

North San Jose Deficiency Plan

**Prepared for:
City of San Jose**

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Executive Summary

This report sets forth a plan to address existing and anticipated deficiencies in the level of service (LOS) of intersections in North San Jose that are identified as part of the Valley Transportation Authority (VTA) Congestion Management Program (CMP). The deficiencies are projected to occur with the proposed intensification of future development within the North San Jose area. The objective of the North San Jose Deficiency Plan (NSJDP) is to identify and implement a set of measures that will improve transportation conditions and air quality in North San Jose. Further, it is the objective of the NSJDP to set forth a comprehensive solution to LOS deficiencies at CMP intersections in North San Jose to avoid the need for strict adherence to LOS standards at CMP intersections for which no localized mitigation is feasible.

Exceedance of LOS Standards

Nine of the 12 CMP intersections that are the subject of this Deficiency Plan are currently operating within the CMP LOS standard but all are expected to degrade to LOS F at sometime in the future. The City of San Jose has identified improvements for five of these intersections that will improve the level of service at the intersections to LOS E or better. Improvements for six other intersections have been identified that will improve intersection operations but not enough to meet the CMP LOS standard of E. The remaining intersection has been studied to identify possible improvements, but the City of San Jose has determined that the improvements required to meet LOS standards are not feasible. Table ES-1 presents projected intersection levels of service conditions for each of the 12 deficient intersections along with proposed improvement descriptions and estimated costs.

Intersection levels of service calculations were conducted as part of the “*North San Jose Development Policy*” traffic study prepared in January 2005. Results of the analysis indicate that 12 of the 22 CMP designated intersections located within North San Jose are projected to operate at LOS F or worse under project conditions. Improvements have been identified for 11 of the 12 intersections as part of this Deficiency Plan. The proposed improvements would greatly enhance circulation within and to North San Jose. Nevertheless, 8 CMP intersections within North San Jose will continue to operate at unacceptable levels. The deterioration of the identified intersections is projected to occur regardless of the planned development levels of the North San Jose Development Policy. The proposed improvements will serve to support future traffic to the maximum extent feasible. In addition to those improvements described for CMP intersections, improvements to other intersections are proposed to further improve the overall levels of service on the North San Jose transportation system. Table ES-2 presents a summary of operating

levels of each of the CMP within North San Jose.

Offsetting Roadway Improvements

The City of San Jose has identified several physical improvements to non-CMP intersections that will further offset CMP deficiencies. The improvements will serve to improve the overall operations of the North San Jose roadway network. The addition of new streets and physical improvements to non-CMP facilities will help alleviate congestion along the major arterials in North San Jose. Table ES-3 presents the offsetting improvements with cost estimates to non-CMP facilities located within North San Jose. Improvements were also identified at intersections and roadway facilities outside of North San Jose at which the anticipated traffic from North San Jose development will have an adverse effect. These additional facilities are not detailed since they are not located within North San Jose, but the improvements will serve to improve the overall operations in the city.

Transit, Bicycle, Pedestrian, and TDM Actions

The planned growth within the North San Jose area will require that the already extensive transit system within the North San Jose area be enhanced. The high density transit oriented proposed project development plan characterized by mixed land uses and high rise buildings along the North First Street creates opportunities for strong transit demand along with the need to implement pedestrian and bicycle facility improvements to reduce auto travel. The City of San Jose will work with VTA as the North San Jose area develops to find a mutually agreeable process to implement transit improvements. The planned specific transit/bicycle/pedestrian improvements are described in Table ES-4.

Additionally, offsetting actions from Immediate Implementation Action List of the VTA will be implemented by the City of San Jose. The actions will serve to offset deficiencies in the CMP transportation system anticipated by this plan.

Summary of Improvement Costs

In total, approximately \$519 million in needed roadway/intersection and transit/pedestrian/bicycle facility improvements have been identified in North San Jose as well as other parts of the city where it is expected that traffic associated with North San Jose development would have adverse effects. Table ES-5 itemizes the transportation improvement projects identified in this report and associated costs.

Table ES 1

Future Conditions CMP Intersection Levels of Service with Proposed Improvements

	Peak Hour	Future Conditions No Improvements		Future Conditions w/Improvements		Proposed Improvement	Funding	Estimated Cost
		Ave. Delay/a/	LOS	Ave. Delay/a/	LOS			
North First Street and SR 237 (South)	AM	34.7	C	27.9	C	Reconstruct interchange overpass	NSJ Impact Fee	\$7,000,000
	PM	139.6	F	49.8	D			
North First Street and Montague Expressway	AM	216.2	F	100.6	F	Widen Montague Expressway	NSJ Impact Fee	\$18,000,000
	PM	239.3	F	133.1	F			
Zanker Road and Montague Expressway	AM	274.7	F	66.8	E	Widen Zanker Road	NSJ Impact Fee	\$49,000,000
	PM	329.9	F	163.9	F			
Trimble Road and Montague Expressway	AM	47.7	D	21.5	C	Construct eastbound Montague to southbound Trimble Flyover	NSJ Impact Fee	\$30,000,000
	PM	555.6	F	52.5	D			
McCarthy Boulevard and Montague Expressway	AM	191.1	F	34.7	C	Replace at-grade intersection with square-loop interchange	NSJ Impact Fee	\$68,000,000
	PM	389.5	F	57.5	E			
Old Oakland Road and Montague Expressway	AM	233.1	F	173.5	F	Widen Montague Expressway Add second southbound left-turn lane	NSJ Impact Fee	\$500,000
	PM	217.3	F	114.4	F			
North First Street and Trimble Road	AM	118.5	F	86.2	F	Add second eastbound left-turn lane Add exclusive westbound right-turn lane	NSJ Impact Fee	\$1,000,000
	PM	123.4	F	101.0	F			
Zanker Road and Trimble Road	AM	120.3	F	63.7	E	Widen Zanker Road Add second eastbound and southbound left-turn lanes	NSJ Impact Fee	/c/
	PM	294.7	F	210.4	F			
North First Street and Brokaw Road*	AM	89.6	F			No Feasible Improvements		
	PM	96.2	F					
Zanker Road and Brokaw Road	AM	224.7	F	96.1	F	Widen Zanker Road Add second eastbound, northbound and southbound left-turn lanes	NSJ Impact Fee	/c/
	PM	198.2	F	105.2	F			
Old Oakland Road and Brokaw Road	AM	80.7	F	79.0	E	Widen Oakland Road	Funded	/d/
	PM	79.1	E	72.3	E			
Trade Zone Boulevard and Montague Expressway	AM	156.2	F	52.7	D	Add second northbound and southbound left-turn lanes Add westbound free-right turn lane	NSJ Impact Fee	\$2,175,000
	PM	119.6	F	70.0	E			
Total Cost								\$175,675,000

Notes:

/a/ Reported delay based on average control delay as calculated by TRAFFIX using HCM 2000 methodology

/b/ Calculated level of service based on worst case intersection LOS assuming lane configurations for two new intersections of square-loop interchange.

/c/ Part of Zanker Road widening cost of \$49,000,000 presented for Zanker/Montague

/d/ Improvement funding of \$1,000,000 is already in place.

* No feasible improvements

**Table ES 2
CMP Intersection Future Conditions Level of Service Summary**

	Peak Hour	Year 2000 Existing		Future Conditions No Improvements		Future Conditions w/Improvements	
		Ave. Delay/a/	LOS	Ave. Delay/a/	LOS	Ave. Delay/a/	LOS
#3026 North First Street and SR 237 (North)	AM	16.0	B	18.3	B	18.3	B
#3026	PM	16.8	B	21.0	C	21.0	C
#3027 North First Street and SR 237 (South)	AM	23.4	C	34.7	C	27.9	C
#3027	PM	25.0	C	139.6	F	49.8	D
#3030 Zanker Road and SR 237 (North)	AM	8.8	A	9.1	A	9.1	A
#3030	PM	13.4	B	11.6	B	11.6	B
#3031 Zanker Road and SR 237 (South)	AM	18.2	B	19.2	B	19.2	B
#3031	PM	12.4	B	14.6	B	14.6	B
#5807 North First Street and Montague Expressway	AM	63.3	E	216.2	F	100.6	F
#5807	PM	119.7	F	239.3	F	133.1	F
#5812 Zanker Road and Montague Expressway	AM	42.5	D	274.7	F	66.8	E
#5812	PM	54.9	D	329.9	F	163.9	F
#5808 Trimble Road and Montague Expressway	AM	23.5	C	47.7	D	21.5	C
#5808	PM	50.4	D	555.6	F	52.5	D
#5809 McCarthy Boulevard and Montague Expressway	AM	48.2	D	191.1	F	190.5	F
#5809	PM	119.3	F	389.5	F	304.1	F
#5801 Old Oakland Road and Montague Expressway	AM	78.0	E	233.1	F	173.5	F
#5801	PM	88.8	F	217.3	F	114.4	F
#3096 De La Cruz Boulevard and Trimble Road	AM	33.8	C	34.8	C	34.8	C
#3096	PM	53.4	D	53.6	D	63.0	E
#3098 North First Street and Trimble Road	AM	44.7	D	118.5	F	86.2	F
#3098	PM	50.0	D	123.4	F	101.0	F
#3119 Zanker Road and Trimble Road	AM	35.0	D	120.3	F	63.7	E
#3119	PM	53.8	D	294.7	F	210.4	F
#3083 North First Street and Brokaw Road*	AM	46.9	D	89.6	F	89.6	F
#3083	PM	44.6	D	96.2	F	96.2	F
#3020 US 101 and Brokaw Road	AM	28.5	C	42.2	D	42.2	D
#3020	PM	31.9	C	38.1	D	38.1	D
#3085 Zanker Road and Brokaw Road	AM	49.0	D	224.7	F	96.1	F
#3085	PM	59.7	E	198.2	F	105.2	F
#3051 I-880 and Brokaw Road (West)	AM	36.6	D	47.2	D	47.2	D
#3051	PM	28.7	C	43.2	D	34.6	C
#3050 I-880 and Brokaw Road (East)	AM	20.4	C	35.1	D	35.1	D
#3050	PM	19.1	B	25.2	C	19.9	B
#3084 Old Oakland Road and Brokaw Road	AM	52.4	D	80.7	F	79.0	E
#3084	PM	43.5	D	79.1	E	72.3	E
#3054 North First Street and I-880 (North)	AM	15.8	B	8.6	A	8.6	A
#3054	PM	10.5	B	16.9	B	16.9	B
#3055 North First Street and I-880 (South)	AM	22.0	C	27.3	C	27.3	C
#3055	PM	17.4	B	23.8	C	23.8	C
#3106 Lundy Avenue and Murphy Avenue	AM	45.0	D	50.7	D	50.7	D
#3106	PM	43.9	D	60.0	E	60.0	E
#5802 Trade Zone Boulevard and Montague Expressway	AM	45.8	D	156.2	F	52.7	D
#5802	PM	75.8	E	119.6	F	70.0	E

Notes:

/a/ Reported delay based on average control delay as calculated by TRAFFIX using HCM 2000 methodology

**Table ES 3
Future Conditions Intersection Levels of Service with Proposed Improvements -Non-CMP Facilities**

	Peak Hour	Future Conditions No Improvements		Future Conditions w/Improvements		Proposed Improvement	Funding	Estimated Cost
		Ave. Delay/a/	LOS	Ave. Delay/a/	LOS			
Roadway Improvements								
Grid System							NSJ Impact Fee	\$55,000,000
Zanker Rd. Widening							NSJ Impact Fee	See Note /b/
Zanker Rd./Skyport Dr. Connection							NSJ Impact Fee	\$64,000,000
US 101/Trimble Rd. Interchange							NSJ Impact Fee	\$27,000,000
Charcot Avenue Extension							NSJ Impact Fee	\$32,000,000
Mabury Interchange							NSJ Impact Fee	\$43,000,000
							Sub-Total	\$221,000,000
Intersection Improvements								
Zanker Road and Tasman Drive	AM	47.2	D	43.4	D	Add second eastbound and westbound left-turn lanes	NSJ Impact Fee	\$2,000,000
	PM	76.3	E	60.3	E			
North First Street and Charcot Avenue	AM	158.7	F	80.5	F	Add exclusive westbound and eastbound right-turn lanes	NSJ Impact Fee	\$2,000,000
	PM	92.3	F	65.1	E	Add second southbound left-turn lane		
North First Street and Metro Drive	AM	21.2	C	17.6	B	Add second eastbound left-turn lane	NSJ Impact Fee	\$250,000
	PM	58.7	E	28.7	C			
Zanker Road and Charcot Avenue	AM	122.2	F	56.6	E	Add second left-turn lane to all approaches	NSJ Impact Fee	\$2,000,000
	PM	187.3	F	61.0	E	Widen Charcot Avenue to 4-lanes		
Junction Avenue and Charcot Avenue	AM	66.6	E	34.9	C	Add second eastbound and westbound left turn lanes	NSJ Impact Fee	\$1,000,000
	PM	179.6	F	39.6	D	Widen Charcot and Junction Avenues		
Bering Drive and Brokaw Road	AM	83.3	F	41.6	D	Add second northbound left-turn lane	NSJ Impact Fee	\$1,000,000
	PM	44.3	D	43.8	D	Add separate southbound left-turn lane		
							Sub-Total	\$8,250,000
							Total Cost	\$229,250,000

Notes:
/a/ Reported delay based on average control delay as calculated by TRAFFIX using HCM 2000 methodology
/b/ Zanker Road widening cost of \$49,000,000 included with CMP facility costs.

**Table ES 4
Transit, Bicycle and Pedestrian Improvements**

Improvement	Cost
Specialized bus/shuttle passenger shelters and other stop and station improvements and amenities.	\$3.0 million
LRT Station Platform improvements including possible widening or lengthening, new passenger shelters and extending shelters to accommodate three-car trains.	\$7.5 million
Lighting, furniture and landscaping at LRT stations, bus stops and key pedestrian locations.	\$2.0 million
Self-cleaning bathrooms (2-4 locations)	\$1.5 million
Real-time information infrastructure and other intelligent transportation systems enhancements at stations and stop areas.	\$1.0 million
Bus Stop duck outs at up to ten locations (priority at @ Tasman LRT station).	\$500k
Shuttles between residential areas, businesses and transit stops/stations. Shuttle service may be pursued by the City of San Jose as conditions of development approvals.	TBD
New bus/shuttle stop locations (notably around the Tasman LRT station) including dedication of Rights-of-Way dedications (ROW dedications will be pursued by the City of San Jose as conditions of development approvals and are not included in this cost estimate.)	\$500k
Bi-directional full priority with ability to cascade calls for green signals for LRT along North First Street from Santa Clara Street (downtown) to Tasman Drive (up to 28 intersections.)	\$1.0 million
LRT operations capital improvements, including but not limited to: <ul style="list-style-type: none"> • Trackway improvements. • Switches. • Tail/storage/layover tracks. • Other improvements to be determined. 	\$15 million
Guadalupe River Trail.	\$10 million
Coyote Creek Trail.	\$10 million
General Bicycle and Pedestrian Improvements, including but not limited to: <ul style="list-style-type: none"> • Bike Lanes and bike sensitive signal detectors. • Bike Racks and bike storage facilities such as cages or electronic bike lockers. • Pedestrian Scale lighting. • Intersection and Crosswalk improvements including but not limited to special pavers or pavement, bollards, pedestrian-activated in pavement lights, countdown signals for pedestrian crossings, narrowing of pedestrian crossing distance including reduced curve radii and/or curb bulbouts, sidewalks along median from intersections to station platform and other safety and aesthetic enhancement. • Curb Ramps. • Other bicycle and pedestrian improvements to be determined. 	\$10.3 million
Total	\$62.3 million

**Table ES 5
Transportation Improvement Cost Summary**

Location (Type)	Cost
NSJ CMP Intersection Improvements	
North First Street & SR237 (South)	\$7,000,000
North First Street & Montague Expressway	\$18,000,000(a)
Zanker Road & Montague Expressway	\$49,000,000(b)
Trimble Boulevard & Montague Expressway	\$30,000,000
McCarthy Boulevard & Montague Expressway	\$68,000,000
Old Oakland Road & Montague Expressway	\$500,000
North First Street & Trimble Road	\$1,000,000
Zanker Road & Trimble Road	See Note c
Zanker Road & Brokaw Road	See Note c
Old Oakland Road & Brokaw Road	See Note d
Trade Zone Boulevard & Montague Expressway	\$2,175,000
Subtotal CMP Intersection Improvements	\$175,675,000
Offsetting Improvements to NSJ Non-CMP Intersections	
North San Jose Grid Street System	\$55,000,000
Zanker Road Widening	See Note c
Zanker Road/Skyport Drive Connection	\$64,000,000
US 101/Trimble Road Interchange	\$27,000,000
Charcot Avenue Extension	\$32,000,000
Mabury Road Interchange	\$43,000,000
Zanker Road & Tasman Drive	\$2,000,000
North First Street and Charcot Avenue	\$2,000,000
North First Street and Metro Drive	\$250,000
Zanker Road and Charcot Avenue	\$2,000,000
Junction Avenue and Charcot Avenue	\$1,000,000
Bering Drive and Brokaw Road	\$1,000,000
Subtotal NSJ Non-CMP Intersection Improvements	\$229,250,000
Other Intersection Improvements Outside of NSJ	51,775,000
Offsetting Action from VTA CMP Immediate Implementation Action List	
Transit, Bicycle, Pedestrian, and TDM Actions	\$62,300,000
Total	\$519,000,000

Notes:

a – Cost associated with the widening of Montague Expressway

b – Cost associated with the widening of Zanker Road

c – Included as part of the Zanker Widening cost listed at Zanker Rd./Montague Expwy.

d – Improvement funding of \$1,000,000 is already in place.

1. Introduction

The purpose of this document is to set forth a plan to address existing and anticipated deficiencies in the level of service (LOS) of intersections in North San Jose that are identified as part of the VTA's Congestion Management Program (CMP). The objective of the North San Jose Deficiency Plan (NSJDP) is to identify and implement a set of measures that will improve transportation conditions and air quality in North San Jose. Further, it is the objective of the NSJDP to set forth a comprehensive solution to LOS deficiencies at CMP intersections in North San Jose to avoid the need for strict adherence to LOS standards at CMP intersections for which no localized mitigation is feasible.

This plan report is organized into six chapters (including this introduction) and one appendix, as follows:

- ❖ Chapter 2 contains a deficiency analysis of roadways and intersections that will exceed the CMP LOS standard, a list and planning-level cost estimates of the physical improvements necessary to maintain the CMP LOS standard on subject intersections, an explanation of why particular intersections cannot be improved to operate with the CMP LOS standard, and an analysis of system-wide benefits to CMP intersections,
- ❖ Chapter 3 identifies physical improvements to non-CMP intersections designed to provide additional offset and sets forth an action list describing how feasible and appropriate actions on the VTA CMP Immediate Implementation Action List will be implemented as part of the deficiency plan,
- ❖ Chapter 4 contains an action plan that describes how deficiency plan actions will be implemented, who bears responsibility for implementation, the source of funding for individual actions, and the timing of implementation,
- ❖ Chapter 5 contains a monitoring program that describes how the City will evaluate the implementation of deficiency plan actions,
- ❖ Chapter 6 describes the reconciliation of CEQA with actions included in the deficiency plan, and
- ❖ Finally, Appendix A contains VTA's CMP Immediate Implementation Action list.

Background

Deficiency Plan Policy

The California State Congestion Management Program (CMP) legislation requires Member Agencies to prepare deficiency plans for CMP intersections located within their jurisdictions that exceed, or are expected to exceed in the future, the CMP traffic level-of-service (LOS) standard. The CMP standard for Santa Clara County is LOS E. The statute requires that deficiency plans improve system-wide traffic level of service and contribute to a significant improvement in air quality. If a CMP System intersection exceeds the LOS standard and does not have a CMP-approved deficiency plan, then the local jurisdiction in which the intersection is located is at risk of losing gas tax revenues provided from Proposition 111 (1991).

Deficiency plans are a logical addition to CMP LOS standards, because in some situations, meeting LOS standards may be impossible or undesirable. For these situations, deficiency plans allow local jurisdictions to adopt innovative and comprehensive transportation strategies for improving system-wide LOS rather than adhering to strict traffic LOS standards that may contradict other community goals. In short, deficiency plans allow Member Agencies to trade off a LOS violation on one CMP intersection for improvements to other facilities or services (e.g. transit, bicycles, walking, or transportation demand management). For example, it may be impossible to improve a CMP intersection to meet the LOS standard because of insufficient right-of-way. With deficiency plans, offsetting improvements, such as higher-density residential development or improved transit service, can be pursued.

A deficiency plan must identify the cause(s) of a deficiency, demonstrate that all feasible improvements have been made to the deficient intersection, and describe actions that will be implemented to compensate for the deficiency.

North San Jose Deficiency Plan Update

In 1994, a Deficiency Plan for North San José was adopted by both the City of San José and the Santa Clara County Congestion Management Agency (which was later combined with the Santa Clara County Transit District to form VTA). During the past eleven years, the City has adhered to the requirements of the deficiency plan, and has implemented many of the improvements and operational actions identified, and/or required of new development approved within the City of San José's North San Jose Area. The *Deficiency Plan for North San José* is now being updated to be consistent with the revised *North San Jose Area Development Policy* adopted in 2005, and to reflect current and planned infrastructure and land use policies in the City.

Deficiency Plan Actions

Deficiency plan actions are transportation improvements, programs, and actions that are implemented to compensate for violations or potential violations of the CMP traffic LOS standard. Under the statute, the Bay Area Air Quality Management District (Air District) is required to prepare a list of deficiency plan actions, improvements, and programs for use in local deficiency plans. According to the statute, actions included in local deficiency plans must be from this list or be approved by the Air District. Air District staff prepared a Deficiency Plan Action List, and the CMP has used the Air District's Deficiency Plan Action List to develop its own action list tailored to Santa Clara County.

The VTA CMP's action list is divided into two categories—immediate implementation actions and deferred implementation actions. Immediate implementation actions are those that Member Agencies can

implement immediately. Deferred implementation actions are actions that cannot be implemented immediately because they require new institutional arrangements and/or specific implementation techniques that must be developed. The VTA CMP requires Member Agencies to implement all feasible and applicable actions on the most current version of the VTA CMP Deficiency Plan Immediate Implementation Action List. Additionally, to further improve transportation conditions, the CMP recommends that Member Agencies include as many actions from the Deferred Implementation Action List as possible.

Deficiency Plan Area Boundary and Deficient Intersections

The North San Jose Deficiency Plan addresses deficiencies throughout North San Jose in an area also known as the Golden Triangle. Figure 1 shows the location of the deficiency plan area boundary and the 12 CMP intersections that have existing or anticipated deficiencies. The Deficiency Plan area is generally bounded by US 101, I-880, and SR 237. The Deficiency Plan Area contains 22 intersections that are part of the CMP system. According to a traffic report prepared for the City of San Jose entitled: “*North San Jose Development Policy*,” 12 of the 22 CMP intersections are projected to be deficient under the desired development levels for North San Jose.

Description of Base Year and Future Conditions

North San Jose Development Traffic Projections

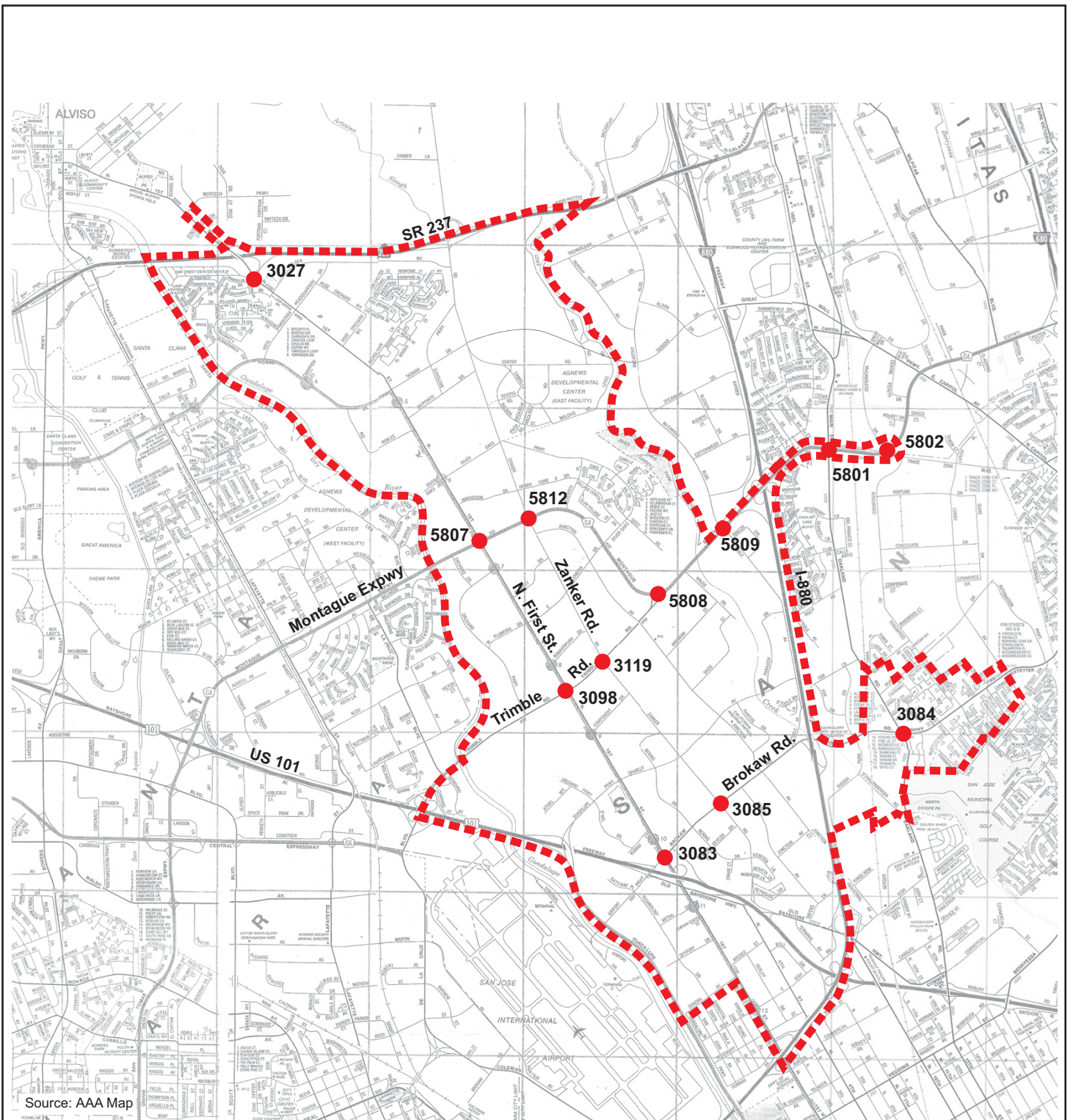
The North San Jose area is primarily an industrial area made up of one to four story buildings housing high-tech companies and other industrial businesses. Though there are some residential developments within the North San Jose area, it has generally been viewed as a major employment center for the city. The proposed North San Jose development levels would allow for the intensification of employment, while also adding additional housing to balance land uses in the North San Jose area. The proposed future development levels for each type of land use, or what is referred to as the “project,” are as follows:

26.7 msf of Industrial Space
1.7 msf of Commercial Space
32,000 residential units

The project’s housing and employment numbers were then aggregated to traffic zones and put into the model to project the future traffic volumes. The project would add approximately 122,000 jobs and 32,000 high-density residential units to the North San Jose area. In addition, the project assumes 18,000 new housing units in potential growth areas within the City of San Jose and other areas within Santa Clara County. Figure 2 presents land uses within the North San Jose Deficiency Plan area.

The VTA Silicon Valley Rapid Transit Corridor (SVRTC) travel demand model, modified by the City’s consultants, was used to estimate the trip making characteristics of the project. There are four major steps in the travel demand forecasting process. First, the trip generation model is applied to calculate the number of (daily) trips produced by the population in the modeled area. Next, the distribution model estimates where the trips are coming from and going to. The mode choice model then estimates which mode of transportation will be chosen for each trip (walk, bike, transit, automobile). And at last, the trip assignment step determines the amount of traffic that will be allocated to each road or transit route.

The model estimated that the project will increase the number of trips within the region by approximately 3% or 622,000 per day. The total number of projected regional trips is approximately 22 million trips. The North



----- = North San Jose Deficiency Plan Area Boundary

● = Deficient Intersection

Figure 1

NORTH SAN JOSE DEFICIENCY PLAN AREA AND DEFICIENT CMP INTERSECTION

North San Jose Deficiency Plan

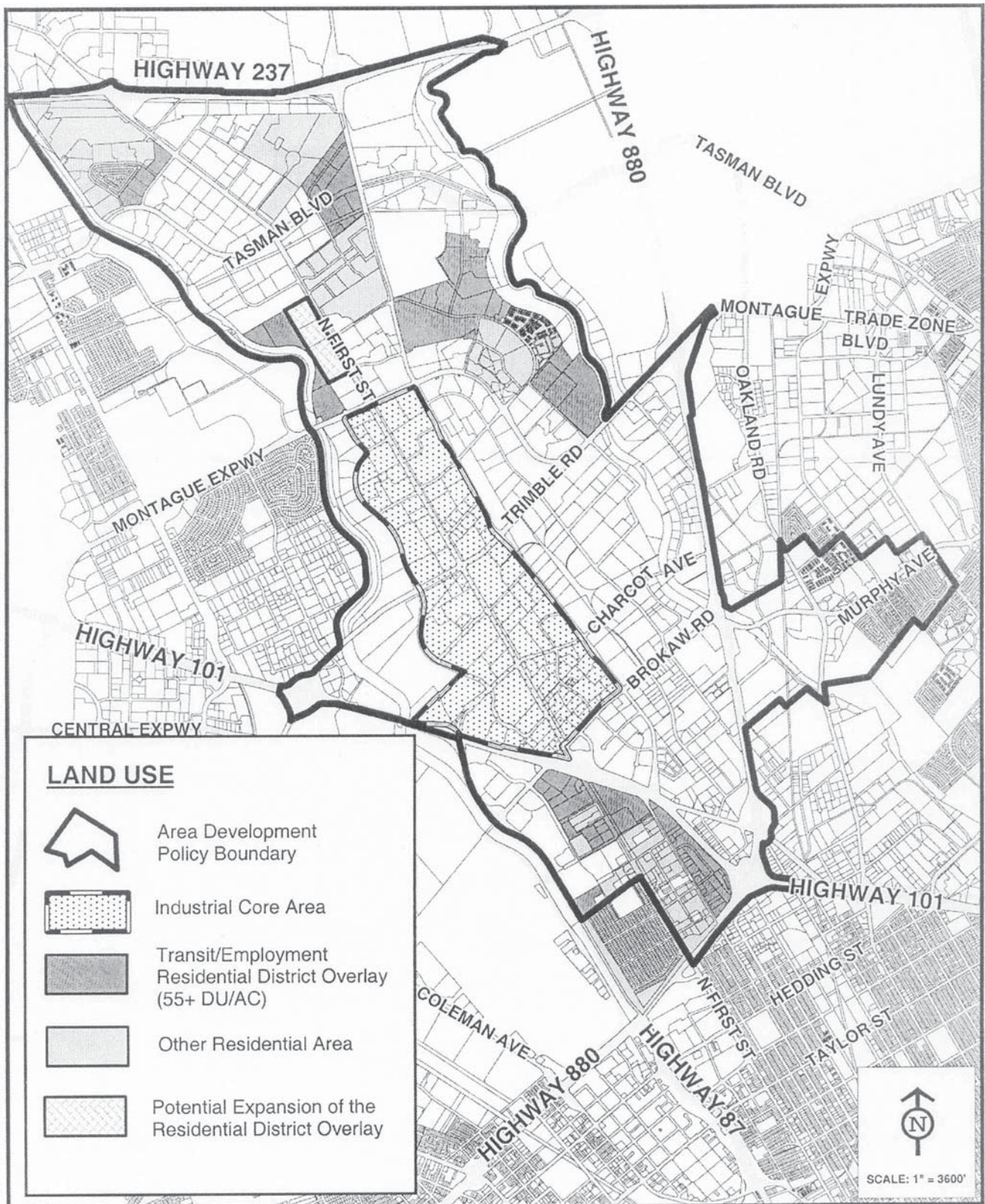


Figure 2

NORTH SAN JOSE DEFICIENCY PLAN AREA LAND USE MAP

San Jose project area will generate about 487,000 new person trips. About 158,000 (or 32%) of these project trips will stay within the North San Jose area. Of all North San Jose project trips, 88% will be made by automobile, six percent will be on transit and six percent will be pedestrian or bike. Of the trips that will stay within the North San Jose area, these mode shares are 75% automobile, 8% transit, and 17% pedestrian/bike. The project will add approximately 34,200 vehicles to the roadways during the AM peak hour and 41,300 vehicles during the PM peak hour.

Intersection Level of Service

Only three of the 12 intersections that are the subject of this deficiency plan currently operate at LOS F, according to Year 2000 conditions (The year 2000 reflects peak traffic conditions in North San Jose since volumes have since decreased slightly). The level of service at the remaining nine intersections will decline to LOS F under future conditions without improvements. Table 1 summarizes existing and future LOS.

Responsible Government Agencies

With the exception of Montague Expressway, all deficient intersections identified in this deficiency plan are located in the City of San Jose. Montague Expressway is within the jurisdiction of the County of Santa Clara. The deficiency plan actions identified in this report will be implemented as part of the North San Jose Development Policy by each applicable jurisdiction in which they are located. With provided funds, each jurisdiction (City of San Jose, County of Santa Clara, VTA) will be responsible for implementing each action. The Valley Transportation Authority (VTA), as the administrator of the county Congestion Management Program, has designated funds for several deficiency plan actions that are also part of the Valley Transportation Plan 2030.

Table 1
NSJ CMP Intersection LOS—Existing and Future Conditions

TRAFFIX Number	Peak Hour	Year 2000 Existing		Future Conditions No Improvements	
		Ave. Delay/a/	LOS	Ave. Delay/a/	LOS
#3026 North First Street and SR 237 (North)	AM	16.0	B	18.3	B
#3026	PM	16.8	B	21.0	C
#3027 North First Street and SR 237 (South)	AM	23.4	C	34.7	C
#3027	PM	25.0	C	139.6	F
#3030 Zanker Road and SR 237 (North)	AM	8.8	A	9.1	A
#3030	PM	13.4	B	11.6	B
#3031 Zanker Road and SR 237 (South)	AM	18.2	B	19.2	B
#3031	PM	12.4	B	14.6	B
#5807 North First Street and Montague Expressway	AM	63.3	E	216.2	F
#5807	PM	119.7	F	239.3	F
#5812 Zanker Road and Montague Expressway	AM	42.5	D	274.7	F
#5812	PM	54.9	D	329.9	F
#5808 Trimble Road and Montague Expressway	AM	23.5	C	47.7	D
#5808	PM	50.4	D	555.6	F
#5809 McCarthy Boulevard and Montague Expressway	AM	48.2	D	191.1	F
#5809	PM	119.3	F	389.5	F
#5801 Old Oakland Road and Montague Expressway	AM	78.0	E	233.1	F
#5801	PM	88.8	F	217.3	F
#3096 De La Cruz Boulevard and Trimble Road	AM	33.8	C	34.8	C
#3096	PM	53.4	D	53.6	D
#3098 North First Street and Trimble Road	AM	44.7	D	118.5	F
#3098	PM	50.0	D	123.4	F
#3119 Zanker Road and Trimble Road	AM	35.0	D	120.3	F
#3119	PM	53.8	D	294.7	F
#3083 North First Street and Brokaw Road	AM	46.9	D	89.6	F
#3083	PM	44.6	D	96.2	F
#3020 US 101 and Brokaw Road	AM	28.5	C	42.2	D
#3020	PM	31.9	C	38.1	D
#3085 Zanker Road and Brokaw Road	AM	49.0	D	224.7	F
#3085	PM	59.7	E	198.2	F
#3051 I-880 and Brokaw Road (West)	AM	36.6	D	47.2	D
#3051	PM	28.7	C	43.2	D
#3050 I-880 and Brokaw Road (East)	AM	20.4	C	35.1	D
#3050	PM	19.1	B	25.2	C
#3084 Old Oakland Road and Brokaw Road	AM	52.4	D	80.7	F
#3084	PM	43.5	D	79.1	E
#3054 North First Street and I-880 (North)	AM	15.8	B	8.6	A
#3054	PM	10.5	B	16.9	B
#3055 North First Street and I-880 (South)	AM	22.0	C	27.3	C
#3055	PM	17.4	B	23.8	C
#3106 Lundy Avenue and Murphy Avenue	AM	45.0	D	50.7	D
#3106	PM	43.9	D	60.0	E
#5802 Trade Zone Boulevard and Montague Expressway	AM	45.8	D	156.2	F
#5802	PM	75.8	E	119.6	F

Notes:

Source: North San Jose Development Policy, Hexagon Transportation Consultants, February 2005

/a/ Reported delay based on average control delay as calculated by TRAFFIX using HCM 2000 methodology and adhering to CMP guidelines.

Box indicates LOS F conditions

2. Deficiency Analysis

The purpose of this chapter is to examine why roadways and intersections in the plan area will exceed the CMP LOS standard, analyze the degree to which roadways and intersections will exceed the CMP LOS standard, and project how development in North San Jose and neighboring cities is expected to impact transportation conditions within the plan area.

Exceedance of LOS Standards

Nine of the 12 CMP intersections that are the subject of this Deficiency Plan are currently operating within the CMP LOS standard but all are expected to degrade to LOS F at sometime in the future. The City of San Jose has identified improvements for five of these intersections that will improve the level of service at the intersections to LOS E or better. Improvements for six other intersections have been identified that will improve intersection operations but not enough to meet the CMP LOS standard. The improvements planned for these intersections, however, are years from programming and completion, and as a result the operation of these intersections may exceed CMP LOS standards in the interim. The remaining intersection has been studied to identify possible improvements, but the City of San Jose has determined that the improvements required to meet LOS standards are not feasible.

Study intersections were evaluated for the revised North San Jose Development Policy and were done so based on traffic forecasts using the Valley Transportation Authority (VTA) Silicon Valley Rapid Transit Corridor (SVRTC) traffic model with refinements implemented by the City's consultants to improve the model's performance in Santa Clara County and North San Jose, specifically. The evaluation is based on intersection levels of service calculations conducted as part of the "*North San Jose Development Policy*" traffic study prepared in January 2005. Table 2 presents projected intersection levels of service conditions for each of the 12 deficient intersections.

Impact of Development on Transportation Conditions

Anticipated deficiencies identified in this plan are the result of development in North San Jose and the surrounding area. For the purposes of this study, growth is measured against 2000 development levels, which are considered worse case compared with current conditions. Anticipated development in North San Jose includes:

- 26.7 million square feet of Industrial Space
- 1.7 million square feet of Commercial Space
- 32,000 Residential Units

Combined, this development will result in 122,000 jobs and 32,000 new high-density residential units in North San Jose. In addition, the analysis assumes 18,000 new housing units in potential growth areas within the City of San Jose and other areas within Santa Clara County. The change in commercial (retail, office, industrial, R & D) square footage under the plan is expected to occur within the existing industrial areas of North San Jose.

Proposed Improvements for Deficient Intersections

The purpose of this section is to describe the physical improvements that are possible at the subject intersections, provide statements explaining why certain intersections cannot be improved to operate within the CMP traffic LOS standard, and summarize an analysis of system-wide benefits to CMP intersections that will result from implementation of the North San Jose Deficiency Plan. The improvements described below are based on the analysis conducted as part of the North San Jose Development policy traffic study and will be necessary to support the projected growth in North San Jose identified in the study. The improvements are preliminary designs only, and details about specific right-of-way and design features will be worked out when the improvements are programmed. Estimated costs are planning-level estimates only. Table 2 summarizes future conditions and improvement costs for the 12 CMP intersections studied in this deficiency plan.

North First Street and SR 237 (South)

A third northbound through lane will be added at the intersection. The addition of the through lane will require widening of the existing overpass of SR 237. This improvement will maintain the level of service at this intersection at LOS D. The estimated cost is \$7,000,000.

North First Street and Montague Expressway

As part of the Tier 1-A improvements to Montague Expressway identified by the County of Santa Clara, Montague Expressway will be widened within North San Jose from six to eight lanes between North First Street and I-880. However, the Montague Expressway widening will not be adequate to improve intersection LOS to the CMP LOS standard. There are no further feasible improvements that can be implemented to improve intersection levels of service to acceptable levels due to right-of-way constraints and the adverse effects further roadway widening will have on transit and pedestrian facilities. Further widening of the roadways will increase vehicular traffic through the intersection that in turn will cause increased delays on buses and the LRT system, and require narrower sidewalks. The estimated cost of the Montague widening is \$18,000,000.

Zanker Road and Montague Expressway

Zanker Road will be widened to six lanes between Old Bayshore Highway and Montague Expressway. As part of the Zanker Road widening, second northbound and southbound left-turn lanes will be constructed at the intersection of Zanker Road and Montague Expressway. However, the intersection improvements will not be adequate to improve intersection LOS to the CMP LOS standard. There are no further feasible improvements that can be implemented to improve intersection levels of service to acceptable levels due to right-of-way constraints and the adverse effects further roadway widening will have on transit and pedestrian facilities. Further widening of the roadways will increase vehicular traffic through the intersection that in turn will cause increased delays on the transit system, and require narrower sidewalks. The estimated cost of the Zanker Road widening is \$49,000,000 that includes improvements at the intersections of Zanker Road and Brokaw Road and Zanker Road and Trimble Road.

Trimble Road and Montague Expressway

The intersection of Trimble Road with Montague Expressway serves as a major access point into and out of North San Jose. It currently experiences large vehicle queues for the westbound Montague Expressway to southbound Trimble Road movement. The movement is currently served by three left-turn lanes. County improvement plans identify the construction of a flyover to serve the movement. With the construction of the flyover all other movements at the intersection will improve. The improvements will maintain the level of service at this intersection at LOS E. The estimated cost is \$30,000,000.

McCarthy Boulevard and Montague Expressway

The intersection of McCarthy Boulevard/O'Toole Avenue with Montague Expressway serves as a major access point into and out of North San Jose to and from I-880. The intersection also serves portions of Milpitas. As such, major congestion is experienced on all approaches to the intersection. County improvement plans identify the construction of a "square-loop" interchange to replace the at-grade intersection as a Tier 1-B improvement. The interchange will eliminate the conflicting movements at the intersection and allow for uninterrupted flow along Montague Expressway to I-880. While specific designs have not been completed yet, it is assumed that the improvements will maintain the level of service at the new facilities at LOS E. The estimated cost of the interchange is \$68,000,000.

Old Oakland Road and Montague Expressway

A second southbound left-turn lane on Old Oakland Road will be added to the intersection. However, the intersection improvement will not be adequate to improve intersection LOS to acceptable levels. There are no further feasible improvements that can be implemented to improve intersection levels of service to the CMP LOS standard due to right-of-way constraints and the adverse effects further roadway widening will have on transit and pedestrian facilities. Further widening of the roadways will increase vehicular traffic through the intersection that in turn will cause increased delays on the transit system, and require narrower sidewalks. The estimated cost of the improvement is \$500,000.

North First Street and Trimble Road

A second eastbound left-turn lane and exclusive westbound right-turn lane on Trimble Road will be added at its intersection with North First Street. The improvements may require acquisition of a minimal amount of right-of-way. However, the intersection improvement will not be adequate to improve intersection LOS to acceptable levels. There are no further feasible improvements that can be implemented to improve intersection levels of service to the CMP LOS standard due to right-of-way constraints and the adverse

effects further roadway widening will have on transit and pedestrian facilities. Further widening of the roadways will increase vehicular traffic through the intersection that in turn will cause increased delays on the transit system, and require narrower sidewalks. The estimated cost of the improvement is \$1,000,000.

Zanker Road and Trimble Road

Second eastbound and southbound left-turn lanes will be added at the intersection. The improvements will be constructed as part of the Zanker Road widening project. The improvements will fit within the existing right-of-way, but will require reconstruction of the existing medians. However, the intersection improvement will not be adequate to improve intersection LOS to acceptable levels. There are no further feasible improvements that can be implemented to improve intersection levels of service to the CMP LOS standard due to right-of-way constraints and the adverse effects further roadway widening will have on transit and pedestrian facilities. Further widening of the roadways will increase vehicular traffic through the intersection that in turn will cause increased delays on the transit system, and require narrower sidewalks. The improvements will be included as part of the Zanker Road widening that has an estimated cost of \$49,000,000.

North First Street and Brokaw Road

This intersection is projected to operate at LOS F into the future. The City of San Jose has determined that there is no feasible improvement for this intersection due to the impacts associated with acquiring additional needed right-of-way. The intersection's proximity to access points to and from US 101 is also a factor in the degraded level of service expected at this intersection.

Zanker Road and Brokaw Road

Second eastbound, northbound and southbound left-turn lanes will be constructed. However, the intersection improvement will not be adequate to improve intersection LOS to acceptable levels. There are no further feasible improvements that can be implemented to improve intersection levels of service to the CMP LOS standard due to right-of-way constraints and the adverse effects further roadway widening will have on transit and pedestrian facilities. Further widening of the roadways will increase vehicular traffic through the intersection that in turn will cause increased delays on the transit system, and require narrower sidewalks. The improvements will be included as part of the Zanker Road widening that has an estimated cost of \$49,000,000.

Old Oakland Road and Brokaw Road

Old Oakland Road will be widened from four to six lanes. This improvement will maintain the level of service at this intersection at LOS E. The improvement is already funded at \$1,000,000.

Trade Zone Boulevard and Montague Expressway

Second northbound and southbound left-turn lanes as well as a westbound free-right-turn lane will be added to the intersection. These improvements will maintain the level of service at this intersection at LOS E. The estimated cost of the improvements is \$2,175,000.

Table 2
Future Conditions CMP Intersection Levels of Service with Proposed Improvements

	Peak Hour	Future Conditions No Improvements		Future Conditions w/Improvements		Proposed Improvement	Funding	Estimated Cost
		Ave. Delay/a/	LOS	Ave. Delay/a/	LOS			
North First Street and SR 237 (South)	AM	34.7	C	27.9	C	Reconstruct interchange overpass	NSJ Impact Fee	\$7,000,000
	PM	139.6	F	49.8	D			
North First Street and Montague Expressway	AM	216.2	F	100.6	F	Widen Montague Expressway	NSJ Impact Fee	\$18,000,000
	PM	239.3	F	133.1	F			
Zanker Road and Montague Expressway	AM	274.7	F	66.8	E	Widen Zanker Road	NSJ Impact Fee	\$49,000,000
	PM	329.9	F	163.9	F			
Trimble Road and Montague Expressway	AM	47.7	D	21.5	C	Construct eastbound Montague to southbound Trimble Flyover	NSJ Impact Fee	\$30,000,000
	PM	555.6	F	52.5	D			
McCarthy Boulevard and Montague Expressway	AM	191.1	F	34.7	C	Replace at-grade intersection with square-loop interchange	NSJ Impact Fee	\$68,000,000
	PM	389.5	F	57.5	E			
Old Oakland Road and Montague Expressway	AM	233.1	F	173.5	F	Widen Montague Expressway Add second southbound left-turn lane	NSJ Impact Fee	\$500,000
	PM	217.3	F	114.4	F			
North First Street and Trimble Road	AM	118.5	F	86.2	F	Add second eastbound left-turn lane Add exclusive westbound right-turn lane	NSJ Impact Fee	\$1,000,000
	PM	123.4	F	101.0	F			
Zanker Road and Trimble Road	AM	120.3	F	63.7	E	Widen Zanker Road Add second eastbound and southbound left-turn lanes	NSJ Impact Fee	/c/
	PM	294.7	F	210.4	F			
North First Street and Brokaw Road*	AM	89.6	F			No Feasible Improvements		
	PM	96.2	F					
Zanker Road and Brokaw Road	AM	224.7	F	96.1	F	Widen Zanker Road Add second eastbound, northbound and southbound left-turn lanes	NSJ Impact Fee	/c/
	PM	198.2	F	105.2	F			
Old Oakland Road and Brokaw Road	AM	80.7	F	79.0	E	Widen Oakland Road	Funded	/d/
	PM	79.1	E	72.3	E			
Trade Zone Boulevard and Montague Expressway	AM	156.2	F	52.7	D	Add second northbound and southbound left-turn lanes Add westbound free-right turn lane	NSJ Impact Fee	\$2,175,000
	PM	119.6	F	70.0	E			
Total Cost								\$175,675,000

Notes:

/a/ Reported delay based on average control delay as calculated by TRAFFIX using HCM 2000 methodology

/b/ Calculated level of service based on worst case intersection LOS assuming lane configurations for two new intersections of square-loop interchange.

/c/ Part of Zanker Road widening cost of \$49,000,000 presented for Zanker/Montague

/d/ Improvement funding of \$1,000,000 is already in place.

* No feasible improvements

3.

Deficiency Plan Action List

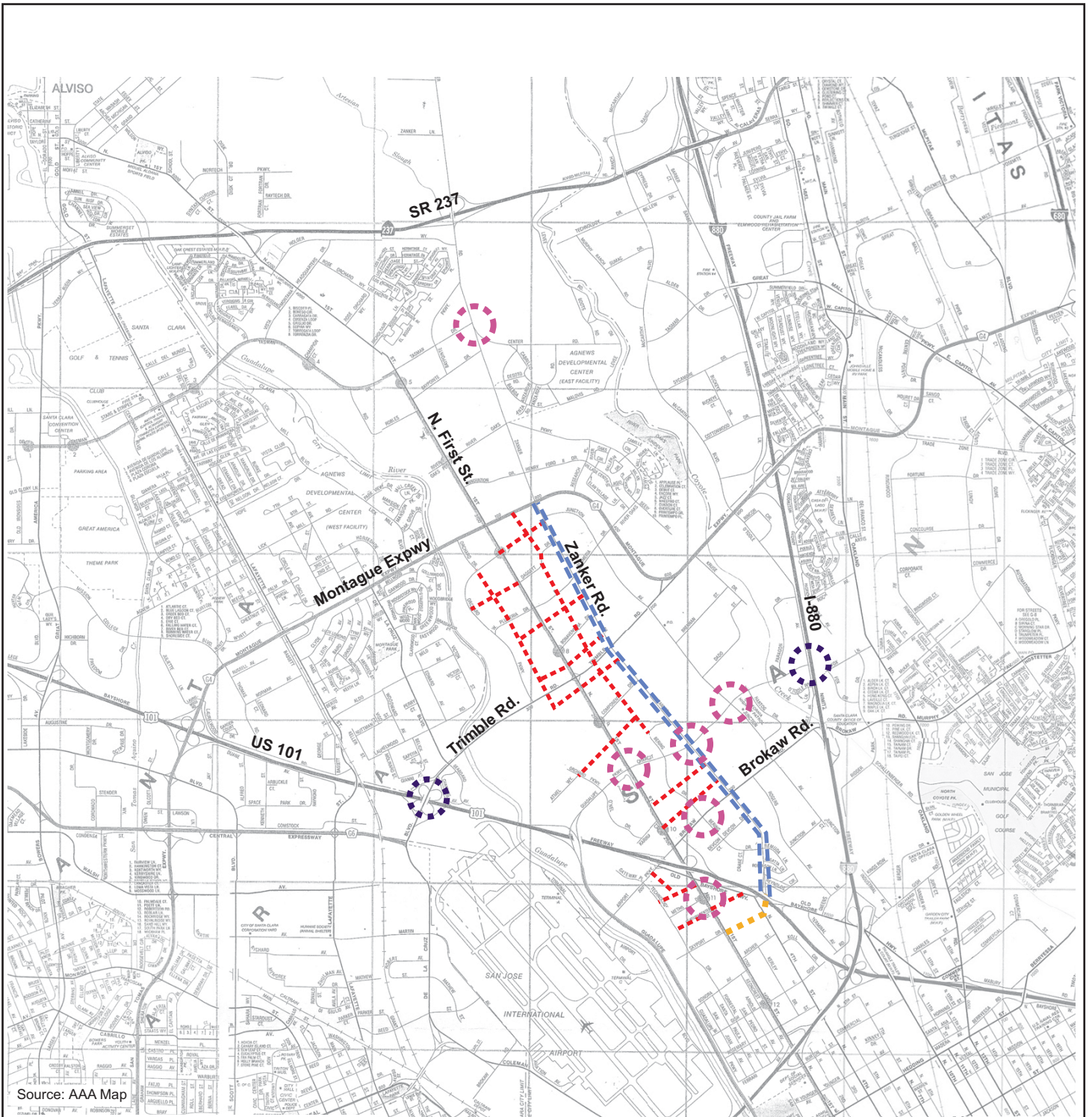
The purpose of this chapter is two-fold: 1) to identify physical improvements to non-CMP facilities designed to provide further offset for CMP deficiencies, and 2) to describe how all feasible and appropriate actions on the VTA's Immediate Implementation Action List will be implemented as part of the deficiency plan.

Offsetting Roadway Improvements

The City of San Jose has identified several physical improvements to non-CMP intersections that will further offset CMP deficiencies. The improvements will serve to improve the overall operations of the North San Jose roadway network. The addition of new streets and physical improvements to non-CMP facilities will help alleviate congestion along the major arterials in North San Jose. As with the CMP intersection improvements, the offsetting improvements described below are preliminary designs only, and details about specific right-of-way and design features will be worked out when the improvements are programmed. Estimated costs are planning-level estimates only. Figure 3 shows offsetting improvements to non-CMP facilities located within North San Jose. Improvements were also identified at intersections and roadway facilities outside of North San Jose at which the anticipated traffic from North San Jose development will have an adverse effect. Improvements at the additional facilities are not described in detail since they are not located within North San Jose, but the improvements will serve to improve the overall operations in the City.

North San Jose Grid Street System

To facilitate the efficient circulation of traffic within North San Jose, several new local streets will be constructed to form a "grid system" of streets. The streets, will serve future development and provide connections to all major arterials in North San Jose. The new streets will generally be two-lane roadways connecting to the major roadways within North San Jose such as Montague Expressway, Trimble Road, North First Street, and Zanker Road. The additional roadways will serve to reduce congestion along the major arterials in the area by providing alternate routes for local trips. Included within the system of streets will be the extensions of Zanker Road to Skyport Drive and Component Drive to Orchard Parkway. Orchard Parkway will also be connected between Trimble Road and Atmel Way. The estimated cost is \$55,000,000.



Source: AAA Map

Legend

- - - - = North San Jose Grid Streets
- - - - = Zanker Widening
- - - - = Zanker Skyport Connection
- ⊙ = Interchange Improvement
- ⊙ = Intersection Improvement

Hexagon
 Transportation Consultants, Inc.

Figure 3

**OFF SETTING IMPROVEMENTS TO
NON-CMP FACILITIES**

North San Jose Deficiency Plan

Zanker Road Widening

Zanker Road runs from Old Bayshore Highway north into Alviso. It is currently two lanes in each direction between Old Bayshore Highway and Montague Expressway. Between Montague Expressway and SR 237 it widens to six lanes, three lanes in each direction. The planned widening will consist of widening the roadway to a minimum of 120 feet between Old Bayshore Highway and Montague Expressway to accommodate the addition of one through lane in each direction. The widening will promote the use of Zanker Road as the primary north/south route in North San Jose and allow for North First Street to serve as a transit-oriented street with operations of the transit system taking precedent over automobile traffic. The estimated cost is \$49,000,000.

Zanker Road to Skyport Drive Connection

The current intersection of Fourth Street and Old Bayshore Road will be replaced by a new partial interchange with US 101 that will provide for the connection of Zanker Road to Skyport Drive and Fourth Street. Currently, ramps only provide access to southbound US 101 from Fourth Street/Old Bayshore and Old Bayshore/Zanker Road from US 101 northbound with no connection over US 101. The new interchange will allow for the connection of Zanker Road to Skyport Drive as well as access to southbound US 101 from Zanker Road and Fourth Street/Old Bayshore. Access to Fourth Street/Skyport Drive and Zanker Road from US 101 northbound also will be provided. The estimated cost is \$64,000,000.

US 101 and Trimble Road Interchange

Some improvements at the US 101 and Trimble Road interchange currently are under construction and others are planned but unfunded. Several improvements will be made to the existing interchange including the elimination of the southbound loop off-ramp to eastbound Trimble, construction of a new southbound diagonal ramp that will serve both eastbound and westbound Trimble, and reconstruction of the southbound diagonal on-ramp and southbound and northbound loop on-ramps. The northbound US 101 loop-off-ramp to westbound Trimble Road also will be eliminated and replaced by a new northbound diagonal off-ramp that will serve both eastbound and westbound Trimble. The northbound diagonal ramp will be fed by a new collector road that will exit US 101 south of SR 87. The existing exit from US 101 is north of SR 87 and causes operational weaving problems. The estimated cost is \$27,000,000.

Charcot Avenue Extension

Charcot Avenue currently begins at North First Street, as a transition from Guadalupe Parkway, and runs east to its terminus at O'Toole Avenue. The planned overpass will cross I-880 and provide for the extension of Charcot Avenue to Old Oakland Road. The connection of Charcot Avenue to Old Oakland Road will provide an alternative east/west route to the already congested roadways of Brokaw Road and Montague Expressway. In order to provide space for bicycle and pedestrian access the overpass will provide two travel lanes, one in each direction. The estimated cost is \$32,000,000.

Mabury Interchange

To alleviate projected congested conditions at the Old Oakland Road and McKee Road interchanges with US 101, a new interchange are planned at Mabury Road. Mabury Road currently passes over US 101, but no access to the freeway is provided. Additionally, the above described Zanker Road to Skyport Drive connection will also serve to alleviate congestion at the Old Oakland and McKee Road interchanges. The estimated cost is \$43,000,000.

Zanker Road and Tasman Drive

The planned improvement is the addition of second eastbound and westbound left-turn lanes on Tasman Drive. The improvements may require the acquisition of right-of-way due to the LRT line running within the median along Tasman Drive. The estimated cost is \$2,000,000. This improvement will maintain the level of service at this intersection at LOS E.

North First Street and Charcot Avenue

The planned improvement is the addition of exclusive westbound and eastbound right-turn lanes on Charcot Avenue and a second southbound left-turn lane on First Street. The improvements may require the acquisition of right-of-way due to the LRT line running within the median along First Street. The estimated cost is \$2,000,000. While improved, this intersection will continue to operate at LOS F.

North First Street and Metro Drive

The planned improvement is the addition of a second eastbound left-turn lane. The improvement will fit within the existing right-of-way and will only require restriping and possibly signal modifications. The estimated cost is \$250,000. This improvement will maintain the level of service at this intersection at LOS C and will not effect LRT operations along North First Street.

Zanker Road and Charcot Avenue

The planned improvement is the addition of second left-turn lanes on all approaches and the widening of Charcot Avenue from two-lanes to four-lanes. The improvements will not fit within the existing right-of-way, but could be included as part of the Zanker Road widening project. The estimated cost is \$2,000,000. These improvements will maintain the level of service at this intersection at LOS E.

Junction Avenue and Charcot Avenue

The planned improvement is the addition of second eastbound and westbound left-turn lanes and widening of both Charcot Avenue and Junction Avenue from two to four lanes. The estimated cost is \$1,000,000. These improvements will maintain the level of service at this intersection at LOS D.

Bering Avenue and Brokaw Road

The planned improvement is the addition of a second northbound left-turn lane and separate southbound left-turn lane. The improvements may require the acquisition of a minimal amount of right-of-way. The estimated cost is \$1,000,000. These improvements will maintain the level of service at this intersection at LOS D.

Table 3 summarizes future conditions and costs associated with the offsetting improvements to non-CMP facilities included in this deficiency plan.

Table 3
Future Conditions Intersection Levels of Service with Proposed Improvements -Non-CMP Facilities

	Peak Hour	Future Conditions No Improvements		Future Conditions w/Improvements		Proposed Improvement	Funding	Estimated Cost
		Ave. Delay/a/	LOS	Ave. Delay/a/	LOS			
Roadway Improvements								
Grid System							NSJ Impact Fee	\$55,000,000
Zanker Rd. Widening							NSJ Impact Fee	See Note /b/
Zanker Rd./Skyport Dr. Connection							NSJ Impact Fee	\$64,000,000
US 101/Trimble Rd. Interchange							NSJ Impact Fee	\$27,000,000
Charcot Avenue Extension							NSJ Impact Fee	\$32,000,000
Mabury Interchange							NSJ Impact Fee	\$43,000,000
							Sub-Total	\$221,000,000
Intersection Improvements								
Zanker Road and Tasman Drive	AM	47.2	D	43.4	D	Add second eastbound and westbound left-turn lanes	NSJ Impact Fee	\$2,000,000
	PM	76.3	E	60.3	E			
North First Street and Charcot Avenue	AM	158.7	F	80.5	F	Add exclusive westbound and eastbound right-turn lanes	NSJ Impact Fee	\$2,000,000
	PM	92.3	F	65.1	E	Add second southbound left-turn lane		
North First Street and Metro Drive	AM	21.2	C	17.6	B	Add second eastbound left-turn lane	NSJ Impact Fee	\$250,000
	PM	58.7	E	28.7	C			
Zanker Road and Charcot Avenue	AM	122.2	F	56.6	E	Add second left-turn lane to all approaches	NSJ Impact Fee	\$2,000,000
	PM	187.3	F	61.0	E	Widen Charcot Avenue to 4-lanes		
Junction Avenue and Charcot Avenue	AM	66.6	E	34.9	C	Add second eastbound and westbound left turn lanes	NSJ Impact Fee	\$1,000,000
	PM	179.6	F	39.6	D	Widen Charcot and Junction Avenues		
Bering Drive and Brokaw Road	AM	83.3	F	41.6	D	Add second northbound left-turn lane	NSJ Impact Fee	\$1,000,000
	PM	44.3	D	43.8	D	Add separate southbound left-turn lane		
							Sub-Total	\$8,250,000
							Total Cost	\$229,250,000

Notes:
/a/ Reported delay based on average control delay as calculated by TRAFFIX using HCM 2000 methodology
/b/ Zanker Road widening cost of \$49,000,000 included with CMP facility costs.

Transit Service Improvements

The planned growth within the North San Jose area will require that the transit system within the North San Jose area be enhanced. The backbone of the transit service in North San Jose is the light rail system that operates along North First Street and Tasman Drive. In addition, bus service is provided primarily along Tasman Drive, Montague Expressway and Trimble Road. According to model estimates, the demand for transit will greatly increase from about 8,200 without the project to 44,000 riders a day under project conditions.

The high-density transit-oriented proposed project development plan characterized by mixed land uses and high rise buildings along the North First Street creates opportunities for strong transit demand. The VTA will consider improvements as part of its annual service plans and other planning studies. The City of San Jose will work with VTA as the North San Jose area develops to find a mutually agreeable process to implement transit improvements. The following measures will serve to meet anticipated transit service demands and comfort:

- Bus service enhancements to the intensified development areas of North San Jose and along the new grid system streets.
- Widen Zanker Road to accommodate increase its capacity so allow North First Street to serve as a transit oriented street with operations of the transit system taking precedent over automobile traffic.
- Coordination of extensive shuttle services between employment, transit stations, and large residential areas.
- The City of San Jose may elect to implement parking strategies in the future as an action to encourage transit usage.
- Implementation of planned specific improvements as described in Table 4.

Pedestrian and Bicycle Facility Enhancements

With the large amount of planned development, increases in pedestrians and bicyclists are expected along with increased auto traffic. It will be desirable to implement pedestrian bicycle improvements to reduce auto travel. Existing pedestrian facilities will need to be improved and future development designed to better serve pedestrians. As development progresses within North San Jose, the following pedestrian and bicycle facility enhancements will be needed:

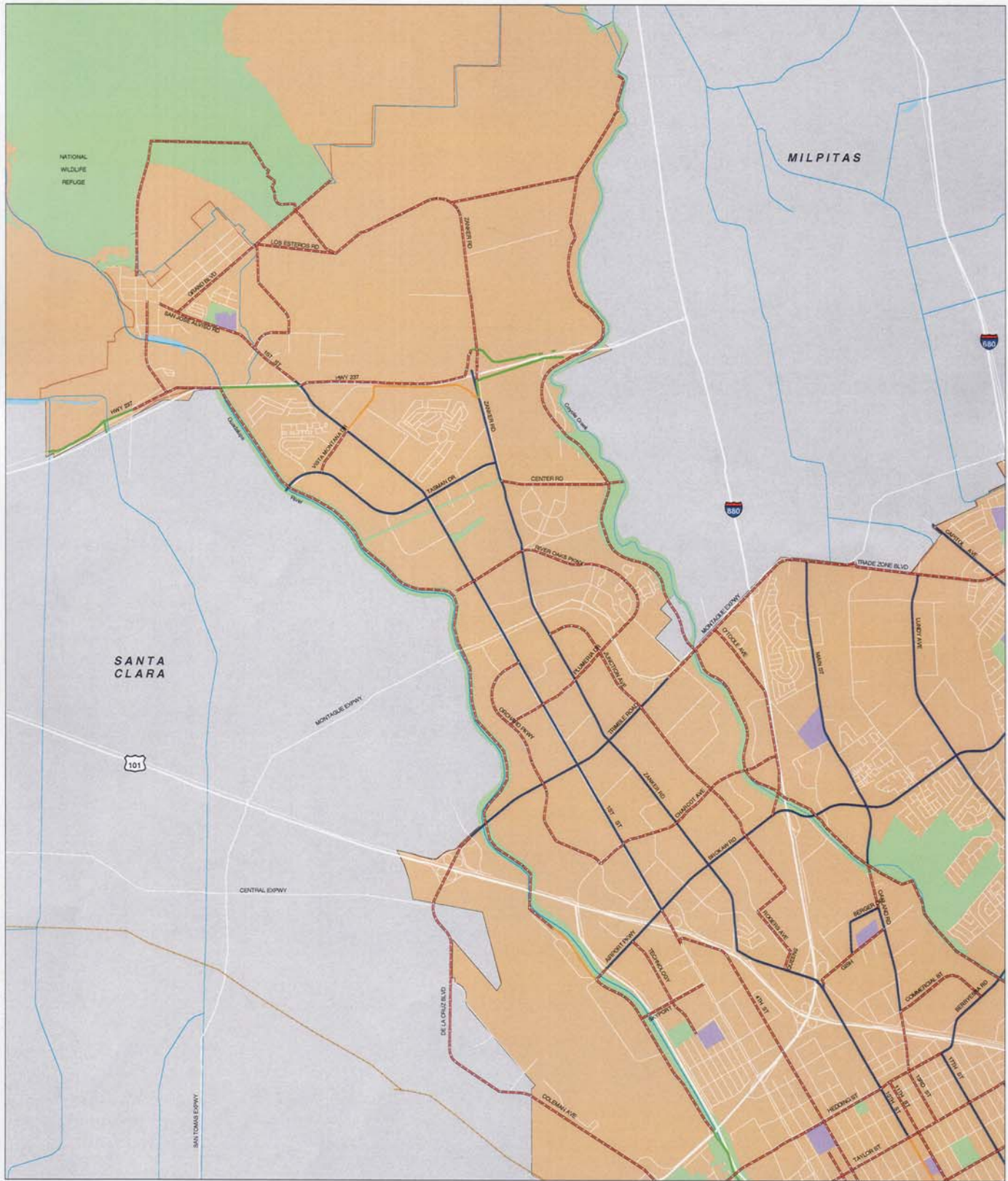
- Construct the new grid streets system to accommodate and encourage bicycles and pedestrians.
- Provide for continuous bicycle connections throughout North San Jose. Provide bicycle facilities on all major streets where feasible as shown in Figure 4. The City of San Jose is pursuing an updated citywide bicycle map.

Offsetting Actions from Immediate Implementation Action List

The Valley Transportation Authority (VTA) has adopted a list of action items for immediate implementation, and this section describes the items from this list that the City of San Jose is planning to undertake to offset the effects of deficiencies in the CMP transportation system anticipated by this plan.

**Table 4
Transit, Bicycle and Pedestrian Improvements**

Improvement	Cost
Specialized bus/shuttle passenger shelters and other stop and station improvements and amenities.	\$3.0 million
LRT Station Platform improvements including possible widening or lengthening, new passenger shelters and extending shelters to accommodate three-car trains.	\$7.5 million
Lighting, furniture and landscaping at LRT stations, bus stops and key pedestrian locations.	\$2.0 million
Self-cleaning bathrooms (2-4 locations)	\$1.5 million
Real-time information infrastructure and other intelligent transportation systems enhancements at stations and stop areas.	\$1.0 million
Bus Stop duck outs at up to ten locations (priority at @ Tasman LRT station).	\$500k
Shuttles between residential areas, businesses and transit stops/stations. Shuttle service may be pursued by the City of San Jose as conditions of development approvals.	TBD
New bus/shuttle stop locations (notably around the Tasman LRT station) including dedication of Rights-of-Way dedications (ROW dedications will be pursued by the City of San Jose as conditions of development approvals and are not included in this cost estimate.)	\$500k
Bi-directional full priority with ability to cascade calls for green signals for LRT along North First Street from Santa Clara Street (downtown) to Tasman Drive (up to 28 intersections.)	\$1.0 million
LRT operations capital improvements, including but not limited to: <ul style="list-style-type: none"> • Trackway improvements. • Switches. • Tail/storage/layover tracks. • Other improvements to be determined. 	\$15 million
Guadalupe River Trail.	\$10 million
Coyote Creek Trail.	\$10 million
General Bicycle and Pedestrian Improvements, including but not limited to: <ul style="list-style-type: none"> • Bike Lanes and bike sensitive signal detectors. • Bike Racks and bike storage facilities such as cages or electronic bike lockers. • Pedestrian Scale lighting. • Intersection and Crosswalk improvements including but not limited to special pavers or pavement, bollards, pedestrian-activated in pavement lights, countdown signals for pedestrian crossings, narrowing of pedestrian crossing distance including reduced curve radii and/or curb bulbouts, sidewalks along median from intersections to station platform and other safety and aesthetic enhancement. • Curb Ramps. • Other bicycle and pedestrian improvements to be determined. 	\$10.3 million
Total	\$62.3 million



Legend

- Existing Trails
- Existing Bicycle Lanes
- Existing Bicycle Routes
- Proposed
- Parks
- Schools



Figure 4

POTENTIAL FUTURE BICYCLE FACILITIES

North San Jose Deficiency Plan

Each of the alternative action items identified is contained in the VTA's Immediate Implementation Action List that can be found in Appendix A. As such, each of these actions has been found to contribute to an improvement of air quality in the region. Table 5 summarizes the VTA CMP Immediate Implementation Action List.

**Table 5
Santa Clara County VTA CMP Immediate Implementation Action List**

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
Bicycle and Pedestrian Actions	
A-2 Bike Lockers, Racks, and Facilities at Transit Centers	<ul style="list-style-type: none"> ❖ The City of San Jose does not have jurisdiction over most transit centers in the City, but it supports and advocates to the VTA and Caltrain for bike parking facilities. ❖ The VTA provides bike racks and access on all buses and LRT's. ❖ The City of San Jose, in consultation with the VTA, will be responsible for ensuring that additional bicycle storage facilities are provided at designated transit centers including park and ride lots, rail transit facilities, and major transit transfer stations. The location of new bicycle storage facilities and the specific style of storage facility will be determined as the action is implemented in conformance with the adopted Deficiency Plan requirements. ❖ General Plan policy calls for the City to provide a bikeway system linking residences, employment, schools, parks, and transit facilities. Priority improvements to the bikeway system including: <ul style="list-style-type: none"> ▪ Bike routes linking LRT stations to neighborhoods. ▪ Bike paths along designated trails and pathway corridors. ❖ The City of San Jose plans to enhance the existing bicycle facilities along the North San Jose roadway network. The enhancements will provide for continuous bicycle connections throughout North San Jose. Bicycle facilities will be provided on all major streets, where feasible. Possible locations of future bicycle facilities are shown in Figure 3.
A-3 Improve Roadside Bicycle Facilities	<ul style="list-style-type: none"> ❖ The City will place priority on implementation of the following identified cross-county bicycle corridors: <ul style="list-style-type: none"> ▪ Highway 880 Corridor & South US 101/Caltrain – that runs along the extent of Zanker Road in North San Jose ▪ State Route 237/Tasman Drive & Capitol Rail – that runs along the extent of Tasman Drive in North San Jose ▪ Bay Trail Corridor – that runs along the bay inlets in Alviso ▪ Alma Street/El Camino Real – that runs just north and parallel to Montague Expressway

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
A-4 Improve Pedestrian Facilities	<ul style="list-style-type: none"> ❖ The San Jose General Plan requires that right-of-way requirements, including provision of bicycle lanes were planned, be considered in conjunction with planning and improvement projects for major streets. ❖ Sidewalks and bicycle facilities will be constructed along the proposed new grid system streets that will serve pedestrians and bicyclists more efficiently than the major arterials that serve large volumes of vehicular traffic. ❖ Sidewalk construction, replacement or repair will be required as part of the entitlement for new construction throughout the North San Jose area. ❖ In order to preserve an acceptable pedestrian environment in conjunction with major roadway widening and to support walking as an alternative for short trips, sidewalks will be constructed along all streets of the proposed North San Jose Grid Street System improvements. The roadways will be of minimal width so as to provide for pedestrian friendly thoroughfares.
Public Transit	
B-3 Shuttle Service (Existing Employment Centers)	<ul style="list-style-type: none"> ❖ The City of San Jose promotes the coordination and operation of shuttle services between employment uses and transit facilities within the North San Jose area. In specific cases the City may require new development involving major employers within North San Jose to operate, not fund, shuttle services through approved development permits. ❖ The City requires the construction of specialized passenger shelters and bus/shuttle stop improvements including curb bulb-outs depending on location and site conditions. The City has implemented the construction of new bus/shuttle stop locations (e.g. around Tasman LRT station) including dedication of ROW. ❖ The City will work with residential developers to explore potential shuttles between residential areas, businesses and transit stops/stations.
B-7 Transit Traffic Signal Preemption	<ul style="list-style-type: none"> ❖ Any traffic signal improvements should at a minimum, maintain the level of priority at traffic signals provided to LRT operations since the inception of the Guadalupe LRT line. ❖ The City of San Jose coordinates with the VTA to implement bus stop and station improvements through the permit review process for new development within North San Jose.
B-8 Bus Stop/Station Improvements	<ul style="list-style-type: none"> ❖ Improvements to be constructed in the vicinity of bus stops and stations include intersection and crosswalk improvements; lane or intersection narrowing, curve radii reductions, curb bulb-outs; and sidewalks along medians from intersections to station platform ❖ Improvements are planned for the LRT shelters within and adjacent to

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
	<p>the North San Jose area</p> <ul style="list-style-type: none"> ❖ Other potential improvements include: <ul style="list-style-type: none"> ▪ Lighting, furniture and landscaping at LRT stations, bus stops and key pedestrian locations ▪ Station platform improvements ▪ Other stop and station amenities such as sidewalks (locations) or sidewalk widening and lengthening ▪ Self-cleaning bathrooms (2-4 locations) ▪ Real-time information infrastructure (on LRTs and at 17 stations and stops.) ▪ Bus duck-outs (most important @ Tasman station)
Carpooling, Bus Pooling, Van Pooling, Taxi Pooling	
C-1 Enhanced Trip Reduction Program	<ul style="list-style-type: none"> ❖ All new significant employment generating development within North San Jose will be required to develop and implement a transportation demand management (TDM) program. The TDM program should address the following actions: ❖ Implement a carpool/vanpool program, e.g., carpool ride-matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc. ❖ Develop a transit use incentive program for employees, such as on site distribution of passes and/or subsidized transit passes for local transit system (participation in the VTA EcoPass system will satisfy this requirement). ❖ Provide preferential parking for electric or alternatively-fueled vehicles. ❖ Provide a guaranteed ride home program. ❖ Implement a flextime policy. ❖ Implement parking cash out program for employees (non-driving employees receive transportation allowance equivalent to the value of subsidized parking).
High Occupancy Vehicle (HOV) Facilities	
D-1 Arterial HOV/Transit Lanes	<ul style="list-style-type: none"> ❖ It is not the policy of the City of San Jose to pursue HOV-type improvements on city streets. With regard to Montague Expressway, the City has supported HOV-type improvements on selected portions of the facility that could support future Bus Rapid Transit facilities.

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
D-2 Implement MTC's 2005 HOV Plan	❖ See above
D-3 Construct HOV Support Facilities	❖ See above
D-4 Construct HOV Connections and Ramps	❖ See above
D-5 Construct HOV Bypass Facilities	❖ See above

Transportation Demand Management (TDM) Programs

E-2 Public Information Programs	❖ Transportation Demand Management (TDM) programs required for new development and permit approvals within North San Jose include public information elements such as designation of a on-site TDM manager and education of employees regarding alternative transportation options.
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Traffic Flow Improvements

F-2 Peak-Hour Parking and Delivery Restrictions	❖ It is not the policy of the City of San Jose to pursue these types of capacity enhancements on city streets, although such improvements could be proposed by large development as part of a TDM program.
F-3 Traffic Signal Timing and Synchronization Program	❖ Any traffic signal improvements should at a minimum, maintain the level of priority at traffic signals provided to LRT operations since the inception of the Guadalupe LRT line. Traffic signal improvements should provide for "cascading greens" along North First Street to serve the LRT line.
F-4 Traffic Flow Improvements in Urban Areas	❖ The City has planned various improvements at CMP and non-CMP intersections within the North San Jose area as described in Chapters 2 and 3.

Site Design Guidelines for New Development

G-1 HOV Parking Preference Program	<p>❖ San Jose typically requires that assigned car pool and van pool parking be placed at the most desirable on-site locations. The City's Industrial Design Guidelines include the following standards:</p> <ul style="list-style-type: none"> ▪ A minimum of 10 percent of parking spaces should be reserved and clearly marked for the exclusive use of carpool/vanpool vehicles. ▪ Convenient access to building entrances from carpool/vanpool parking should be provided. ▪ The most convenient parking spaces should be prioritized for handicapped persons, visitors, carpool/vanpools and motorcycles.
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CMP Action Item	CMP Action Items Implemented in Deficiency Plan
G-2 Bike Facilities at Development Projects	<ul style="list-style-type: none"> ▪ For projects with 50 or more employees, a carpool/vanpool waiting area should be provided. This waiting area should provide visibility for arriving carpool/vanpool vehicles. It should be covered, well lit and located within 50 feet of carpool/vanpool vehicles. ❖ The City of San Jose Zoning Ordinance requires that all new residential, commercial and industrial development provide bicycle parking spaces at rates depending upon the specific proposed use. ❖ The City of San Jose Zoning Ordinance requires that all new general industrial or office and research and development projects of 30,000 feet or greater incorporate showers for use by employees to encourage bicycle use by employees. ❖ Through the North San Jose Area Development Policy, all new employment generating development within North San Jose will be required to include the following facilities that encourage the use of bicycles: <ul style="list-style-type: none"> ▪ On-site bicycle racks and secure lockers ▪ Physical improvements, such as sidewalk improvements, landscaping and bicycle parking that will act as incentives for pedestrian and bicycle modes of travel. ▪ On-site improvements to support connection from the site to regional bikeway/pedestrian trail system. ▪ Secure and conveniently located bicycle parking and storage for workers. ❖ All new residential development within North San Jose will be required to implement similar measures for bicyclists including: <ul style="list-style-type: none"> ▪ Bicycle lanes, sidewalks and/or paths, connecting project residences to adjacent schools, parks, the nearest transit stop and nearby commercial areas. ▪ Satellite telecommute center within or near the development (where appropriate).
G-3 Building Orientation/ Placement at Employment Sites	<ul style="list-style-type: none"> ❖ The San Jose General Plan contains numerous policies that promote new development within transit corridors to encourage alternate modes of transportation through building placement and site design. These policies are implemented through the City's Residential, Industrial and Commercial Design Guidelines. Specific Policies within the General Plan include: <ul style="list-style-type: none"> ▪ High density residential and mixed residential/commercial development located along transit corridors should be designed to maximize transit useage and allow residents to conduct routine

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
G-4 Pedestrian Circulation System	errands close to their residence.
	<ul style="list-style-type: none"> <li data-bbox="574 321 1406 499">▪ New commercial development should be located near existing centers of employment or population or in close proximity to transit facilities and should be designed to encourage pedestrian and bicycle access through techniques such as minimizing building separation from the street, providing safe, accessible, convenient and pleasant pedestrian connections, secure bike storage, etc. <li data-bbox="526 535 1300 594">❖ The North San Jose Area Development Policy establishes the following design guidelines: <ul style="list-style-type: none"> <li data-bbox="574 627 1365 686">▪ New buildings to be located along street edges with active uses and building entrances oriented toward the street. <li data-bbox="574 720 1398 837">▪ Establishing pedestrian connections to the nearest transit station should be given priority in site design for all new commercial, industrial or residential development located within 2000 feet of an existing or planned transit station. <li data-bbox="574 871 1393 1022">▪ Within the Corporate Center Core Area, new development should be concentrated along the North First Street corridor. Parking structures should not be placed along North First Street. Use of surface parking lots should be minimized and any surface parking lots should be placed behind buildings. <li data-bbox="526 1056 1382 1207">❖ The San Jose General Plan contains numerous policies that promote the development of high quality, safe pedestrian facilities throughout the City. These policies are implemented through the City's Residential, Industrial and Commercial Design Guidelines. Specific Policies within the General Plan include: <ul style="list-style-type: none"> <li data-bbox="574 1241 1386 1392">▪ New industrial and residential development should create a pedestrian friendly environment by connecting the features of the development with safe, convenient, accessible and pleasant pedestrian facilities. Such connections should also be made between the new development and adjacent public streets. <li data-bbox="574 1425 1382 1543">▪ For new residential development, pedestrian connections should also be made between the new development, the adjoining neighborhood, transit access points, and nearby commercial areas. <li data-bbox="574 1577 1398 1694">▪ High density residential and mixed residential/commercial development located along transit corridors should be designed to create a pleasant walking environment to encourage pedestrian activity, particularly to the nearest transit stop. <li data-bbox="574 1728 1365 1820">▪ In order to provide pedestrian comfort and safety, all pedestrian pathways and public sidewalks should provide buffers between moving vehicles and pedestrians where feasible. <li data-bbox="526 1854 1300 1885">❖ City of San Jose Municipal Code (Section 19.36.030) requires

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
G-5 Bike Storage at Residential Development Projects	<p>construction of sidewalks as part of new industrial development.</p> <ul style="list-style-type: none"> ❖ The City of San Jose Zoning Ordinance requires that new multi-family residential development provide bicycle parking spaces or bicycle storage at a ratio of one space per four units. A minimum of three spaces must be provided. Bicycle parking facilities must be located in a convenient, highly visible and well lighted area to minimize theft and vandalism, generally within fifty feet of a building entrance and within view of pedestrian traffic.
G-6 Shuttle Service (New Development)	<ul style="list-style-type: none"> ❖ The City of San Jose works with the developers of new, large employment generating uses to provide shuttle services as a traffic mitigation measure as part of the development review process. Several such shuttles are currently under private operation. ❖ The City of San Jose cooperates with the VTA, the California Department of Transportation and other transportation agencies to maximize access to transit facilities for all segments of the City's population.
G-7 Transit Stop Improvements	<ul style="list-style-type: none"> ❖ The City of San Jose requires that new development install indented curbs and bulb-outs if appropriate for bus pullouts, bus shelters and other transit-related public improvements where appropriate through the entitlement process for new development projects. This action is currently implemented through the City's Residential, Industrial and Commercial Design Guidelines.
G-8 Multi-Tenant Complex TDM Program	<ul style="list-style-type: none"> ❖ All new development within North San Jose will be required to incorporate transportation demand management (TDM) elements into facility design. Improvements may include, but are not limited to: <ul style="list-style-type: none"> ▪ Assigned car pool and van pool parking at the most desirable on-site locations ▪ Make available transportation during the day for emergency use by employees who commute on alternate transportation. (This service may be provided by access to company vehicles for private errands during the workday and/or combined with contractual or pre-paid use of taxicabs, shuttles, or other privately provided transportation.); ▪ Provide shuttle access to CalTrain stations; ▪ Provide or contract for on-site or nearby child care services; ▪ Provide Eco-passes (or equivalent broad spectrum transit passes) to all on-site employees; ▪ Encourage use of telecommuting and flexible work schedules; ▪ Incorporate on-site support services (food service, ATM, dry

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
	<p>cleaner, gymnasium, etc.);</p> <ul style="list-style-type: none"> ▪ Designate an on-site TDM coordinator; ▪ Provide or contract for on-site or nearby child care services; ▪ Provide vans for van pools; ▪ Provide on-site showers and lockers.
Land-Use Program	
H-1 Mixed-Use Development	<ul style="list-style-type: none"> ❖ The City of San Jose General Plan identifies Transit-Oriented Development corridors as a suitable location for mixed-use development and provides specific land use designations and strategies for the implementation of mixed-use projects. ❖ The North San Jose Area Development Policy includes provisions to support mixed-use development within the North San Jose area through the adoption of two new General Plan Land Use Designations. The Industrial Core Area designation allows for supporting commercial and residential uses to be combined with industrial park uses within a 600-acre along the North First Street light rail corridor. The Transit/Employment Residential District Overlay designation allows for supporting commercial uses to be combined with residential development on various sites totaling 400 acres in area. ❖ Mixed-use development will continue to be allowed or encouraged on properties within the North San Jose area with a Transit Corridor Residential designation
H-2 Childcare Facilities near Transit and Worksites	<ul style="list-style-type: none"> ❖ The City of San Jose promotes the location of childcare facilities and other services where appropriate near light rail transit stations, major transportation hubs and major employment centers. ❖ The North San Jose Area Development Policy allows for the conversion of up to 285 acres of existing industrial land to residential use. A minimum density of 55 DU/AC will be required for 200 of those acres and a minimum density of 90 DU/AC will be required for the remaining 85 acres, yielding a minimum of 18,700 new residential units. Residential development in the form of mixed-use industrial office and residential projects will be allowed within a 590 acre Corporate Industrial Core Area. Up to 6,000 new residential units are anticipated to occur through this provision. In combination with existing lands planned for residential, up to 32,000 new residential units are anticipated throughout the Policy area. ❖ All new residential development within North San Jose is subject to the affordability policy for Redevelopment areas requiring 15% or 20% of new units to be marketed at affordable rates.
H-3 Affordable Housing near Worksites	
H-4 High Density	<ul style="list-style-type: none"> ❖ The General Plan includes several policies that encourage the

CMP Action Item	CMP Action Items Implemented in Deficiency Plan
Development near Transit	<p>development of high-density projects near existing or planned transit facilities.</p> <ul style="list-style-type: none"> ❖ The North San Jose Area Development Policy establishes a Corporate Industrial Core Area along the North First Street light rail corridor encouraging the intensification of employment uses in proximity to transit. The height limit for new development within the Core Area is 250 feet. ❖ The North San Jose Area Development Policy establishes potential new residential areas with a minimum density of 55 DU/AC on approximately 200 acres in close proximity to transit. The height limit for new development within 2000 feet of a light rail station is 150 feet.
H-5 Establish Telecommuting Centers	<ul style="list-style-type: none"> ❖ This program is an optional traffic mitigation measure included among the TDM measures in the project CEQA document.
H-6 Auto-Free/Transit Only Zone	<ul style="list-style-type: none"> ❖ It is not the policy of the City of San Jose to pursue these types of transit enhancements on city streets, although such improvements could be proposed by large development as part of a TDM program.

Source: Requirements for Deficiency Plans, VTA CMP, November 1992; City of San Jose

4. **Action Plan**

The purpose of this chapter is to describe how deficiency plan action items will be implemented, identify the responsible agency for implementing each action, and identify the funding source for each action.

Development Review Process

Proposals for individual development projects within the North San Jose Development Area will be required to provide operational analyses and improvements plans as necessary, to ensure that specific design, on-site circulation, driveway locations, and infrastructure (including right-of-way) improvements are consistent with the overall plans for the area and meet appropriate design criteria. All proposals will go through the City review process including review and comments by VTA and other agencies. The City of San Jose has endorsed VTA's Community Design and Transportation (CDT) Program and will incorporate guidelines and recommendations of the VTA, CMP, and CDT Program when appropriate and applicable.

Summary of Improvement Costs

The City of San Jose has identified approximately \$519 million in needed roadway/intersection and transit/pedestrian/bicycle facility improvements in North San Jose as well as other parts of the city where it is expected that traffic associated with North San Jose development would have adverse effects. The identified improvements will be funded largely by the City of San Jose's new traffic impact fee for North San Jose, but a portion of these costs are planned to be funded by the City of San Jose and other funding sources totaling approximately \$59 million. Table 6 itemizes the transportation improvement projects identified by the City of San Jose and associated costs.

**Table 6
Transportation Improvement Cost Summary**

Location (Type)	Cost
NSJ CMP Intersection Improvements	
North First Street & SR237 (South)	\$7,000,000
North First Street & Montague Expressway	\$18,000,000(a)
Zanker Road & Montague Expressway	\$49,000,000(b)
Trimble Boulevard & Montague Expressway	\$30,000,000
McCarthy Boulevard & Montague Expressway	\$68,000,000
Old Oakland Road & Montague Expressway	\$500,000
North First Street & Trimble Road	\$1,000,000
Zanker Road & Trimble Road	See Note c
Zanker Road & Brokaw Road	See Note c
Old Oakland Road & Brokaw Road	See Note d
Trade Zone Boulevard & Montague Expressway	\$2,175,000
Subtotal CMP Intersection Improvements	\$175,675,000
Offsetting Improvements to NSJ Non-CMP Intersections	
North San Jose Grid Street System	\$55,000,000
Zanker Road Widening	See Note c
Zanker Road/Skyport Drive Connection	\$64,000,000
US 101/Trimble Road Interchange	\$27,000,000
Charcot Avenue Extension	\$32,000,000
Mabury Road Interchange	\$43,000,000
Zanker Road & Tasman Drive	\$2,000,000
North First Street and Charcot Avenue	\$2,000,000
North First Street and Metro Drive	\$250,000
Zanker Road and Charcot Avenue	\$2,000,000
Junction Avenue and Charcot Avenue	\$1,000,000
Bering Drive and Brokaw Road	\$1,000,000
Subtotal NSJ Non-CMP Intersection Improvements	\$229,250,000
Other Intersection Improvements Outside of NSJ	51,775,000
Offsetting Action from VTA CMP Immediate Implementation Action List	
Transit, Bicycle, Pedestrian, and TDM Actions	\$62,300,000
Total	\$519,000,000

Notes:

a – Cost associated with the widening of Montague Expressway

b – Cost associated with the widening of Zanker Road

c – Included as part of the Zanker Road Widening cost listed at Zanker Rd./Montague Expwy.

d – Improvement funding of \$1,000,000 is already in place.

Summary of San Jose Traffic Impact Fees

The North San Jose Deficiency Plan Policy traffic impact fee is funding approximately \$460 million in improvements. The fee is based on PM peak-hour trip-making characteristics of the particular land use proposed for development in North San Jose. The PM peak hour is used because it is the PM peak hour during which traffic conditions are the worst. The total increase in PM peak hour vehicle trips with the anticipated development was estimated to be 41,300. The traffic impact fee is determined by calculating the cost per vehicle trip for the anticipated growth by dividing the total cost of improvements (\$519 million minus \$59 million (the amount funded by other sources) = \$460 million) by the increase in peak hour vehicle trips (41,300) to come up with \$11,138 per trip. The cost is then distributed upon each of the land uses based on their trip generating characteristics determined based on the following rates:

Single-Family Residential	0.6279 trips per unit
Multi-Family Residential	0.5024 trips per unit
Industrial Uses	0.9371 trips per 1,000 s.f.

Multiplying the cost per trip figure times each of the rates determines the applicable fee for each land use. Traffic impact fees by land use type are presented in Tables 7 and 8.

**Table 7
North San Jose Trip Estimates**

Land Use	Size	Trip Rate
SF Detached	3,530 units	.6279 per unit
MF Attached	28,470 units	.5024 per unit
Industrial	26.7 m.s.f	.9371 per 1,000 s.f.

**Table 8
North San Jose Land Use Impact Fees**

Land Use	Fee	Unit of Measure
SF Detached	\$6,994.00	Per dwelling unit
MF Attached	\$5,596.00	Per dwelling unit
Industrial	\$10.44	Per sq. ft.

5. **Deficiency Plan Monitoring**

The purpose of this chapter is to describe how the City of San Jose will monitor and evaluate the implementation of the Action Plan set forth in this Deficiency Plan. The timing and implementation of each of the identified improvements in the previous chapter are described in this chapter. As development within North San Jose progresses, the construction of each of the identified improvements will be necessary. Table 9 sets forth a schedule for implementation of the Action Plan.

Evaluation of CMP levels of service will be accomplished through periodic updates to the City's traffic model and impact fee system. Deficiency plans must be monitored as part of the CMP annual monitoring program and updated as needed. The City of San Jose will monitor implementation of the deficiency action plan by preparing a Deficiency Plan Implementation Status Report. This report will be submitted to VTA and will be based upon the implementation schedule included in the deficiency plan. The City of San Jose will also be required to include in their status reports a financial element that includes a description of and status of funds collected and expenditures made in implementing deficiency plan actions. The status report will include a review of possible additions from the Deferred Implementation Action List.

Development Phasing

The implementation of each of the identified improvements will be established as the development levels planned for North San Jose proceed. Since the development planned for North San Jose will not occur immediately, it is not necessary to construct all improvements at the initiation of development. Rather the improvements will be constructed concurrently with development as deemed necessary. The deficiency plan actions identified in this report will be implemented as part of the North San Jose Development Policy by each applicable jurisdiction in which they are located. With provided funds, each jurisdiction (City of San Jose, County of Santa Clara, VTA) will be responsible for implementing each action.

Generally, the implementation of each of the intersection improvements was determined based on level of service calculations with incremental phases of development. The planned development was divided into 25% increments to develop the following four phases of development:

Phase 1	6.675 msf of Industrial Space 425 ksf of Commercial Space 8,000 Residential Units	Phase 3	20.025 msf of Industrial Space 1.275 msf of Commercial Space 24,000 Residential Units
Phase 2	13.35 msf of Industrial Space 850 ksf of Commercial Space 16,000 Residential Units	Phase 4	26.7 msf of Industrial Space 1.7 msf of Commercial Space 32,000 Residential Unit

North San Jose Development Policy

According to the North San Jose Development Policy, development will not be able to proceed to the next phase until the improvements associated with each phase are completed. For example, development of industrial/office space beyond 6.675 msf will require that the following improvements be completed:

- Montague Expressway Widening
- US 101/Trimble Road Interchange
- Montague Expressway/Trimble Road
- Various intersection improvements
- Various transit, bicycle, and pedestrian improvements

The transit, bicycle, and pedestrian improvements will be more specifically detailed in subsequent analyses and review of specific site development projects.

Improvement Phasing

The need for specific intersection improvements during each phase of development was determined based on current level of service calculations. Each intersection was evaluated to determine during which phase the addition of project traffic would cause the intersection to fall below CMP standards. A few exceptions to the level of service criteria include intersections for which the proposed improvements are minor and can be completed within the first phase of development. The phase at which each of the identified improvements will be implemented is outlined below.

The phasing of the major roadway improvements was determined based on judgement of necessity of the improvements and level of service calculations. The phase at which the major roadway improvements were needed was determined based on their need to serve the North San Jose area as a whole. The major roadway improvements serve as gateways and/or major arterials to and within North San Jose, and therefore are needed to serve each of the development phases. The phase at which each of the major roadway improvements will be implemented is outlined below.

**Table 9
Action Plan Implementation Schedule**

Location (Type)	Schedule for Improvement
NSJ CMP Intersection Improvements	
North First Street & SR237 (South)	Phase 3
North First Street & Montague Expressway	Phase 1
Zanker Road & Montague Expressway	Phase 2
Trimble Boulevard & Montague Expressway	Phase 1
McCarthy Boulevard & Montague Expressway	Phase 3
Old Oakland Road & Montague Expressway	Phase 1
North First Street & Trimble Road	Phase 1
Zanker Road & Trimble Road	Phase 2
Zanker Road & Brokaw Road	Phase 2
Trade Zone Boulevard & Montague Expressway	Phase 1
Offsetting Improvements to NSJ Non-CMP Facilities	
North San Jose Grid Street System	All Phases
Zanker Road Widening	Phase 2
Zanker Road/Skyport Drive Connection	Phase 4
US 101/Trimble Road Interchange	Phase 1
Charcot Avenue Extension	Phase 2
Mabury Road Interchange	Phase 4
Zanker Road & Tasman Drive	Phase 3
North First Street and Charcot Avenue	Phase 1
North First Street and Metro Drive	Phase 1
Zanker Road and Charcot Avenue	Phase 3
Junction Avenue and Charcot Avenue	Phase 3
Bering Drive and Brokaw Road	Phase 1
Other Intersection Improvements Outside of NSJ	All Phases
Offsetting Action from VTACMP Immediate Implementation Action List	
Bicycle, Pedestrian Actions, TDM and Transit Actions	All Phases

6. Environmental Documentation

The purpose of this chapter is to describe the reconciliation of CEQA with actions included in the deficiency plan. Per Public Resources Code § 21080 (b)(13), congestion management programs are exempt by statute from the provisions of the California Environmental Quality Act (CEQA). As established in Government Code §§ 65089 et seq., a deficiency plan is a required part of a congestion management program when certain conditions are met. As such and within certain parameters, a deficiency plan enjoys the same statutory exemption as the CMP.

The purpose of the deficiency plan is to identify and implement measures that will improve traffic conditions in a locality, and as such implementation of the plan will lead to improved environmental conditions. Furthermore, items identified from the VTA CMP's Immediate Implementation Action List have also been identified by the Bay Area Air Quality Management District as actions that when implemented will have a positive impact on air quality in the region. To the degree that individual projects identified in the North San Jose Deficiency Plan have the potential for creating ancillary (i.e., localized) impacts to the environment, such impacts will be evaluated as individual projects come forward for design and construction.

Appendix A
Valley Transportation Authority
Immediate Implementation Action list

VTA Action Item Summary

A. Bicycle and Pedestrian Actions

A-2 Bike Lockers, Racks, and Facilities at Transit Centers

A-3 Improve Roadside Bicycle Facilities

A-4 Improve Pedestrian Facilities

B. Public Transit

B-3 Shuttle Service (Existing Employment Centers)

B-8 Bus Stop Improvements

C. Carpooling, Bus Pooling, Van Pooling, Taxi Pooling

(All actions on deferred list.)

D High Occupancy Vehicle (HOV) Facilities

(All actions on deferred list.)

E. Transportation Demand Management (TDM) Programs

E-2 Public Information Programs

F. Traffic Flow Improvements

F-2 Peak-Hour Parking and Delivery Restrictions

F-3 Traffic Signal Timing and Synchronization Program

F-4 Traffic Flow Improvements in Urban Areas

G Site Design Guidelines for New Development

G-1 HOV Parking Preference Program

G-2 Bike Facilities at Development Projects

G-3 Building Orientation Placement at Employment Sites

G-4 Pedestrian Circulation System

G-5 Bike Storage at Residential Development Projects

G-6 Shuttle Service (New Development)

G-7 Transit Stop Improvements

G-8 Multi-Tenant Complex TDM Program

H Land-Use Program

(All actions on deferred list.)

A. BICYCLE AND PEDESTRIAN ACTIONS

A-2: Bicycle Storage Facilities at Transit Centers -- IMMEDIATE ACTION

Description: This action consists of adding bicycle storage facilities at designated transit centers including:

- ❖ Park-and-ride lots
- ❖ Rail transit stations
- ❖ Major transit transfer stations

The SCCTD will work with Member Agencies in designating transit centers appropriate for adding bicycle storage facilities within the Deficiency Plan area. In some cases, bicycle storage facilities might more appropriately be added at existing transit stations outside the deficiency plan area to better achieve the deficiency plan goals. For example: if the deficiency plan area contained all employment centers with few transit centers, it would be appropriate to include storage facilities at transit centers in existing residential areas, where workers live, as part of the deficiency plan.

Bicycle storage facilities shall include bicycle lockers, bike racks, and equipment storage lockers for bicyclists.

Intent: To facilitate the use of bicycles for commute and other trips.

Standards¹:

1. A minimum of 10 bicycle lockers shall be provided at all designated transit centers within the deficiency plan area, and at identified transit centers outside the deficiency plan area.
2. Secure and protected bicycle racks shall be provided at transit centers where necessary and feasible. Bicycle racks shall allow use of U-type locks.
3. Storage lockers for bicyclists shall be provided at transit centers when possible.

Timing: The deficiency plan must include a list of all transit centers that will be improved as part of the deficiency plan and an implementation plan (including funding sources and schedule) for installing the bike storage facilities.

Approval Criteria: The CMP will require that these actions be implemented at all appropriate transit centers as quickly as possible. The plan should include installing equipment at all transit centers in the deficiency plan within 1-to-2 years.

¹ The CMP will work with the SCCTD, other Member Agencies, and representatives of bicycle advocacy organizations to develop common equipment standards for bike lockers, racks and storage lockers. In the interim, Member Agencies are urged to work with SCCTD, Caltrans, and local bicycle advocacy groups to obtain appropriate equipment for bike facilities.

A-3: Improved Roadside Bicycle Facilities-- IMMEDIATE ACTION

Description: This action consists of improving roadside bicycle facilities throughout the deficiency plan area as well as connections to bicycle routes outside the deficiency plan area.

Intent: To facilitate the use of bicycles for all types of trips. **Standards:**

1. The deficiency plan must include a Bicycle Facilities Improvement Element. This element must include all bicycle improvements on an official city (or county) bicycle plan within the deficiency plan area including:
 - ❖ Widening roadway shoulders for bicycle facilities (or adding bicycle lanes);
 - ❖ Installing and marking bike detection loops at traffic signals; and
 - ❖ Implementing the city's bicycle circulation plan.
2. The initial deficiency plan must include a schedule for constructing all bicycle facilities in the Bicycle Facilities Improvement Element. If there is no official bike plan for the deficiency plan area, a Bicycle Facility Improvement Element for the deficiency plan area must be developed as part of the initial deficiency plan.
3. All cities must develop an implementation program for their Citywide Bicycle Circulation Plan. (Cities that do not have a Citywide Bicycle Circulation Plan must develop a Citywide Bicycle Circulation Plan.²)

Timing: The Deficiency Plan must include a bicycle facilities improvement element. This element must:

- ❖ List all locations where facilities will be improved;
- ❖ Outline the type of improvements that will be implemented; and
- ❖ Present an implementation plan that describes the funding sources and the schedule for the improvements.

Approval Criteria: The CMP will require that Member Agencies implement a program to strongly encourage bicycle use. Therefore, the City of San Jose should include an aggressive implementation program for bicycle facility improvements.

For cities without Citywide Bicycle Circulation plans, the CMP will also require that these plans be completed within one year of deficiency plan approval.

² Note that all cities must have Citywide Bicycle Circulation Plan to receive funds from the State's Transit Development Act (TDA).

A-4: **Improve Pedestrian Circulation -- IMMEDIATE ACTION**

Description: This action consists of improving public sidewalks and pathways within existing commercial, employment and mixed-use centers located in the Deficiency Plan area. Improvements may include: constructing new sidewalks and pathways, providing lighting, improving landscaping, and adding signage.

Intent: To encourage walking between neighboring land uses and to support the use of alternative transportation by providing an integrated and functional pedestrian circulation system in major commercial, employment and mixed use centers.

Standards:

1. The deficiency plan must include a Pedestrian Facility Improvement Element for existing commercial, employment and mixed use centers in the Deficiency Plan area. The element may include:
 - ❖ Constructing new sidewalks between adjoining uses;
 - ❖ Constructing new sidewalks to transit stops in existing industrial areas;
 - ❖ Providing lighting for existing sidewalks and paths,
 - ❖ Improving landscaping;
 - ❖ Adding pedestrian phases/actuation for traffic signals;
 - ❖ Adding signage.
2. This Pedestrian Facility Improvement Element must include an implementation plan describing how and when the improvements will be made.

Timing: The Deficiency Plan must include a pedestrian facility improvement element. This element must:

- ❖ List all locations where facilities will be improved;
- ❖ Outline the type of improvements that will be implemented; and
- ❖ Present an implementation plan that describes the funding sources and the schedule for the improvements.

Approval Criteria: The CMP will require that pedestrian facilities in all existing activity centers within the deficiency plan area be upgraded.

The pedestrian circulation improvements in the Deficiency Plan's Pedestrian Facility Improvement Element should include as many improvements as possible and must be implemented consistent with the implementation plan.

B. TRANSIT

B-3: Shuttle Service to Rail Transit Stations -- IMMEDIATE ACTION

Description: This action consists of providing shuttle transit service to rail transit stations and other locations or assisting in the financing of existing shuttle services.

Intent: To encourage transit use.

Standards:

1. The city must perform an initial rail station shuttle feasibility study as part of the deficiency plan. This study must include:
 - ❖ A list of all major employment centers in the deficiency plan area (defined as having over 750 employees or 300,000 gross square feet of building area) located over 2,500 feet from a rail transit station.
 - ❖ A description of all existing public or private shuttle services in the deficiency plan area.
 - ❖ A basic analysis for implementing new shuttle services from a rail station to each employment center. In the initial deficiency plan this analysis may be a relatively simple analysis evaluating the cost of providing shuttle service to each employment center, identifying the shuttle route, identifying the distance from the rail station to the employment center, identifying opportunities for serving multiple employment centers with the same shuttle route (including those with less than 750 employees), and estimating the number of potential shuttle passengers along the route. This basic analysis must also consider the feasibility of extending any existing shuttle services in the area to the employment center.
2. The city must develop a prioritized list of potential shuttle routes based upon the initial feasibility study. During the first year, the city must complete a more detailed feasibility study on the three highest priority shuttle routes. The feasibility study shall examine potential strategies for implementing and sustaining the operation of shuttle services. This feasibility study should include an implementation plan for any routes that are found to be cost effective. This detailed feasibility study must be submitted to the CMP with the city's monitoring report.
3. In future years, the city must perform detailed feasibility studies on the other routes identified on the priority list. These studies must be included in future monitoring reports.
4. The city must encourage implementation of the shuttle services found to be most effective in the feasibility study.

Timing: The City of San Jose must include the initial rail station shuttle feasibility study as part of the list of employment centers and the feasibility study the original deficiency plan.

The city must include the more detailed shuttle feasibility studies in the future year deficiency plan monitoring reports.

The city must make a clear effort to develop innovative schemes to implement private shuttle service from existing employment centers during the next several years.

Approval Criteria: The CMP will require that cities include the list and initial feasibility study with their original deficiency plan. The city must include the more detailed shuttle feasibility studies, as well

as a brief report documenting its progress at implementing and sustaining shuttle service in the future year deficiency plan monitoring reports.

B-8: Transit Stop Improvements -- IMMEDIATE ACTION

Description: This action consists of improving transit stops to encourage transit use as well as improving adjoining roadways to improve traffic flow and/or reduce delays to transit vehicles entering the traffic flow.

Intent: To improve traffic LOS and increase the efficiency and the safety of the public transit system.

Standards:

Member Agencies must work with SCCTD to prepare a transit stop improvement element for transit stops in the deficiency plan area. This element must include the following:

1. A list of all transit stops in the deficiency plan area
2. An evaluation of each transit stop on the list in terms of its need for:
 - ❖ Relocation;
 - ❖ Elimination;
 - ❖ Traffic flow improvements (to assist the transit vehicle in entering the stream of traffic);
 - ❖ Passenger amenities including: shelter, seating, lighting, maps, schedules, pay telephone, and landscaping.
3. A program for implementing the improvements identified in the element.

Timing: The original Deficiency Plan must include the Transit Stop Improvement Element. Within one year after CMP approval of the Deficiency Plan, the City of San Jose must begin implementation of the Transit Stop Improvement Element.

Approval Criteria: The CMP will require that all transit stops in the Deficiency Plan area be upgraded to include all feasible passenger amenities and traffic flow improvements. This program must be implemented according to the schedule included in the Deficiency Plan.

C. CARPOOLING, BUSPOOLING, VANPOOLING, AND TAXIPOOLING (All actions on Deferred List)

D. HIGH OCCUPANCY VEHICLE (HOV) FACILITIES (All actions on Deferred List)

E. TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAMS

E-2: Public Information Programs - IMMEDIATE ACTION

Description: This action consists of providing public information on availability and benefits of transportation alternatives to the single occupant automobile as well as the air and water quality impacts of transportation decisions.

Intent: To encourage using alternatives to the single occupant automobile by including agencies such as municipal libraries and public schools, as well as employers, in the distribution of this type of information.

Standards:

1. The deficiency plan must include a plan for increasing the distribution of alternative transportation information developed by the SCCTD, the Commuter Network, MTC, Santa Clara Valley Non-point Source Program and the Air District—beyond employers included in the Air District's Trip Reduction Ordinance—within the county. Information could include:
 - ❖ Health effects of air pollution and traffic congestion;
 - ❖ Air pollution effects of older vehicles and poorly tuned vehicles;
 - ❖ Benefits of trip linking;
 - ❖ Benefits of compact/mixed-use development, especially near transit;
 - ❖ Educational materials designed for use in schools.
2. The Commuter Network and the Santa Clara Valley Non-point Source Program will assist their member cities in this effort.

Timing: The original deficiency plan must include a description of the City of San Jose's plan for implementing this action. The City of San Jose must begin implementation upon CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that a comprehensive implementation program be developed by each City of San Jose for this action. The CMP will require that this action be implemented immediately.

F. TRAFFIC FLOW IMPROVEMENTS

F-2: Peak-period Parking and Delivery Restrictions -- IMMEDIATE ACTION

Description: This action consists of restricting curbside parking and deliveries during peak periods to improve traffic flow.

Intent: To improve traffic flow thereby reducing vehicle emissions.

Standards:

1. City of San Jose must evaluate the feasibility of this action on all CMP Roadway System arterials within the Deficiency Plan area (whether or not the City of San Jose is responsible for operating the arterial). Member Agencies may extend this plan to non-CMP arterials within the Deficiency Plan area.
2. In locations where it is feasible to restrict curbside parking and deliveries during peak periods, the Member Agencies must evaluate whether implementing this action will improve traffic flow. For locations where traffic flow can be improved by implementation of parking and delivery restrictions (and the restrictions are feasible) the City of San Jose must include an implementation plan describing how and when Se restrictions will be made.
3. City of San Jose must implement feasible and effective parking restrictions.

Timing: The original Deficiency Plan must include a study of the feasibility and effectiveness of these parking and delivery restrictions. If the restrictions are found to be effective, the Deficiency Plan must also indicate when feasible projects will be implemented.

The City of San Jose must implement the parking and delivery restrictions identified in the Deficiency Plan according to the schedule set forth in the Deficiency Plan.

Approval Criteria: The CMP will require that parking and delivery restrictions during the peak hour are implemented at all feasible locations where a traffic evaluation shows that they will be effective at improving traffic flow and reducing vehicle emissions.

F-3: Traffic Signal Timing and Synchronization Program -- IMMEDIATE ACTION

Description: This action consists of optimizing the timing of traffic signals to reduce vehicle delay and vehicle emissions at intersections.

Intent: To reduce vehicle idling and traffic delay at intersections.

Standards:

City of San Jose must develop a program for optimizing traffic signal timing at all CMP Roadway System intersections within the Deficiency Plan area (whether or not the City of San Jose is responsible for operating the traffic signal). Member Agencies may extend this plan to non-CMP arterial intersections within the Deficiency Plan area.

The program must include an implementation plan describing how and when the improvements will be made. Improvements could include: synchronizing sets of traffic signals on an arterial through an interconnection program, simply improving individual traffic signal timing, or other similar improvements.

Timing: The Deficiency Plan must include a Traffic Signal Timing Optimization Program. This program must:

- ❖ List all locations where traffic signal timing will be improved;
- ❖ Outline the type of improvements to be implemented (e.g. timing changes, interconnection projects, or synchronization); and
- ❖ Present an implementation plan that describes the funding sources and the schedule for the improvements.

Approval Criteria: The CMP will require that traffic signal timing at all traffic signals on CMP Roadway System facilities within the deficiency plan area be improved.

The Traffic Signal Timing Optimization Program must be implemented consistent with the schedule included in the Deficiency Plan.

Note: In general, traffic signals should be re-timed on a regular basis to ensure optimum operation. The deficiency plan should recognize this need and require a regular analysis of traffic signal timing in the deficiency plan area. (This analysis could be done by the city traffic engineering staff in conjunction with the annual CMP Traffic LOS Monitoring program.)

F-4: Urban Area Traffic Flow Improvements -- IMMEDIATE ACTION

Description: This action consists of making traffic flow improvements within congested urbanized areas to control traffic flows rather than to add capacity. These improvements may include items such as the following:

- ❖ Additional Turn lanes at intersections;
- ❖ HOV lanes;
- ❖ Turning two-way streets into one-way streets;
- ❖ Computerized traffic & transit control and management on arterials;
- ❖ Turn restrictions at intersections (peak period and all day);
- ❖ Designating reversible lanes to serve peak direction traffic flows.

Intent: The intent of these improvements is to improve traffic flows and reduce emissions in urbanized areas. These traffic flow improvements should be used to encourage infill development in urbanized areas.

Standards: The City of San Jose must evaluate the benefit of these types of traffic flow improvements in the Deficiency Plan area.

Timing: Cities will be responsible for planning and financing these traffic flow improvements. New development projects located within the Deficiency Plan area or impacting deficient facilities may be required to help fund the improvements. The improvements should be implemented concurrent with development. Member Agencies are encouraged to evaluate the potential for these actions at improving traffic flow when they complete transportation analyses for Specific Plan areas and General Plan revisions. The original deficiency Plan must include an Urban Area Traffic Flow Improvement Plan. This plan must:

- ❖ List all locations where facilities will be improved;
- ❖ Outline the type of improvements that will be implemented; and
- ❖ Present an implementation plan that describes the funding sources and the schedule for the improvements.

Approval Criteria: The CMP will require that all feasible and desirable traffic flow improvements consistent with this action be made to the deficiency plan area's CMP Roadway System.

The original Deficiency Plan must include an implementation plan for all urban area traffic flow improvements included in the Deficiency Plan.

G. SITE DESIGN GUIDELINES for NEW DEVELOPMENT and ADDITIONS The Deficiency Plan actions included in the Site Design Guidelines category are intended to be implemented by all new development that takes place within the City of San Jose's jurisdiction. Implementation will be required by Member Agencies as a condition of project approval.

Many Deficiency Plan Site Design Guideline actions are currently required by CMP Member Agencies; the intent of placing these actions within the Deficiency Plan is to ensure that these actions be applied to all new development project in Santa Clara County. Finally, it should be noted that these standards are minimums; Member Agencies may require additional actions as part of their own development regulations.

The Deficiency Plan Site Design Guideline actions apply to all new development projects with the following minimum gross square footages³:

• Office	30,000 gross square feet
• R&D	30,000 gross square feet
• Industrial	40,000 gross square feet
• Warehouse	85,000 gross square feet
• Residential	100 PM peak hour trips
• Retail Centers ⁴	50,000 gross square feet

Site Design Guideline actions will also apply to major additions to existing development. Major additions are defined as either (1) additions of at least 10,000 gross square feet which, when added to the existing building area that will bring the facility up to the square footage threshold defined above; or (2) as additions of at least 10,000 gross square feet to facilities that already meet the applicable square footage threshold.

³ Unless local occupancy standards vary significantly, these square footages for employment purposes house approximately 100 employees.

⁴ Only action items F-4, F-7, F-8, and F-2 (storage only) will apply to retail centers

G-1: Parking Preference for HOVs -- IMMEDIATE ACTION

Description: This action consists of providing preferential parking for high occupancy vehicles (HOVs) at employment and activity centers.

Intent: To encourage ridesharing.

Standards:

1. All new development projects subject to the Deficiency Plan must designate at least 10% of their parking spaces closest to the employee building entrances for exclusive use of employees who are ridesharing.
2. All new buildings subject to the Deficiency Plan must provide drop-off areas convenient to main employee building entrances in order to encourage ridesharing. Drop-off areas should have direct access to the street.

Timing: The City of San Jose must begin implementing these actions in all appropriate development immediately.

These actions must be applied to all new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

G-2: Bicycle Facilities at Development Projects -- IMMEDIATE ACTION

Description: This action consists of requiring bicycle storage facilities and showers / changing areas for all new employment centers that have 100 or more employees. This action also must be implemented for additions for facilities when the total number of employees is over 100.

Intent: To facilitate the use of bicycles for commute trips.

Standards:

1. Bicycle Storage: All bicycle storage shall be secure and sheltered.

First 900 Employees	1 bike space for every 20 auto spaces
Over 900 Employees	1 bike space for every 40 auto spaces
Minimum	5 bike spaces
Retail Centers.....	1 bike space for every 20 auto spaces

2. Showers & Changing Rooms: Showers and changing rooms must be accessible for all employees working at the site.

100 to 150 Employees	1 shower
151-to-225 Employees	2 showers
226-to-300 Employees	3 showers, -one additional shower shall be provided for every 200 employees.

Note: This requirement is not applicable to retail centers.

Timing: The City of San Jose must begin implementing these actions in all appropriate development immediately.

These actions must be applied to all new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

G-3: Building Placement on Site -- IMMEDIATE ACTION

Description: This action consists of placing new buildings on their sites in a manner designed to encourage alternative forms of transportation.

Intent: To encourage transit use, ridesharing, bicycling, and walking by placing buildings on their sites to make it convenient and attractive to use these alternatives to the automobile.

Standards:

1. All new development projects must include an analysis of the building orientation with respect to transportation as part of the project's Transportation Impact Analysis.⁵
2. All new buildings must have entrances oriented to adjoining transit stop(s) and/or sidewalks. They must also have direct pedestrian routes from the building entrance to the street or transit stop (see Action F-4).
3. All new buildings located within 2,000 feet of an existing or proposed rail transit station must be located within 150 feet of the street curb. Parking for these buildings should be limited in the area between the street and new buildings. Instead, parking should be provided at the sides and backs of new buildings. Member Agencies may modify this requirement for selected buildings in campus developments.

Timing: The City of San Jose must begin implementing these actions in all appropriate development immediately.

These actions must be applied to r new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

⁵ This requirement is included as Section 2.17 of the CMP's Transportation Impact Analysis Methodology (1991 CMP - Exhibit C).

G-4: Pedestrian Circulation System: New Development -- IMMEDIATE ACTION

Description: This action consists of building safe, attractive, and useful public sidewalks and pathways in all new development projects.

Intent: To encourage walking between neighboring land uses and to support the use of alternative transportation by providing an integrated and functional pedestrian circulation system.

Standards:

1. All new development projects must include a pedestrian circulation system that provides direct access from building entrances to transit stops, adjoining public sidewalks, neighboring land uses, nearby commercial areas, and to important locations within the project site.
2. All pedestrian paths and sidewalks must be designed with adequate lighting, landscaping, and signage for convenience and security. Where paths or sidewalks cross internal streets or parking lots, the pedestrian way shall be designated using special paving or other indication that it is a pedestrian way. Pedestrian paths through parking must provide adequate buffer between sidewalks and parked cars. All pedestrian paths must be fully accessible to the disabled.

Timing: The City of San Jose must begin implementing these actions in all appropriate development immediately.

These actions must be applied to all new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

G-5: Bicycle Facilities at New Residential Development -- IMMEDIATE ACTION

Description: This action consists of requiring secure bicycle storage facilities at all new residential development projects that do not have private garages.

Intent: To facilitate bicycle use by occupants of new multi-family structures for all types of trips.

Standards:

1. All new residential development projects that do not provide separate garages for each unit shall provide secure and sheltered parking for bicycles. Projects must provide at least 1/2 space per dwelling unit.

Timing: The City of San Jose must begin implementing this action in all appropriate development immediately.

This action must be applied to all new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that this action be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require this action to apply to all development projects subject to the Deficiency Plan.

G-6: Shuttle Service -- IMMEDIATE ACTION

Description: This action consists of providing shuttle transit service to rail transit stations and other locations.

Intent: To encourage transit use.

Standards:

1. All new employment center development projects with either a minimum of 750 employees or 300,000 gross square feet must provide shuttle service to and from a rail transit station, unless the city has performed a feasibility study and determined that this action is infeasible for a particular development project. The shuttle service operating plan must be described in the development project's Transportation Impact Analysis Report and should be reviewed with SCCTD staff. The employment center may contribute to an existing shuttle service in the area or extend an existing shuttle into the area if such a service exists.
2. New employment center development projects with a size from 100-to-750 employees may be required to contribute to existing shuttle services (if they exist) in the deficiency plan area on a pro-rata basis.
3. New employment centers located within 2,500 feet of an existing transit station may construct safe, convenient, and attractive pedestrian walkways from their site to the transit station in-lieu of providing the shuttle service. (If there is an existing pedestrian way, the City of San Jose may require the project to make improvements to the facility to make it safer and more attractive.)

Timing: The City of San Jose must require shuttle transit service in all appropriate development upon building occupancy.

The shuttle service must be provided until such time as it is no longer required. The CMP must approve discontinuing any shuttle service included in an approved Deficiency Plan. An acceptable reason for discontinuing shuttle service is that a transit station is constructed within 2,500 feet of the development project.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

G-7: Transit Stop Improvements -- IMMEDIATE ACTION

Description: This action consists of improving transit stops to encourage transit use as well as improving adjoining roadways to improve traffic flow and/or reduce delays to transit vehicle entering the traffic flow.

Intent: To improve traffic LOS and increase the efficiency and the safety of the public transit system.

Standards:

1. Member Agencies must work with SCCTD to require new development projects to assist in provision of roadway improvements (including bus turnouts and bus bulbs) at bus stops affected by the development project. (Bus-bulbs are extensions of the sidewalk into the traffic lane; bus bulbs reduce the difficulty buses have in re-entering the stream of traffic thereby reducing delays to transit passengers.)
2. Member Agencies must work with the SCCTD to require new development projects to assist in provision of transit station amenities (such as shelters, signs, maps, schedules, public telephones, and lighting) at transit stops affected by the development project.

Timing: The City of San Jose must begin implementing these actions in all appropriate development immediately.

These actions must be applied to all new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

G-8: Multi-tenant Complex TDM Program -- IMMEDIATE ACTION

Description: This action consists of requiring all businesses in new employment complexes with over 500 employees to participate in the Commuter Network's Transportation Demand Management (TDM) program (even those businesses not currently covered by the Air District's Trip Reduction Rule or Commuter Network TDM ordinance).

Intent: To encourage using alternatives to the single occupant automobile for travel to and from work.

Standards:

1. Member Agencies must ensure that all new multi-employer complexes with over 500 total employees in the deficiency plan area participate in the TDM program.
2. The Commuter Network will assist its member cities in the planning and implementation of this action.

Timing: The City of San Jose must begin implementing these actions in all appropriate development immediately.

These actions must be applied to all, new development projects subject to the Deficiency Plan under the jurisdiction of the City of San Jose within one year after CMP approval of the Deficiency Plan.

Approval Criteria: The CMP will require that these actions be implemented immediately on all projects requiring discretionary review. Consistency with this requirement must be indicated in a development project's TIA Report.

Member Agencies must also include a schedule in the original Deficiency Plan for changing its development regulations to require these actions to apply to all development projects subject to the Deficiency Plan.

C. CARPOOLING, BUS POOLING, VARPOOLING, AND TAXIPOOLING

C-1: Enhanced Trip Reduction Program -- DEFERRED ACTION

Description: This action consists of implementing an enhanced trip reduction program.

Intent: To improve the effectiveness of the trip reduction programs required under the Air Quality Management District's Trip Reduction Rule.

Standards:

Member Agencies should work with CMP staff to develop an enhanced trip reduction program for the deficiency plan area. Implementation of this program should be coordinated with the Air District's Trip Reduction Rule.

Timing: The original deficiency plan must include a program for developing an enhanced trip reduction program for the deficiency plan area.

Approval Criteria: The CMP will require that all feasible enhancements be made to the deficiency plan area's trip reduction program. This program must be implemented according to the schedule included in the Deficiency Plan. This schedule should be coordinated with implementation of the Air District's Trip Reduction Rule.

D. HIGH OCCUPANCY VEHICLE (HOV) FACILITIES

D-1: Arterial HOV/Transit Lanes -- DEFERRED ACTION

D-2: Implement MTC 2005 HOV Plan -- DEFERRED ACTION

D-3: Construct HOV Support Facilities -- DEFERRED ACTION

D-4: Construct HOV to HOV Connections and Ramps - DEFERRED ACTION

D-5: Construct HOV Bypass Facilities -- DEFERRED ACTION

Description: These actions are major capital improvements for the regional HOV system.

Intent: These actions are intended to encourage the use of transit and ridesharing.

Standards: To be developed.

Timing: Deferred Action -- Sub-regional Deficiency Plan Element.

Approval Criteria: To be developed.

Reason for Deferral: Most of these actions consist of implementation of major transportation improvements. The CMP, working with Member Agencies must develop a comprehensive program for implementing individual actions in a coordinated and equitable fashion.

G. NEW DEVELOPMENT SITE DESIGN GUIDELINES

All New Development Site Design Guidelines Actions are on the immediate implementation list.

H. LAND USE ACTIONS -- DEFERRED ACTIONS -- (See Note)

The following actions all address land use planning and for purposes of Deficiency Plans are categorized as deferred. The CMP is developing a land-use planning study that will discuss specific implementation techniques for these actions. Until these techniques are approved, the CMP recommends that these actions be implemented by Member Agencies when they revise their General Plan or develop an areawide plan using commonly accepted transportation planning practice.

H-1: Mixed Use Development

H-2: Childcare Facilities near Transit & Employment Centers

H-3: Development of Affordable Housing Near Worksites

H-4: High Density Housing near Rail Transit

H-5: Establish Telecommuting Centers

H-6: Auto Free / Transit Only Zone

Description: These actions are land use measures designed to increase transit ridership, reduce vehicle miles traveled, improve overall air quality, and improve traffic LOS on the overall CMP roadway system. Where feasible and consistent with other community goals the City of San Jose will implement these actions.

Intent: The intent of these actions is to improve overall CMP System transportation conditions.

Standards: Specific standards will be developed as part of the CMP's Land Use Element.

Timing: Deferred Action.

Note: These actions should be implemented by Member Agencies when they revise their General Plan or develop a Specific Plan. Member Agencies should use commonly accepted transportation and land-use planning practice in these situations.

Approval Criteria: To be developed.

Reason for Deferral: The CMP, working with Member Agencies, must develop specific implementation standards for land use actions.