

APPENDIX C
Deficiency and Improvement Plan Guidelines

MARIN CONGESTION
MANAGEMENT PROGRAM

Deficiency and Improvement
Plan Guidelines

prepared for

Marin County
Congestion Management Agency

by
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1. Introduction

This document describes a proposed process for the preparation of deficiency and improvement plans. There is an important distinction between the two:

- Deficiency plans are required by CMP legislation for any roadway segment that falls below the adopted level of service standard when the state-mandated exceptions (discussed below) are applied.
- Improvement plans are recommended by the Marin County CMP for all segments which are already below the adopted level of service standard or segments that fall below the adopted level of service standard but are exempted from a deficiency plan after exceptions are applied.

State Requirements for Deficiency Plans

The Congestion Management Program (CMP) legislation provides for deficiency plans as a way for local jurisdictions to remain in conformance with the CMP when level of service (LOS) deteriorates below the established standard.

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 65089.4.

The 1991 Marin County CMP adopts LOS E as the standard for freeways and rural expressways (Interstate 580, Highway 101 and Highway 37) and LOS D for other roadways on the designated network. When deterioration of the level of service on a given CMP network segment has not been prevented, the legislation provides two options for local jurisdictions to remain in conformance:

- a) implementation of a specific plan to correct the LOS deficiency on that affected network segment; and,
- b) implementation of other measures intended to result in measurable improvements in LOS on the CMP network and contribute to significant improvements in air quality.

Language regarding deficiency plans is found in California Government Code Section 65089.3, which states:

(a) The agency shall monitor the implementation of the elements of the congestion management program. The department is responsible for data collection and analysis on state highways, unless the agency designates that responsibility to another entity. The agency may also assign data collection and analysis responsibilities to other owners and operators of facilities or services if the responsibilities are specified in its adopted program. The agency shall consult with the department and other affected owners and operators in developing data collection and analysis procedures and schedules prior to program adoption. 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:

(a) Consistency with the levels of service and performance standards, except as provided in Section 65089.4.

(b) Adoption and implementation of a trip reduction and travel demand ordinance.

(c) 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.

(d) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

The California Government Code specifies when deficiency plans are required:

65089.4. (a) A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service standards are not maintained on segments or intersections of the designated system. The deficiency plan shall be adopted by the city or county at a noticed public hearing.

(b) The agency shall calculate the impacts subject to exclusion pursuant to subdivision (b) of this section, after consultation with the regional agency, the department, and the local air quality management district. If the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, the agency shall make a finding at a publicly noticed meeting that no deficiency plan is required and so notify the affected local jurisdiction.

Section 65089.4 of the California Government Code also specifies the required context of deficiency plans:

(c) The agency shall be responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of this section. The deficiency plan shall include all of the following:

(1) An analysis of the cause of the deficiency. This analysis shall include the following:

(A) Identification of the cause of the deficiency.

(B) Identification of the impacts of those local jurisdictions within the jurisdiction of the agency that contribute to the deficiency. These impacts shall be identified only if the calculated traffic level of service following exclusion of impacts pursuant to subdivision (f) indicates that the level of service standard has not been maintained, and shall be limited to impacts not subject to exclusion.

(2) A list of improvements necessary for the deficient segment of intersection to maintain the minimum level of service otherwise required and the estimated costs of the improvements.

(3) A list of improvements, programs, or actions, and estimates of costs, that will (A) measurably improve multimodal performance, using measures defined in paragraphs (1) and (2) of subdivision (b) of Section 65089, and (B) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, parking cash-out programs, 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 that meet the scope of this paragraph. If all improvement, program, or action is not on the approved list, it shall not be implemented unless approved by the local air quality management district or air pollution control district.

(4) An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000), that shall be implemented, consisting of improvements identified in paragraph (2), or improvements, programs, or actions identified in paragraph (3), that are found by the agency to be in the interest of the public health, safety, and welfare. The action plan shall include a specific implementation schedule. The action plan shall include implementation strategies for those jurisdictions that have contributed to the cause of the deficiency in accordance with the agency's deficiency plan procedures. The action plan need not mitigate the impacts of any exclusions identified in subdivision (f). Action plan strategies shall identify the most effective implementation strategies for improving current and future system performance.

The procedures required for deficiency plan approval are described in Section 65089.4 (d) to (e):

1 This 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.

(d) A local jurisdiction shall forward its adopted deficiency plan to the agency within 12 months of the identification of a deficiency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following that 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 local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days addressing the agency's concerns. Failure of a local jurisdiction to comply with the schedule and requirements of this section shall be considered to be nonconformance for the purposes of Section 65089.5.

(e) The agency shall incorporate into its deficiency plan procedures, a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the agency.

(1) If, according to the agency's methodology, it is determined that more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in the development of a deficiency plan to be adopted by all participating local jurisdictions.

(2) The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other impacting local jurisdictions. If a local jurisdiction responsible for participating in a multi-jurisdictional deficiency plan does not adopt the deficiency plan in accordance with the schedule and requirements of paragraph (a) of this section, that jurisdiction shall be considered in nonconformance with the program for purposes of Section 65089.5.

(3) The agency shall establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities of this section.

The provision of excluding some traffic from the deficiency is provided in Section 65089.4(f).

(f) The analysis of the cause of the deficiency prepared pursuant to paragraph (1) of subdivision (c) shall exclude the following:

(1) Interregional travel (also defined as trips which originate outside of Marin County),

(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-income and very low income housing.

(6)(A) Traffic generated by high-density residential development located within one-fourth mile of a fixed rail passenger station, and

(B) 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.

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

(a) If, pursuant to the annual 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 collie 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) (1) Upon receiving notice form 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.

(2) If, within the 12-month period following the receipt of a notice of nonconformance, the Controller is notified by the agency that the city or county is in conformance, the Controller shall allocate the apportionments withheld pursuant to this section to the city or county.

(3) If the Controller is not notified by the agency that the city or county is in conformance pursuant to paragraph (2), the Controller shall allocate the apportionments withheld pursuant to this section to the agency.

(c) The agency shall use funds apportioned under this section for projects of regional significance which are included in the capital improvement program required by paragraph (5) of subdivision (b) of Section 65089, or in a deficiency plan which has been adopted by the agency. The agency shall not use these funds for administration or planning purposes.

Improvement Plans

Improvement plans are recommended in the Marin Congestion Management Program. However, the State legislation makes no requirements for improvement plans. It is recommended that the approach for development of improvement plans should be similar to deficiency plans.

2. Recommendations on Key Issues

There are several policy directions needed for deficiency and improvement plans. We have identified the issues below.

Who is responsible for preparation of deficiency and improvement plans? Local jurisdictions are responsible for developing and adopting deficiency plans.

In some cases, several jurisdictions are required to collaborate in the development of a plan. The determination of which jurisdictions should participate is to be made by the CMA. The policy to make this determination is as follows:

A jurisdiction should participate in the preparation of a deficiency plan at a specific location if traffic from that jurisdiction, either as an origin or a destination, represents ten (10%) percent of the assigned level of service capacity of the facility. The determination of the jurisdiction percentage of the traffic would be made using the select link analysis for the base year of the Marin County latest approved travel model for the P.M. peak hour.

No specific sponsorship of improvement plans is required. It is suggested that local jurisdictions sponsor these plans where possible, because they would need to prepare deficiency plans if the improvement plan actions eventually become ineffective.

Recommended action: The CMA is to designate the jurisdiction(s) required to lead or participate in the preparation of a deficiency plan. Preparation of deficiency plans must be the responsibility of local jurisdiction (s) with assistance from the CMA. Improvement plan preparation should be the responsibility of local jurisdictions, with assistance from the CMA.

What triggers the deficiency and improvement plan process? The deficiency plan process is triggered when, pursuant to annual LOS monitoring through traffic counts and subsequent adjustments for all exclusions required by law (California Code Section 65089.4), a CMP network segment is found to be "deficient" because it degrades from the adopted LOS standard.

The determination of the exclusions is the responsibility of the CMA staff. The procedures for developing these exclusions are to be developed by the CMA once the deficiency is identified.

The improvement plans are intended for the grandfathered segments of the CMP network as mentioned in California Code Section 65089(a) (1) (B). This document recommends expanding them to those deficient segments that do not fall below the level of service standard once the state exclusions are applied.

Recommended action: CMA to require deficiency plans when deficiency occurs, in accordance with state guidelines.

What trips must be excluded from the deficiency determination? Annually, upon completion of the level of service monitoring, the CMA will identify potentially deficient segments. The level of service will then be analyzed for both before and after the exclusion procedures established in the State legislation. These procedures mandate that exclusion be determined following consultation with Metropolitan Transportation Commission, California Department of Transportation, and Bay Area Air Quality Management District.

A decision was made in the first CMP that trips should not be removed for the exclusions. For local planning purposes, all improvement plans should not have any exempted trips. Also, any long-range planning and impact fee analysis work should be performed using level of service analyses before the exclusion.

As required in California Government Code Section 65089.4, several types of travel must be excluded from the determination of the need for deficiency plans, including interregional travel (including traffic originating outside of Marin County); construction, rehabilitation, or maintenance of facilities that impact the system; freeway ramp metering; traffic signal coordination by the state or a multi-jurisdictional agency; and traffic generated by the provision of low and very low income housing; traffic generated by high density residential development located within one-fourth mile of a fixed rail passenger station; and 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.

Recommended Action: The CMA will determine the trips to be excluded from the calculation of LOS for segments which may need to submit deficiency plans, in consultation with Metropolitan Transportation Commission, California Department of Transportation, and Bay Area Air Quality Management District. Improvement plans will not contain exclusions.

What constitutes a deficient segment? A segment will be considered deficient and recommended for submission of an improvement plan when its level of service falls below the adopted standard. It will be considered deficient for CMP legislative purposes and require adoption of a deficiency plan if it registers below the adopted standard even after all exclusions listed above have been computed.

Recommended Action: The CMA will make a finding each year of deficient segments that will be recommended for improvement plans. Using the State guidelines, deficient segments requiring deficiency plans will also be designated as a subset of the first list.

What is the purpose of the deficiency plan process? In the State legislation, the deficiency plan process requires local jurisdictions to examine two types of improvement options, and choose one of two options for addressing deficient network segments. The two options are:

- To implement improvements directly on the deficient segments designed to eliminate the deficiency; or

- 0 To designate the segment as deficient, and implement a deficiency or improvement plan including actions designed to measurably improve the overall LOS on the CMP network, and contribute to significant air quality improvements. Such actions may not necessarily be implemented or have a measurable impact on the deficient segment itself.

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. Measures not on the BAAQMD list may also be used, but will need to be evaluated by the BAAQMD for air quality impacts prior to including it as a measure in a deficiency plan.

Recommended action: The CMA should maintain a list of acceptable measures to examine both types of solutions to each level of service problem.

What is the purpose of the improvement plan process? An improvement plan process is established as a proactive planning process to recommend solutions to traffic congestion problems not addressed in the deficiency plan process. This falls into the areas of existing traffic congestion problems, and anticipated traffic congestion problems that do not appear because of the exclusions discussed above.

When is a deficiency plan required? A deficiency plan is required when the CMA designates a CMP network segment as deficient using the State legislative definition.

Recommended action: The CMA should establish an official calendar to provide a maximum time window in deficiency plan preparation.

When is an improvement plan required? An improvement plan deadline is not mandated by state legislation; the current CMP suggests that the plans be developed by the next CMP submittal.

Recommended action: The CMA may recommend that any proposed draft improvement plans should be in place by June of 1995 to allow for lead time when preparing the EIR on the next biennial approval. They can also be prepared at a later date.

How are deficiency plans and improvement plans adopted? To CMP legislative guidelines, a deficiency plan must be prepared by the affected local jurisdiction(s). All participating jurisdictions in a multi-jurisdictional improvement plan must approve the plan.

Because the intent is similar and the approach logical, a similar method seems to be appropriate for improvement plans.

Recommended action: The CMA sta and the CMP technical advisory committee should review the draft to advise if the plan will be acceptable. Then, the deficiency and improvement plans should be adopted by the affected jurisdiction (s) at a public hearing and finally approved (with no amendments or conditions) by the Congestion Management Agency.

How do deficiency and improvement plans relate to the countywide transportation planning process? Deficiency and improvement plan actions should be coordinated with the countywide transportation planning process, including forecasts of travel needs and planned capital improvements. Likewise, the occurrence of deficiencies should be a factor influencing future programming decisions associated with continued countywide transportation planning efforts.

Recommended action: All capital improvement items listed in deficiency and improvement plans should be mentioned in the capital improvements program for the CMP. Any growth management or transit actions from deficiency or improvement plans should be included in upcoming countywide plans.

How long does a jurisdiction have to prepare a legislatively-mandated deficiency plan? Jurisdictions will receive a formal notice of a level of service deficiency at the time when LOS monitoring results are approved. This is the start of the 90-day period allowed under Section 65084.5.

Recommended action: The CMA should provide ample time to jurisdictions to consider legislatively-required documents. LOS monitoring should occur in the spring, and CMA conformance determination in the following spring, providing the maximum amount of time possible for jurisdictions to develop a deficiency plan.

What are the required components of a deficiency and improvement plan? State law requires a deficiency plan to contain these items:

- an analysis of the deficiency;
- a list of improvements and related costs to mitigate that deficiency on that facility itself;
- a list of possible actions that would result in improvements to the CMP system's LOS and be beneficial to air quality; and,
- an action plan to implement improvements from one of the two above lists.

Because improvement plans are similar in nature, it seems appropriate to recommend the same format.

Recommended Action: All deficiency and improvement plans should include the State-legislated format.

What constitutes acceptable deficiency and improvement plans? An acceptable plan shall contain all components listed above, as well as appropriate local review and comment. Approval procedures are specified for deficiency plans; improvement plans do not need to meet the strict approval guidelines.

Recommended Action: All deficiency plans should be reviewed by the CMA staff and technical committee prior to action by the CMA Board. The technical committee may make a recommendation related to approval or rejection of ally plan to the CMA Board. The plan will be evaluated oil the following technical criteria:

- a) *Completeness as explained in California Government Code Section 65089.4*
- b) *Vie appropriateness of the plan actions in relation to the magnitude of the deficiency*
- c) *Pie reliability of the funding sources*
- d) *The reasonableness of the implementation plan schedule*
- e) *The ability to implement the proposed actions (including jurisdictional control issues)*

CMA staff technical committee and CMA Board review should be sought for improvement plans, although no specific CMA board action is required.

Why prepare a deficiency plan? When a state-defined deficiency occurs, the responsible jurisdiction(s) must respond. Tile jurisdiction will forego additional gasoline tax subventions (pursuant to Section 2105 of the Streets and Highways Code) unless it prepares a deficiency plan. If no response is forthcoming, the jurisdiction with the deficiency is required to be found in nonconformance with the CMP by the Congestion Management Agency (CMA) board.

Recommended action: Pie CMA should adopt a goal to approve all deficiency and improvement plans. The CMA should also utilize this adoption as all endorsement of the projects and/or actions in its planning and programming. In particular, these plans should be used in obtaining additional justification for funding allocations from regional, state and Federal sources in competitive funding environments.

Why prepare an improvement plan? Even though they are not required by State legislation, an improvement plan bodes several benefits. The plan becomes a document which can be used to leverage funding from regional, state and Federal sources. The plan also becomes a key component in the preparation of a capital improvements program and related funding programs. The plan offers communities and developers an opportunity to help implement the programs identified to eliminate the deficiency. Finally, adoption of an effective improvement plan may prevent a State-mandated deficiency plan from having to be prepared.

3. Process

The CMA should adopt a process by which plans are developed and approved. A typical process that could be used by Marin CMA is listed below.

Agencies Involved in Preparation. All jurisdictions affected by the deficiency should be involved. The leading jurisdiction is the jurisdiction in which the deficiency occurs. Other participating jurisdictions are determined according to this policy:

A jurisdiction should participate in the preparation of a deficiency plan at a specific location if traffic from that jurisdiction, either as an origin or a destination, represents ten (10%) percent of the volume of the facility at the maximum service flow rate of the LOS Standard set by the Marin CMA for that facility. The determination of the jurisdiction percentage of the traffic would be made using the select link analysis for the base year of the Marin County latest approved travel model for the P.M. peak hour.

If it is a multi-jurisdictional plan or if it involves system-wide improvements, Congestion Management Agency staff, transit agencies, the Bay Area Air Quality Management District, and the California Department of Transportation should also be involved.

Deficiency and Improvement Plan Development and Approval Process. The proposed process for developing and approving deficiency and improvement plans is described on the attached flowcharts.

Figure A describes the overall deficiency plan process. Figure B depicts the deficiency identification step in the process. Figure C illustrates the process to be followed by local jurisdictions for development of deficiency plans. Figure D shows the process to be followed for deficiency plan approval. This differs from Figure C in that Figure D sets the CMA actions and schedule for approval of deficiency plans in relation to the CMA's annual findings of conformance with CMP requirements. Figure E illustrates the deficiency plan monitoring process.

A similar set of figures describes the improvement plan approval process. Figure F depicts the overall process. Figure G describes the identification step in the process. Figure H illustrates the process to be followed for the development of improvement plans. Figure I illustrates the improvement plan monitoring process.

Deficiency Identification. A deficiency is discussed in the annual level of service monitoring process, as described in Chapter 2.

Figure A
GENERAL DEFICIENCY PLAN PROCESS

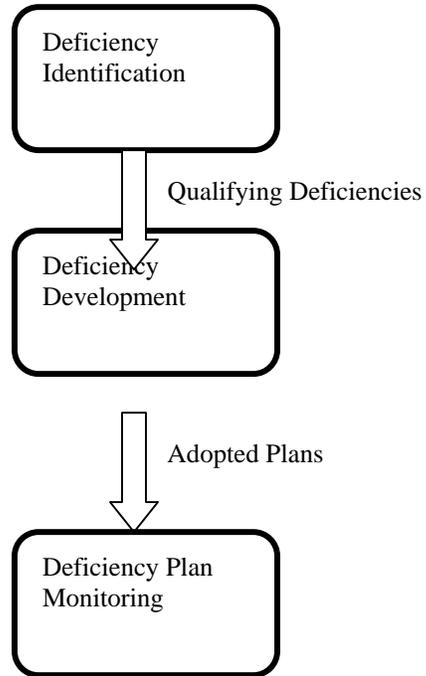


Figure B
IDENTIFICATION FOR DEFICIENCY PLANS

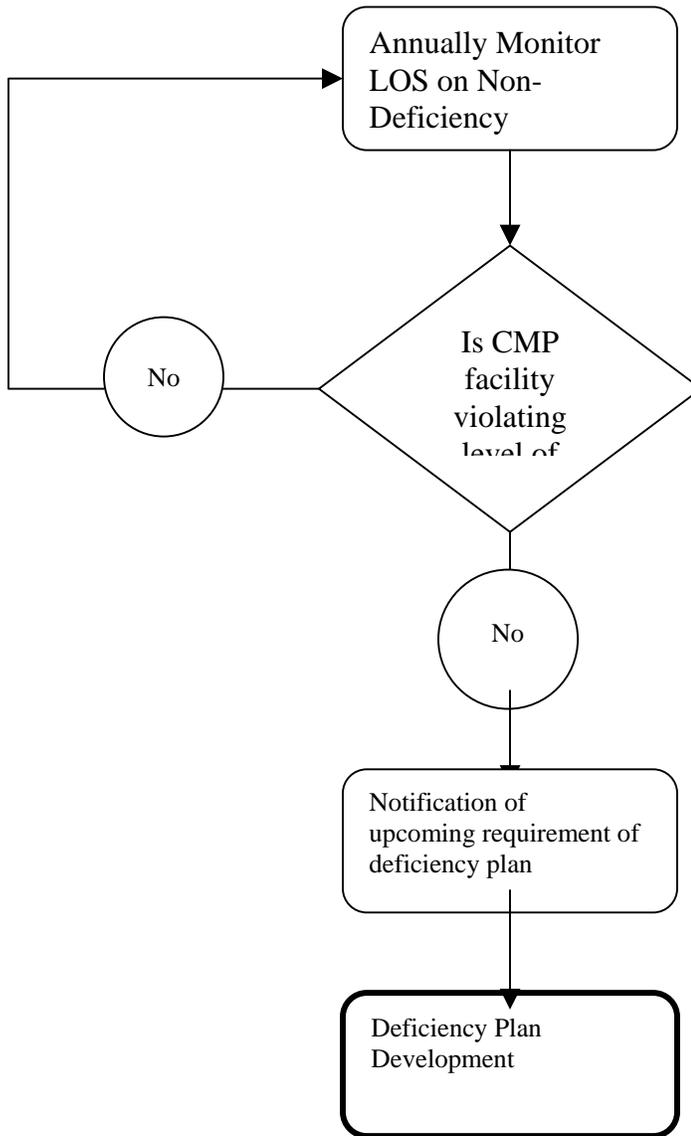


Figure C
DEFICIENCY PLAN DEVELOPMENT

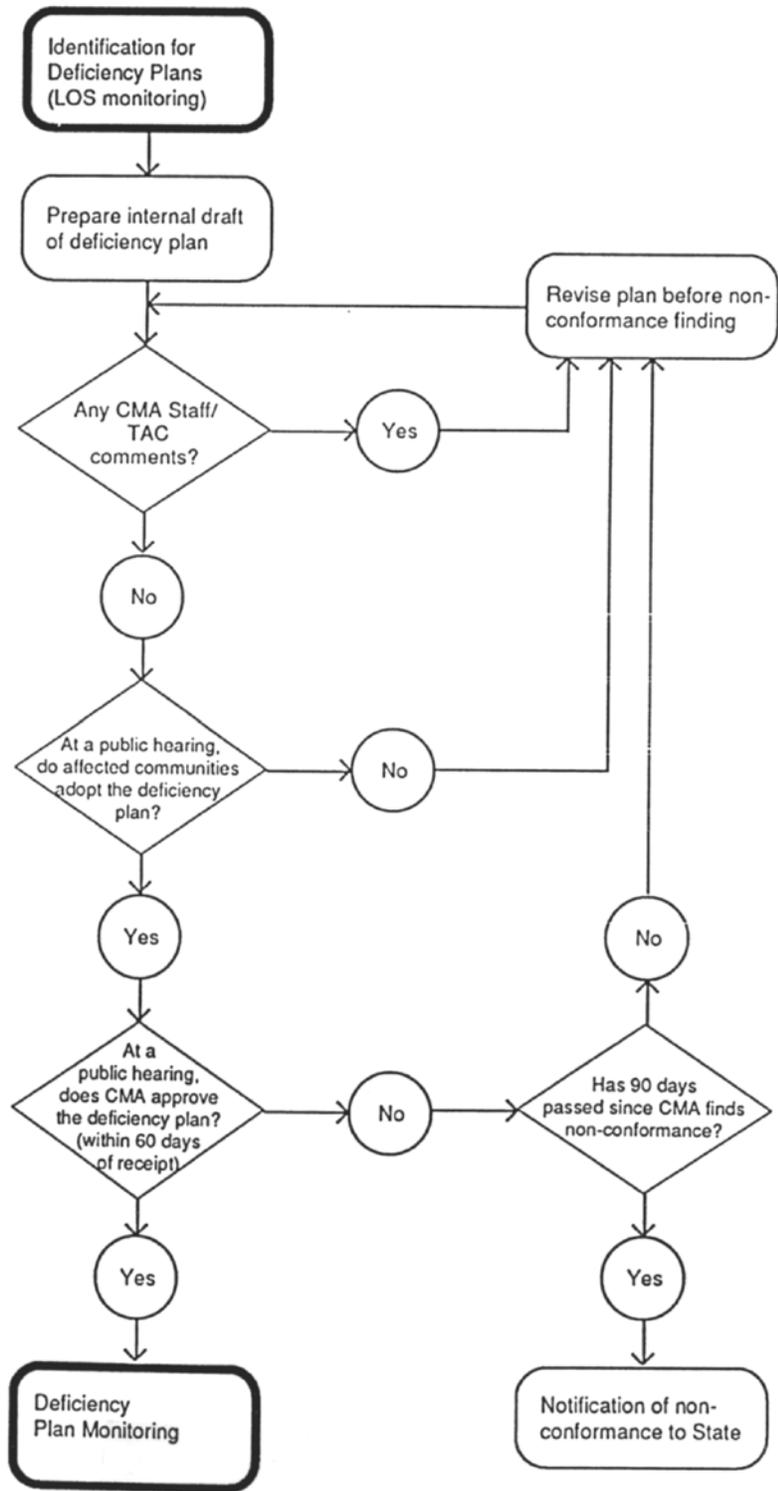
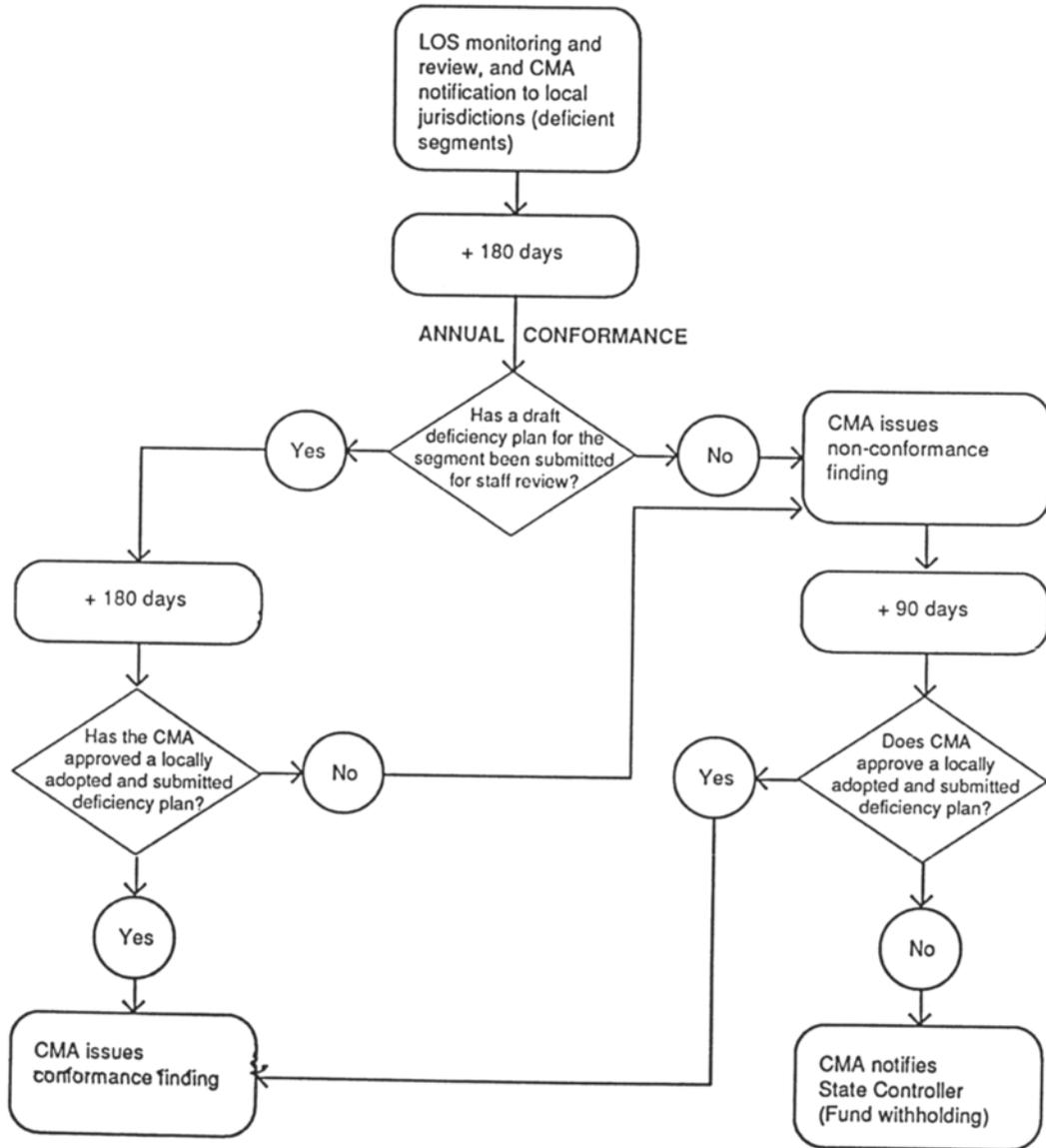


Figure D
APPROVAL PROCESS AND TIME LINES FOR DEFICIENCY PLANS



Time Allowed for Deficiency Plan Preparation (from LOS Notification)

1. If deficiency plan ready at annual monitoring: 180 days
2. If deficiency plan not ready at annual monitoring but approved during 1st cycle: 180 + 180 = 360 days
3. If no plan was prepared: 180 + 90 = 270 days
4. If deficiency plan was not ready at annual conformance monitoring and was rejected once: 180 + 180 + 90 = 450 days

Figure E
DEFICIENCY PLAN MONITORING

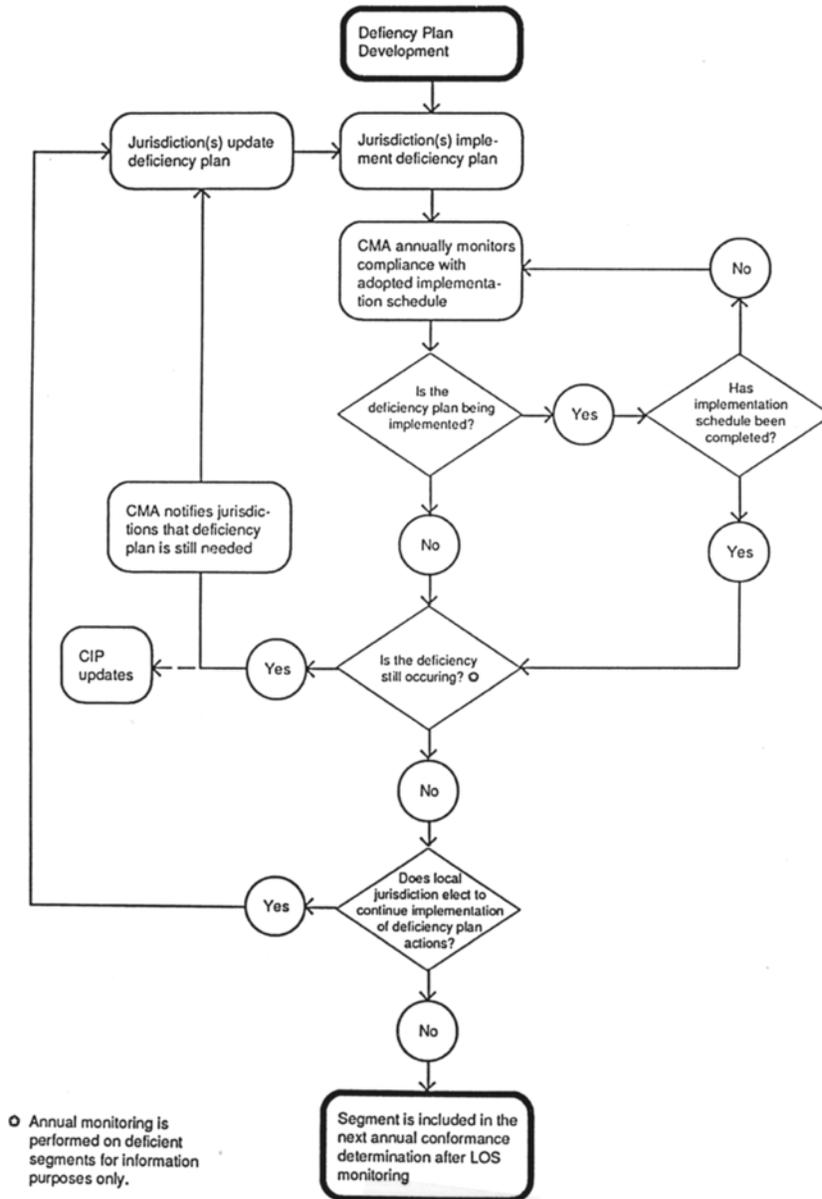


Figure F
GENERAL IMPROVEMENT PLAN PROCESS

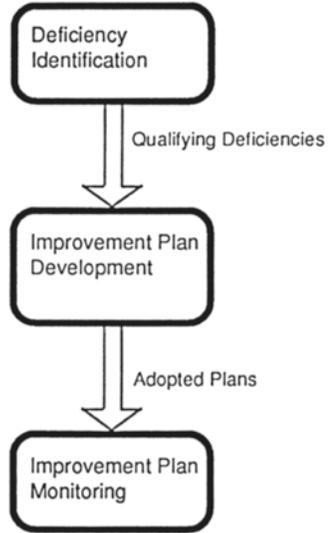


Figure G
IDENTIFICATION FOR IMPROVEMENT PLANS

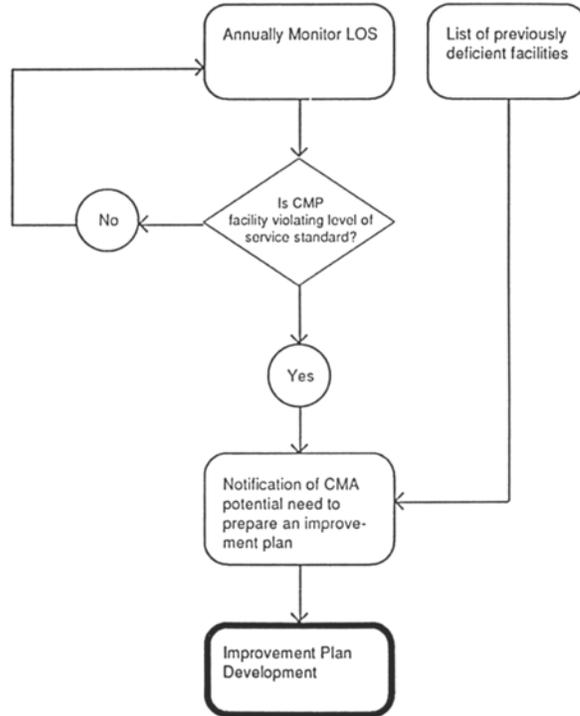


Figure H
IMPROVEMENT PLAN DEVELOPMENT

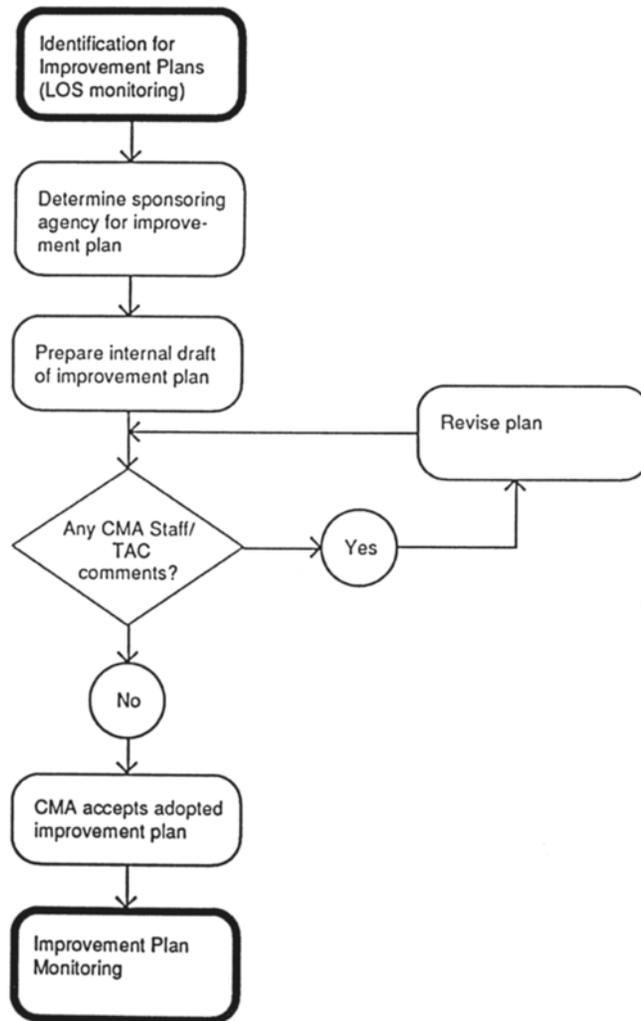
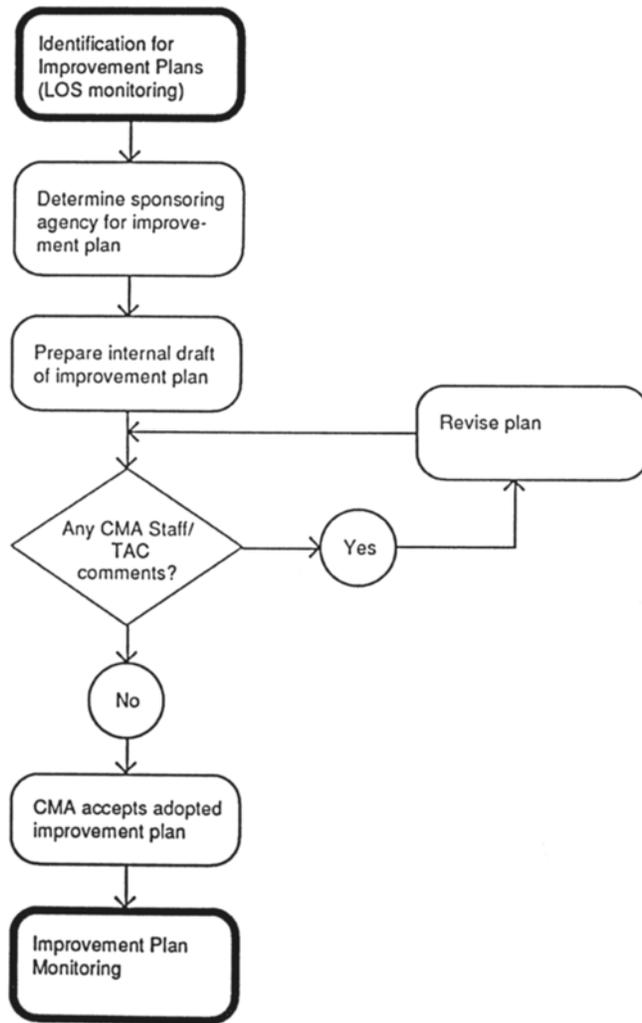


Figure H
IMPROVEMENT PLAN DEVELOPMENT



Development of Deficiency Plans

1. The CMA will designate one local jurisdiction to be the lead on preparing and submitting a deficiency plan. That jurisdiction would follow these steps:
 - That jurisdiction should develop a work strategy by which to develop a draft plan in the adopted time frame. The draft plan should include a plan for other designated jurisdictions to participate and provide feedback. A draft plan should address these points:
 - The deficiency must be described in terms of its cause and magnitude (such as needed reduction in traffic to raise speed to the level of service standard.)
 - Actions considered to remedy the specific deficiency should be considered. If no action can be developed to remedy that specific deficiency, alternative actions to improve level of service on the CMP network shall be considered.
 - If actions are considered which are intended to improve LOS on the CMP network, those actions listed in the Bay Area Air Quality Management District guidelines for deficiency plans, and other possible actions identified by affected jurisdictions and approved by the BAAQMD should be given a suitability assessment (See *Appendix B*). Suitable system actions should be evaluated at a sketch-planning level for potential effects on system-wide traffic congestion and air quality (traffic analyses or model forecasts may be required).
 - A detailed action plan should be developed, including description of the selected actions, anticipated costs and related funding sources, and a corresponding implementation schedule.
2. A draft plan should be reviewed by CMA staff and the technical committee. These groups should coordinate with the local jurisdiction where desired to develop a deficiency plan acceptable to that jurisdiction and the CMA.
- 3a. To meet legislative compliance, a final deficiency plan must be adopted by the affected local jurisdictions at a noticed public hearing not later than 90 days following notification of the annual conformance findings of the CMA.

Also for plans required to obtain legislative compliance, a final plan must be approved by the CMA. The CMA will approve or reject a deficiency plan within 60 days of receipt of the deficiency plan from the local jurisdiction.
- 3b. Because improvement plans do not need legislative compliance, their adoption procedure is simplified. Local jurisdictions may submit their improvement plan, or endorse an improvement plan submitted through the CMA.

Implementation Monitoring. Deficiency and improvement plans should be monitored annually by the CMA, prior to annual conformance determination, to establish:

- a) whether they are being implemented according to the schedule detailed in their specific action plans; and
- b) whether changes have occurred that require modifications of the original deficiency plan or schedule.

The plan should include a schedule for implementation of the proposed actions. Compliance with the stated schedule will be monitored annually at the time of conformance determination. A jurisdiction which is either not implementing the actions stipulated in the approved deficiency plan, or not adhering to the stated schedule may be found in non-conformance if the deficiency still exists. Once the action plan is implemented, an evaluation to recognize a measurable improvement will determine if the plan should be updated or if the roadway can be returned to level of service monitoring as its conformance determination. Action plans will be incorporated into future CMP documents.

The evaluation may result in recommended changes in other elements of the CMP, such as the capital improvements program (CIP) or trip reduction ordinances (TROs).

Process for Deficiency Plan Update. To facilitate the approval process, minor updates to deficiency and improvement plans should be accepted by the Congestion Management Agency Board. The affected jurisdiction(s) may submit a notice to the CMA stating the reason and the content of the update to their plan. The CMA board would then approve or reject the request for the update. Should the CMA reject the request, the existing deficiency plan would remain in place.

Development of Improvement Plans

If an improvement plan need is identified, staff from CMA and the affected local jurisdictions should meet to determine what the contents and objective of the plan should be. At a minimum, an improvement plan should contain:

- An analysis of the causes of the deficiency
- An indication of the potential future need of a deficiency plan if no improvement plan is implemented
- Potential actions to be considered to remedy the deficiency's impact
- Recommendations which are intended to prevent the need for a deficiency plan

Although no adoption is required, review by the CMA staff, technical committee, CMA board and affected local jurisdictions governing boards should be provided.

4. Methodology

General Approach to Deficiency and Improvement Plan Analysis. The scope for the deficiency plan actions should be matched to the severity of the problem. Extreme deficiencies will need more significant actions; minor deficiencies need only minor actions.

Calculation of Deficiency. The magnitude of the deficiency should be determined as the amount of traffic on a road segment that is above its level of service capacity.

Available Action Tools. Action tools fall into one of two categories: improvements designed to directly mitigate the specific deficiency, and improvements designed to improve LOS on the CMP network and provide air quality improvements

The first type of action tools are intended to directly mitigate a deficiency. These include highway, transit and other mode improvements.

The second type of action tools are intended to provide measurable improvements to air quality and LOS on the CMP network in cases where deficiencies on specific segments or at specific intersections cannot be mitigated directly. For these, the Bay Area Air Quality Management District has developed a list of available deficiency plan actions, which are considered beneficial for air quality and congestion management. Jurisdictions may include actions other than those on this list, provided that they are reviewed and approved by the BAAQMD prior to adoption of the plan.

When developing a plan, the most current Bay Area Air Quality Management District list of actions should be consulted. Actions currently on the BAAQMD list are shown in Appendix A.

Identification of Preferred Implementation Actions. Beginning with the Bay Area Air Quality Management District list, a jurisdiction should have a number of preferred implementation actions available to it. To assist jurisdictions with the selection of preferred actions, a suitability screening table has been prepared (Appendix B).

Format. Deficiency and improvement plan reports should be as easy as possible to prepare and reproduce. The Congestion Management Agency staff should be available as a technical resource in the preparation of deficiency plans.

Reports should be submitted on copy-ready single-sided 8 and 1/2 by 11 paper, and will contain the following sections:

Introduction and Setting. A short description of the facility, including a map showing its location.

Deficiency Analysis. An explanation of what are the likely causes of the deficiency, and a quantitative assessment of the magnitude of the deficiency.

Screening of Actions. A suitability screening table of possible actions and a sketch-planning level evaluation of most suitable actions.

Evaluation of Suitable Actions. A determination of whether to remedy the deficiency on the specific link, or to measurably improve air quality and the LOS on the CMP network.

Implementation Plan. A description of the proposed implementation actions and their costs, and dates for implementation and completion of deficiency plan actions.

Appendix A: Approved Systemwide Deficiency Plan Actions on Bay Area Air Quality Management District List

Actions adopted November 4, 1992 include:

- Bicycle and Pedestrian Measures

- Improved roadway bicycle facilities and bike paths
- Transit and bicycle integration
- Bicycle lockers and racks at park-and-ride lots
- Bicycle facilities and showers at developments
- Improved pedestrian facilities
- Pedestrian signals Lighting for pedestrian safety

- Transit

- Improvement of bus, rail and ferry transit services
- Expansion of rail transit services
- Expansion of ferry services
- Preferential treatment for buses and in-street light rail vehicles
- Transit information and promotion
- Transit pricing strategies to encourage ridership and, where applicable, reduce transit vehicle crowding
- Transit fare subsidy programs
- Transit centers
- Improved and expanded timed transfer programs
- Improved and expanded fare coordination
- Signal preemption by transit vehicles
- Bus stop bulbs
- School bus transit service

- Carpooling, Buspooling, Vanpooling, Taxipooling, Jitneys, Casual Carpooling and Other Shared Rides (Ridesharing)

- Preferential treatment for shared ride vehicles
- Increased use of commuter/employer services

- High-Occupancy Vehicles (HOV) Facilities

- Preferential treatment for **HOVs**
- Bus and carpool/buspool/vanpool/taxipool priority lanes on local arterials Accelerated implementation of the 2005 HOV Master Plan
- HOV to HOV facilities
- Direct HOV lane entrance/exit ramps to arterials and special generators

- Other TCMs, Related Measures

- Stricter travel demand management/trip reduction ordinance
- Expanded public education programs
- Child care facilities at or close to employment sites, transit centers and park-and-ride lots
- Retail services at or close to employment sites, transit centers and park-and-ride lots
- Telecommuting centers and work-at-home programs
- Parking management
- Parking "cash-out" program/travel allowance
- Land use measures

•Traffic Flow Improvements

- Preferential treatment of HOVs
- Ramp metering
- Auxiliary lanes of up to one mile in length where HOV lanes are provided
- Signalization improvements
- Computerized traffic and transit control/management on arterials
- Turn lanes at intersections
- Turn restrictions at intersections
- Reversible lanes
- One-way streets
- Targeted traffic enforcement programs
- Restrictions oil curb side deliveries and on-street parking

Appendix B
Suitability Screening for Available Actions
(Deficiency Plan Actions Approved by BAAQMD)

Available Actions	Consistency with Local General Plan	Effect on Local Economy	Relationship to Causes of Deficiency	Anticipated Effect on Travel Behavior	Anticipated Effect on Existing Residents/Property Owners	Anticipated Implementation Costs	Overall Suitability
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Bicycle and Pedestrian Measures

- Improved roadway bicycle facilities and bike paths
- Transit and bicycle integration
- Bicycle lockers and racks at park-and-ride lots
- Bicycle facilities and showers at developments
- Improved pedestrian facilities
- Pedestrian signals
- Lighting for pedestrian safety

Transit

- . Improvement of bus, rail and ferry transit services
 - Expansion of rail transit services
 - Expansion of ferry services
 - Preferential treatment for buses and in-street light rail vehicles
 - Transit information and promotion
 - Transit pricing strategies to encourage ridership and, where applicable, reduce transit vehicle crowding
 - Transit fare subsidy programs
 - Transit centers
 - Improved and expanded timed transfer programs
 - Improved and expanded fare coordination
 - Signal preemption by transit vehicles
 - Bus stop bulbs
 - School bus transit service

CC113 ranked from I to 4, where I - not suitable and 4 = clearly suitable.

Appendix B (continued)
Suitability Screening for Available Actions
(Deficiency Plan Actions Approved by BAAQMD)

Available Actions	Consistency with Local General Plan	Effect on Local Economy	Relationship to Causes of Deficiency	Anticipated Effect on Travel Behavior	Anticipated Effect on Existing Residents/Property Owners	Anticipated Implementation Costs	Overall Suitability
<p>Carpooling, Buspooling, Vanpooling, Taxipooling, Jitneys, Casual Carpooling, and Other Shared Rider (Ridesharing)</p> <ul style="list-style-type: none"> - Preferential treatment for shared ride vehicles - Increased use of commuter/employer services 							
<p>High-Occupancy Vehicles (HOV) Facilities</p> <ul style="list-style-type: none"> - Preferential treatment for HOVs - Bus and carpool/buspool/vanpool/taxipool priority lanes on local arterials - Accelerated implementation of the 2005 HOV Master Plan - HOV to HOV facilities - Direct HOV lane entrance/exit ramps to arterials and special generators 							
<p>Other TCMs, Related Measures</p> <ul style="list-style-type: none"> - Stricter travel demand management/trip reduction ordinance - Expanded public education programs - Child care facilities at or close to employment sites, transit centers and park-and-ride lots - Retail services at or close to employment sites, transit centers and park-and-ride lots - Telecommuting centers and work-at-home programs - Parking management - Parking "cash-out" program/travel allowance - Land use measures 							
<p>1 Cells ranked from I to 4, where I = not suitable and 4 = clearly suitable.</p>							

Appendix B (continued)
Suitability Screening for Available Actions¹
(Deficiency Plan Actions Approved by BAAQMD)

Available Actions	Consistency with Local General Plan	Effect on Local Economy	Relationship to Causes of Deficiency	Anticipated Effect on Travel Behavior	Anticipated Effect on Existing Residents/ Property Owners	Anticipated Implementation Costs	Overall Suitability
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Traffic Flow Improvements

- Preferential treatment of HOVs
- Ramp metering
- Auxiliary lanes of up to one mile in length where HOV lanes are provided
- Signalization improvements
- Computerized traffic and transit control/management on arterials
- Turn lanes at intersection&
- Turn restrictions at intersections
- Reversible lanes
- One-way streets
- Targeted traffic enforcement programs
- Restrictions on curb side deliveries and on-street parking

Cells ranked from I to 4, where I - not suitable and 4 = clearly suitable.

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Appendix C: Glossary

AVR (Average Vehicle Ridership). The number of employees reporting to a worksite during the peak period, divided by the number of vehicles those employees use to arrive at the worksite.

Baseline LOS. The level of service included in the initial CMP.

CIP (Capital Improvement Program). A list of physical improvements to the transportation system (including roads, transit facilities, pedestrian and bicycle facilities).

CMA. Marin County's Congestion Management Agency. The CMA is a countywide organization responsible for preparing and implementing the county's CMP. CMAs came into existence as a result of state legislation and voters' approval of Proposition I I I in 1990.

CMA Model. The Marin County travel model. It is currently monitored by the Marin County Department of Public Services.

CMP. Marin County's Congestion Management Program. Updated biennially, a CMP sets performance standards for roadways and public transit, and shows how local jurisdictions will attempt to meet those standards through TDM strategies (including a TRO), land use strategies, and a seven-year capital improvements program. A CMP is necessary in order to qualify for certain funds made available through the state gas tax increase authorized in **1990**. CMPs must be consistent with the RTP.

ETC (Employee Transportation Coordinator). A person designated to develop and manage an employer's TDM program.

Funded Transportation Projects. Those projects funded for construction. This includes all projects in the State Transportation Improvement Program (STIP).

HCM. The Transportation Research Board's Special Report Number 209, entitled 1985

Highway Capacity Manual.

HOV Lane (High Occupancy Vehicle Lane). The technical term for a carpool lane, commuter lane or diamond lane.

Internal Trips. Those trips expected to have both their origin and destination within specific development projects. For example, if a project consists of office space and residential space, internal trips shall consist of trips by residents of the development project to offices within the development project. The purpose of estimating internal trips is to prevent double counting of trips in trip generation. In the example above, if one trip was assumed to come from the

housing and one trip was assumed to come to the office, when in fact it was the same trip, the estimated trip generation from the project would be too high.

ITE. Institute of Transportation Engineers

IVHS (Intelligent Vehicle Highway Systems). Refers to a wide range of advanced electronics and communications technology applied to roads and vehicles. Designed to improve safety and productivity, IVHS also can have a positive impact on air quality by cutting congestion.

Lead Agency. The local jurisdiction that has responsibility for certifying a lane use development project's CEQA environmental analysis.

LOS (Level of Service). This is the measure used by transportation professionals to grade performance of transportation facilities. LOS is graded on a scale of A (the best performance) to F (the worse performance).

Member Agency. A local jurisdiction that is a signatory of CMA's Joint Powers Agreement.

Network. The representation of transportation facilities for use in the model.

Passer-By Trips. Those trips estimated to be generated by a development project that will come from traffic already on the transportation system and will merely stop on its way. Passerby trips are important for shopping and commercial development where it is likely that people on their way home from work will stop without generating a new trip.

Peak Hour. The peak hour of traffic volumes in the area surrounding a development project.

Peak Periods. Between the hours of 6:00 A.M. and 9:00 A.M. and between 3:30 P.M. and 6:30 P.M. on non-holiday weekdays.

PMS (Pavement Management System). A computer-assisted program for diagnosing the need for roadway improvements in a timely, cost-effective manner. The Metropolitan Transportation Commission has developed a standard PMS system.

Responsible Jurisdiction. The local jurisdiction is responsible for preparing a deficiency plan (the city or county in which the deficient facility is located).

TCM (Transportation Control Measures). Strategy to reduce driving or smooth traffic flows in order to cut auto emissions.

TDM (Transportation Demand Management). Methods to reduce the number of automobiles on the transportation system; examples include programs to promote telecommuting, flextime and ridesharing.

TMA (Transportation Management Association). A voluntary group set up by employers to develop strategies for reducing vehicle trips within a certain area.

TOS (Traffic Operations System). In the Bay Area, California Department of Transportation and the CHP will monitor traffic flows by means of detectors embedded in pavement and closed-circuit television cameras, quickly dispatching tow trucks and other assistance. Signs and radio messages will alert drivers to trouble ahead, while ramp metering will control traffic flows. By the year 2000, all 500 miles of the Bay Area's freeways should be TOS-equipped.

Transportation Facility. Any part of the designated CMP system, including roadways, intersections, freeways, bicycle facilities, pedestrian facilities and transit facilities.

TRO (Trip Reduction Ordinance). A TRO is an ordinance that requires employers to meet certain trip-reduction goals and objectives. A TRO is required under the CMP and CCAA legislation. The Bay Area Air Quality Management District has prepared a regional TRO for the Bay Area.

TSN1 (Transportation Systems Management). Low-cost improvements to make the transportation system work more efficiently, such as traffic signal coordination.

VER (Vehicle Employee Ratio). The number of vehicles used by employees who start work at a worksite during the peak period, divided by the number of those employees. VER is the reciprocal of AVR.