They are Principal Arterials, which in San Mateo County were defined as those roadways that are not freeways containing six or more lanes for a length of at least one mile and carrying average daily traffic (ADT) volumes of at least 30,000 vehicles.

The specific roadways included in the CMP Roadway System and the reasons why these roadways were included are as follows:

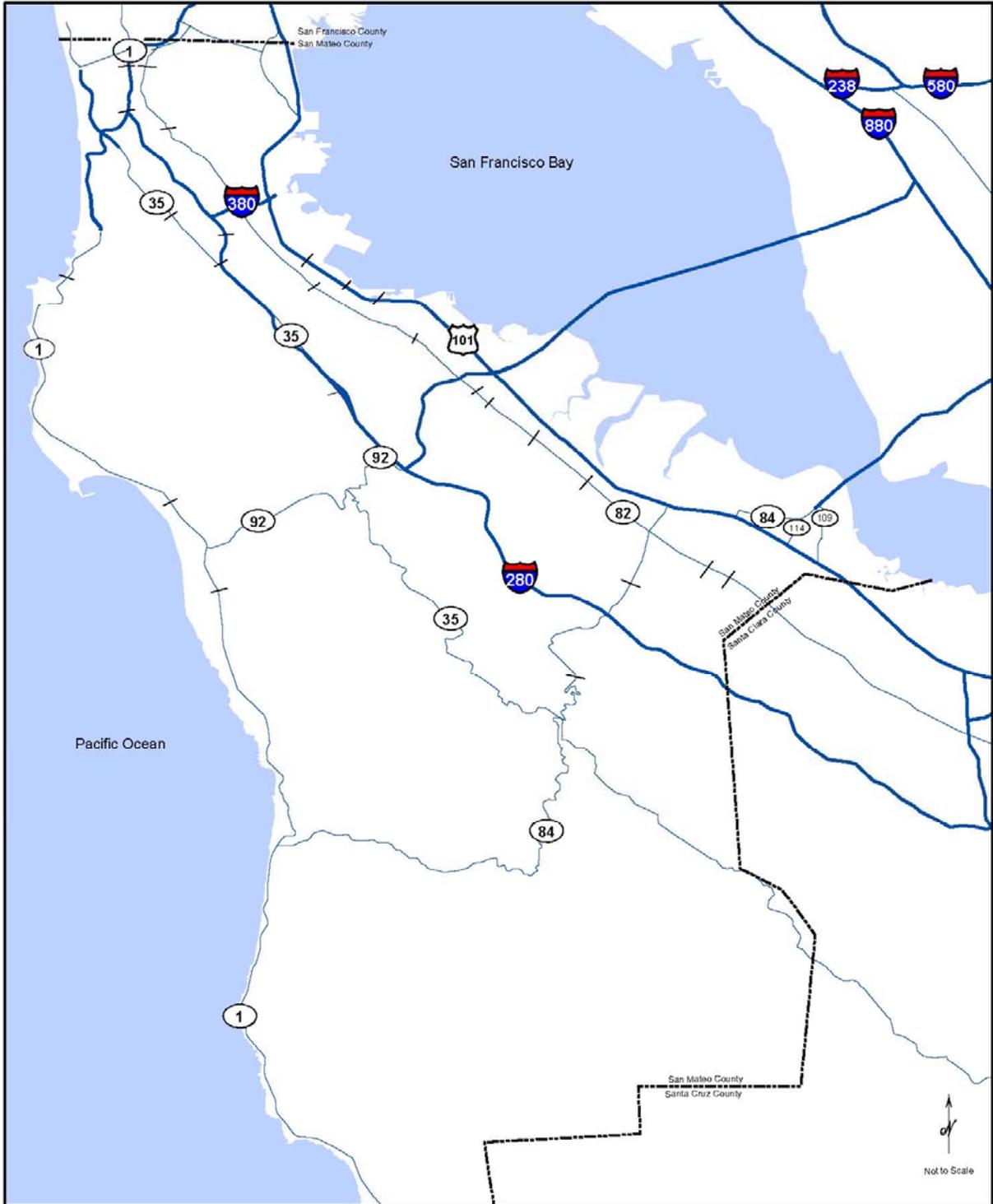
²Each of those kinds of actions are discussed in the chapters that follow.

1. State Route (SR) 1, SR 35, SR 82, SR 84, SR 92, U.S. 101, SR 109, SR 114, I-280, and I-380 are part of the California State Highway System. These are all the State Highways in San Mateo County.
2. SR 1, SR 35, SR 82, U.S. 101, and I-280 extend from the San Francisco County line in the north to the Santa Clara County line in the south. These are the only roadways in San Mateo County to meet this requirement.
3. SR 84 and SR 92 extend east/west from San Francisco Bay to (SR 1 near) the Pacific Ocean. These roadways in addition to I-380 also connect two (or more) major north/south routes.
4. Geneva Avenue, Mission Street and Bayshore Boulevard are the only roadways that are not State Highways that connect to roadways included in the CMP of an adjacent county. These roadways had to be included in San Mateo County's CMP Roadway System to be consistent with San Francisco County's CMP Roadway System. (No roadways, in addition to the State Highways already mentioned, needed to be added to be consistent with the CMP Roadway Systems of Alameda, Santa Clara, and Santa Cruz Counties).
5. Portions of El Camino Real (SR 82) are the only roadway segments in San Mateo County that qualify for inclusion in the CMP's Roadway System based on this CMP's definition of a Principal Arterial. (All of El Camino Real was included in the CMP's roadway system because this street is part of the California State Highway System- SR 82).

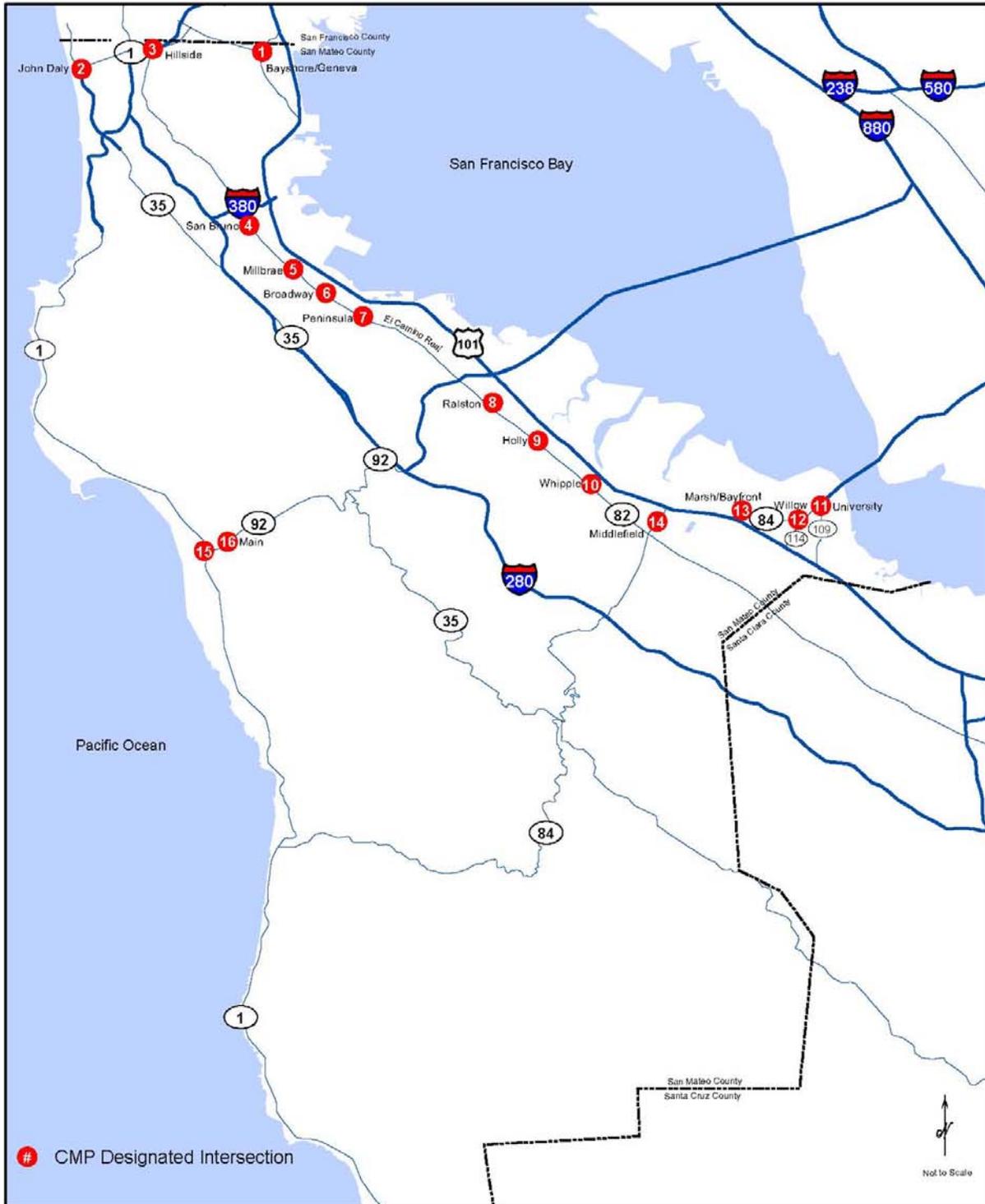
The following intersections were added to the CMP Roadway System adopted in 1993 so as to have their levels of service monitored.

- Geneva Avenue and Bayshore Boulevard
- SR 35 and John Daly Boulevard
- SR 82 (Mission Street) and John Daly Boulevard/Hillside Boulevard
- SR 82 (El Camino Real) and San Bruno Avenue
- SR 82 and Millbrae Avenue
- SR 82 and Broadway
- SR 82 and Peninsula Avenue
- SR 82 and Ralston Avenue
- SR 82 and Holly Street
- SR 82 and Whipple Avenue
- SR 84 (Bayfront Expressway) and SR 109 (University Avenue)
- SR 84 and Willow Road
- SR 84 and Marsh Road
- SR 84 (Woodside Road) and Middlefield Road
- SR 92 and SR 1
- SR 92 and Main Street.

The roadways and intersections in San Mateo County whose traffic levels of service will have to be monitored because they are now part of the CMP Roadway System are shown on Figure 2-1 and Figure 2-2, respectively. Detailed descriptions of the roadways included in this CMP's Roadway System are presented in Appendix A. The 1999 CMP included the division of one of the segments on State Route 1 into two separate segments for the purposes of monitoring. This division will occur at Sharp Park Boulevard in Pacifica. The results of the 2009 CMP Monitoring Report with the current levels of service are contained in Appendix F.



CMP Roadway Segments
Figure 2-1



CMP Intersections
Figure 2-2

CHAPTER 3

Traffic Level of Service Standards

Legislative Requirements

California Government Code Sections 65089.1 (A) and (B) requires that level of service standards be established by, in this case, C/CAG for the roadways and intersections designated to be in the CMP Roadway System. Furthermore, roadway levels of service (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*, or an uniform methodology adopted by the CMA that is consistent with the *Highway Capacity Manual*. The CMA (C/CAG in San Mateo) is responsible for selecting the LOS methodology to be used.

The CMP legislation stipulates that the CMP's Level of Service Standards can be set at any level of service - A through F. However, only roadway segments or intersections currently operating at Level of Service F may have an LOS F standard set for them.

Discussion

Level of service (LOS) is a qualitative term used to describe a roadway's operating condition. The level of service 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. Verbal descriptions of the levels of service for the five types of facilities in San Mateo County's CMP Roadway System-freeways, multilane highways, two-lane highways, arterials, and intersections-are presented in Table 3-1. Graphical illustrations of the LOS designations are presented on Figure 3-1.

Table 3-1

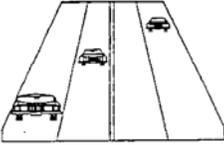
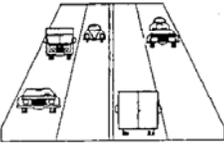
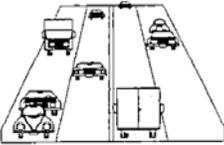
Level of Service Descriptions

| Level of Service | Freeways and Multilane Highways | Two-Lane Highways |
|------------------|--|---|
| A | Highest quality of service with free-flow conditions and a high level of maneuverability. | Free-flow conditions with a high level of maneuverability. Passing is easy to accomplish. |
| B | Free-flow conditions, but presence of other vehicles is noticeable. Minor disruptions easily absorbed. | Stable operations with passing demand approaching passing capacity. |
| C | Stable operations, but minor disruptions cause significant local congestion. | Stable operations, but with noticeable increases in passing difficulty. |
| D | Borders on unstable flow with ability to maneuver severely restricted due to congestion. | Approaching unstable traffic flow. Passing demand is high while passing capacity approaches zero. |
| E | Unstable operations with conditions at or near capacity. Disruptions cannot be dissipated and cause bottlenecks to form. | Unstable operations. Passing is virtually impossible and platooning becomes intense. |
| F | Forced or breakdown flow with bottlenecks forming at locations where demand exceeds capacity. Speeds may drop to zero. | Heavily congested flow with traffic demand exceeding capacity. Speeds may drop to zero. |

| Level of Service | Arterials | Intersections |
|------------------|---|---|
| A | Free-flow conditions with a high level of maneuverability. Minimal stopped delays at signalized intersections. | Free-flow conditions with insignificant delays. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. |
| B | Reasonably unimpeded operations with slightly restricted maneuverability. Stopped delays are not bothersome. | Stable operations with minimal delays. An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. |
| C | Stable operations with somewhat more restrictions in making mid-block lane changes than LOS B. Motorists will experience appreciable tension while driving. | Stable operations with acceptable delays. Major approach phase may become fully utilized. Most drivers feel somewhat restricted. |
| D | Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed. | Approaching unstable conditions. Delays are tolerable. Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delay. |
| E | Unstable operations with significant intersection approach delays and low average speeds. | Unstable operations with significant delays. Volumes at or near capacity. Vehicles may have to wait through several signal cycles. Long queues form upstream from intersection. |

Figure 3-1 Level of Service Definitions

Level of Service Definitions

| LEVEL OF SERVICE | FLOW CONDITIONS | DELAY | SERVICE RATING |
|--|---|--------------|----------------|
| <p>A</p>  | <p>Highest quality of service. Free traffic flow with low volumes. Little or no restriction on maneuverability or speed.</p> | None | Good |
| <p>B</p>  | <p>Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.</p> | None | Good |
| <p>C</p>  | <p>Stable traffic flow, but less freedom to select speed or to change lanes.</p> | Minimal | Adequate |
| <p>D</p>  | <p>Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.</p> | Minimal | Adequate |
| <p>E</p>  | <p>Unstable traffic flow and rapidly fluctuating speeds and flow rates. Low maneuverability and low driver comfort.</p> | Significant | Poor |
| <p>F</p>  | <p>Forced traffic flow. Speed and flow may drop to zero.</p> | Considerable | Poor |

The purpose of setting LOS standards is to evaluate changes in congestion. Congestion is to be measured on the designated system of CMP roadways via level of service calculations. Existing levels of service are to be calculated every two years as part of the CMP's traffic operations

monitoring program. (The results of the monitoring of existing levels of service in 2009 for the CMP roadway segments and intersections are presented in Appendix F.) Future (or anticipated) levels of service are expected to be calculated as part of the program to evaluate the impacts of planned (or anticipated) land use changes.¹

The methods used in this CMP to analyze existing and future levels of service on the CMP Roadway System were selected after reviewing the methods used by local jurisdictions and Caltrans. A survey conducted in 1991 revealed that most of the cities that responded used standard level of service methods for signalized intersections with half using the *Highway Capacity Manual* method and half using the Transportation Research Board's *Circular 212* method. About a third of the responding cities used a reserve capacity method to evaluate un-signalized intersections. The volume-to-capacity method was used to evaluate arterials in half of the responding cities. Most cities indicated that they did not use a standard level of service calculation method for the remaining facilities-freeways, multilane highways, and two-lane highways. Of those cities that had previously selected a method, the volume-to-capacity ratio method was preferred. Caltrans uses a floating car method to determine travel speeds as a measure of congestion on freeways.

The original methods selected to calculate the levels of service are described in Appendix B. These methods are consistent with the Transportation Research Board's *Circular 212* and the *Highway Capacity Manual*, as required by the CMP legislation. For the 2005 CMP, LOS for intersections was performed utilizing both the Circular 212 Methodology (based on a volume-to-capacity ratio of the critical movements) and the 2000 HCM Methodology (calculated based on an average control delays, expressed in seconds per vehicle). The LOS ratings using the 2000 HCM method are one to two grades lower than the ratings based on Circular 212 methodology. In addition, calculated LOS ratings using the 2000 HCM methodology are more consistent with field observations than the calculated ratings based on the Circular 212 methodology. For comparison purposes, the 2007 CMP also included both methodologies for calculating intersection LOS. Based on the observation that the 2000 HCM LOS results are more reflective of actual conditions, it was determined that the 2009 CMP and subsequent updates only include the 2000 HCM methodology for calculating intersection LOS.

¹See Chapter 6 for further discussion of the program that will analyze the potential countywide impacts of land use changes on San Mateo County's transportation system.

When monitoring conformance with this CMP's recommendations, a significant increase in congestion is defined as a change in the measured level of service 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.

Projected violations of the LOS standards may be identified as a result of the Land Use Impact Analysis Program. These projected violations will not trigger preparation of deficiency plans.

Possible Options

In general, there are two basic options that can be selected to develop level of service standards. When presented to C/CAG in 1991, these options were defined as follows:

Option 1: C/CAG could select LOS E as the standard for all roadways, with the exception of LOS F for roadways currently operating at LOS F.

Option 2: C/CAG could select LOS standards that vary by specific roadway segment.

Option 1 would provide the greatest flexibility to modify the LOS standards when future CMPs are prepared and the lowest risk of having to change standards later based on more refined analyses. However, this approach does not differentiate among acceptable levels of congestion on various types of roadways, such as freeways versus arterials and urban settings versus rural settings. Option 2 does allow for different standards to be selected for various types of roadway segments, but does so at the risk that some standards may be set too high in relation to information about traffic volumes developed in subsequent CMPs. Nevertheless, the second option would establish a direction for San Mateo County's CMPs more in keeping with the intent of AB 471.

Process of Selecting LOS Standards for Roadway Segments

The LOS standards for roadway segments were selected during development of the 1991 CMP. Analyses of existing (1990/91) levels of service and projections of future (year 2000) levels of service were used to develop the LOS standards for San Mateo County's CMP Roadway System. The process used to develop the standards followed these steps:

1. Limits of roadway segments were selected based on facility type and number of lanes.
2. Existing (1990/91) peak-hour volumes were identified. Traffic volumes for the morning commute period (6:00 AM to 10:00 AM) and the evening commute period (3:00 PM to 7:00 PM), obtained from Caltrans, the cities, and new traffic counts, were reviewed. (The process of compiling and analyzing feasible traffic counts is described in Appendix C of the 1991 CMP.)
3. Existing (1990/91) volume-to-capacity (V/C) ratios and levels of service were evaluated.
4. After the highest hourly volumes were identified, their corresponding V/C ratios and LOS were selected to represent existing (1990/91) conditions for each roadway segment.
5. Future volumes (for the year 2000) were projected by applying growth factors obtained by comparing the Metropolitan Transportation Commission's (MTC's) (simulated) traffic assignments for the years 1987 and 2000. (The traffic volumes simulated by MTC to represent traffic conditions presumed to exist in 1987 were very similar to actual counts recorded in 1990 and 1991.)
6. Locations projected to have changes in capacity, due to roadway widening projects, were identified. Future V/C ratios (projected for the year 2000) and corresponding LOSs were evaluated for the AM and PM peak hours selected earlier.

Roadway Segment Level of Service Standards

The following LOS standards were selected for the roadway segments.

- If the existing (1990/91) level of service was F, then the standard was set to be LOS F.
- If the existing or future level of service was or will be E, then the standard was set to be LOS E.
- The standard for roadway segments near the San Francisco, Santa Clara, and Alameda County borders, with one exception,² was set to be LOS E to be consistent with the recommendations in those counties' 1991 CMPs. (This standard would apply 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.

The LOS standards adopted by C/CAG for the roadway segments included in this CMP are presented in Table 3-2 and on Figure 3-2.

The roadway segment Level of Service Standards adopted by the C/CAG to monitor attainment of the CMP support the following objective:

The LOS Standards established for San Mateo County vary by roadway segment. By adopting LOS standards based on geographic differences, the 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 variations in LOS standards by geographic area conform to current land use plans and development differences between the Coastside and Bayside, between older downtowns near CalTrain stations and other areas of San Mateo County.

²For I-280 south of SR 84, the adopted standard is LOS D.

Table 3-2

Level of Service Standards for CMP Roadway Segments^a

| Route | Roadway Segment | Baseline (1990-91) LOS | LOS Standard |
|-------|--|------------------------------|-----------------|
| 1 | San Francisco County Line to Linda Mar Boulevard | D | E |
| 1 | Linda Mar Boulevard to Frenchmans Creek Road | D | E |
| 1 | Frenchmans Creek Road to Miramontes Road | E | E |
| 1 | Miramontes Road to Santa Cruz County Line | C | D |
| 35 | San Francisco County Line to Sneath Lane | C | E |
| 35 | Sneath Lane to I-280 | E | F ^b |
| 35 | I-280 to SR 92 | A | B |
| 35 | SR 92 to SR 84 | A | B |
| 35 | SR 84 to Santa Clara County Line | A | E |
| 82 | San Francisco County Line to John Daly Boulevard | A | E |
| 82 | John Daly Boulevard to Hickey Boulevard | A | E |
| 82 | Hickey Boulevard to I-380 | A | E |
| 82 | I-380 to Trousdale Drive | A | E |
| 82 | Trousdale Drive to 3rd Ave-nue | B | E |
| 82 | 3rd Avenue to SR 92 | B | E |
| 82 | SR 92 to Hillsdale Avenue | A | E |
| 82 | Hillsdale Avenue to 42nd Ave-nue | A | E |
| 82 | 42nd Avenue to Holly Street | B | E |
| 82 | Holly Street to Whipple Avenue | A | E |
| 82 | Whipple Avenue to SR 84 | D | E |
| 82 | SR 84 to Glenwood Avenue | B | E |
| 82 | Glenwood Avenue to Santa Cruz Avenue | D | E |
| 82 | Santa Cruz Avenue to Santa Clara County Line | D | E |
| 84 | SR 1 to Portola Road | B | C |
| 84 | Portola Road to I-280 | D | E |
| 84 | I-280 to Alameda de las Pulgas | B | C |
| 84 | Alameda de las Pulgas to U.S. 101 | C | E |
| 84 | U.S. 101 to Willow Road | D | D |
| 84 | Willow Road to University Avenue | E | E |
| 84 | University Avenue to Alameda County Line | F | F |

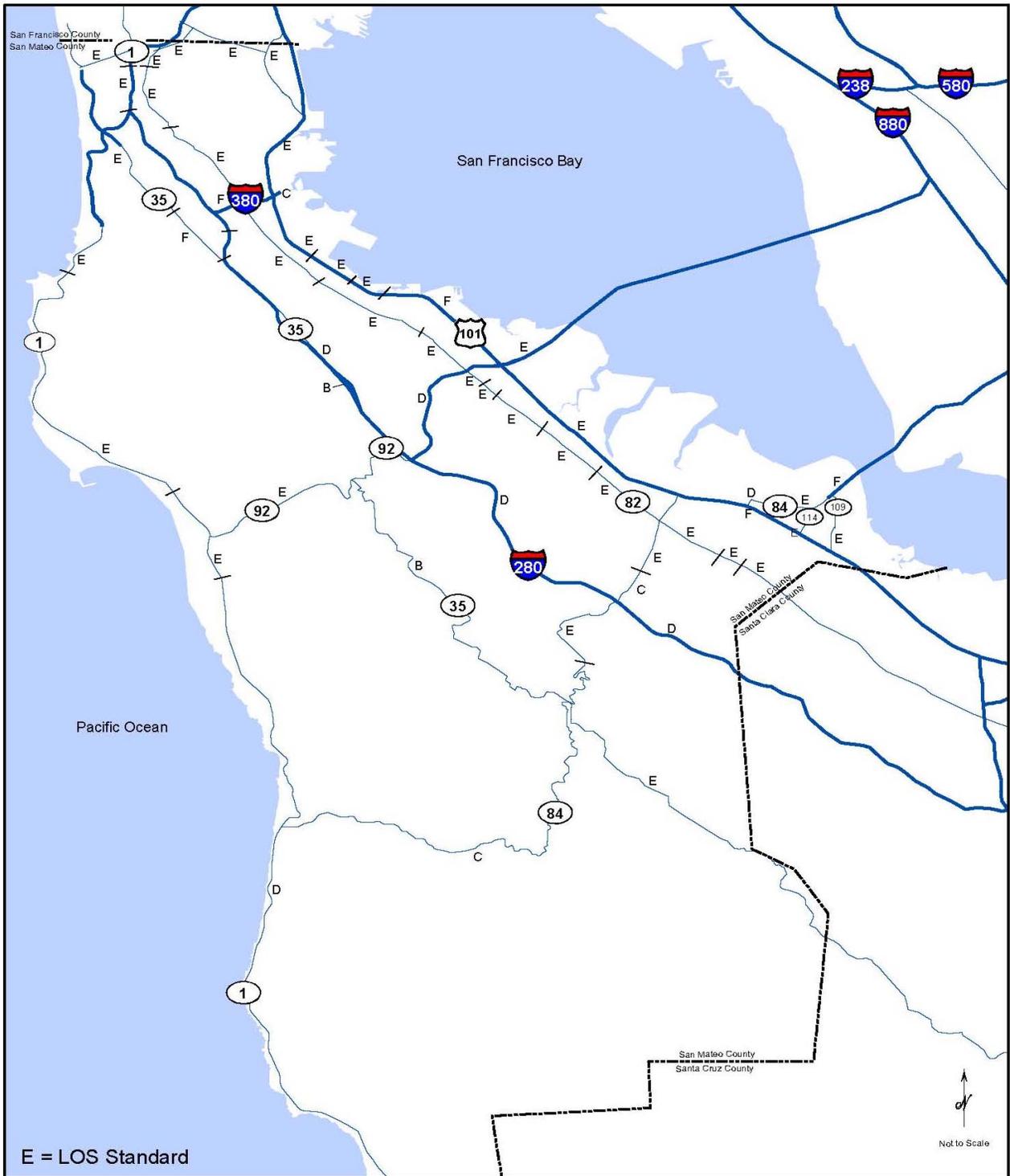
Table 3-2

Level of Service Standards for CMP Roadway Segments^a (Continued)

| Route | Roadway Segment | Baseline (1990-91) LOS | LOS Standard |
|--------------------|---|------------------------------|-----------------|
| 92 | SR 1 to I-280 | E | E |
| 92 | I-280 to U.S. 101 | C | D |
| 92 | U.S. 101 to Alameda County Line (Bridge Causeway) | D | E |
| 101 | San Francisco County Line to I-380 | E | E |
| 101 | I-380 to Millbrae Avenue | D | E |
| 101 | Millbrae Avenue to Broadway | D | E |
| 101 | Broadway to Peninsula Avenue | E | E |
| 101 | Peninsula Avenue to SR 92 | F | F |
| 101 | SR 92 to Whipple Avenue | D | E |
| 101 | Whipple Avenue to Santa Clara County Line | F | F |
| 109 | Kavanaugh Drive to SR 84 (Bayfront Expressway) | E | E |
| 114 | U.S. 101 to SR 84 (Bayfront Expressway) | D | E |
| 280 | San Francisco County Line to SR 1 (north) | N/A | E |
| 280 | SR 1 (north) to SR 1 (south) | D | E |
| 280 | SR 1 (south) to San Bruno Avenue | C | D |
| 280 | San Bruno Avenue to SR 92 | C | D |
| 280 | SR 92 to SR 84 | C | D |
| 280 | SR 84 to Santa Clara County Line | C | D |
| 380 | I-280 to U.S. 101 | F | F |
| 380 | U.S. 101 to Airport Access Road | A | C |
| Mission Street | San Francisco County Line to SR 82 | A | E |
| Geneva Avenue | San Francisco County Line to Bayshore Boulevard | A | E |
| Bayshore Boulevard | San Francisco County Line to Geneva Avenue | A | E |

^a Levels of Service calculated based on volume-to-capacity ratios.

^b The LOS Standard has been changed from LOS E to LOS F based on the evaluation of additional traffic count data.



CMP Roadway Segments and LOS Standards

Figure 3-2

The standards established the direction for subsequent CMPs. With the adoption of those standards, the C/CAG started the technical and political processes of respecting small area or city-based differentiations, while requiring that information on operating conditions be collected throughout San Mateo County to monitor changes in levels of service on roadways considered to be of importance to more than one jurisdiction.

The standards created the initial linkage between planned or anticipated land use changes and the analysis of the impacts that those changes would be projected to have on San Mateo County's roadway system. (Additional discussion of the Land Use Impact Analysis Program is presented in Chapter 6.)

Intersection Level of Service Standards

Sixteen intersections were added to the CMP Roadway System first adopted in 1991. A process similar to the process used to develop the standards for the roadway segments was used to develop the standards for the intersections.

As with the CMP's roadway segments, intersection levels of service were calculated by using volume-to-capacity ratios. The *Transportation Research Board's Circular 212* Planning method was used, and capacity adjustments were made to reflect traffic operations in San Mateo County. The method used to calculate intersection levels of service is described in detail in Appendix B.

The following process was used to develop the level of service standards for intersections:

1. Existing (1993) peak-hour intersection turning-movement volumes were obtained from manual counts conducted during the morning commute period (7:00 AM to 9:00 AM) and the evening commute period (4:00 PM to 6:00 PM).
2. Existing volume-to-capacity ratios were calculated and levels of service were evaluated for the AM and PM peak hours.
3. Future intersection volumes were projected by applying growth factors obtained by comparing MTC's traffic assignments for roadway segments adjacent to each intersection for the years 1987 and 2000.
4. Future (year 2000) V/Cs were calculated and LOSs were evaluated for the AM and PM peak hours.

5. Intersection Level of Service Standards were selected based on the following considerations:
- a) If the existing level of service is F, then the standard is set to be LOS F.
 - b) If the existing or future level of service is or will be E, then the standard is also set to be E.
 - c) The standard of the intersections near the San Francisco, Santa Clara, and Alameda Counties will be LOS E to be consistent with the LOS standards adopted in those counties.
 - d) On SR 82 (El Camino Real), the standard is set to be LOS E to be consistent with the roadway segment standards.
 - e) For the remaining intersections, the standard is set to be LOS E to correspond to the standard established for the adjacent roadway segment. (All of the segments on which these intersections are located have standards set to LOS E.)

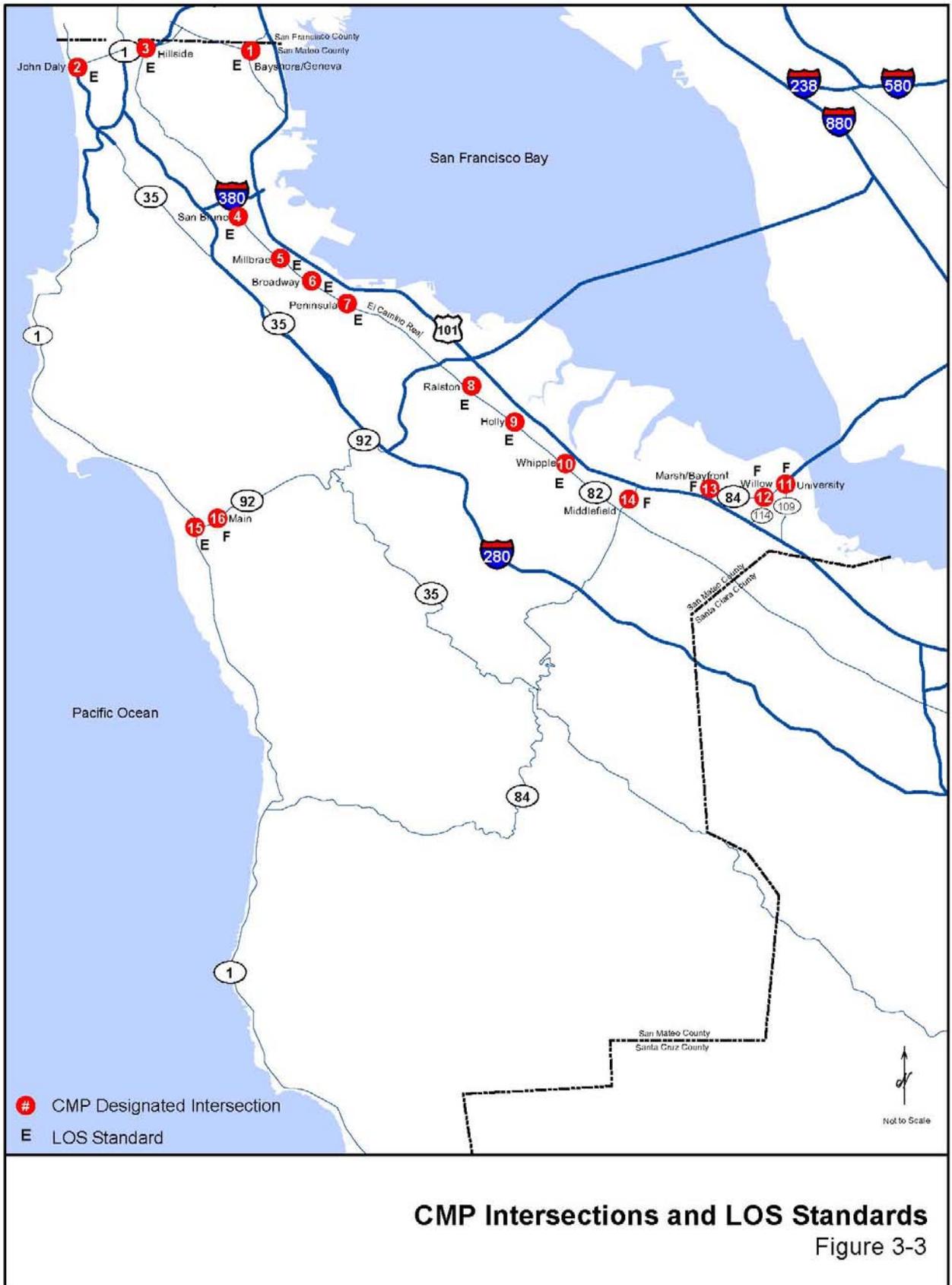
The LOS standards adopted by C/CAG for the 16 designated intersections are presented in Table 3-3 and Figure 3-3.

Table 3-3

Intersection Level of Service Standards

| Intersection | Peak Hour | Baseline (1993) LOS | LOS Standard |
|--|------------------|----------------------------|---------------------|
| Geneva Avenue/Bayshore Boulevard | AM | A | E |
| | PM | A | |
| Skyline Boulevard (SR 35)/ John Daly Boulevard | AM | A | E |
| | PM | A | |
| Mission Street (SR 82)/John Daly Boulevard- Hillside Boulevard | AM | A | E |
| | PM | A | |
| El Camino Real (SR 82)/San Bruno Avenue | AM | A | E |
| | PM | C | |
| El Camino Real (SR 82)/Millbrae Avenue | AM | C | E |
| | PM | B | |
| El Camino Real (SR 82)/Broadway | AM | A | E |
| | PM | A | |
| El Camino Real (SR 82)/ Park-Peninsula Avenue | AM | A | E |
| | PM | A | |
| El Camino Real (SR 82)/Ralston Avenue | AM | A | E |
| | PM | C | |
| El Camino Real (SR 82)/Holly Street | AM | A | E |
| | PM | B | |
| El Camino Real (SR 82)/Whipple Avenue | AM | A | E |
| | PM | B | |

| Intersection | Peak Hour | Baseline (1993) LOS | LOS Standard |
|---|-----------|---------------------|--------------|
| Bayfront Expressway (SR 84)/ University Avenue (SR 109) | AM | D | F |
| | PM | F | |
| Bayfront Expressway (SR 84)/ Willow Road (SR 114) | AM | F | F |
| | PM | C | |
| Bayfront Expressway (SR 84)/Marsh Road | AM | E | F |
| | PM | F | |
| Woodside Road (SR 84)/Middlefield Road | AM | D | E |
| | PM | E | |
| SR 92/SR 1 | AM | B | E |
| | PM | A | |
| SR 92/Main Street | AM | F | F |
| | PM | D | |



Level of Service Standards and Monitoring the CMP

The LOS standards presented in this CMP are all based on analyzing existing traffic counts or projections of local and regional traffic. That is, the calculations of existing and projected weekday levels of service do not exclude some types of trips, such as those associated with interregional travel or low-income housing. For purposes of determining deficiencies, however, 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. Levels of service associated with traffic occurring on weekends or at times when special events occur have not been analyzed in this CMP.

Level of Service Issues for Future CMPs

Although the C/CAG has adopted level of service standards for the roadway segments and intersections that are part of the CMP Roadway System, future resolution of the following issues could affect the definition of LOS standards in future CMPs:

1. The Level of Service Standards presented in Tables 3-2 and 3-3 apply to *continuous roadway segments and specific intersections*. The adopted standards do not require measuring congestion at other specific sites, such as other intersections, freeway ramps or freeway weaving areas. If the measurement and analysis of operating conditions for those types of facilities are to be added to future CMPs, the LOS standards would be set for them at that time.
2. The level of service standards were based on calculated volume-to-capacity ratios. This measure of performance was selected due to the types of available data. The level of service calculation methods may be modified in future CMPs and the resulting levels of service may be different. For example, for roadway segments, it is possible that levels of service measured by conducting travel time runs could be different from those levels of service measured by volume-to-capacity ratios as described in this CMP. Similarly,

for intersections, it is possible that levels of service measured by delay times could be different from those levels of service measured by volume-to-capacity ratios. This is one reason why the LOS standards for this CMP are one to two levels worse than the levels of service projected for the year 2000.

3. Limited amounts of data were available to evaluate existing levels of service. For example, the counts provided by Caltrans were listed in one-hour increments (i.e., 4:00 PM to 5:00 PM, 5:00 PM to 6:00 PM). These one-hour increments do not necessarily reflect when the highest peak-hour volumes occur (e.g., those could have occurred from 4:30 PM to 5:30 PM).
4. The Level of Service Standards may be refined by using the Countywide Travel Demand Forecasting Model. That model is described in Chapter 9. It will allow C/CAG to more accurately forecast the performance of the CMP's Roadway System in future years.
5. For roadways and intersections with a LOS Standard F, if the monitoring results indicate a LOS F, determine the level (seconds of delay) that exceeds the upper threshold limits defined for LOS F. This will help identify and breakdown the different severity levels within the LOS F designation.

As a result of these changes, C/CAG could identify additional roadway segments and intersections operating at LOS F. The C/CAG would then amend this CMP's LOS Standards to reflect that new information.

CHAPTER 4

Performance Element

Legislative Requirements

One of the changes imposed by AB 1963 is to rename the “ Transit Level of Service Standards” element to the “ Performance” element. According to California Government Code section 65089(b)(2), this element includes 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 capital improvement program, deficiency plans, and the land use impact analysis program.

Discussion

One of the key phrases in AB 1963 regarding this element is “ multimodal system performance” . The purpose of this element is to identify measures that, either individually or taken as a group, evaluate how the *countywide transportation system (including all modes)* is performing, and to present the results of the evaluation. The Traffic Level of Service Standards element and the monitoring of that element provides C/CAG with information regarding the performance of the roadway system. This element will provide information regarding the transportation system as a whole.

The performance measures will be used to evaluate the effectiveness of projects proposed for inclusion in the CMP Capital Improvement Program. They will also be used to evaluate the effectiveness of proposed actions in deficiency plans to determine whether they are appropriate and acceptable. In the Land Use Impact Analysis Program, the performance measures can be used to evaluate proposed mitigation measures.

Possible Performance Measures

There is a myriad of performance measures that can be selected for the CMP. The 12 transportation system performance measures, listed in the Statewide CMP/Air Quality Study, are:

1. Level of Service (Volume-to-Capacity)
2. Hours of Delay
3. Travel Time (Vehicle Only)
4. Travel Time (All Motorized Modes)
5. Modal Split
6. Average Vehicle Occupancy
7. Average Vehicle Ridership
8. Vehicles Miles of Travel
9. Vehicles Miles of Travel Per Person Trip
10. Person Throughput (Person Trips Per Hour Per Mile of Facility)
11. Accessibility Percent Employees Within X Minutes
12. Accessibility Percent Employees Within X Miles

These 12 measures were used as the springboard for discussion and selection of the performance measures for San Mateo County.

Selection Criteria

The selection process included a discussion of the performance measure options, an identification of available data, and an identification of information that could be developed using the San Mateo Countywide Travel Demand Forecasting model. The selection criteria included measurability (Can they be measured in the field or be easily ascertained from available data?), forecastability (Can changes in the measure be predicted using the countywide travel demand forecasting model or

other tool?), multimodality (Does the measure include a variety of modes?), and clarity (Can the measure be understood by lay people?).

San Mateo County Performance Measures

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 increased to encourage more improvements in new projects. These measures will be evaluated for peak commute periods, when congestion levels are at their highest. The four measures are:

1. *Level of Service.* This performance measure provides an overview of the operating level of the roadway system in San Mateo County. It is already included in the CMP and Level of Service Standards have been set for selected roadway segments and intersections. Roadway level of service will be measured with either vehicle counts, to determine volume-to-capacity ratios, or floating car runs, to determine travel speeds. In addition, the duration of the peak period will be reviewed.
2. *Travel Times for Single-Occupant Automobiles, Carpools, and Transit.* This performance measure will determine the amount of time required to traverse selected corridors on a variety of modes. The corridors will be selected so that comparable distances can be measured. (One example would be the U.S. 101/CalTrain corridor from the northern county border to the southern county border. Travel times would be measured for travelers on CalTrain, in single-occupant automobiles on U.S. 101, and in a SamTrans bus on El Camino Real.) Field measurements would be used to determine the travel times for single-occupant automobiles. Transit schedules would be used to determine travel times via bus and CalTrain. Transit travel times could also be field checked. The travel times could be compared among the modes and as they vary over time. Travel times for peak periods would be compared to travel times for off-peak periods to determine the amount of peak-period delay on each mode.

3. *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 Capital Improvement Program. If a new transportation improvement project does not incorporate pedestrian and bicycle travel, it must explain provide justification for such.

4. *Ridership/Person Throughput for Transit.* 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, how the ridership compares to the capacity, and how the various transit modes (bus, CalTrain, BART) compare among themselves.

Monitoring will be done biennially. The results will be used for planning purposes and to identify where additional measures may be needed in order to better assess the degree to which congestion is improving or worsening.

CHAPTER 5

Trip Reduction and Travel Demand Element

Legislative Requirements

California Government Code 65089.a.3 requires that a Trip Reduction and Travel Demand Element be part of the CMP. As stated in that legislation, and amended by AB 1963, this element should promote alternative transportation methods (carpools, vanpools, transit, bicycles, park-and-ride lots, etc.), improve the balance between jobs and housing, and promote other strategies to reduce traffic congestion such as flexible work hours, telecommuting, and parking management programs. Also stated is that the agency shall consider parking cash-out programs.

The agency and air quality management district are to coordinate the development of trip reduction responsibilities and shall avoid duplication. A multiple site employer shall have the option of complying with a district employer trip reduction rule, or a similar rule proposed pursuant to a federal implementation plan, and reporting directly to the district or a federal or state agency. A multiple site employer that exercises this option shall be exempt from an employer-based trip reduction requirement imposed pursuant to the trip reduction and travel demand element. As per Health and Welfare Code 40929, the Congestion Management Agency shall not require an employer to implement an employee trip reduction program unless the program is expressly required by federal law and the elimination of the program will result in the imposition of federal sanctions, including, but not limited to, the loss of federal funds for transportation purposes. This does not however, prohibit local jurisdictions from requiring trip reduction and other transportation demand management programs as a condition for the approval of development permits.

Measure A, adopted by the San Mateo County voters on June 7, 1988, and reauthorized for extension in November 2004, authorized the imposition of a one-half cent increase in the sales tax to support transportation improvements contained in the Transportation Expenditure Plan adopted by the Board of Supervisors and a majority of the cities representing a majority of the population. This Plan requires that the

Transportation Authority adopt in conjunction with the County and the Cities, a Transportation Systems/Demand Management (TSM/TDM) Plan, and that no Measure A project (excluding Paratransit, Local Entities, TSM, Bicycle Program, and Administration) shall be allocated funds unless the project is found to be in conformity with the TSM/TDM Plan. Each jurisdiction in San Mateo County must have a TSM/TDM plan/program in order to be eligible to receive Measure A funds.

Discussion

The purpose of this CMP element is to describe San Mateo County's ongoing efforts to reduce congestion and attain the Traffic Level of Service Standards, presented in Chapter 3, through a variety of actions. One of the ways to reduce congestion would be to increase the people-carrying capacity of the CMP Roadway System by promoting the use of travel modes other than the single-occupant automobile, such as carpools, vanpools, transit, and bicycles. The implementation of congestion reduction strategies such as staggered work hours, telecommuting, and parking management are also expected to be pursued at the local level. Data for mode of transportation to work by San Mateo County employed residents from the census are presented in Table 5-1.

Table 5-1

San Mateo County Employed Residents (Mode of Transportation to Work)

| | 1990 | | 2000 | | Change |
|-----------------------|----------------|-------|----------------|-------|--------------|
| Drive Alone | 251,218 | (.72) | 256,066 | (.72) | 4,848 |
| Carpool | 45,104 | (.13) | 45,367 | (.13) | 533 |
| Public Transportation | 25,788 | (.07) | 26,029 | (.07) | 241 |
| Motorcycle | 1,333 | (.01) | 878 | (.00) | -455 |
| Bicycle | 2,606 | (.01) | 2,896 | (.01) | 290 |
| Walked | 8,868 | (.03) | 7,609 | (.02) | -1,249 |
| Other Means | 6,059 | (.02) | 2,406 | (.01) | -3,652 |
| Work at Home | 9,532 | (.03) | 12,845 | (.04) | 3,313 |
| TOTAL: | 346,559 | | 354,096 | | 7,537 |

Source: 1990 and 2000 Census.

Most county employed residents are driving alone to work, a trend that has grown stronger since 1980. In 1990 and 2000, solo automobile drivers accounted for 72 percent of the county employed residents' commute trips. By comparison, only 7 percent traveled to work by transit and 13 percent by carpool.

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 have to be made when individual jurisdictions or groups of jurisdictions offer more employment opportunities than affordably priced housing to accommodate the work force.

The Association of Bay Area Governments (ABAG) projected, as shown in Table 5-2, the number of jobs to be located in San Mateo County will grow faster than the number of county residents seeking employment.

Table 5-2
San Mateo County's Employment and Employed Residents

| | 2005 | 2010 | 2020 | 2030 | 2035 |
|---|---------|---------|---------|---------|---------|
| Employment | 337,350 | 363,060 | 423,100 | 487,420 | 522,100 |
| Employed Residents | 319,600 | 348,100 | 398,500 | 443,300 | 468,000 |
| Ratio of Employment to Employed Residents | 1.06 | 1.07 | 1.06 | 1.10 | 1.12 |

Source: ABAG Projections 2007

Not all of San Mateo County's employed residents work in San Mateo County and not all of the jobs in San Mateo County are filled by San Mateo County residents. As shown in Table 5-3, 59 percent of the jobs in San Mateo County are filled by San Mateo County residents in year 2000. The remaining jobs are filled by employees who reside in the neighboring counties in relatively equal parts. Similarly, approximately 59 percent of the employed residents work within San Mateo County. Other residents work in San Francisco County, Santa Clara County, and Alameda County in descending order. ABAG has projected that by Year 2020, San Mateo County jobs filled by employees residing in San Mateo County will to grow to 63

percent, while 61 percent of the employed residents are expected to work within San Mateo County.

Table 5-3

Origins and Destinations of Home-to-Work Trips

| | San Mateo County Jobs Filled by Employees Residing in Each County | | San Mateo County Employed Residents Who Commute to Each County | |
|----------------|--|---------|---|---------|
| | 2000 | 2020 | 2000 | 2020 |
| San Mateo | 206,093 | 252,555 | 206,093 | 252,555 |
| San Francisco | 43,306 | 50,071 | 71,702 | 83,367 |
| Santa Clara | 40,666 | 53,313 | 55,473 | 61,887 |
| Alameda | 33,501 | 47,134 | 14,783 | 16,489 |
| Rest of Region | 23,334 | N/A | 4,209 | N/A |
| TOTAL | 346,900 | 403,073 | 352,260 | 214,298 |

Source should now reflect that data came from Census 2000 journey-to-work data and it was adjusted using work trip increases forecast from ABAG Projections 2003.

Current TSM/TDM Programs in San Mateo County

Measures that reduce the number of vehicles on the roadway system are referred to as Transportation Demand Management (TDM) measures. Measures that improve the efficiency of the system are referred to as Transportation System Management (TSM) measures. TSM measures include traffic signal synchronization, ramp metering, and high occupancy vehicle (HOV) lanes (also known as diamond or carpool lanes). Both TDM and TSM are addressed in this element.

Measure A mandated that every jurisdiction in San Mateo County have 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. It requires that local jurisdictions implement TSM/TDM programs in order to be eligible to receive Measure A funding.

Measure A TSM Plan

In June 1988, voters in San Mateo County approved Measure A that created the San Mateo County Transportation Authority 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 the Authority to adopt, in conjunction with the cities 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, voters in San Mateo County approved the continuation of Measure A to be in effect from 2009 to 2033. The continuation of Measure A includes the Bicycles and Pedestrians 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.

The three primary goals of San Mateo County's TSM plan are as follows:

Goal 1: To develop a coordinated countywide TSM program that: (1) examines the nature and cause of growing peak-hour traffic congestion in the county; (2) reviews available TSM techniques and implementation methods; (3) identifies TSM measures that would be effective in the county; and (4) recommends implementation of a plan by local governments and employers.

Goal 2: To increase the efficiency of the existing transportation system in San Mateo County during peak-commute periods by: (1) reducing single-occupant auto work-trips; (2) increasing the use of public transit and other alternative modes of transportation; and (3) reducing the rate of increase in roadway usage. An initial target is to achieve a 25-percent rate of participation by employees in alternatives to single-occupant auto work-trips during peak hours within five years. In addition to relieving congestion, implementation of the recommended TSM measures would also help attain State and Federal air quality standards, and conserve energy.

Goal 3: To establish an ongoing planning process for evaluating and refining the countywide TSM plan that: (1) evaluates the effectiveness of traffic mitigation programs; (2) recommends adjustments to existing programs where needed; and (3)

promotes local and regional planning to achieve a balance between land use decisions and the demand for transportation facilities.

Measures to implement the goals of the Measure A TSM effort and to encourage more efficient use of existing transportation networks were identified in the plan. These included promoting ridesharing (car and vanpools), flexible work hours, and countywide long-range planning leading to growth targets and a jobs/housing balance.

In the current Measure A, annually, 0.7 percent of the total sales tax revenue is allocated to fund projects that further these goals. Local agencies, including cities, towns, joint powers agencies, SamTrans, and school districts, can nominate projects to receive these funds.

The San Mateo County's Measure A transportation sales tax Expenditure Plan (2004) states that a 3% share of sales tax revenues, an estimated \$45 million (over the next 25-year period) will be allocated towards pedestrian and bicycle projects including paths, trails and bridges over roads and highways. In addition, the Expenditure Plan also states that a 4% share of sales tax revenues, an estimated \$60 million (over the next 25-year period) will be allocated to local shuttle services. Priority will be given to those shuttle service programs that include a portion of the funding from businesses, employers and other private parties. Priority will be given to service that connects with Caltrain, BART and future ferry terminals.

Local TSM/TDM Programs That Have Been Implemented In Direct Response To The Requirements Under Measure A

Local governments in San Mateo County continue to implement trip reduction programs in response to the requirements under Measure A to, among other things, maintain eligibility for Measure A funds. A variety of methods are used. Some cities have formed joint powers agencies to implement a common program and to take advantage of the cost effectiveness of consolidated efforts. The Cities of Burlingame, Foster City, San Mateo, Redwood City, San Carlos, and Belmont had operated as the Inter-City TSM Agency (ITSMA). The Cities of Daly City, South San Francisco, San Bruno, Pacifica, Brisbane, Millbrae, Half Moon Bay, and Colma, had formed the Multi-City TSM Agency (MTSMA). Many of the cities in ITSMA and MTSMA are large employers themselves and have programs for their own employees. In May 2000, these two agencies joined forces in order to provide a comprehensive program of services for the entire County. The new agency is the Peninsula Traffic Congestion Relief Alliance. The cities of Atherton, Hillsborough and the County of San Mateo have also joined

the new agency. The City of Menlo Park operates independent programs, some of which preceded Measure A. The San Francisco International Airport, the largest employer in San Mateo County, has a TSM/TDM program that includes all of the tenants at the Airport.

Peninsula Traffic Congestion Relief Alliance Programs

The Peninsula Traffic Congestion Relief Alliance, (the Alliance) is San Mateo County's Transportation Demand Management Agency. Established in May 2000, as a result of the merger of the Multi-City Transportation Systems Management Agency and the Inter-City Transportation Systems Management Agency, the primary objective of the Alliance is to reduce the number of single occupant vehicles traveling in, to and through San Mateo County, reducing traffic congestion and vehicle emissions, thus improving air quality. The Alliance's programs are accomplished through sales, marketing and management of transportation demand management (TDM) programs provided to commuters, local employers and residents.

These TDM programs promote use of alternative modes of transportation including taking public transit such as SamTrans, Caltrain and BART, express employer shuttle bus connections from public transit, vanpools, carpools, residential shuttle buses, bicycling, and walking. The Alliance also provides for transit complementary programs such as the Emergency Ride Home Program and Downtown Dasher, a mid-day, on-demand taxi program.

Specific programs offered through the Alliance include the following:

Emergency Ride Home Program: Employers can provide their employees with the assurance that if the employee takes an alternative type of commute to work (other than their car) the employee can be provided a ride home if an emergency arises during the work day. The Alliance pays for 75% of the ride home either by taxi or 24-hour rental car and the employer pays the other 25%.

Vanpool Incentive Program: Employees who agree to drive a new vanpool for six months consecutively will receive a \$500 cash incentive. Other employees who agree to become passengers of the new vanpool for three months consecutively will be reimbursed half of their vanpool costs (maximum of \$100 per month). This is a one-time incentive program.

Carpool Incentive Program: Employees and residents of San Mateo County who commit to

carpooling together at least 2 days per week for 8 consecutive weeks receive a \$60 gas card (per passenger) as an incentive, \$80 is provided per passenger for those in a hybrid or clean air fuel vehicle. This is a one-time incentive to encourage solo drivers to carpool.

Carpool to College and School Pool Pilot Program: Students who commit to carpooling together at least 2 days per week for 4 weeks receive a \$20 gas card (per passenger) as an incentive. While parents who agree to take their children to school with another parent and child of another family at least 2 days per week for 4 weeks during a semester of school will also receive a \$20 gas card (per participating parent) as a one-time incentive.

Try Transit Program: Employees and residents of San Mateo County can try transit for free. Many of the local public transit agencies including Caltrain, SamTrans, BART, AC Transit and VTA provide tickets to get people who have not taken public transit, to try transit as a one-time incentive.

Bicycle Parking Incentive and Safety Program: Employers can provide accommodation for employees interested in bicycling to and from work by installing bicycle racks or lockers at their business. The Alliance provides 50% of the cost of the bicycle parking from basic bike racks to high security bike lockers, up to a maximum of \$500 per unit.

The Alliance can also provide complimentary bicycle safety sessions for employees and for local residents who are commuting by bicycle. A certified bicycle safety instructor provides rules of the road information and bicycle repair and maintenance tips.

Shuttle Program: The Alliance offers complimentary shuttle services to employees from BART and Caltrain stations through employer participation in shuttle consortium groups in addition to management of community shuttle services. This is a cooperative effort between the Alliance, with financial assistance from SamTrans, Caltrain, San Mateo County Transportation Authority, C/CAG of San Mateo County, Bay Area Air Quality Management District, the Metropolitan Transportation Commission, the cities that are sponsoring the program and local employers. This partnership has fostered eighteen sponsored shuttles operating in the cities of Brisbane, Burlingame, Foster City, Redwood City, San Carlos, San Mateo and South San Francisco. These shuttles transported a combined 537,000 riders in 2008.

Commuter Benefits Consulting: The Alliance assists employers with setting up a commuter subsidy program for employers utilizing \$230 per employee per month as a pre-tax payroll benefit or as a fully subsidized program for commuter checks to be used for employees who take public transit.

Downtown Dasher: An on-demand taxi service in South San Francisco, providing employees of companies East of Highway 101 with access to downtown South San Francisco during mid-day. This service promotes downtown businesses in South San Francisco and also assists in alleviating drivers of single occupant automobiles to utilize a taxi service as an alternative during the lunch hour.

Commute.org Internet Site: The Alliance' s website, commute.org, provides detailed information on all Alliance programs including: forming vanpools, utilizing the 511.org ridermatching tool, receiving vanpool incentives; starting a carpool and receiving the carpool incentive; the emergency ride home program; the try transit program; bicycle parking incentive and safety classes; shuttle routes and schedules; transit schedules and information. Commute.org also provides rider alerts to advise shuttle riders of changes to schedules or other pertinent information that riders may need.

City of Menlo Park Programs

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 two Caltrain shuttles bus routes- the Willow and Marsh shuttles which operate during the AM and PM peak hours taking passengers from Caltrain to their businesses, schools, shopping or appointments. The Willow and Marsh bus routes carried 58,407 passengers from July 2007- June 2008.. This program is funded by a combination of City and County Association of Governments Local Services grant, business contributions, and the San Mateo County Joint Powers Board.

The City also manages a Midday shuttle service which is a community service route open to the general public but focuses on the senior community. Between July 2007- June 2008 the

Midday shuttle carried 20,667 passengers. The Shoppers shuttle, which is a door-to-door service that operates only once a week, carried 725 passengers during the same time period . Smaller minibuses provide a community feel; buses are easily identified with the City of Menlo Park logo and other design elements. The small buses are able to drive into major activity centers such as the senior centers and popular shopping destinations. In addition, stops are made at the library in downtown Menlo Park, the Veterans Hospital, Stanford Hospital, and JobTrain. For those residents who do not live within an easy walking distance of a SamTrans stop or the Midday shuttle service stop, Menlo Park offers a shuttle service that picks up passengers at their homes provides rides to specific shopping areas. These programs are funded by a combination of City and County Association of Governments Local Services grant and new office development fees.

City of East Palo Alto Programs

The City of East Palo Alto Mobility Program is summarized as follows:

Weekend Community Shuttle: The weekend Community Shuttle is a free community service designed to link East Palo Alto neighborhoods with the Palo Alto Transit Center.

Shopper Shuttle: Provides East Palo Alto residents with shopping opportunities to destinations in Mountain View, Palo Alto/Stanford, and Redwood City.

Low Income Subsidy Program: Under this program up to 75 SamTrans monthly transit passes are sold to eligible low-income residents of East Palo Alto, on average each month. The program implements a recommendation of the East Palo Alto Community Based Transportation Plan. It is a partnership among City of East Palo Alto, SamTrans, El Concilio, and Human Services of San Mateo County. El Concilio and Human Services of San Mateo County ensure that recipients are low-income residents. Subsidized passes are sold to eligible residents at \$25 for a monthly pass, a \$31 monthly subsidy.

Weekday Community Shuttle: C/CAG is currently funding the hydrogen shuttle as the second shuttle on the weekday community shuttle in the mornings, a free community shuttle designed to link East Palo Alto neighborhoods with the Palo Alto Transit Center.

Other Local TSM/TDM Programs

C/CAG Local Transportation Services Component of the Countywide Congestion Relief Plan

In 2002, the C/CAG Board approved the Countywide Congestion Relief Plan that includes the creation of a Local Transportation Services element. The intent of Local Transportation Services element is 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 and needs of that jurisdiction. It will be up to each jurisdiction to determine how these services will be organized, the type of service to be provided, and the amount of contribution that the jurisdiction wishes to make. The benefit to the jurisdiction will be the creation or expansion of local transportation services that focus primarily on connecting that jurisdiction's residential areas with downtown, employment centers, schools, and transit stations.

Funding for the Local Transportation Services program comes from the C/CAG Member assessments that were adopted under the Countywide Congestion Relief Plan combined with dollar for dollar matching funds from the San Mateo County Transportation Authority. All projects must also match these funds dollar for dollar from funds coming from the local jurisdiction.

On May 14, 2009, the C/CAG Board adopted an extension to the Local Transportation Services program for FY 2009/10 and awarded funds to the following jurisdictions:

| CITY | FY 09/10 |
|----------------------|------------|
| Burlingame | \$ 52,825 |
| East Palo Alto | \$ 140,486 |
| Foster City | \$ 155,000 |
| Menlo Park | \$ 130,541 |
| Brisbane / Daly City | \$ 97,546 |
| South San Francisco | \$ 120,000 |
| Redwood City | \$ 90,000 |

San Francisco International Airport's Program

San Francisco International Airport (SFO) is currently in the process of updating its TSM. The updated TSM program will be included in the 2011 CMP.

South San Francisco's Transportation Demand Management (TDM) Ordinance

The City of South San Francisco has adopted a comprehensive and enforceable TDM ordinance. C/CAG recognizes the value of the City of South San Francisco's efforts and has recently begun to examine the City of South San Francisco's TDM ordinance for use in the next update of the guidelines for the land use component of the Congestion Management Program.

AB 434, Transportation Fund for Clean Air and Its Relationship to TSM/TDM

AB 434 provides authority for the Bay Area Air Quality Management District to impose a surcharge of up to \$4 on motor vehicle registration fees. The surcharge provides funding specifically for projects that reduce air pollution from the use of motor vehicles. Funds generated by the fee are referred to as the Transportation Fund for Clean Air (TFCA). Projects funded by TFCA funds often have a positive impact on the TSM and TDM effort. This impact however, is incidental to the purpose of the funds - which is to improve air quality.

TFCA funds raised through the surcharge are distributed by the District through two processes. Sixty (60) percent, referred to as the Regional Fund, are first used to fund certain District programs. These funds are distributed throughout the nine-county Bay Area on a competitive basis. The remaining 40 percent of the funds generated in each county are returned to the Program Manager(s) of that county. C/CAG has been designated as the overall Program Manager to receive the funds in San Mateo County. For the past years, C/CAG has allocated the Program Manager Funds to shuttle programs.

TSM/TDM and Other Elements of the CMP

Under the Land Use Impact Analysis Program (Chapter 6), C/CAG requires that a plan to mitigate all new peak hour trips be included as a condition of the approval of development agreements. A copy of this new policy and implementation guidelines is included in Appendix G. TDM measures can be used to satisfy this requirement. C/CAG strongly encourages existing developments to adopt these same measures on a voluntary basis. TSM and TDM

measures also comprise BAAQMD's Deficiency List of Programs, actions, and improvements to be included in Deficiency Plans.

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CHAPTER 6

Land Use Impact Analysis Program

Legislative Requirements

Proposition 111 (Government Code Sections 65088-65089) requires that local governments develop a Land Use Impact Analysis Program to determine the impacts of land use decisions upon regional transportation routes and air quality. The legislation states each Congestion Management Agency must develop:

A program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts. This program shall measure, to the extent possible, the impact to the transportation system using the performance measures described in paragraph (2). In no case shall the program include an estimate of the cost of mitigating the impacts of interregional travel. The program shall provide credit for local public and private contributions to improvements to regional transportation systems. However, in the case of toll road facilities, credits shall only be allowed for local public and private contributions, which are unreimbursed from toll revenues or other State or federal sources. The agency shall calculate the amount of the credit to be provided. The program defined under this section may require implementation through the requirements and analysis of the California Environmental Quality Act, in order to avoid duplication.

Legislation does not alter the constitutional discretion local jurisdictions have in making land use decisions or in determining the responsibilities of development proposals to mitigate impacts. The legislation, however, does place the San Mateo City/County Association of Governments (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 adopted standards.

Components of the Land Use Impact Analysis Program

The legislation does not specify the exact nature of an Impact Analysis Program; therefore, each CMA has considerable discretion in how much it chooses to require transportation improvements to overcome the impacts of land use decisions.

Roadway System

The designated CMP Roadway System comprises the roadways and intersections included in the CMP that will be subject to analysis and monitoring by C/CAG. The CMP Roadway System is defined in Chapter 2.

Travel Modeling

The Travel Demand Forecasting Model, as described in Chapter 9, will be used to determine the impacts of land use alternative and development proposals on the CMP network.

Land Use Data Base

A Land Use Information System has been developed to provide existing and projected land use data for use in the Travel Forecasting Model. This data, which is updated annually, was collected from all jurisdictions and reflects the most complete and accurate information available.

Review Process

C/CAG must develop a process for reviewing the impacts of land use proposals on the CMP network. C/CAG has the option of reviewing proposals at various stages of the planning process. C/CAG has discretion about the nature of the process.

Land Use Impact Analysis Program

The program has been developed as a three-tiered process. The three different 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.

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 2025 based on a county wide land use plan, which reflects desired levels and types of development. This analysis will be conducted for both the Congestion Management Program and the Countywide Transportation Plan.

The Travel Demand Forecasting 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 2025 population and employment projections. These ABAG projections will be modified on a city-by-city basis to reflect more realistically existing and future land use conditions based on recently collected data from all jurisdictions in the County.

Step 2: Development of Capital Improvement Programs and Financial Plan

The Countywide Transportation Plan (CTP) indicates which projects should be included in future capital improvement programs to relieve congestion the most effectively. C/CAG will make recommendations to the cities, County, SamTrans, Transportation Authority, and the Joint Powers Board when they formulate future capital improvement programs. The CTP is being updated in 2009.

C/CAG will also develop a financial plan for review and consideration by all jurisdictions and agencies. The financial plan will specify how to most effectively use pools of federal, State, and local funds to implement capital improvement programs.

Tier 2: Individual Large Development Analysis

Step 1: Notification

Local jurisdictions will notify C/CAG at the beginning of the CEQA process of all development applications or land use policy changes (i.e., General Plan amendments) that are expected to generate a net (subtracting existing uses that are currently active) 100 or more peak period trips on the CMP network, within ten days of completion of the initial study prepared under the California Environmental Quality Act (CEQA). Peak period includes 6:00 a.m. to 10:00 a.m. and 3:00 p.m. to 7:00 p.m. Examples of developments that would

generate 100 peak period trips include 100 single-family dwelling units; 15,000 square feet of retail space; 50,000 square feet of office space; a 150-room hotel; or 100,000 square feet of light industrial space.

Step 2: Testing 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 traffic impact analyses, their own travel forecasting models, or C/CAG's Travel Demand Forecasting 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 3: Mitigation and Conformance

Local jurisdictions **must** ensure that the developer and/or tenants will mitigate all of the new peak hour trips generated by the project by selecting one or more of the options that follow. It is up to the local jurisdiction working together 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.

1. Reduce the scope of the project so that it will generate less than 100 peak hour trips.
2. Build adequate roadway and/or transit improvements so that the added peak hour trips will have no measurable impact on the Congestion Management Program roadway network.
3. Contribute an amount per peak hour trip to a special fund for improvements to the Congestion Management Program roadway network. This amount will be set annually by C/CAG based on a nexus test.
4. Require the developer and all subsequent tenants to implement Transportation Demand Management programs that mitigate the new peak hour trips. A list of acceptable programs and the equivalent number of trips that are mitigated will be provided by C/CAG annually. Programs can be mixed and matched so long as the total mitigated trips is equal

to or greater than the new peak hour trips generated by the project. These programs, once implemented, must be on-going for the occupied life of the development. Programs may be substituted with prior approval of C/CAG, so long as the number of mitigated trips is not reduced. Additional measures may be proposed to C/CAG for consideration. Also there may be special circumstances that warrant a different amount of credit for certain measures. These situations can also be submitted to C/CAG in advance for consideration.

Step 4: 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 Travel Forecasting Model every two years.

Step 2: Testing of Cumulative Impacts

Each update of the Travel Demand Forecasting Model (generally done every 2 to 4 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 capital improvement programs, and (4) providing data for jurisdictions to use in the development of site traffic impact analyses and environmental assessments.

Step 4: Reporting Changes

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

Implementation Guidelines

A copy of the Guidelines for implementing the land use component of the congestion management program is in Appendix I.

Compliance Monitoring

Status of the land use impact analysis program compliance monitoring is included in Appendix I.

MTC Resolution 3434 (Regional Transit Expansion Program) and Compliance with SB 1636 (2002)

The Metropolitan Transportation Commission (MTC) adopted Resolution No. 3434, a Regional Transit Expansion Plan for the San Francisco Bay Area region in 2001. Transit expansion projects in San Mateo County included in resolution 3434 are:

- Caltrain Express: Phase 1 (open for service)
- Caltrain Express: Phase 2
- Caltrain Electrification
- Dumbarton Rail
- Expanded Ferry Service Phase 1: South San Francisco to San Francisco
- Expanded Ferry Service Phase 2: Redwood City to San Francisco

On July 27, 2005, MTC adopted the Transit Oriented Development (TOD) policy for Resolution 3434 regional transit expansion projects. The TOD policy goals are aimed at improving the cost-effectiveness of regional investments in new transit expansions and easing the Bay Area's chronic housing shortage. That TOD policy conditions the use of regional discretionary funding for transit expansion projects on supportive local land use plans and policies. The TOD policy only applies to physical transit extensions funded in Resolution 3434, including the Dumbarton Rail, Expanded Ferry Services, and the Caltrain Extension.

San Mateo County Transit Oriented Development (TOD) Housing Incentive Program

C/CAG administers the Transit Oriented Development (TOD) Housing Incentive Program for San Mateo County. The goal of the program is to promote, support, and facilitate TOD projects throughout the County in order to provide a better relationship between land use and transportation.

The program encourages the cities and the County to develop high-density housing (greater than 40 units per acre) within one third of a mile of a rail station.

The program provides financial incentives to jurisdictions that build Transit Oriented Development (TOD) projects by rewarding them with additional funds for transportation projects; encourages jurisdictions that receive additional transportation funding to find some way of financially assisting TOD projects so that they become economically viable. An additional incentive is provided to encourage low- or moderate-income housing.

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CHAPTER 7

Deficiency Plan Guidelines

The legislation that resulted in the preparation of Congestion Management Programs (CMPs) defined the preparation of deficiency plans as a way for local jurisdictions (cities and the County) to remain in conformance with the CMP when the level of service (LOS) for a CMP roadway segment or intersection deteriorates below the established standard. A CMP roadway segment or intersection can be found to violate the LOS standard when levels of service are monitored biennially.

California Government Code Section 65089.1(b)(1)(B) states:

In no case shall the LOS standards established be below the Level of Service E or at the current level, whichever is further from Level of Service A, except where a segment or intersection has been designated as deficient and a deficiency plan has been adopted pursuant to Section 65089.3.

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 level of service 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:

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

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 systemwide 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 transportation demand management). 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 transportation demand management (TDM) programs;
- 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.

Legislative Requirements

The language describing the role and function of deficiency plans is found in California Government Code Section 65089.4, which states that:

- (a) The agency¹ shall monitor the implementation of the elements of the congestion management program. At least biennially, the agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:
 - (1) Consistency with the levels of service and performance standards, except as provided in subdivisions (b) and (c).
 - (2) Adoption and implementation of a trip reduction and travel demand ordinance.
 - (3) Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.

- (b) (1) A city or county may designate individual deficient segments or intersections which do not meet the established level of service standards if, prior to the designation, at a noticed public hearing, the city or county has adopted a deficiency plan which shall include all of the following:
 - (A) An analysis of the causes of the deficiency.

¹In San Mateo County, C/CAG is the agency referred to in the statute.

- (B) A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service otherwise required and the estimated costs of the improvements.
- (C) A list of improvements, programs, or actions, and estimates of costs that will (i) measurably improve the level of service of the system, as defined in subdivision (b) of Section 65089, and (ii) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, and transportation control measures. The air quality management district or the air pollution control district shall establish and periodically revise a list of approved improvements, programs, and actions which meet the scope of this paragraph. If an improvement program or action is on the approved list and has not yet been fully implemented, it shall be deemed to contribute to significant improvements in air quality. If an improvement program or action is not on the approved list, it will not be implemented unless approved by the local air quality management district or air pollution control district.
- (D) An action plan, consistent with the provision of Chapter 5 (commencing with Section 66000) of Division 1 of Title 7,² that shall be implemented, consisting of improvements identified in paragraph (B), or in improvements, programs, or actions identified in paragraph (C), that are found by the agency to be in the interest of the public's health, safety and welfare. The action plan shall include a specific implementation schedule.
- (2) A city or county shall forward its adopted deficiency plan to the agency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following the hearing, the agency shall either accept or reject the deficiency plan in its entirety, but the agency may not modify the deficiency plan. If the agency rejects the plan, it shall notify the city or county of the reasons for that rejection.

²This chapter describes the procedures allowed or required in order to implement development mitigation fees. It includes adoption requirements, allowable categories for fees including transportation, procedures for property donation, and procedures for assessment and payment of the fees.

- (c) The agency, after consultation with the regional agency, the department, and the local air quality management district or air pollution control district, shall exclude from the determination of conformance with the level of service standards, the impacts of any of the following:
 - (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 or 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.
 - (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.
- (d) For the purposes of this chapter, the impacts of a trip which originates in one county and which terminates in another county shall be included in the determination of conformance with level of service standards with respect to the originating county only. A round trip shall be considered to consist of two individual trips.

The procedures for a finding of nonconformance are found in California Government Code Section 65089.5, which states:

- (a) If, pursuant to the monitoring provided for in Section 65089.3, the agency determines, following a noticed public hearing, that a city or county is not conforming with the requirements of the congestion management program, the agency shall notify the city or county in writing of the specific areas of nonconformance. If, within 90 days of the receipt of the written notice of nonconformance, the city or county has not come into conformance with the congestion management program, the governing body of the agency shall make a

finding of nonconformance and shall submit the finding to the commission and to the Controller.

- (b) Upon receiving notice from the agency of nonconformance, the Controller shall withhold apportionments of funds required to be apportioned to that nonconforming city or county by Section 2105 of the Streets and Highways Code, until the Controller is notified by the agency that the city or county is in conformance.

In addition, per SB 1435, a nonconforming jurisdiction will be disqualified from receiving funding from the Transportation Equity Act for the 21st Century (TEA-21).

Discussion

The many issues influencing the preparation and adoption of deficiency plans are discussed in the following pages using a question and answer format.

1. Why prepare a deficiency plan?

A jurisdiction (a city or the County) should prepare a deficiency plan to achieve two key goals:

- To establish a program of actions intended to mitigate (or reduce) existing congestion by improving the level of service on the roadway segments or intersections included in the CMP Roadway System, and
- To assure that the jurisdiction is in conformance with the CMP and remains eligible to continue to receive gasoline tax subventions and TEA-21 funds.

The responsible jurisdiction(s) must prepare a deficiency plan when it (or they) has been notified by C/CAG that a deficiency has occurred. The responsible jurisdiction will forego additional gasoline tax subventions (pursuant to Section 2105 of the Streets and Highways Code) and funding from TEA-21 unless it (or they) prepares a deficiency plan. If no response is forthcoming, C/CAG will declare the jurisdiction with the deficiency to not be in conformance with the CMP.

2. What triggers the deficiency plan process?

The deficiency plan process is triggered when a CMP roadway segment or intersection is found to be “deficient” because it operates below its adopted LOS standard with the

adjustments for all exclusions allowed by law. California Code Section 65089.3 states that a deficiency finding could emanate from the results of the LOS monitoring process. An LOS deficiency may also be found to exist as a result of a monitoring program developed by a city or the county as part of the approval process for a local land use decision, as discussed in Chapter 6. Only actual deficiencies, not projected deficiencies, will trigger the requirement for a deficiency plan.

3. What trips can be excluded from the deficiency determination?

As required in California Government Code Section 65089.3 and added to by AB 3093, the following types of travel shall be removed from the level of service calculation; interregional travel; changes in operating conditions resulting from the construction, rehabilitation, or maintenance of facilities that impact the roadway system; freeway ramp metering; traffic signal coordination by the state or a multi-jurisdictional agency; traffic generated by the provision of low and very low income housing; trips generated by high-density housing near rail stations; and trips generated by mixed-use development near rail stations. Trips which originate in one county and which terminate in another county are to be included in the determination of conformance with level of service standards in only the county where the trips originated. Therefore, the statute establishes that only trips originating inside San Mateo County will be taken into account toward the LOS determination for the purpose of establishing conformance with the CMP.

4. Who is responsible for the preparation of deficiency plans?

Local jurisdictions are responsible for the preparation of deficiency plans for roadway segments or intersections that are wholly within their boundaries. For deficient segments or intersections within more than one jurisdiction, all affected jurisdictions will collaborate in the preparation of a deficiency plan. C/CAG strongly encourages the cooperative development of deficiency plans. If a common approach is not acceptable to all jurisdictions involved, then each individual jurisdiction will be responsible for preparing a deficiency plan for the affected roadway(s) or intersection(s) within its jurisdiction. C/CAG can accept all of the plans if they are complementary. If they are not complementary, C/CAG can require that complementary plans be developed.

5. What if a deficiency occurs due to an action by a jurisdiction not located within San Mateo County?

Representatives of all affected jurisdictions, those receiving the deficient location and those causing the deficiency, could develop a coordinated deficiency plan. Otherwise, the Metropolitan Transportation Commission (MTC), serving as the Regional Congestion Management Agency, would arbitrate between or among the jurisdictions. If MTC is not successful in their arbitrations, no penalties will be sanctioned against the jurisdictions located within San Mateo County.

6. What are the required components of a deficiency plan?

The contents of a deficiency plan are defined on pages 7-3 and 7-4 part (b) of Section 65089.3. The following is a summary description of those items:

- An analysis of the causes of the deficiency;
- A list of improvements and the costs that will be incurred to mitigate that deficiency on that facility itself;
- A list of possible actions and costs that would result in improvements to the CMP system's LOS and that would be beneficial to air quality; and
- An action plan, including a schedule, to implement improvements from the two lists identified above.

7. What improvements are acceptable for inclusion in a deficiency plan?

The process of preparing a deficiency plan allows a local jurisdiction to choose one of two options for addressing deficiencies. The two options are:

- a. To implement improvements directly on the deficient segments designed to eliminate the deficiency; or
- b. To designate the segment as deficient, and implement a deficiency plan prescribing actions designed to measurably improve the overall LOS and contribute to *significant* air quality improvements throughout the CMP Roadway System. Such actions may not necessarily directly pertain to or have a measurable impact on the deficient segment itself.

If a local jurisdiction chooses the second option (b), the Bay Area Air Quality Management District (BAAQMD) has created a list of system deficiency plan measures that are regarded

as beneficial for air quality. The latest list was approved by the BAAQMD on November 4, 1992, and is included in Appendix C (of this CMP). Measures not on the BAAQMD list may also be used, but will need to be evaluated by the BAAQMD for their air quality impacts prior to being included as part of a deficiency plan. If a local jurisdiction selects the first option (a), measures designed to meet LOS standards on the deficient roadway(s) need not be drawn from the BAAQMD list, and they need not be approved by the BAAQMD.

8. How long does a jurisdiction have to prepare a deficiency plan?

Jurisdictions will be notified that a level of service deficiency has occurred when the results of the LOS monitoring are provided to C/CAG. The results will be submitted to C/CAG who will notify local jurisdictions, in writing, if any deficient locations have been identified. Local jurisdictions will then have up to twelve months from the receipt of written notification of the conformance findings, to develop and adopt at a public hearing, any required deficiency plans.

The deficiency plan process section of this Chapter provides more detail about time lines.

9. How is a deficiency plan adopted?

A deficiency plan is prepared by the affected local jurisdiction(s). The jurisdictions may elect to submit draft plans to C/CAG's Technical Advisory Committee (TAC) and Congestion Management and Air Quality Committee (CMAQ) for review to determine if the plan may be considered acceptable when submitted to C/CAG for approval. The deficiency plan must then be adopted by the affected jurisdiction(s) at a public hearing and then approved by C/CAG.

10. What constitutes an acceptable deficiency plan?

An acceptable deficiency plan shall contain all the components listed in the response to Question 6 above, and may be reviewed by the TAC and CMAQ prior to action by C/CAG. The TAC and/or CMAQ may make a recommendation related to approval or rejection of the deficiency plan to C/CAG, but it is not required that they make a recommendation. The plan will be evaluated on the following technical criteria:

- a. Completeness as required in California Government Code Section 65089.3.

- b. The appropriateness of the deficiency plan's actions in relation to the magnitude of the deficiency.
- c. The reliability of the funding sources proposed in the deficiency plan.
- d. The reasonableness of the implementation plan's schedule.
- e. The ability to implement the proposed actions (including the degree of jurisdictional authority).

11. How should deficiency plans relate to the countywide transportation planning process?

Actions included in deficiency plans should be selected from information and decisions made as part of the countywide transportation planning process, including land use and travel forecasts, transit operational needs, and planned capital and service improvements. Likewise, the occurrence or projection of deficiencies should be a factor influencing the decisions made within the ongoing countywide transportation planning process to amend the Capital Improvement Program (CIP).

The Guidelines for Deficiency Plan is included in Appendix D.

Current Deficiencies

The City/County Association of Governments of San Mateo County (C/CAG) retained a consultant to conduct the 2009 congestion monitoring of the 53 roadway segments and 16 intersections that comprise the CMP Roadway System in San Mateo County. A copy of the CMP Congestion Monitoring Report is included in Appendix F.

Indicated in the tables below (from Appendix F) are current 2009 LOS for all roadway segments and intersections:

**TABLE 1
2009 CMP ROADWAY SEGMENT LEVELS OF SERVICE**

| Route | Roadway Segment | LOS Standard ¹ | 2009 LOS | | 2007 LOS ² | 2005 LOS ² | 2003 LOS ² | 2001 LOS ² | 1999 LOS ² |
|-------|--|---------------------------|--------------------|-----------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|
| | | | Without Exemptions | With Exemptions | | | | | |
| 1 | San Francisco County Line to Linda Mar Blvd. | E | F ³ | F ⁴ | F ³ / F ⁴ | F ³ / F ⁴ | F ³ /F ⁴ | F ³ /F ⁴ | F ³ /F ⁴ |
| 1 | Linda Mar Blvd. to Frenchmans Creek Road | E | D | N/A | D | D | D | D | D |
| 1 | Frenchmans Creek Road to Miramontes Road | E | E | N/A | E | E | E | F/E | E |
| 1 | Miramontes Road to Santa Cruz County Line | D | B | N/A | B | C | C | C | B |
| 35 | San Francisco county Line to Sneath Lane | E | C | N/A | C | C | B | B | A |
| 35 | Sneath Lane to I-280 | F | E | N/A | F | F | F | F | F |
| 35 | I-280 to SR 92 | B | B | N/A | B | C/C | C/B | C/B | C/B |
| 35 | SR 92 to SR 84 | B | B | N/A | B | B | B | B | B |
| 35 | SR 84 to Santa Clara County Line | E | B | N/A | B | B | B | B | B |
| 82 | San Francisco County Line to John Daly Blvd | E | A | N/A | A | A | A | A | A |
| 82 | John Daly Boulevard to Hickey Boulevard | E | A | N/A | A | A | A | A | A |
| 82 | Hickey Boulevard to I-380 | E | A | N/A | C | A | A | A | B |
| 82 | I-380 to Trousdale Drive | E | A | N/A | B | A | A | A | A |
| 82 | Trousdale Drive to 3 rd Avenue | E | A | N/A | A | A | A | A | A |
| 82 | 3 rd Avenue to SR 92 | E | A | N/A | A | A | A | A | A |
| 82 | SR 92 to Hillside Avenue | E | B | N/A | B | B | A | A | B |
| 82 | Hillside Avenue to 42 nd Avenue | E | B | N/A | B | B | B | B | B |
| 82 | 42 nd Avenue to Holly Street | E | B | N/A | B | A | A | A | A |
| 82 | Holly Street to Whipple Avenue | E | C | N/A | D | D | B | B | D |
| 82 | Whipple Avenue to SR 84 | E | C | N/A | C | C | B | B | C |
| 82 | SR 84 to Glenwood Avenue | E | B | N/A | B | B | C | B | B |
| 82 | Glenwood Avenue to Santa Cruz Avenue | E | B | N/A | C | D | D | C | C |
| 82 | Santa Cruz Avenue to Santa Clara County Line | E | B | N/A | B | C | D | C | C |
| 84 | SR 1 to Portola Road | C | C | N/A | C | C | C | D/D | D/C |
| 84 | Portola Road to I-280 | E | B | N/A | B | B | B | D | B |
| 84 | I-280 to Alameda de las Pulgas | C | C | N/A | D/A | C | D/C | D/D | D/D |
| 84 | Alameda de las Pulgas to U.S. 101 | E | E | N/A | E | E | D | E | F/C |
| 84 | U.S. 101 to Willow Road | D | E | E | C | B | A | F/E | D |
| 84 | Willow Road to University Avenue | E | F | E | F/F | F/F | F/F | F/F | F/F |
| 84 | University Avenue to Alameda County Line | F | F | N/A | F | F | F | F | F |
| 92 | SR 1 to I-280 | E | E | N/A | E | E | E | E | E |

| | | | | | | | | | |
|----------------|---|---|------------------|----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 92 | I-280 to U.S. 101 | D | E ³ | D ⁴ | F ³ /D ⁴ | F ³ /E ⁴ | C ³ | E ³ /E ⁴ | F ³ /F ⁴ |
| 92 | U.S. 101 to Alameda County Line | E | A/B ³ | N/A | A/B ³ | A/B ³ | C ³ | F ³ /F ⁴ | F ³ /F ⁴ |
| 101 | San Francisco County Line to I-380 | E | D ³ | N/A | E ³ | D ³ | D ³ | E ³ | F ³ /F ⁴ |
| 101 | I-380 to Millbrae Avenue | E | D ³ | N/A | F ³ /C ⁴ | F ³ /D ⁴ | F ³ /E ⁴ | F ³ /C ⁴ | F ³ /D ⁴ |
| 101 | Millbrae Avenue to Broadway | E | F ³ | C ⁴ | F ³ /C ⁴ | F ³ /D ⁴ | F ³ /E ⁴ | F ³ /E ⁴ | F ³ /E ⁴ |
| 101 | Broadway to Peninsula Avenue | E | F ³ | D ⁴ | F ³ /C ⁴ | F ³ /D ⁴ | F ³ /D ⁴ | F ³ /E ⁴ | F ³ /D ⁴ |
| 101 | Peninsula Avenue to SR 92 | F | F ³ | N/A | F ³ |
| 101 | SR 92 to Whipple Avenue | E | F ³ | E ⁴ | F ³ /D ⁴ | F ³ /E ⁴ |
| 101 | Whipple Avenue to Santa Clara County Line | F | F ³ | N/A | F ³ |
| 109 | Kavanaugh Drive to SR 84 (Bayfront Expwy.) | E | D | N/A | D | C | C | E | E |
| 114 | U.S. 101 to SR 84 (Bayfront Expressway) | E | C | N/A | C | B | C | D | D |
| 280 | San Francisco County Line to SR 1 (north) | E | F ³ | D ⁴ | F ³ /A | E ³ | F ³ /F ⁴ | F ³ /F ⁴ | F ³ /F ⁴ |
| 280 | SR 1 (north) to SR 1 (south) | E | E | N/A | E | E ³ | E ³ | E ³ | F ³ /F ⁴ |
| 280 | SR 1 (south) to San Bruno Avenue | D | E ³ | D ⁴ | F ³ /C ⁴ | F ³ /E ⁴ |
| 280 | San Bruno Avenue to SR 92 | D | E ³ | C ⁴ | A/B ³ | A/B ³ | (A/B) ³ | A/B ⁴ | D |
| 280 | SR 92 to SR 84 | D | D ³ | N/A | D ³ | D ³ | (A/B) ³ | D ⁴ | E ³ /D ⁴ |
| 280 | SR 84 to Santa Clara County Line | D | D ³ | N/A | D ³ | E ³ /C ⁴ | (A/B) ³ | D ⁴ | E ³ /E ⁴ |
| 380 | I-280 to U.S. 101 | F | F ³ | N/A | F ³ | E ³ | F ³ | F ³ | F ³ |
| 380 | U.S. 101 to Airport Access Road | C | B ³ | N/A | D ³ /C | A ³ | A ³ | C ³ | C ³ |
| Mission St | San Francisco County Line to SR 82 | E | A | N/A | A | A | A | A | A |
| Geneva Ave. | San Francisco County Line to Bayshore Blvd. | E | A | N/A | A | A | A | A | A |
| Bayshore Blvd. | San Francisco County Line to Geneva Avenue | E | A | N/A | A | A | A | A | A |

Notes:

¹ From "Final Congestion Management Program 2007," Table 3-2.

² For 1999, 2001, 2003, 2005, and 2007 LOS, the first value represents LOS without exemptions, and the second value represents LOS with exemptions.

³ Based on average speed from travel time surveys.

⁴ Exemptions applied to volume-to-capacity ratios estimated from average speeds.

N/A = not applicable. LOS standard is not violated. Therefore, exemptions were not applied.

LOS Standard violations (after application of exemptions) are indicated in **bold**.

LOS based on 2000 Highway Capacity Manual Methodology.

**TABLE 2
2009 CMP INTERSECTION LEVELS OF SERVICE AND STANDARDS**

| Intersection | LOS Standard | Peak Hour | 2000 HCM Method | | | Circular 212 Method | | | | | | Standard Exceeded |
|--|--------------|-----------|----------------------|----------|----------------|----------------------|----------|----------------|----------|----------------|----------|-------------------|
| | | | 2009 LOS | 2007 LOS | 2005 LOS | 2009 LOS | 2007 LOS | 2005 LOS | 2003 LOS | 2001 LOS | 1999 LOS | |
| Geneva Avenue/ Bayshore Boulevard | E | AM | C | B | C | A | A | A | A | A | A | No |
| | | PM | C | C | C | A | A | A | A | A | A | No |
| Skyline Boulevard (SR 35)/ John Daly Boulevard | E | AM | B | B | B | A | A | B | A | A ¹ | A | No |
| | | PM | C | B | C | C | B | B | A | A ¹ | A | No |
| Mission St. (SR 82)/ John Daly Blvd. – Hillside Blvd. | E | AM | C | C | C | A | B | B | A | B ¹ | A | No |
| | | PM | D | C | D | C | B | C | C | B ¹ | A | No |
| El Camino Real (SR 82)/ San Bruno Avenue | E | AM | C | C | C | A | A | A | A | A ¹ | A | No |
| | | PM | D | D | D | A | B | A | A | A ¹ | C | No |
| El Camino Real (SR 82)/ Millbrae Avenue | E | AM | E | E | E ¹ | E | E | E ¹ | C | C | D | No |
| | | PM | D | E | E ¹ | D | E | E ¹ | C | D | B | No |
| El Camino Real (SR 82)/ Broadway | E | AM | B | B | B | A | A | A | A | B | B | No |
| | | PM | A | B | B | A | A | A | A | A | A | No |
| El Camino Real (SR 82)/ Park-Peninsula Avenue | E | AM | B | B | B | A | A | A | A | A | A | No |
| | | PM | B | B | B | A | A | A | A | A | A | No |
| El Camino Real (SR 82)/ Ralston Avenue | E | AM | D | D | E | C | D | D | C | C ¹ | B | No |
| | | PM | D | D | E | C | D | E | C | D ¹ | C | No |
| El Camino Real (SR 82)/ Holly Street | E | AM | C | C | C | A | A | A | A | A ¹ | A | No |
| | | PM | D | C | C | C | B | B | A | B ¹ | B | No |
| El Camino Real (SR 82)/ Whipple Avenue ² | E | AM | C | C | D | A | A | C | A | A | A | No |
| | | PM | D | D | D | C | C | D | C | A | D | No |
| Bayfront Expressway (SR 84)/ University Avenue (SR 109) | F | AM | B | B | B ¹ | C | D | C ¹ | D | D ¹ | C | No |
| | | PM | F | F | E ¹ | F | F | E ¹ | E | E ¹ | F | No |
| Bayfront Expressway (SR 84)/ Willow Road | F | AM | C | C | C ¹ | A | B | B ¹ | B | B | C | No |
| | | PM | F | F | E ¹ | E | F | D ¹ | E | F | F | No |
| Bayfront Expressway (SR 84)/ Marsh Road | F | AM | C | C | C ¹ | D | B | B ¹ | D | E | D | No |
| | | PM | F | D | C ¹ | F | D | C ¹ | C | D | F | No |
| Woodside Road (SR 84)/ Middlefield Road | E | AM | D | D | D | D | D | D | C | C | E | No |
| | | PM | D | D | D | D | C | D | D | D | E | No |
| SR 92/ SR 1 | E | AM | C¹ | D | D | A¹ | B | B | B | A ¹ | B | No |
| | | PM | D ¹ | D | D | B¹ | D | D | C | B ¹ | C | No |
| SR 92/ Main Street | F | AM | C ¹ | C | C | A¹ | D | D | E | D | C | No |
| | | PM | C¹ | C | C | A¹ | C | C | C | C | B | No |

Notes: ¹ LOS included lane improvements as compared to previous monitoring results.

² Starting with 2007 analysis the LOS Included westbound right-turn overlap phase to accurately reflect operating conditions at intersection.

Changes in LOS as compared to the year 2007 are indicated in **bold**.

The results indicate that two roadway segments are in violation of the LOS Standard in 2009 are:

- SR 1, San Francisco County Line to Linda Mar Blvd.
- SR 84, US 101 to Willow Rd.

The results for intersections are presented for both the Circular 212 Method and 2000 HCM Methods. Using the Circular 212 Method, which evaluates based on a volume-to-capacity ratio of critical movements, the results indicate that LOS changed at 12 locations (5 worsened, 8 improved) when compared to the 2007 monitoring program.

The following five (5) intersection' s level of service worsened as compared to the Year 2007:

- Skyline Blvd. (SR 35)/John Daly Blvd. (from LOS B to LOS C in PM peak hr)
- Mission St (SR 82)/John Daly Blvd. -Hillside Blvd. (from LOS B to LOS C in PM peak hr)
- El Camino Real (SR 82)/Holly Street (from LOS B to LOS C in PM peak hr)
- Bayfront Expwy. (SR 84)/Middlefield Rd. (from LOS D to LOS F in AM and PM peak hrs)
- Woodside Rd. (SR 84)/Middlefield Rd. (from LOS C to LOS D in PM peak hr)

The following eight (8) intersection' s level of service improved as compared to the Year 2007.

- Mission St. (SR 82)/John Daly Blvd.-Hillside Blvd. (from LOS B to LOS A in AM peak hr)
- El Camino Real (SR 82)/San Bruno Ave. (from LOS E to LOS D in PM peak hr)
- El Camino Real (SR 82)/Millbrae Ave. (from LOS E to LOS D in PM peak hr)
- El Camino Real (SR 82)/Ralston Ave. (from LOS D to LOS C in AM and PM peak hrs)
- Bayfront Expwy. (SR 84)/University Ave. (from LOS D to LOS C in AM peak hr)
- Bayfront Expwy. ((SR 84)/Willow Rd. (from LOS B to LOS A in AM peak hr and LOS F to LOS E in PM peak hr)
- SR 92/SR 1 (from LOS B to LOS A in AM peak hr and LOS D to LOS B in PM peak hr)
- SR 92/Main St. (from LOS D to LOS A in AM peak hr and from LOS C to LOS A in PM peak hr)

For the 2000 HCM Method, which calculates an average control delay (expressed in seconds per vehicle), LOS ratings changed at eight locations (5 worsened, 3 improved) when compared to the 2007 monitoring program.

The following five (5) intersection' s level of service worsened as compared to the Year 2007 monitoring program:

- Geneva Ave. and Bayshore Blvd. (from LOS B to LOS C in AM peak hr)
- Skyline Blvd. (SR 35)/John Daly Blvd. (from LOS B to LOS C in PM peak hr)
- Mission Street (SR 82)/John Daly Blvd./Hillside Blvd. (from LOS C to LOS D in PM peak hr)
- El Camino Real (SR 82)/Holly St. (from LOS C to LOS D in PM peak hr)
- Bayfront Expwy (SR 84)/Millbrae Ave. (from LOS E to LOS D in PM peak hr)

The following three (3) intersection' s level of service improved as compared to the Year 2007 monitoring program:

- El Camino Real (SR 82)/Millbrae Ave. (from LOS E to LOS D in PM peak hr)
- El Camino Real (SR 82)/Broadway Ave. (from LOS B to LOS A in PM peak hr)
- SR 92/SR 101 (from LOS D to LOS C in AM peak hr)

A number of San Mateo County jurisdictions have been identified as being connected to these segments. This number will increase substantially when the jurisdictions not physically connected to these segments but contributing 10% of the offending traffic are also included. It is likely that a number of jurisdictions will have to participate in multiple deficiency plans because of the traffic contributed by that jurisdiction to the deficient locations in several areas.

The C/CAG Board approved the Countywide Congestion Relief Plan (CRP), which is a countywide deficiency plan to address these and future deficiencies. This Plan will relieve all San Mateo County jurisdictions - 20 cities and the County - from having to develop and implement individual deficiency plans for current Level of Service (LOS) changes and any that may be detected in future years, starting from July 1, 2002, resulting from roadway LOS monitoring. The CRP was reauthorized for a term of four years (July 1, 2007 to June 30, 2011). An updated executive summary of the Plan is shown below.

Executive Summary Of San Mateo County Congestion Relief Plan (Deficiency Plan)

This Congestion Relief Plan is necessary because a number of locations throughout the County have been determined through traffic counts to have congestion that exceeds the standards that were adopted by C/CAG as part of the Congestion Management Program. Although the Plan is a legal requirement and enforceable with financial penalties, it is more important that the Plan be viewed as an opportunity to make a real impact in congestion that has been allowed to go unchecked for many years. A key factor in developing the Plan has been for C/CAG to respect and support the economic development done by local jurisdictions to make San Mateo County prosperous and to ensure a sound financial base to support local government. Economic prosperity however, has created severe traffic problems, which if not properly addressed, will threaten that same prosperity. Therefore this Plan aims to find ways to improve mobility Countywide and in each and every jurisdiction, while not putting a halt to this economic growth.

The Plan, which was initiated in July 1, 2002 and updated July 1, 2007, will relieve all San Mateo County jurisdictions - 20 cities and the County - from having to fix the specific congested locations that triggered the development of this Plan, and any new ones that may be detected for the next four years.

The following elements, which were updated and effective as of July 1, 2007, are intended to be a comprehensive package of policies and actions that together will make a measurable impact on current congestion and slow the pace of future congestion:

1. Employer-Based Shuttle Program and Local Transportation Services

It is recommended that the Employer-Based Program that focuses on connecting employment centers to transit centers (both BART and Caltrain) and the Local Program that provides funds for local jurisdictions or their designees to provide transportation services for its residents that meet the unique characteristics and needs of that jurisdiction, be combined. Local jurisdictions need to have the flexibility to determine the best mix of services, which sometimes results in combining commuter service, school service, services for special populations, and mid day service. The combination of schedules often enables the more effective utilization of resources and an increase in service options. More use of on-demand services to serve smaller employment and population centers is also encouraged.

The annual pool of funds for the combined program is recommended to be up to \$500,000. This is the same as the current authorization. These funds will be matched dollar for dollar by the San Mateo County Transportation Authority for those services that have a direct connection to Caltrain Stations. Programs that include matching funds and in-kind services equal to 50% of the total program cost will be given a priority for these funds.

2. Provision of Countywide Transportation Demand Management Programs

The Countywide Transportation Demand Management Program operated by the Peninsula Traffic Congestion Relief Alliance has been extremely successful in meeting the needs of the individual communities, city and county governments, and employers throughout San Mateo County. The Alliance has also significantly expanded its role in managing shuttle programs for the cities and assisting with the creation of new shuttle services. C/CAG Staff is working with the Alliance and the cities/county to identify additional services that would complement the existing program. Some of these may include:

- Implementation of a subsidized transit pass program.
- Programs designed to expand transit use.

The annual pool of funds for this program is currently \$550,000.

3. Countywide Intelligent Transportation System Program

Under the original Congestion Relief Plan a Countywide Intelligent Transportation System (ITS) Plan was developed. Individual components of that Plan are currently being implemented including signal coordination and upgrades for the entire length of El Camino Real in San Mateo County, and the development/deployment of an Incident Management Plan to provide alternative routes for drivers on Route 101 when an incident forces a partial or total closure of the freeway. It is anticipated that funding under the Congestion Relief Program will be needed for consulting assistance to design and implement the Incident Management Program and other components of the ITS Plan. Funding will also be needed for education and public outreach efforts, and for geographic information system (GIS) support.

The annual pool of funds for this program is \$200,000. These funds will be matched by the contribution from the San Mateo County Transportation Authority.

4. Ramp Metering Program

Under the original Congestion Relief Plan a Ramp Metering Study was done for Route 101 (county line to county line) and Route 280 from Route 380 north to the county line. The Study concluded that a carefully designed program could achieve travel time benefits on the freeway while minimizing the impacts on local streets. The C/CAG Board has created a Ramp Metering Technical Advisory Committee to implement the program. Phase 1 metering, which included Route 101 south of Route 92, was turned on at the beginning of 2007. Phase 2, which included northbound I-280 between San Bruno and Daly City, was turned on in October 2008. Funding under the reauthorized Congestion Relief Plan will be needed for the following:

- Conducting a before and after study to document the effects of implementing ramp metering.
- On going monitoring of the program.
- Fine-tuning and adjusting the program to respond to changes in traffic patterns.
- Conducting an education and community outreach effort about the program.
- Designing the implementation of the remaining phases of the program.

The annual pool of funds for this program is \$100,000. These funds will be matched dollar for dollar by the San Mateo County Transportation Authority.

5. Incentives for Employers/Developers to Increase Alternative Methods of Commuting

The original Congestion Relief Program included the expansion of the Transit Oriented Development (TOD) Program to include employment centers. This effort was never implemented because agreement could not be reached on an appropriate design for the program. It appears that the structure of the TOD Program for residential complexes may not be transferable to employment centers without significant modifications. However data suggests that there are important gains to be made in transit rider-ship through a program that makes commute alternatives more attractive than commuting in single occupant vehicles.

Therefore staff is recommending that we work with the business community to design a program that supports the business environment, is likely to have a measurable and lasting impact on congestion relief, and that ensures that the C/CAG investment results in outcomes that would not have occurred without the program. At this time staff is not recommending a specific allocation of funds for this effort. Depending on the design of the program, it is possible that

other sources of monies may be more appropriate. Staff will report back with more specifics on this program after working with the business community, and may at that time recommend a budget allocation and source of funds.

6. El Camino Real Incentive Program

On May 11, 2006, the C/CAG Board approved the El Camino Real Incentive Program and authorized the use of the Congestion Relief Plan as the funding source for it. Under this Program the jurisdictions along El Camino Real will be eligible to receive up to \$50,000 as matching funds to support land use and transportation planning efforts along the corridor. The jurisdictions will also be eligible for an additional \$50,000 in matching funds to support the implementation of these plans. Some of the other activities that will be funded as part of the El Camino Real Incentive Program include the development of a corridor study and design of transportation system improvements to complement the land use changes adopted by the local jurisdictions, and as matching funds to secure outside grants to support the overall El Camino Real Program. The annual pool of funds for this program is established at \$500,000.

7. Programs to Address Traffic Congestion on the Coastside

The Coastside communities have not benefited from the Congestion Relief Plan programs to the same extent as the Bayside communities, in particular with the Employer-Based Shuttle Program, Transportation Demand Management assistance to employers, the ITS and Ramp Metering programs, and the El Camino Real Incentive Program. Therefore it is recommended that consideration be given to the creation of services that meet some of the unique needs of the Coastside. Examples of programs might include:

- Locally coordinated services that target congestion created as a result of individuals transporting children to and from schools.
- Used of smaller vehicles as shuttles and/or fixed route service providers to reach areas not currently served by the existing transit services.
- Implementation of shuttles and other transportation services for limited periods of time to address severe congestion that results from various events on the Coastside.

It is proposed that the funding to support these services be derived from the pool of funds identified in Number 1 - Employer-Based Shuttle Program and Local Transportation Services and includes an additional \$50,000 for project development.

SUMMARY

The initial Plan was in effect from FY 2002/03 thru FY 2006/07. The Plan was reauthorized in February 2007 for a four-year period beginning in FY 2006/07 thru FY 2010/11. Under the reauthorized Plan, the cities and the County were assessed \$1.85 million on an annual basis for the four-year period of the Plan, starting from July 1, 2002. This amount represented each jurisdiction' s share of the total cost of the Plan based on that jurisdiction' s percent of automobile trips both generated and attracted as a percent of the Countywide total. It is anticipated that the local jurisdiction' s contribution will be more than quadrupled as a result of the generation of matching funds to support the Plan. As a participant in this Plan the cities and the County will be exempt from any deficiency planning requirements for the four-year period, that are the result of a roadway segment or intersection exceeding the Level of Service Standard set forth in the Congestion Management Program.

The Program has proven beneficial to the Cities and County and therefore it was reauthorized for an additional four-year term with an assessment of \$1.85 million. The Congestion Relief Program was extended and will continue from July 1, 2007 and expire June 30, 2011.

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CHAPTER 8

Seven-Year Capital Improvement Program

Legislative Requirements

California Government Code 65089.b.5 requires that the CMP include a seven-year Capital Improvement Program (CIP) to maintain or improve the Traffic Level of Service Standards and to mitigate impacts to the regional transportation system of land use decisions made by local jurisdictions (cities and the County). The CIP must also conform to the requirements of transportation-related programs to mitigate air quality problems.

Discussion

The purpose of the CIP is to identify transportation system improvements, (i.e., projects) which would maintain or improve traffic levels of service, transit services, and mitigate regional transportation impacts identified through the Countywide Transportation Plan and the Land Use Impact Analysis Program. 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 Metropolitan Transportation Commission in the Bay Area and then to the California Transportation Commission (CTC) and/or the Federal Highway Administration so that funding from State and Federal programs will be allocated for the projects included in the CIP.

Funding is made available under the CMP 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 funding sources available for the current CMP. Although these funding sources provide the bulk of the funding for San Mateo County transportation projects, it is important to understand that these funding sources are limited and will not fully address the CIP needs

as presently identified. C/CAG will investigate possible means of dealing with the shortage.

In the past, federal funds have been derived from the Transportation Equity Act for the Twenty-First Century (TEA-21) which included two primary financing programs for local projects: the Surface Transportation Program (STP) and the Congestion Mitigation and Air Quality Program (CMAQ). Projects that are currently funded under these programs are listed in Appendix G. On July 29, 2005, Congress has passed the reauthorization of the Transportation Bill - Safe, Accountable, Flexible and Efficient (SAFE), a six-year bill through 2009. The STP and CMAQ programs are expected to continue.

State funding for local transportation projects is available primarily through the State Transportation Improvement Program (STIP). A list of the current projects funded under this program is included in Appendix G. In Fall 2007, the California Transportation Commission (CTC) provided the Fund Estimate (FE) for the 2008 STIP. C/CAG recommended a list of projects to the Metropolitan Transportation Commission (MTC) for incorporation into a regional recommendation. The list of projects was initially adopted by the CTC in April 2008. The recently updated list of projects in San Mateo County for the 2008 STIP (as of June 11, 2009) is in Table 8-1.

Other Funding Sources for San Mateo County

Transportation Projects

There are several other sources of funds for transportation projects in San Mateo County. One of the major sources of funds is the Measure A sales tax increase passed in San Mateo County on June 7, 1988. The ballot measure created the San Mateo County Transportation Authority and authorized an increase in the retail sales/use tax of one-half of one percent for 20 years in order to finance the construction of certain transportation improvements. In November 2004, voters in San Mateo County also approved the reauthorization of measure A to be in effect from 2009 to 2033.

Improvements funded by Measure A include public transit and highway projects, alternative congestion relief, and local programs. In addition, the extension of Measure

A will include bicycle and pedestrian improvements. A summary of the Transportation Expenditure Plan for Measure A extension is included in Appendix H.

The Transportation Authority is in the process of preparing a Strategic Plan to prioritize improvements. Many of those improvements will also require state and/or federal funding and are part of the CMP.

Other sources of potential funding for transportation improvements and maintenance projects are as follows:

- Four dollar fee on motor vehicles registered in San Mateo County (Details in Chapter 11)
- Proposition 111 - Gas tax revenues allocated to local jurisdictions
- Transportation Fund for Clean Air - Programs to enhance air quality funded by increased vehicle registration fees (see Chapter 5)
- Bridge Replacement and Rehabilitation funds
- Proposition 108 - Passenger Rail and Clean Air Bond Act of 1990
- Proposition 116 - Clean Air and Transportation Improvement fund (also enacted in 1990)
- Regional Bridge Tolls
- Transportation Development Act funds
- Transit Capital Improvement funds
- Transit operator funds
- San Francisco International Airport MOU Funds

Goals and Objectives Established in the Regional Transportation Plan – The *Transportation 2035 Plan for the San Francisco Bay Area*

In April 2009, the Metropolitan Transportation Commission (MTC) adopted the *Transportation 2035 Plan for the San Francisco Bay Area*. The *Transportation 2035 Plan* represents the transportation policy and action statement of how the Bay Area will approach the region’s transportation needs over the next 25 years. At the core of the *Transportation 2035 Plan* is a vision of what the Bay Area transportation network should look like in 2035. The purpose and goals of the *Plan* provide the framework for this vision. The purpose of the *Plan* is to encourage and promote the safe and efficient management, operation and development of a regional intermodal transportation system that will serve the mobility needs of people and goods.

The RTP includes the following principles: Economy, Environment and Equity, referred to as the Three E’s, and associated goals. The plan goals are not entirely confined to any one of the Three E’s but rather cut across and reinforce all three principles.

| <i>Principle</i> | <i>Goal</i> |
|------------------|--|
| Economy | Maintenance & Safety, Reliability, Efficient Freight Travel, Security & Emergency Management |
| Environment | Clean Air, Climate Protection |
| Equity | Equitable Access, Livable Communities |

In addition, MTC also adopted the Regional Transit Expansion Program - which includes investment in new rail and bus projects that will improve mobility and enhance connectivity for residents throughout the Bay Area, The Transportation and Land Use Platform – calls for supportive land use plans and policies to support transit expansion, and Transit Oriented Development Policy.

The 2009 Congestion Management Plan (CMP) for San Mateo County is consistent with those goals and objectives established in the *Transportation 2035 Plan*. The projects for San Mateo County included in the *Transportation 2035 Plan* are included in Appendix J.

Table 8-1 2008 State Transportation Improvement Program

SUMMARY of 2008 STIP FOR SAN MATEO COUNTY
(\$1,000's)

| Agency | Rte | PPNO | Project | Total | Project Totals by Fiscal Year | | | | | | |
|----------|-----|-------|---|----------------|-------------------------------|-------|-------|-------|--------|-------|-------|
| | | | | | Prior | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | |
| Caltrans | 101 | 658B | Aux lanes-SCL Co. line to Marsh Rd | 14,221 | 5200 | 9,021 | | | | | |
| Caltrans | 101 | 690A | Willow Rd interchange reconstruction (design phase) | 6,089 | | | 6,089 | | | | |
| Caltrans | 102 | 690A | Willow Rd interchange reconstruction (construction phase) | 20,471 | | | | | 20,471 | | |
| Caltrans | 101 | 669B | SR 92 Slow Vehicle Lane Improvements | 7,759 | | | | | 7,759 | | |
| Caltrans | 101 | 669B | SR 92 Slow Vehicle Lane Improvements (grf) | 4,781 | | | | | 4,781 | | |
| Caltrans | 82 | 645C | Menlo Park-Millbrae, interconnect signals, phase 2 | 7,135 | 739 | 6,396 | | | | | |
| Caltrans | 1 | 632C | SR 1 Calera Parkway - Pacifica | 6,900 | | | | | 6,900 | | |
| SMCTA | 92 | 225G | SR 92 Widening - Curve Correction | 5,629 | | | | | 5,629 | | |
| SM C/CAG | VAR | 2140E | Countywide ITS Project | 1,977 | | | | 1,977 | | | |
| SM C/CAG | VAR | New | Smart Corridor Segment (design phase) | 3,000 | | 2,000 | 1,000 | | | | |
| SM C/CAG | VAR | New | Smart Corridor Segment (Construction phase) | 8,000 | | | | | 8,000 | | |
| MTC | | 2140 | Planning, programming, and monitoring | 300 | | 60 | 60 | 60 | 60 | 60 | 60 |
| SM C/CAG | | 2140A | Planning, programming, and monitoring | 2,760 | | 460 | 460 | 460 | 690 | 690 | |
| JPB | | | CalTrain South SF Station and Access Improvements | 19,203 | | | | | 19,203 | | |
| MTC | | | TE Reserve | 1,041 | | | | | | | 1,041 |
| SM C/CAG | | | TE Reserve | 5,468 | | 1,124 | 1,587 | 1,716 | 951 | 90 | |
| | | | Total: | 114,734 | | | | | | | |

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CHAPTER 9

Data Base and Travel Model

Legislative Requirements

California Government Code section 65089 (c) requires that every Congestion Management Agency (CMA), in consultation with the regional transportation planning agency, cities, and the county, develop a uniform data base to support a countywide transportation computer model that can be used to project traffic impacts associated with proposed land developments. Each CMA must approve computer models used for county subareas, including models used by local jurisdictions for their own land use impact analysis purposes. All models must be consistent with the modeling methodology and data bases used by the regional transportation planning agency.

Discussion

The purpose of the requirements presented above is to establish uniform technical assumptions and methodology for the congestion management process. Included in possible decisions must be consideration of the benefits of transit service and transportation demand management programs, as well as highway projects, to alleviate potential congestion on the designated CMP Roadway System. The modeling requirement is also intended to assist local agencies in assessing the impacts of new land development(s) on the transportation system.

The San Mateo Countywide Travel Demand Forecasting Model is a tool essential to the success of the ongoing CMP planning process. Application of the model will allow the C/CAG to project the potential impacts of local land development decisions on the CMP Roadway System.

Land Use Data Base Development

The land use data base that will be used in conjunction with the Countywide Travel Demand Forecasting Model is based primarily on data from the 2000 Census of Population for existing residential uses and projections summarized in the *Projections '03* report prepared by the Association of Bay Area Governments (ABAG).

Projections of socioeconomic variables were made for the traffic analysis zones defined for San Mateo County. Aggregations of the zonal projections make it possible to produce projections of socioeconomic characteristics for individual unincorporated areas and the 20 cities in the County.

Model Development

The original Countywide Travel Demand Forecasting Model was developed in 1993. A technical description of the work that was conducted to develop and validate the model is provided in the *San Mateo County Travel Demand Forecasting Model, Documentation*, Barton-Aschman Associates, Inc., January 1994. In May 1996 a number of refinements and enhancements were made to the countywide model, specifically with respect to the zonal level of detail in the vicinity of transit corridors, and to the structure and performance of the mode choice models. In November 2001, additional refinements were made to the trip generation models (to conform to the recently completed *MTC-Baycast* model) and highway assignment models. Most recently, the model land use data was updated to ABAG Projections 2005 for all future years; and to ABAG Projection 2003 for the base year validation of highway and transit counts. The zone system outside San Mateo County (but within the 9-county Bay Area) was made consistent with the MTC-1454 traffic analysis zone system.. The countywide model produces 4-hour peak period trips for AM and PM.

The framework established for the model encompasses the following five components: trip generation, trip distribution, mode choice, highway assignment, and transit assignment. These are the typical model components found in any model whose purpose is to produce simulations of travel demand based on different assumptions about land use, demographic, and transportation system characteristics.

The San Mateo Countywide Travel Demand Forecasting Model was implemented using the EMME/2 (version 9.2) software. EMME/2 is an interactive transportation

planning program that produces numerical and graphic representations of travel supply and demand.

The model has been structured to provide forecasting detail that adequately addresses the evaluation needs of both countywide and corridor-specific transportation strategies. To accomplish these objectives, the San Mateo Countywide Model was developed to rely on a zone structure detailed enough to depict changes in land use and demographic characteristics that would affect travel demand on state highways and intra-county transit systems, and highway and transit networks detailed enough for the analysis of those types of travel demand.

A representation of land use and demographic characteristics of the entire nine-county Bay Area also allows the travel model to produce travel demand forecasts that incorporate influences of regional travel demand on transportation facilities in San Mateo County.

General Model Approach

Relationship to the MTC model

The San Mateo Countywide "C/CAG" Travel Demand Forecasting System (SMC Model) is a focused model of the MTC Regional Travel Demand Forecast Model; with a more detailed zone system; and trip generation, trip distribution and mode choice models that are calibrated for the more detailed zone system.

Model Constants

Model constants for trip generation, trip distribution, and mode choice are calibrated in the SMC model specifically for the SMC model zone structure, which is a different (more detailed) zone structure from the MTC model, primarily in the counties of San Mateo and Santa Clara.

Model Coefficients

In most cases, such as trip generation and trip distribution for all trip purposes, the model coefficients are the same in the SMC model as in the MTC Regional model. In the case of the mode choice models, the non-work mode choice models also use the same model coefficients as the MTC regional model. For mode choice for home-based work trips, the

structure of the SMC model is different; with different model coefficients; the home-based work mode choice model (in SMC model) utilizes county-to-county-constants in order to maintain consistent flows of county-to-county trips by mode, compared to the MTC Regional model.

Both the K-factors and the Gamma coefficients for the home based work and the non-work trip distribution models have been re-calibrated in the SMC model for the SMC model zone system. The resulting K-factors and revised gamma coefficients preserve the mean trip length by trip purpose and the trip length frequency distributions that are estimated by the MTC regional model.

Market segmentations

The market segmentations of households by auto ownership and by workers per household are identical in the SMC model compared to the MTC model. The market segmentation of home-based work trip generation and home-based work trip distribution is slightly different than the MTC regional model, in that the SMC models are not segmented by income quartile.

Also, the market segmentation of home-based work transit trip in the SMC model is also different than the MTC regional model, in that the SMC model transit trips are segmented by Caltrain versus BART versus Bus/Light Rail; and by walk-to-transit versus drive-to-transit.

Trip purpose

Trip purposes defined for the SMC model are the same as or consistent with the trip purposes in the MTC regional model. For school trips, the SMC model structure includes home-based "secondary school" trips and home-based university/college trips; where secondary school equates to all grade levels preceding university/college.

Traffic Analysis Zone System

The traffic analysis zone (TAZ) structure developed for the San Mateo Countywide Travel Demand Forecasting Model is a refinement of the 1454-zone structure used by MTC for their nine-county regional travel model. TAZs are small geographical subdivisions of a

region. Forecasts of socioeconomic variables, such as households and employment, are collected at the TAZ level for use by the travel demand models.

The San Mateo Countywide Travel Demand Forecasting Model required disaggregating or splitting the MTC zones within San Mateo County into more and smaller TAZs. The San Mateo County TAZs nest precisely within the larger MTC zones. This facilitates the disaggregation of projections of travel (person trip tables) created using MTC's zone structure to the traffic zones, and allows direct comparisons between the San Mateo Countywide Model's outputs and those from the MTC model.

Internal San Mateo County Zones

Within San Mateo County, MTC's 1454-zone system was refined to better suit the more detailed model network of the San Mateo Countywide model. As a result of this zone refinement effort, the approximate 100 to 200 MTC zones in San Mateo County were increased to 333 TAZs.

External Zones

Outside of San Mateo County, the level of detail decreased as the distance from San Mateo County increased. The MTC 1454-zone structure was used for areas directly adjacent to San Mateo County, except for specific study areas where a greater level of detail was desired. MTC's superdistricts (of which there are 34 in the entire region) were used for the remaining areas of the region. A total of 696 external TAZs were developed.

Highway and Transit Networks

Networks are representations of transportation systems. For the purpose of model validation and calibration, a network describing the characteristics of the transportation systems in 2005 and 2000, respectively, was created. These networks consist of highway, transit, and auxiliary transit (walk- and park-and-ride access connectors) elements.

As with the TAZ development process, the San Mateo County highway and transit networks were derived from the MTC regional networks. Within San Mateo County, the roadway network level of detail was increased to include intracounty arterials not included in the regional network. These roadways were added to ensure that every TAZ is

accessible to the network, that principal travel routes exist in their entirety, and to maintain the continuity of bus routes that were coded over the roadway network.

The level of detail for the transportation network represented outside San Mateo County decreases with increasing distance from the county. For counties directly adjacent to San Mateo an arterial network was maintained, while for counties farther away only regional facilities (usually freeways) were coded in the network. Regional transit facilities, such as express bus routes and rail transit, such as BART and CalTrain are also coded into the networks to allow for the estimation of inter-county and intracounty transit travel. Large feeder services such as MUNI, Samtrans bus, VTA bus and VTA light rail are also coded in these networks and maintained

Model Components

The model produces the following countywide travel information:

- Trip generation (these are forecasts of the number of trips produced by and attracted to each TAZ)
- Trip distribution (these are distributions of trips simulated between each pair of TAZs, by trip purpose)
- Mode choice for interzonal trips (these are the forecasts of trips by travel modes such as drive-alone auto, shared-ride auto, and transit made between TAZs)
- Highway assignment (forecasts of trips made on the roadway networks being modeled)
- Transit assignment (forecasts of trips made on the transit networks being modeled)

(It should be noted that the model developed for San Mateo County has the capability of creating forecasts of home-based university and home-based secondary school, as well as air passenger trips.)

Model Updates

MTC completed work on its BAYCAST model several years ago. In response to that, C/CAG has maintained a series of overhaul updates of the countywide model so that it primarily implements the BAYCAST models and it continues to be consistent with the MTC regional model. The latest update includes ABAG Projections 2005 as the basis for land

use assumptions for all future years, and ABAG Projections 2003 for the model validation year of 2005. A copy of the Checklist for Modeling Consistency is included as Appendix K.

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CHAPTER 10

Monitoring and Updating the CMP

There are several elements of the Congestion Management Program (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:

- Traffic Level of Service Standards
- Trip Reduction and Travel Demand Element
- Land Use Impact Analysis Program
- Deficiency Plans.

The processes to be applied to monitor each of these elements are described in this chapter. A jurisdiction may be found in nonconformance with the CMP if these processes are not adhered to.

The Congestion Management Program (CMP) will be updated every two years. Some of the issues to be addressed in future updates are also discussed in this chapter.

Discussion

The CMP legislation requires that all elements of the CMP be monitored on at least a biennial¹ basis by the designated Congestion Management Agency. The specific language regarding monitoring states that:²

The agency shall monitor the implementation of all elements of the congestion management program. The agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:

¹According to AB 1963.

²California Government Code Section 65089.3 (a).

- (1) Consistency with levels of service and performance standards, except as provided in subdivisions (b)³ and (c).⁴
- (2) Adoption and implementation of a trip reduction and travel demand ordinance and program.
- (3) Adoption and implementation of a program to analyze the impact of land use decisions, including the costs associated with mitigating these impacts.

The monitoring program will be used by the City/County Association of Governments of San Mateo County (C/CAG) to determine conformance with the San Mateo County CMP. If a local jurisdiction were not in conformance with the standards and requirements of the CMP, then C/CAG would make a finding of nonconformance. The CMP legislation describes the process for determining nonconformance as follows:⁵

- (a) If, pursuant to the monitoring provided for in Section 65089.3, the agency determines, following a noticed public hearing, that a city or county is not conforming with the requirements of the congestion management program, the agency shall notify the city or county in writing of the specific areas of nonconformance. If, within 90 days of receipt of the written notice of nonconformance, the city or county has not come into conformance with the congestion management program, the governing body of the agency shall make a finding of nonconformance and shall submit the finding to the commission and to the Controller.

³Subdivision (b) exempts CMP Roadway System segments or intersections for which the CMA (C/CAG) has approved a Deficiency Plan from having to comply with the CMP's Traffic LOS Standards. For more information on Deficiency Plans, see Chapter 7.

⁴Subdivision (c) exempts certain types of traffic and situations from the Traffic LOS Standards (e.g., interregional traffic, construction and maintenance projects, freeway ramp metering, traffic signal coordination, traffic generated by low-income housing, traffic generated by high-density residential development, and mixed-use development near rail passenger stations).

⁵California Government Code Section 65089.5, subsections (a) and (b).

- (b) Upon receiving notice from the agency of nonconformance, the Controller shall withhold apportionment of funds required to be apportioned to that nonconforming city or county by Section 2105 of the Streets and Highways Code, until the Controller is notified by the agency that the city or county is in conformance.

As stated above, 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) Transportation Equity Act for the 21st Century (TEA-21) until such time as 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.

Monitoring the CMP

Traffic Level of Service Standards Monitoring Process

The adopted Traffic Level of Service (LOS) Standards are presented in Chapter 3. The monitoring process will identify if there are any locations on the CMP Roadway System (see Chapter 2) that do not meet their LOS standard. Deficiency plans will then need to be prepared for these locations. As noted in Chapter 7, a total of two deficient segments have been identified through the 2009 Monitoring. These deficiencies will be addressed through the Countywide Deficiency Plan.

At this time C/CAG is responsible for all traffic level of service monitoring activities. Traffic counts and LOS calculations will be conducted for the CMP roadway segments and designated intersections at least every two years. C/CAG has adopted to monitor the performance of the CMP segments and intersections during the spring of each odd year.

Trip Reduction and Travel Demand Management Monitoring Process

This element of the CMP is described in Chapter 5. The primary requirements of the legislation specifying the preparation of CMPs are that the CMP include a program that promotes alternative transportation methods.

Land Use Impact Analysis Program Monitoring Process

The procedures for the Land Use Impact Analysis Program is described in Chapter 6 and Appendix I.

Deficiency Plan Monitoring Process

The deficiency plan monitoring process is described in Chapter 7. C/CAG must also monitor deficiency plans to establish:

1. Whether they are being implemented according to the schedule described in their specific action plans, and
2. Whether changes have occurred which require modifications of the original deficiency plan or schedule.

Findings of Nonconformance

During the monitoring process, C/CAG may determine that a local jurisdiction (a city or the County) is not conforming with the requirements of the CMP. C/CAG can reach this conclusion only after holding a noticed public hearing. C/CAG will notify the local jurisdiction(s), in writing, of the areas of nonconformance. The affected local jurisdiction(s) will then have 90 days after receipt of the written notice of nonconformance to gain compliance. If they are not able to do so, C/CAG will make a finding of noncompliance and will submit that finding to the California Transportation Commission and to the State Controller. Upon receipt of the finding, the State Controller will withhold the apportioned Proposition 111 fuel tax subventions and TEA-21 funds to the nonconforming local jurisdiction(s) until the Controller is notified by C/CAG that the jurisdictions are in conformance with the CMP.

CHAPTER 11

Vehicle License Fee Program

Management of Traffic Congestion and Stormwater Pollution

Background / Discussion

Assemblymember Simitian introduced AB 1546 on behalf of C/CAG in 2003. This bill was adopted by the Legislature on August 18, 2004, and signed into law by the Governor on September 29, 2004. It took effect on January 1, 2005 as Chapter 2.65 (commencing with Section 65089.11) to Division 1 of Title 7 of the Government Code and Section 9250.5 of the Vehicle Code, relating to local government. The new law provides authorization for the City/County Association of Governments of San Mateo County to impose an annual fee of up to \$4 on motor vehicles registered within San Mateo County for a program for the management of traffic congestion and stormwater pollution within San Mateo County.

AB 1546 created a pilot program for San Mateo County with strong management controls including public hearings, specific work program/budget, performance measures, independent audit, sunset provision, and a report to the Legislature.

In order to impose the fee, the C/CAG Board must hold a public hearing to adopt a program and budget for the management of traffic congestion and stormwater pollution within San Mateo County, make a finding of fact that those programs bear a relationship or benefit to the motor vehicles that will pay the fee, and adopt performance measures for those programs.

Proceeds from the fee must only be used for programs that bear a relationship or benefit to the motor vehicles that will pay the fee. This includes motor vehicle congestion and stormwater pollution prevention programs that directly address the negative impacts on creeks, streams, bays, and the ocean caused by motor vehicles and the infrastructure supporting motor vehicle travel. The C/CAG Board, by a two-thirds vote, must make a finding of fact that there is such a relationship between the use of the fee and the payers

of the fee.

On December 9, 2004 the C/CAG Board unanimously approved the imposition of a four-dollar (\$4.00) fee for motor vehicles registered in San Mateo County, a corresponding program of services, and a budget for the expenditure of the fees. On March 10, 2005 the C/CAG Board unanimously approved Resolution 05-08 that refined the program and budget, clearly justified the need for the fee, and established performance measures for each of the programs to be funded with the fee.

Senate Bill 348 (SB 348), sponsored by Assemblymember Simitian, allowed the C/CAG Board to reauthorize an annual fee of up to \$4 on vehicles registered in San Mateo County for a period of four years until January 1, 2013, unless reauthorized by the Legislature. The bill was adopted by the Legislature and signed by the Governor on September 27, 2008. The C/CAG Board adopted the program on November 12, 2008.

Nexus of the Vehicle License Fee (VLF) Program

The programs to be funded with the proceeds from the fee must have a relationship or benefit to the motor vehicles that are paying the fee.

As it relates to the congestion management component of the program, motor vehicles are the clear and direct cause of traffic congestion on the roadways. The programs to be implemented with the proceeds from the fee will include improvements to the roadway system that facilitate the flow of traffic and reduce travel times, improve the conditions and maintenance of roadways to have the added benefit of reducing the wear and tear on vehicles, improve the performance and efficiency of roadways through deployment of new technologies, and through improvements to public transit to provide alternatives to driving single occupant vehicles.

The stormwater pollution prevention component of the program is designed to curb one of the primary sources of pollutants in the Ocean, the Bay and other San Mateo County waterways, which are the fluids, emissions, and residue from the wearing of parts on motor vehicles. These materials are deposited on impervious surfaces throughout the County and are washed into the waterways by storms. This has been documented by the California State Water Resources Control Board (Resolution No. 2003-009, Monitoring List 2002), the San Mateo Countywide Clean Water program in a 1999 study,

the Santa Clara Valley Nonpoint Source Program (Source Identification and Control Report), and by the U.S. Environmental Protection Agency. The programs to be implemented with the AB 1546 fee will directly impact the negative impacts of these materials produced by motor vehicles on waterways, and also to address the pollution created by the infrastructure supporting motor vehicle travel. Therefore the fee paid by the owners of motor vehicles will be used to mitigate the water pollution created by the vehicles that are assessed the fee.

Under both of these program elements, the motor vehicles and operators are directly responsible for the problems created; and the fee is being assessed to these same entities in order to develop and implement the solutions to these same problems.

Benefit to the Cities and the County

Through the program proposed for the implementation of the fee, the County and all 20 Cities will each receive a proportional share of 50% of the proceeds from the adoption of this fee (minus administrative costs for C/CAG and the Department of Motor Vehicles). These allocations will be used to directly offset existing costs for the implementation of transportation and stormwater pollution prevention programs at the local level to address the negative impacts of motor vehicles. Only those costs that bear a direct relationship or benefit to the motor vehicles paying the fee are eligible for the use of these fees. The remaining 50% of the fees collected will be for new Countywide programs and services related to motor vehicles. The Countywide program will also be beneficial to the Cities/County.

Program, Budget, and Performance Measures

The cities and the County receive financial relief for the National Pollutant Discharge Elimination System Program (NPDES) and transportation congestion management programs that they are currently supporting. Many of these programs are unfunded mandates. The Vehicle License Fee program has been defined such that the cities and the County will be able to qualify for its full allocation of funds under both the NPDES and transportation congestion management categories.

Revenues and Expenditures

To date C/CAG has received proceeds of the fee covering the period of July 2005 through April 2009. The table below indicates the cumulative totals for revenues and expenditures for the program as of June 3, 2009.

| Revenues | Totals |
|--|------------------|
| Fees Collected | \$10,134,648 |
| Administration | |
| DMV One-time Setup | \$100,286 |
| DMV Admin. | \$12,668 |
| C/CAG Admin. (<i>est.</i>) | <i>\$200,000</i> |
| Expenditures | |
| Congestion Management | |
| Local Disbursements | \$2,021,084 |
| Regional Programs (ITS, Hydrogen shuttle) | \$1,228,936 |
| Programmed | \$1,660,777 |
| Stormwater Pollution Prevention | |
| Local Disbursements | \$2,092,075 |
| Regional Programs (Streets/Parking Lot Demo) | \$642,600 |
| Programmed | \$2,176,122 |

Programs and Performance Measures

The following table identifies the project types associated with traffic congestion management and stormwater pollution prevention programs including performance measures as applicable to the Local Cities and County and Countywide programs.

| Traffic Congestion Management | | |
|--------------------------------------|--|---|
| | <i>Projects</i> | <i>Performance Measure</i> |
| Local Cities and County | Local shuttles/transportation | Number of passengers transported. |
| | Road resurfacing/reconstruction | Miles/fraction of miles of roads improved. |
| | Deployment of Local Intelligent Transportation Systems (ITS) | Number of ITS components installed/implemented. |
| | Roadway operations such as: Restriping, Signal timing, coordination, Signage | Miles/fraction of miles of roads improved. |
| | Replacement and/or upgrading of traffic signal hardware and/or software | Number of units replaced and/or upgraded. |
| Countywide | Maintenance and operation of up to four hydrogen and/or other clean fuel shuttle vehicles and related fueling infrastructure | Number of passengers transported and number of passenger miles. |
| | Deployment of Intelligent Transportation System (ITS) projects having regional / Countywide significance | Number of ITS components installed / implemented. |

| Stormwater Pollution Prevention | | |
|--|------------------------------|--|
| | <i>Projects</i> | <i>Performance Measure</i> |
| Local Cities and County | Street sweeping | Miles of streets swept an average of once a month. |
| | Roadway storm inlet cleaning | Number of storm inlets cleaned per year. |
| | Street side runoff treatment | Square feet of surfaces managed annually. |
| | Auto repair shop inspections | Number of auto repair shops inspected per year. |

| | | |
|------------|---|--|
| | Managing runoff from Street/Parking lot impervious surfaces | Square feet of surfaces managed annually. |
| | Small capital projects such as vehicle wash racks for public agencies that include pollution runoff controls | Number of projects implemented. |
| | Capital purchases for motor vehicle related runoff management and controls | Number of pieces of equipment purchased and installed. |
| | Additional used oil drop off locations | Number of locations implemented and operated, and quantity of oil collected. |
| | Motor vehicle fluid recycling programs | Number of programs implemented and operated, and quantity of fluids collected. |
| | Installation of new pervious surface medium strips in roadways | Square footage of new pervious surface medium strips installed. |
| Countywide | Pilot water studies | Number of studies completed |
| | Public outreach to auto repair shops | Number of shops contacted and provided information to. |
| | Training and implementation of car wash Best Management Practices (BMPs) | Number of individuals trained |
| | NPDES consulting assistance on motor vehicle related issues | Person hours of consulting assistance. |
| | Brake pad partnership | Number of studies participated in. |
| | Partial funding for hydromodification plan | Percent implementation of the Plan |
| | Monitoring of motor vehicle related BMPs | Number of locations where BMPs were monitored annually |
| | Addressing stormwater pollution on the freeways and other State highways through installation of filtration systems | Number of filtration systems installed |
| | Countywide oil and other motor vehicle fluid recycling programs | Number of programs implemented and operated |
| | Countywide training on the prevention and control of water pollution attributable to motor vehicles | Number of individuals trained |

Program Fund Distribution

The established program allocates the net proceeds equally towards the traffic congestion management and stormwater pollution prevention categories. The program distributes the funding within these categories for projects that focuses on the local jurisdictions including the 20 cities and the County as well as projects with countywide significance. The program allocations are summarized as follows:

- 25% are committed to the cities and County for local traffic congestion management programs.
- 25% are programmed by C/CAG for Countywide traffic congestion management programs including the implementation of a demonstration alternate fuel program and the deployment of Intelligent Transportation Systems
- 25% are committed to the cities and County for local programs that address the negative impact on creeks, streams, bays, and the ocean caused by motor vehicles and the infrastructure supporting motor vehicle travel.
- 25% are programmed by C/CAG for Countywide programs that address the negative impact on creeks, streams, bays, and the ocean caused by motor vehicles and the infrastructure supporting motor vehicle travel.

Local Cities and County – Allocations

Jurisdictions are reimbursed for work performed and are required to expend fifty percent (50%) of the funds for traffic congestion management and 50% towards stormwater pollution prevention projects. Funds are allocated to local cities and the County bi-annually based on population estimates as a percentage of the total population within the County. The following table summarizes the fund allocations and expenditures for the period from July 1, 2005 to June 3, 2009. Jurisdictions are required to provide invoices along with performance measures to C/CAG before funds are distributed.

LOCAL ALLOCATION TOTALS (July 1, 2005 to June 3, 2009)

| Jurisdiction | % Share | Total Allocation | Total Expended |
|---------------------|---------|---------------------|---------------------|
| ATHERTON | 1.0% | \$ 44,154 | \$ 37,962 |
| BELMONT | 3.5% | \$ 154,538 | \$ 132,865 |
| BRISBANE | 0.5% | \$ 22,077 | \$ 18,981 |
| BURLINGAME | 3.9% | \$ 172,200 | \$ 172,200 |
| COLMA | 0.2% | \$ 8,831 | \$ 7,592 |
| DALY CITY | 14.5% | \$ 640,230 | \$ 640,230 |
| EAST PALO ALTO | 4.5% | \$ 198,692 | \$ 80,168 |
| FOSTER CITY | 4.1% | \$ 181,031 | \$ 178,232 |
| HALF MOON BAY | 1.8% | \$ 79,477 | \$ 68,331 |
| HILLSBOROUGH | 1.5% | \$ 66,231 | \$ 66,231 |
| MENLO PARK | 4.2% | \$ 185,446 | \$ 185,446 |
| MILLBRAE | 2.9% | \$ 128,046 | \$ 128,046 |
| PACIFICA | 5.4% | \$ 238,431 | \$ 238,511 |
| PORTOLA VALLEY | 0.6% | \$ 26,492 | \$ 22,415 |
| REDWOOD CITY | 10.5% | \$ 463,615 | \$ 427,588 |
| SAN BRUNO | 5.8% | \$ 256,092 | \$ 256,092 |
| SAN CARLOS | 3.9% | \$ 172,200 | \$ 160,125 |
| SAN MATEO | 13.0% | \$ 573,999 | \$ 493,500 |
| SOUTH SAN FRANCISCO | 8.5% | \$ 375,307 | \$ 375,307 |
| WOODSIDE | 0.8% | \$ 35,323 | \$ 30,369 |
| COUNTY OF SAN MATEO | 8.9% | \$ 392,969 | \$ 392,969 |
| TOTALS | | \$ 4,415,380 | \$ 4,113,159 |

Program Updates

All 21 local jurisdictions received funding for congestion management and stormwater pollution prevention projects included in the program plan adopted by C/CAG. A summary of their combined performance is as follows:

LOCAL PROGRAMS

| Category | Unit | Total Project Qty | % of VLF* | Qty funded by VLF |
|--|------------|-------------------|-----------|-------------------|
| Traffic Congestion Management | | | | |
| Restripe | Miles | 21 | 59% | 12 |
| Resurface | Miles | 199 | 8% | 16 |
| Shuttle | Passengers | 7,462 | 76% | 5671 |
| Sign Installation | Miles | 41 | 65% | 26 |
| Signal Upgrade | Each | 241 | 51% | 123 |
| Stormwater Pollution Prevention | | | | |
| Drain/Inlet Cleaning | Each | 30,568 | 38% | 11616 |
| Street Sweeping | Miles | 162,319 | 44% | 71420 |

** % of VLF indicates the fee amount as a percentage of the total project cost. This % is used to calculate the actual project quantity funded by the VLF.*

REGIONAL PROGRAMS

Traffic Congestion Management

- Intelligent Transportation System - Distributed \$1,244,000 to eleven jurisdictions for projects to upgrade signal controller (62 locations) and video detection systems (20 locations).
- Alternative Fuel Program – Deployment of the hydrogen shuttle service program (service commenced on December 3, 2007). The Shuttle operates on a full morning (A.M.) schedule of four (4) round trips per day carrying an average of over 7 passengers per trip.

Stormwater Pollution Prevention

- Developed of a Sustainable, Green Streets and Parking Lots Technical Design Guidebook, which provide strategies for incorporating innovative stormwater treatment measures in streets and parking lot projects.
- Green Streets and Parking Lots Construction Project – Programmed \$1,928,000 for six small-scaled demonstration projects to construct green streets related and related to roadside stormwater pollution prevention improvements.

CHAPTER 12

Traffic Impact Analysis (TIA) Policy

The intent of the Traffic Impact Analysis (TIA) policy is to provide uniform procedures to analyze traffic impacts on the Congestion Management Program (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.

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