ATTACHMENT 1

FINAL
ENVIRONMENTAL IMPACT REPORT

SCH #90020776

MOUNTAIN HOUSE
MASTER PLAN AND SPECIFIC PLAN I

Volume I

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R10114-B0

4.12 TRANSPORTATION

SETTING

The existing conditions of the regional and local road network are described in detail in the original FEIR for the General Plan Amendment for Mountain House New Town (BASELINE, 1992a) and are largely unchanged since its preparation. That information is summarized below, and updated, when applicable, specifically for traffic volumes.

State and Regional Highways

The project site is located within a mile of two interstate freeways that provide regional site access. Interstate 580 (I-580) is an eight-lane freeway extending east from the San Francisco Bay Area, traversing the San Ramon/Livermore Valley (Tri-Valley) area, extending across the Altamont Pass easterly to the Interstate 205 (I-205) junction, and then continuing southeasterly as a four-lane freeway to connect to Interstate 5 (I-5) for north-south regional travel (Figure 4.12-1). I-205 extends as a four-lane freeway from its junction with I-580 near the Alameda-San Joaquin County line, passes along the southern boundary of the project site and continues for approximately 13 miles to connect with I-5 northeast of Tracy. In conjunction with I-580, I-205 provides an important connection between the Central Valley and the Bay Area. Both I-580 and I-205 are Congestion Management Program (CMP) routes.

There are five freeway interchanges connecting to local roads within five miles of the project site: on I-580 at Grant Line Road and Patterson Pass Road, and on I-205 at Patterson Pass Road, 11th Street, and Grant Line Road (Figure 4.12-1). These interchanges are generally unsignalized diamond interchanges built to rural standards.

Local Roads

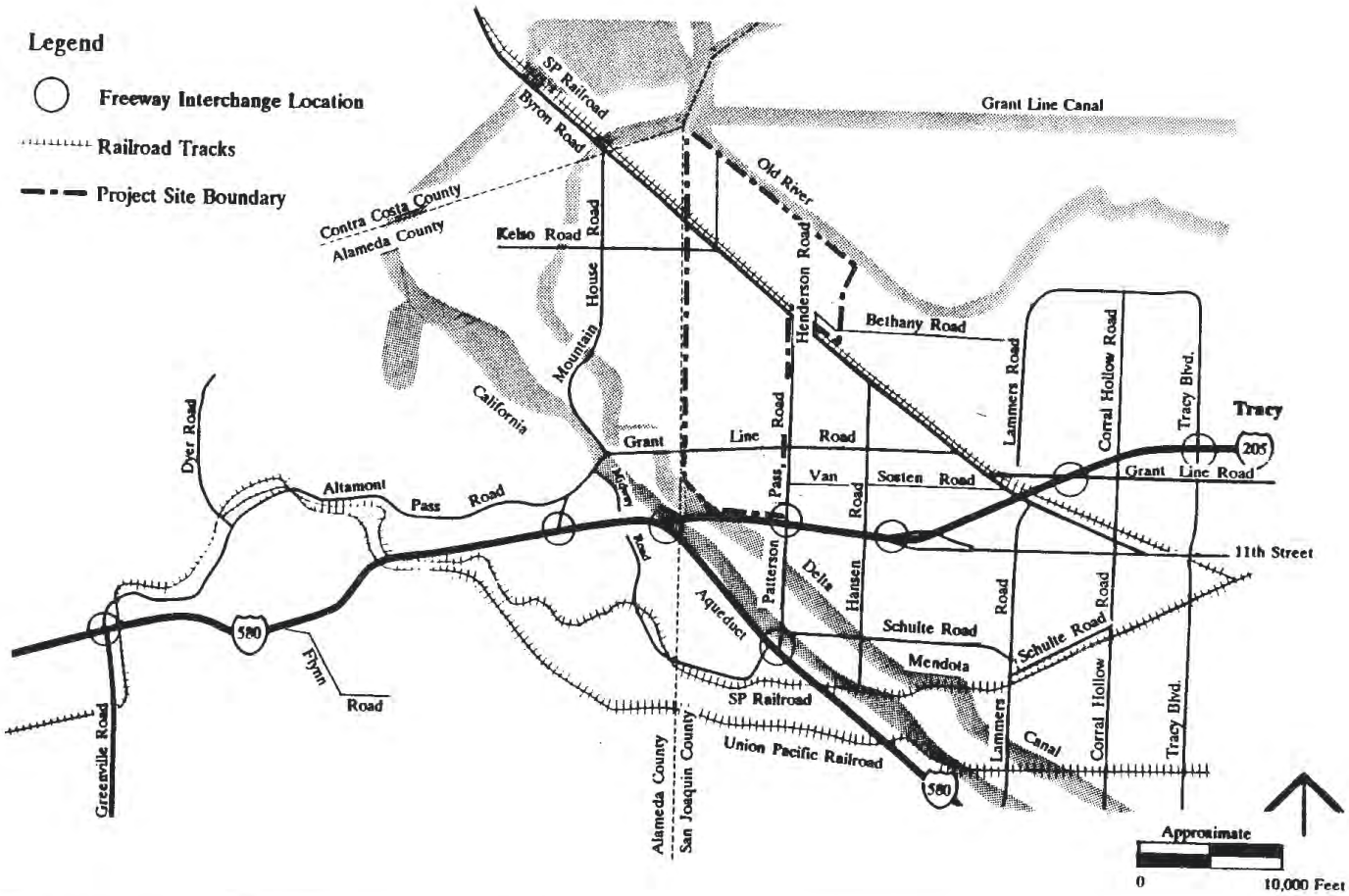
The project site is served by several arterial roads within San Joaquin County and other jurisdictions (Figure 4.12-1). Most of these roads are currently two-lane rural roads with relatively straight alignments and posted speeds of 50 mph.

- Patterson Pass Road is a north-south road along the east edge of the project site, connecting Byron Road to I-205 and continuing south to I-580.

- Grant Line Road is a main east-west local route that crosses the southern portion of the project site; Grant Line Road is offset by about half a mile at Byron Road, continuing easterly into the City of Tracy.

SITE VICINITY ROADWAYS

Figure 4.12-1



R10114-BO.03 6/6/94

- 11th Street is a four-lane major arterial that extends from I-205 several miles east of the project site into central Tracy. The segment from I-205 to Tracy Boulevard is on the County's CMP system.

- Byron Road is a two-lane rural highway connecting the Brentwood area in Contra Costa County with downtown Tracy, passing diagonally through the northern portion of the project site.

- Mountain House Road is a north-south road in Alameda County, about a mile west of the project site.

- Altamont Pass Road is a winding two-lane road that parallels I-580 from Mountain ~~Pass~~ **House** Road westerly through the Altamont Pass to Greenville Road in Livermore.

Several other two-lane minor local roads cross or terminate at the project site. Kelso Road, which crosses Byron Road, provides local access to the northwest portion of the site, while Henderson and Bethany roads provide access to the northeast portion of the site. Von Sosten Road provides local access to the site south of Grant Line Road between Byron and Patterson Pass roads.

Existing Traffic Volumes

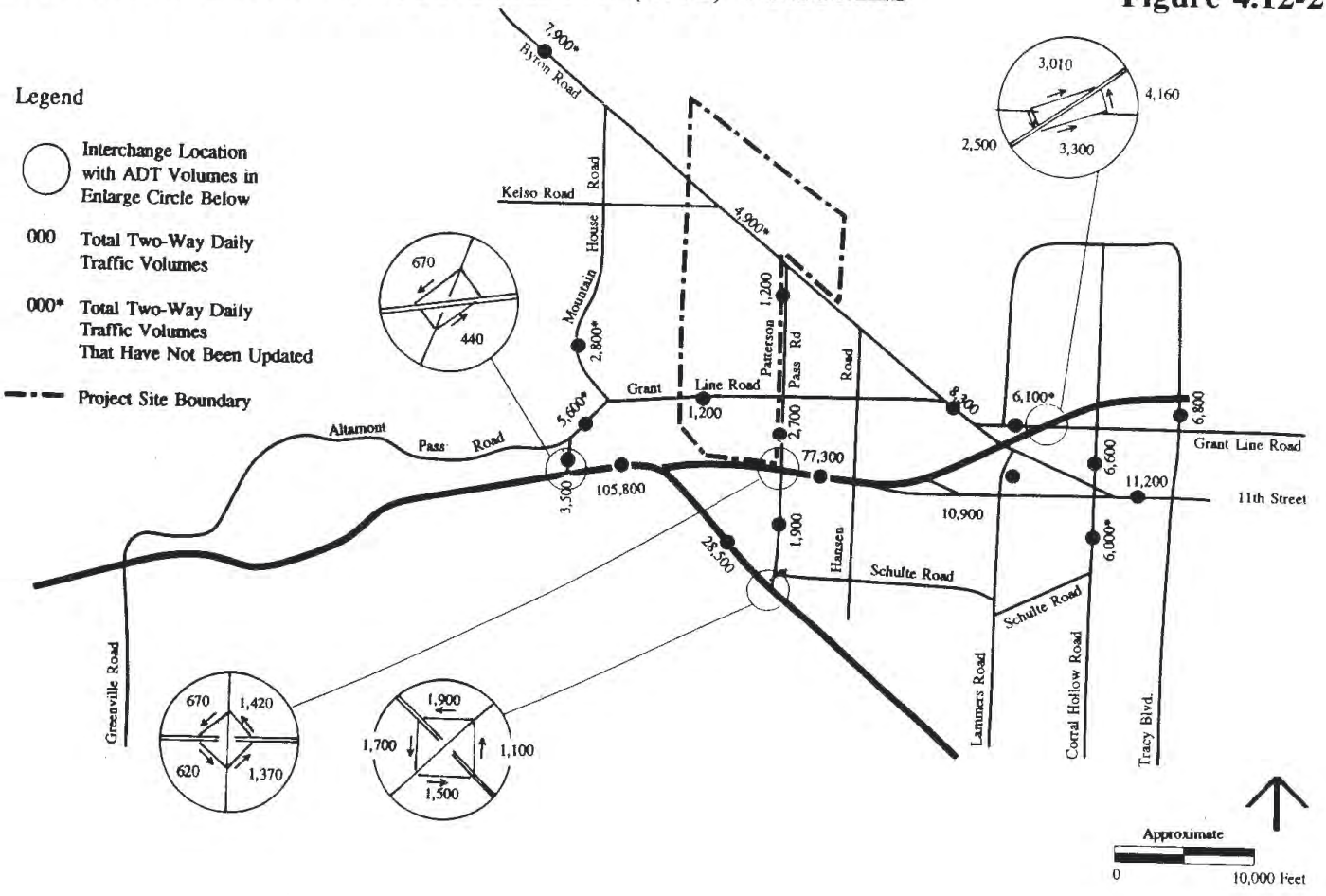
The highest average daily traffic (ADT) volumes in the study area are observed on I-580, with total two-way daily traffic of about 105,800 vehicles just west of the I-580/I-205 junction (Figure 4.12-2). South of this junction, the volume on I-580 drops to about 28,500, while I-205 east of the junction carries the remaining 77,300 daily vehicles (Figure 4.12-2).

I-580 is an important east-west route for truck travel; average daily traffic on I-580 at the Altamont Pass includes about 15 percent truck traffic, based on Caltrans reports on truck traffic on State highways (Caltrans, 1989). Peak-period truck traffic counts for I-205 indicate that the AM peak period traffic stream is about 12 percent heavy vehicles (trucks, light trucks, buses, and recreational vehicles), while the corresponding portion for the PM peak-period traffic stream is about eight percent (Korve Engineering, Inc., 1990). Existing AM and PM peak hour volumes are shown in Figures 4.12-3 and 4.12-4, respectively.

Most of the other study area roads have ADT volumes of less than 5,000 (Figure 4.12-2). Exceptions are 11th Street, with an ADT of about 10,900 just east of I-205 and 11,000 east of Corral Hollow Road; Byron Road, which carries about 7,900 vehicles daily northwest of the project site and 8,300 vehicles southeast of the project site; Grant Line Road with ADT volumes of about 5,600 near its intersection with Altamont Pass Road and 6,100 just to the east of its intersection with Lammers Road; and Corral Hollow Road, with an ADT of approximately 6,600 south of Grant Line Road. At the project site, Byron Road has an ADT volume of about 4,900, Grant Line Road has an ADT volume of about 1,200, and Patterson Pass Road carries about 2,700 vehicles daily near the I-205 interchange. North of Grant Line Road, the ADT on Patterson Pass Road decreases to about 1,200 vehicles.

EXISTING AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Figure 4.12-2



Sources: Caltrans 1993, San Joaquin County 1993, Alameda County 1989-1990, Korve Engineering 1990.

R10114-BO.03 6/6/94

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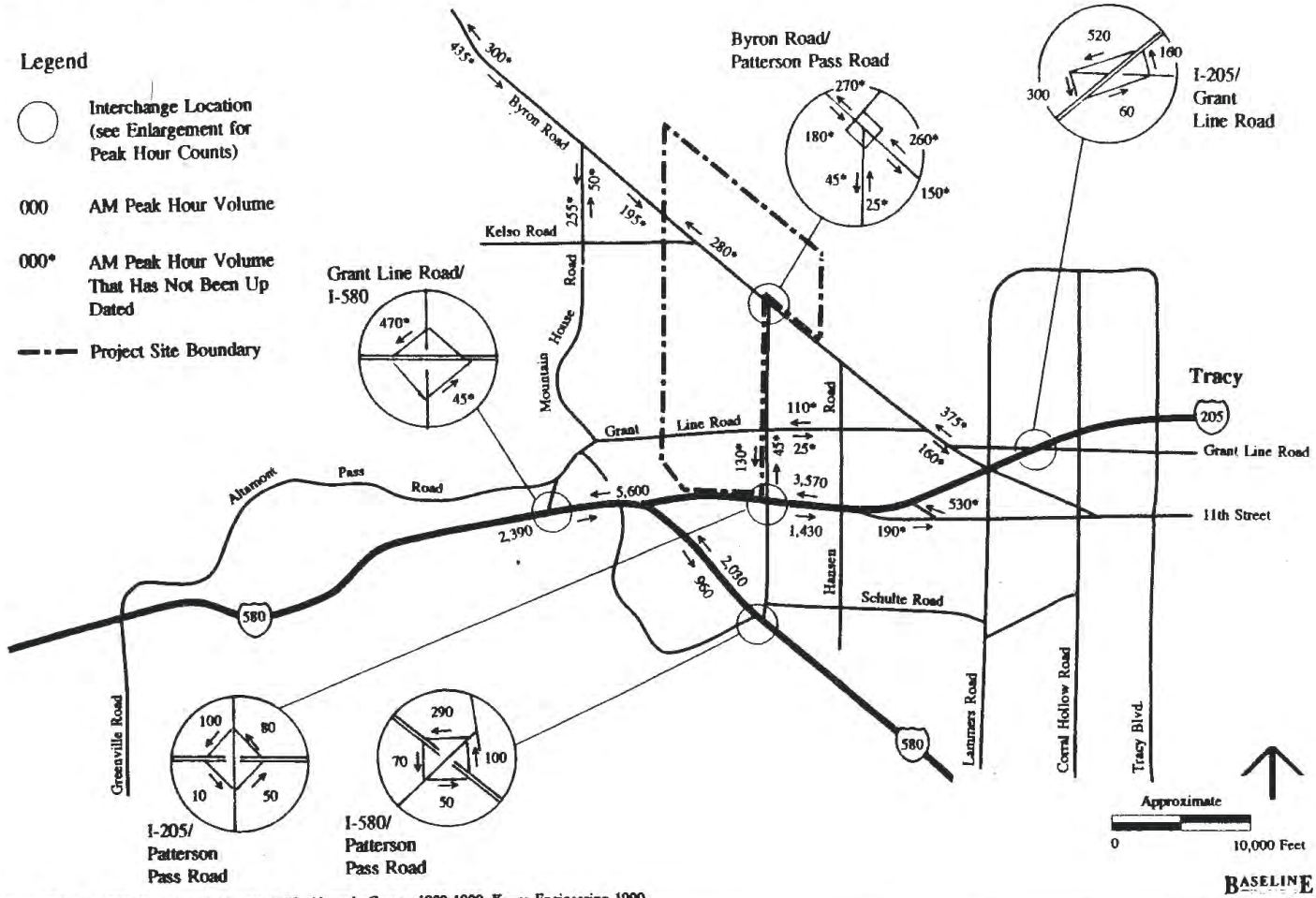
EXISTING AM PEAK HOUR TRAFFIC VOLUMES

Figure 4.12-3



Sources: Caltrans 1993, San Joaquin County 1993, Alameda County 1989-1990, Korve Engineering 1990.

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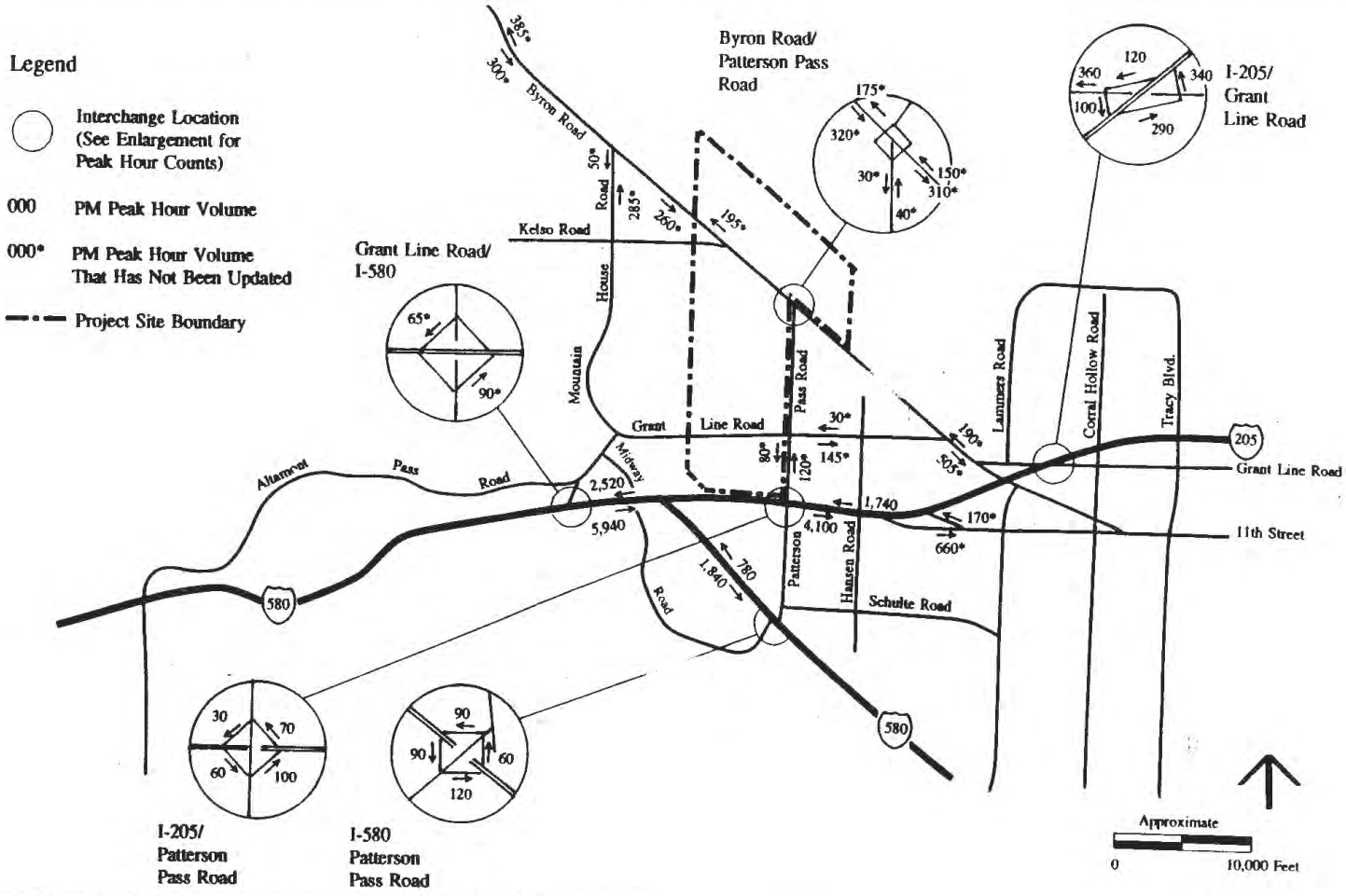
EXISTING PM PEAK HOUR TRAFFIC VOLUMES

Figure 4.12-4



Sources: Caltrans 1993, San Joaquin County 1993, Alameda County 1989-1990, Korve Engineering 1990.

R10114-BO.03 6/6/94

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Levels of Service

Levels of Service (LOS) standards are letter grades of A through F which rate the quality of traffic flow on a roadway (see Appendix E for Level of Service descriptions). Analysis of existing LOS for roadway segments in the project vicinity have been performed for the existing conditions and is based the 1985 *Highway Capacity Manual* (Transportation Research Board, 1985) procedures. Existing AM and PM peak hour LOS have been calculated using the peak hour volumes shown in Figures 4.12-3 and 4.12-4.

The San Joaquin General Plan 2010 requires LOS standards for various types of roads:

- On all State highways: LOS D or better.[1]
- Within a city's sphere of influence: LOS C or better, or LOS D if allowed by the City General Plan.
- On all other roads: LOS C or better.

Most site vicinity freeways and roads operate at LOS C or better during peak periods, with one exception (Figure 4.12-5 and Table 4.12-1). I-205 operates at LOS F during PM peak hours in the eastbound direction. During the AM peak period, I-205 operates acceptably at LOS D or better. Existing ramps and interchanges in the site vicinity generally operate with minimal delays at all times of the day.

Two-lane rural road LOS analysis is based on average travel speeds and frequency of passing opportunities, which are measures of the quality of traffic flow as perceived by the driver. LOS A and B indicate satisfactory passing opportunities and free flow speeds of over 50 mph. Most of the site vicinity roads currently operate at LOS A or B. LOS C indicates the formation of "platoons," or groups of cars formed behind a slightly slower vehicle which slows travel speeds and hinders passing ability. Free flow speed is still over 50 mph on straight rural roads with LOS C operations; however, the opportunity for drivers to pass at will is reduced.

Transit Service

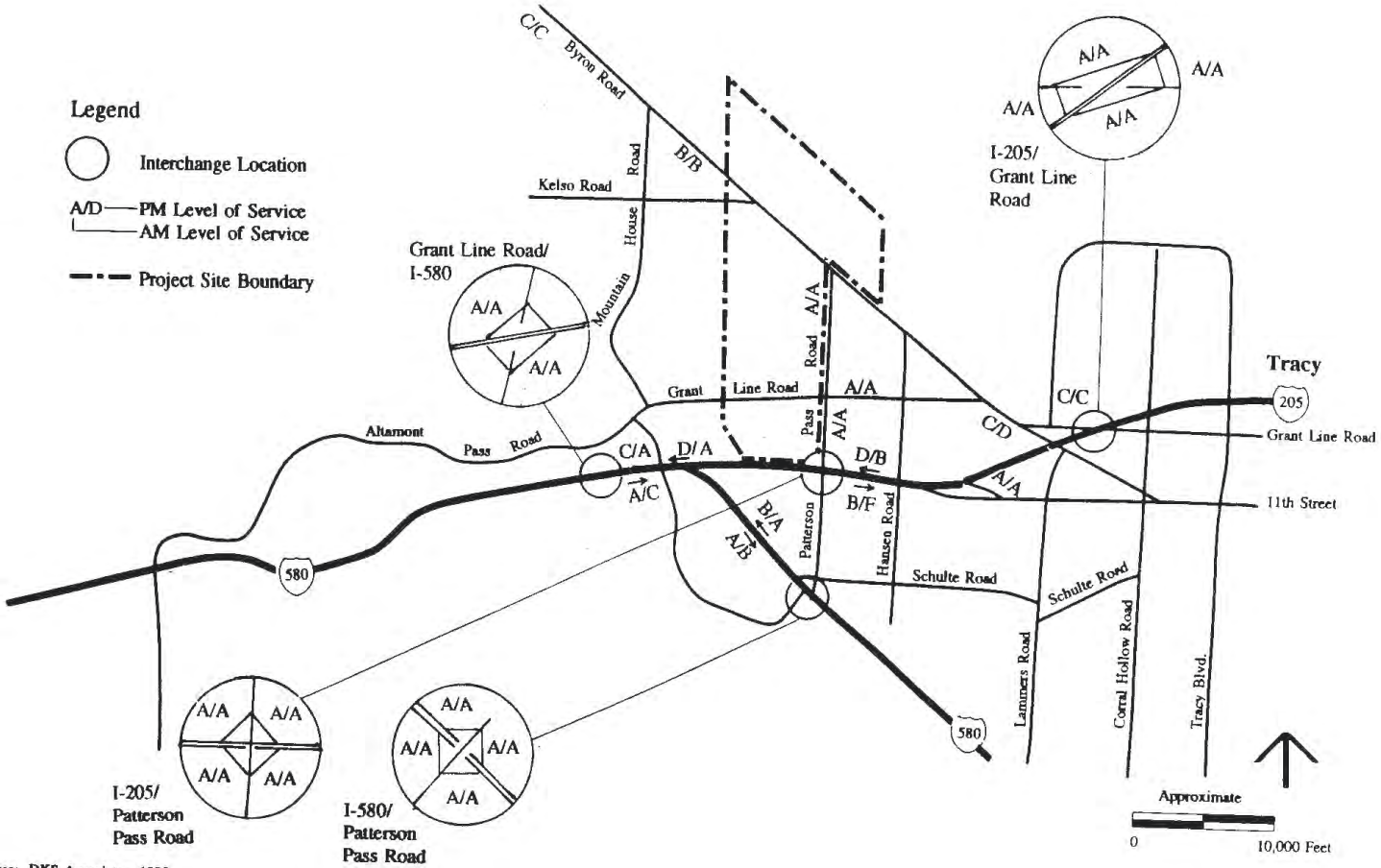
The nearest regularly scheduled bus service to the project site is provided by the San Joaquin Regional Transit District. The Transit District currently serves the Stockton Metropolitan area, which is more than 25 miles from the project site, but ~~plans to expand into other areas of~~ **is in the process of extending intercity service in** San Joaquin County ~~as the need arises~~. In addition, the District operates regional transit service from San Joaquin County to the Bay Area (as far north as Contra Costa County and as far south as Santa Clara County), Stanislaus County, and Sacramento, including subscription morning/evening commute service between the Lawrence Livermore National Laboratory, located about ten miles west of the project site, and the cities of Stockton, Manteca, and Tracy, and service to the Bayfair BART Station.

Several other transit carriers operate within 5 to 20 miles of the project site. Tracy Trans operates a dial-a-ride service in the City of Tracy. The Livermore-Amador Valley Transit Authority (Wheels) operates fixed-route bus service in the cities of Livermore, Dublin, and Pleasanton. The Central

[1] Note that Caltrans District 10 uses a more restrictive standard LOS C for State highways in rural areas.

EXISTING LEVELS OF SERVICE
SITE VICINITY ROADWAY SEGMENTS

Figure 4.12-5



Source: DKS Associates, 1993.

R10114-BO.03 6/6/94

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TABLE 4.12-1

EXISTING FREEWAY LEVELS OF SERVICE
1993 PM Peak Hour

Location	Number of Lanes in Each Direction	Peak Hour Volume		Volume-to-Capacity Ratio		Level of Service	
		West-bound	East-bound	West-bound	East-bound	West-bound	East-bound
I-580 west of I-205 junction	4	2,520	5,940	0.32	0.74	A	C
I-580 east of I-205 junction	2	780	1,840	0.20	0.46	A	B
I-205 at Patterson Pass Road	2	1,740	4,100	0.44	1.03	B	**F**

Source: DKS Associates; Caltrans District 4.

Note: **Bold** and underlined letters indicate locations where County standards for acceptable LOS are not met under existing conditions.

Costa County Transit Authority provides bus service between the cities of San Ramon, Dublin, and Pleasanton and the Walnut Creek BART station.

The nearest Bay Area Rapid Transit (BART) station is the Bayfair station near San Leandro, about 30 miles west of the project site. A BART extension to Dublin, about 20 miles west of the project site, is currently under construction. BART Express bus routes serve the Tri-Valley area, with service as far east as Livermore.

AMTRAK operates a feeder bus service between Tracy and the AMTRAK station in Stockton. The AMTRAK line between Oakland and Stockton runs on the Southern Pacific track located along the south side of Suisun Bay and along the Atchison, Topeka and Santa Fe (ATSF) track through the Delta.

Railroad Lines

The project site is traversed by the Southern Pacific (SP) Transportation Company "Mococo" branch line which runs parallel and adjacent to Byron Road from Tracy north to Martinez (Figure 4.12-1). A second SP track, currently inoperative, runs from Tracy south of I-205 through the Altamont Pass. A third line owned by the Union Pacific Railroad Company runs through southern Tracy, continuing through the Altamont Pass to the Bay Area. The two active railroad lines carry freight.

In the project vicinity, there are seven grade crossings along the SP track that parallels Byron Road. These are at Herdlyn, Lindemann, Kelso, Henderson, Wicklund, Reeve, and Grant Line roads. Six of the seven streets are local access roads; only Grant Line Road, east of the site, carries appreciable traffic volumes.

IMPACTS AND MITIGATION MEASURES

The CEQA Guidelines indicate that a project will normally have a significant impact if it causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. The San Joaquin County road standards contained in the General Plan 2010 are for LOS C or better on all County roads, except in a city sphere of influence area where the city has adopted more lenient standards, and LOS D on all freeways and State highways[2] (San Joaquin County, 1992). For this DEIR, impacts have been identified as significant when future traffic volumes would result in an LOS not meeting standards identified in the General Plan 2010.

The I-580 freeway, I-205 freeway, and 11th Street are **San Joaquin County** CMP routes. The CMP standard for I-580 and 11th Street is LOS D, while the standard for I-205 from the County line to Tracy Boulevard is LOS F, and the standard from MacArthur Drive to I-5 is LOS E.[3] Under the **San Joaquin County** CMP, an impact is considered significant if the ADT volume increases by 250 trips or more, or if an LOS of C or worse is projected to degrade by one or more letter categories.

I-580, I-680, and State Route 84 in Alameda County are Alameda County CMP routes. The standard in Alameda County for CMP routes is LOS E.

MASTER PLAN

The internal circulation at the project site is proposed as a series of major arterials, minor arterials and collectors (Figure 4.12-6); the major arterials would be four to six lanes wide, the minor arterials would be four lanes wide, and collectors would be two lanes wide. Traffic signals are proposed at 27 intersections on the site. The project proposes improvements to two existing rail crossings (at Kelso and Henderson Roads), closure of the Wicklund Road rail crossing, a new at-grade crossing at Patterson Pass Road and a new grade-separated crossing of both Byron Road and the SP track west of Patterson Pass Road.

The project includes provisions for bus and rail passenger transit services, bicycles and pedestrians. Local transit service would operate within each neighborhood area, focused on neighborhood centers. Regional bus routes would operate to Tracy, Stockton, Livermore and the nearest BART station, with a central transfer facility within the Town Center (Figure 3.9 and Table 3.8). Park-and-ride facilities are proposed at the central transfer facility, each neighborhood center, and the future rail station(s).

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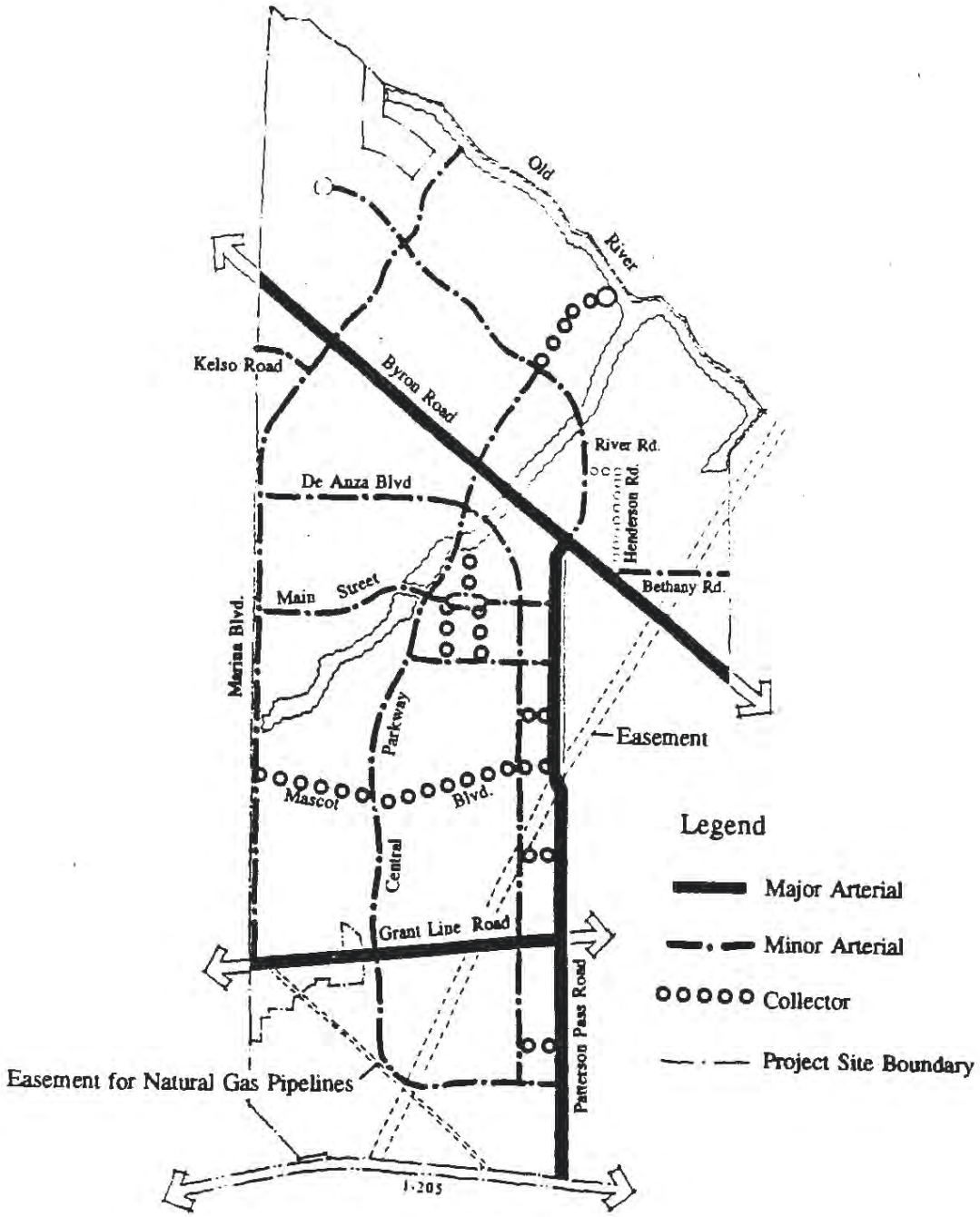
2 For the purposes of this analysis, note that the LOS standards of General Plan 2010 (LOS D) have been used. However, Caltrans District 10 uses a more restrictive standard, LOS C, for rural freeways such as I-580 south of I-205.

3 Congestion Management Program (Con Mag) for San Joaquin County, November 26, 1991.

Feeder bus service is proposed between Mountain House and the Altamont and Mococo rail stations upon implementation of passenger service on those lines. A continuous network of off-street bike paths and on-street bike lanes is proposed, along with signed bike routes on collector streets.

MASTER PLAN CIRCULATION SYSTEM

Figure 4.12-6



Source: The SWA Group, 1993.

R10114-BO.03 6/6/94

BASELINE

The project includes provisions for certain regional transportation improvements in the site vicinity. Specific improvements identified include the I-205/Patterson Pass Road freeway interchange, the I-580/Grant Line Road interchange and an intermodal station on the Mococo line. The Draft Master Plan also proposes the project's participation in a Strategic Transportation Plan study of the Altamont Corridor, in the development of HOV lanes on I-205 and truck climbing lanes on I-580, and in other freeway mainline improvements (Table 3.7).

The Draft Master Plan proposes improvements to Byron, Patterson Pass, and Grant Line roads on the site, defining them as Mountain House "Gateways." The Draft Master Plan also includes provisions for participating in traffic studies and improvement measures for other County arterials, and for roadways in other counties or cities that would be impacted by the project. This latter participation is conditioned on equal consideration of the other jurisdictions' impacts on the project.

The Draft Master Plan includes Transportation Demand Management (TDM) measures to reduce the use of single occupant vehicles within, to and from the site. The TDM program incorporates San Joaquin Valley Air Pollution Control District (SJVUAPCD) measures, and a monitoring program, implemented under the structure of a Transportation Management Association (TMA). The project appears to meet transit/TDM requirements of the County General Plan 2010 and the County Congestion Management Program (ConMAG, 1991).

The Draft Master Plan also includes transportation "trigger points" which indicate the number of occupied residential units that are anticipated to trigger the need for a particular transportation improvement. ~~The trigger points are proposed as guidelines, rather than actual construction dates, with a trip analysis being done at such time a trigger point is reached to establish the actual construction date.~~ This DEIR evaluates full buildout of the Master Plan and the Specific Plan I, but does not evaluate the adequacy of the trigger points or the phasing of improvements. Moreover, the Master Plan does not provide a mechanism for reviewing trigger points in advance of when they are reached in case improvements are needed earlier than anticipated, and does not indicate how early the planning for an improvement would begin in order to provide for necessary designs, approvals and construction **by the time that the trigger point is reached**.

The Draft Master Plan provides for project participation in funding of community and regional transportation improvements based on "fair share" estimates defined in the Public Financing Plan. The Public Financing Plan is a separate document being prepared for the Mountain House project, and is therefore not specifically analyzed in this DEIR. The Draft Master Plan proposes that the fair share estimates used in the Public Financing Plan initially be based on estimates provided in the most current EIR, with final determination being made at the time of design or funding of the individual improvements. (Table 4.12-7, later in this DEIR section, presents information on projected percentages of traffic on individual roadways to assist the County in establishing fair share responsibilities for use in the Public Financing Plan.) The Draft Master Plan also proposes creation of a Mountain House Planning Area as a part of the County's Traffic Impact Mitigation Fee program. The local portion of fees collected within this planning area is proposed to be used to fund

County Arterial improvements identified in that program, with specific fees set by the County prior to submittal of the first Development Permit.

Impact Methodology and Assumptions

The transportation impacts of the project are examined in this DEIR in the context of cumulative projected growth in the County and in the region to the year 2010. For this analysis, the project was superimposed onto 2010 projections of housing and employment in the remainder of San Joaquin County and the surrounding region, including the nine-county Bay Area, the four-county Sacramento area, and Stanislaus County. To provide a baseline for comparison, a "No Project" alternative was also developed which assumes no development of the project site but which includes the same 2010 growth forecasts for the remainder of the County and the surrounding region.

This transportation impact analysis uses the San Joaquin County Council of Governments (COG) Travel Model. The model has been significantly revised and expanded since the 1991 County's General Plan 2010 FEIR (BASELINE, 1992b) and the Mountain House FEIR (BASELINE, 1992a) and FSEIR (BASELINE, 1993). The Travel Model was revised to incorporate peak hour and mode choice forecasting capabilities.[4] A description of the final model and details of the various land use and network assumptions for 2010 are contained in Appendix F. **The 2010 regional network is consistent with applicable agencies' financially constrained networks as of late 1993.** For this DEIR, the following changes were made to the model network and land use inputs, while retaining the basic model structure:

- Traffic zones were disaggregated within the project site to provide better detail for on-site traffic impact analysis.

- The 2010 land uses for the site were updated to correspond to the current proposed project.

- The 2010 land use assumptions for the remainder of San Joaquin County were retained from the FSEIR. This forecast incorporates San Joaquin County General Plan 2010 land use projections, adjusted to delete the previously proposed "new town" projects of Liberty and Forest Oaks and to reflect somewhat more growth by 2010 in Tracy, Lathrop, and Stockton than assumed previously in both the original FEIR (BASELINE, 1992a) and the General Plan 2010 FEIR (BASELINE, 1992b).

- The 2010 land use assumptions for the Bay Area, Sacramento, and Stanislaus County were updated to reflect the applicable agencies' most current forecasts. Bay Area forecasts are based on ABAG's *Projections '92* forecasts, using travel projections developed by MTC for

[4] DKS Associates, 1992-93, for the San Joaquin County COG. The revised model was used for testing multi-modal alternatives for the COG's 1993 Regional Transportation Plan EIR. As part of this work, the model was recalibrated on newly available 1990 census travel data and validated against daily and peak hour traffic counts as well as transit ridership counts, resulting in significant changes to the model structure.

the Regional Transportation Plan analysis.[5] Although significant growth is forecast by ABAG in the Tri-Valley area, the ABAG 2010 projections do not reflect full buildout of several large-scale developments proposed in the area (including the Dougherty Valley, Eastern Dublin, West Dublin, and North Livermore General Plan Amendments).[6] Sacramento area forecasts rely on updated land use forecasts from SACOG, with significantly greater growth projected by 2010 than previously forecasted. Stanislaus County projections are based on the recent I-5 Corridor Strategic Plan studies (Merced County Council of Governments, 1993).

- The 2010 regional network was revised to correspond to "financially feasible" networks as defined in Regional Transportation Plans (RTP) for each agency. In San Joaquin County, the COG's RTP Balanced Alternative, which is generally similar to the adopted RTP, was used as a starting point. In the Bay Area, MTC's "Track 1" RTP alternative was used, and projects were verified with staff of Alameda and Contra Costa counties.

- The 2010 network in the Tracy area was modified from the FSEIR assumptions to be consistent with the City's adopted Urban Management Plan network.

- Regional transit services and HOV lanes were added to the 2010 network. Projections of San Joaquin County transit services were based on the RTP Balanced Alternative, with some revisions by County staff, while Bay Area transit services were based on MTC's RTP "Track 1" alternative. Key transit improvements include the continuation and expansion of the planned Altamont commuter rail line demonstration project, and the extension of BART to Dublin, currently under construction.

- Transit services to, from, and within the project site were added in accordance with the facilities proposed in the Draft Master Plan.

The model results were used in several ways to analyze potential transportation impacts of the project:

- Overall trip-making characteristics of the project were identified by reviewing trip generation, distribution and mode choice projections from the model. These characteristics directly influence the locations and extent of other impacts of the project on traffic, air quality and noise.

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5 Person trip ends by mode were imported directly into the 1993 Travel Model, using 2010 auto person trip ends for the Bay Area Regional Transportation Plan, provided by Metropolitan Transportation Commission, October, 1993.

6 Inclusion of full buildout of these projects (representing a horizon year beyond 2010) would result in higher traffic volume forecasts for I-580, I-680, and other Tri-Valley facilities, but would reduce the share of Mountain House traffic projected on these facilities.

- Projected daily volumes on all arterial and freeway segments in the project vicinity were compared between the No Project and Project alternatives to provide insight as to where traffic increases due to the project are greatest.

- AM and PM peak hour directional volumes were compared to roadway capacities to determine where level of service deficiencies would occur and where roadway widening would be required to mitigate the deficiencies. This was done for both the No Project and Project alternatives in order to identify locations where the project would require more lanes than otherwise needed to accommodate future traffic. This is the key indicator of level of significance of traffic impacts.

- Projected intersection turn volumes were used to determine levels of service at all key intersections within or adjacent to the project, and to identify potential needs for mitigation. This was done for the Project alternative only.

- "Select Link" analysis was used to identify the number and proportion of project-generated trips on roadways impacted by the project. This process traces the origins and destinations of all trips using a particular roadway segment, and therefore is useful in establishing or reviewing fair share funding responsibilities of the project. Due to the computer processing requirements, it was necessary to select a limited number of roadway/freeway locations for select link analysis in advance of the model runs. Locations were therefore chosen to include all roadways identified as being significantly impacted in the previous FSEIR for the project, and to use segments that are likely to be representative of the roadway as a whole.

Impact M4.12-1

At buildout, the project would generate approximately 273,000 daily vehicle trips to, from, or within the site. The added vehicle trips would contribute significantly to projected traffic growth, increases in vehicle miles traveled, and LOS deficiencies on the road system, particularly in the vicinity of the site. Some of these associated impacts would be unavoidable. The project would also generate the need for public transit services to, from, and within the site. Since transit services are proposed in the Master Plan to accommodate the projected transit ridership, this trip generation impact is not significant or unavoidable.

The project's potential trip generation was estimated using the 1993 COG Travel Model. The model first estimates person trips by all modes, and then allocates person trips to vehicle and transit

passenger modes. Person trip ends and vehicle trips[7] generated by the project are shown in Tables 4.12-2 and 4.12-3.

Table 4.12-2 summarizes person trip ends generated by mode. At full buildout, the project would generate almost 590,000 person trip ends by all modes. A high proportion of trip ends is projected to be in vehicles, either as drivers or passengers. Vehicle drivers are projected to account for 70% of all trip ends (407,000 out of 589,950).

Table 4.12-3 shows daily and peak hour vehicle trips to, from, and within the project. The project is projected to generate approximately 273,000 vehicle trips to, from, or within the site over the day.[8] Internal trips (those that do not leave the project site) were projected by the COG Travel Model based on the projected 2010 land uses and accessibility between zones within the modelling region. Internal trips are projected to account for 49 percent of the total vehicle trips generated on-site. The remaining 51 percent are trips entering or leaving the project boundaries. The high rate of internal travel is because the project includes both residential and non-residential uses, including retail, school and other activities, and because of the project's jobs/housing balance.

The rate of internal travel would vary depending on the type of trip. With the full buildout of all the employment proposed, about 45 percent of the work trips would be internal. Shopping trips would be nearly 90 percent internal, and school trips would also be largely internal. This projected rate of internal travel is highly dependent on achieving the assumed full buildout of employment and the proposed mix of commercial, school, and other non-residential land uses within the site. The rate of internal travel is also dependent on the affordability of on-site housing to a sufficient number of the employees. A detailed analysis of the project's proposed Jobs/Housing and Affordable Housing programs is included in Section 4.9, Population, Housing, and Employment.

The rate of internal travel would also vary over time, with a lower rate during interim phases of the project. For example, at buildout of Specific Plan I, about 37 percent of all project trips are projected to be internal (Tables 4.12-15 and 4.12-16, presented later in this section), as compared to 49 percent upon buildout of the Master Plan.

Transit passengers would account for 2.4 percent of the work trip ends and 0.4 percent of all trip ends. The projected daily vehicle trip generation of the project is about five percent higher than

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[7] Each one-way trip is considered to have two trip ends: one at the origin and the other at the destination. Trip generation in the model is based on trip ends. The number of trip ends generated on-site is the sum of all origins and destinations at homes, businesses, and other activities on the site. If a trip stays on the site (i.e., an internal trip), both of its trip ends are included in the total. If a trip leaves the site, only the trip end generated on site is included in the trip end total, whether it is an origin or a destination.

[8] The number of daily vehicle trips (273,300) is less than the number of vehicle trip ends in Table 4.12-2 (407,000) because each internal trip generates two trip ends on site. For example, a resident driving from home to shop within the project site generates two trip ends in Table 4.12-2: one at home and one at the store. However, these two trip ends represent only one car on the roadway system (one vehicle trip) in Table 4.12-3.

TABLE 4.12-2

PROJECT TRIP ENDS BY MODE AT BUILDOUT
2010 Daily Trip Ends Generated On-Site

	Person Trip Ends		Vehicle Trip Ends	Number of Persons per Vehicle
	Number	Percent		
Home-Based Work:				
Drive alone	59,390	82.8	59,390	1.12
Shared ride	10,620	14.8	4,750	1.12
Transit	1,740	2.4	--	
Total	71,750	100.0	64,140	
Other:				
Drive alone/shared ride	517,380	99.8	342,860	1.51
Transit	810	0.2		
Total	518,190	100.0	342,860	
Total:				
Drive alone/shared ride	587,400	99.6	407,000	1.45
Transit	2,550	0.4		
Total	589,950	100.0	407,000	

Source: DKS Associates.

TABLE 4.12-3

PROJECT VEHICLE TRIPS AT BUILDOUT

	Vehicle Trips Generated					
	AM Peak		PM Peak		Daily	
	Number	Percentage	Number	Percentage	Number	Percentage
Inbound	4,900	30.3	5,600	26.5	69,800	25.5
Outbound	4,300	26.5	6,200	29.2	69,800	25.5
Internal[1]	7,000	43.2	9,400	44.3	133,700	49.0
TOTAL	**16,200**	**100.0**	**21,200**	**100.0**	**273,300**	**100.0**

Source: DKS Associates

[1] Trips with both ends within project boundaries.

previously projected in the FSEIR (407,000 trip ends versus 387,400 trip ends in the FSEIR). About half of the difference is due to increased employment in the proposed project. The remaining increase is due to revised trip generation rates in the COG Travel Model. On the other hand, peak hour trip generation at buildout of the proposed project is projected to be 18 percent lower than shown in the FSEIR (30,600 versus 37,200 trip ends in the PM peak hour). The decrease appears to be due to use of locally calibrated peak hour factors built into the revised COG travel model, which were not used in previous analyses.

The transit shares projected for Mountain House are higher than projected for the County as a whole, but not high enough to significantly reduce traffic impacts of the project over an average day. The low transit percentages are typical of suburban development, and may be due to various factors. Only those transit services fully committed in the Draft Master Plan or programmed by other agencies were assumed for forecasting purposes. The 2010 regional network in the COG Travel Model includes an Altamont commuter rail line to the Bay Area, but the closest currently planned station is in downtown or south Tracy. Transfers to bus would be required for commuter rail passenger access to major employment sites in the Tri-Valley area such as Hacienda Business Park and Bishop Ranch. Although the Draft Master Plan provides a rail passenger station on the Southern Pacific Mococo line, no passenger rail service was assumed on the line since there are no currently funded plans for operating the service. BART was assumed to extend only to the Dublin/Pleasanton station, as currently funded. A local bus line was assumed to circulate around the project site as proposed in the Draft Master Plan, but its relatively slow travel speeds, low service frequency, and requirements for transfers would limit its ridership. Transit service improvements for Mountain House beyond those assumed in the DEIR would increase transit usage by project residents and employees, potentially reducing peak period impacts in some major travel corridors such as I-580. However, these increases are not anticipated to be sufficient to avoid traffic impacts of the project.

Although the currently planned transit services would not mitigate overall traffic impacts of the project, provision of the services is important for a number of reasons:

- They would mitigate transit needs generated by the project, for example by project residents who do not have access to automobiles or those who desire to use alternative modes.

- They fulfill County and Congestion Management Program requirements for providing transit services.

- There is a potential air quality benefit.

- Specific congested commute corridors, such as the I-580 corridor, would benefit from having alternative modes of travel available.

- There is potential for greater transit usage than projected in the DEIR if additional regional transit improvements are implemented beyond those assumed in the analysis and/or if other conditions change in the future (e.g., implementation of ~~Microline~~ **Mococo line** service).

One way to mitigate the increase in daily trip generation and reduce associated adverse impacts on the transportation system is to downsize the project. The total amount of the project's allowable housing and employment could be lowered so that traffic generation over the day would not exceed the somewhat lower level projected in the previous FSEIR. However, reducing the size of the project would not mitigate all adverse regional traffic impacts since, on many regional facilities, cumulative traffic levels without the project (the No Project Scenario) are projected to exceed capacities. Also, due to the "replacement" effect,[9] there would not necessarily be a one-to-one reduction of roadway volumes. Even with downsizing of the project, unavoidable adverse impacts would remain. Reducing the overall size of the project has therefore not been proposed as a mitigation measure below.

Mitigation Measure M4.12-1

(a) The County should prepare and implement a countywide Transportation Systems Management (TSM) program to promote and facilitate use of alternative modes to the single-occupant vehicle within the County. The program should include measures such as continuation and expansion of the County rideshare program, transportation coordinators at employment sites, provision of park-and-ride lots throughout the County, and development of a network of high occupancy vehicle (HOV) lanes on corridors of high travel demand.

(b) The ~~Transit~~ ***Transportation*** *Management Association (TMA) should promote, with State and County assistance, lanes for priority HOV access to/from the project site (e.g., HOV bypass lanes at metered on-ramps to I-580 at Grant Line Road, and at on-ramps to I-205 at Patterson Pass Road).* ***The TMA should promote the construction of HOV lanes when I-205 is widened. A policy stating this commitment should be added under Freeway Improvements and TDM Measures (Appendix C).***

(c) Local transit service (using clean fuel-transit buses, if feasible) proposed in the Draft Master Plan should be increased, with more frequent service during peak periods to facilitate non-vehicle travel on internal roads, and more direct routing to destinations and fewer transfers than proposed in the Draft Master Plan.

~~*(d) The Draft Master Plan provides for transit stops to be located within one-quarter mile of the majority of residential, retail and employment sites (Policy (h) under Objective 1 in Bus Transit in Appendix C). This policy should be modified to provide transit stops within one-quarter mile walking distance or less, for 90 percent or more of the residences and to provide transit stops at all employment and commercial areas within the site. Such guidelines should also be included in each specific plan.*~~

[9] With addition of the project, some regional trips that would otherwise use I-580 and I-205 would be "replaced" by project trips because the project would provide jobs for some San Joaquin Valley residents who, in the absence of the project, would commute to jobs further west. The COG Travel Model reflects this redistribution of trips.

~~*(c) Additional local serving commercial uses should be provided throughout the project site to facilitate walking and bicycle trips for local shopping. This could be accomplished by revising the Land Use map to include more than one neighborhood commercial area in each neighborhood. Such multiple small local commercial sites provide opportunities for residents' convenience shopping without the need to drive.*~~

(d) A new Policy should be added under Commercial Objective 2 (Appendix C):

"f) Neighborhood commercial areas shall be located so as to optimize accessibility for local pedestrians and cyclists and to reduce automobile trips."

A new Implementation should be added under Commercial Objective 2 (Appendix C):

"c) The Neighborhood Commercial areas shall be sited so that as many homes as possible are located within a one-quarter mile walk of the closest neighborhood or community shopping area."

~~*(f)*~~ ***(e)*** *To reduce peak hour vehicle trip generation, employers should be* ~~*required*~~ ***encouraged*** *to provide flexible work hour programs and/or "9/80" and "4/40"[10] week schedules. This mitigation measure should be added as an Implementation to the Transportation Demand Management section (Appendix C).*

~~*(g)*~~ ***(f)*** *The Draft Master Plan should be amended with a policy in the Transportation Demand Management section under Objective 1 (Appendix C), as follows:*

"j) Transit Oriented Development (TOD) Guidelines shall be considered in the design of each neighborhood center. Review and approval of TOD provisions by the County Community Development Department shall be ~~*a condition*~~ ***required prior to approval*** *of the first Development Permit* ~~*for each specific plan*~~*."*

~~*(h)*~~ ***(g)*** *Implementation c) under Objective 2 in Transit (Appendix C) should be amended as follows:*

"c) The Community, ~~*in conjunction with the County, will participate in a location/feasibility analysis for a potential*~~ ***shall contribute on a "fair share" basis to any*** *Altamont Station* ***study. The Community shall contribute a fair share toward the capital costs of building an Altamont Station and to the operating and maintenance costs that are identified. The fair share contribution of the Community toward constructing the station shall be based on ridership projections. Bus service between the Community and the Altamont Station shall be included in the Community's transit commitment.*** ~~*to serve the project. If determined to be feasible, and potential adverse impacts on other riders are not significant, then a proportionate "fair share" contribution...."*~~

[10] A "9/80" schedule allows workers to work nine-hour days, with every other Friday off. A "4/40" schedule allows workers to work ten-hour days for four days each week.

~~(i)~~ **(h)** ~~An i~~ *Implementation* **c)** ~~*should be added*~~ *under Objective 1 in Transportation Demand Management* ***should be revised*** *as follows:*

"~~e~~ **c)** *The applicant shall develop ~~a~~* ***an annual*** *Transportation Monitoring Program, which would be* ~~*a part of*~~ ***conducted at the same time as*** *the annual monitoring* ~~*conducted*~~ *for the Jobs/Housing and Affordable Housing Programs,* ~~*as outlined in Implementations (d) and (e) under Objective 1, and Implementations (k) and (l) under Objective 2, of Jobs/Housing and Affordable Housing*~~*. The monitoring program would serve as a means of comparing the actual traffic generated by the project to the traffic projections, and would allow revisions to mitigation measures and trigger points for needed* ***transportation*** *improvements.* ~~*A monitoring program would allow the County to assess the degree to which the applicant's commitment to on site employment opportunities, ridesharing, and transit usage is successful. The monitoring*~~

~~*program is also critical for monitoring project related impacts to State highways and interchanges.*~~

~~*Transportation monitoring should be conducted annually as part of the Community Monitoring Program.*~~ *The annual reports should identify various data including land use occupancy information, traffic counts, and progress of planned transportation improvements and planning studies such as PSRs. Traffic monitoring should include traffic counts and level of service analysis on all community gateways and other impacted County roads. Adequacy of the near-term trigger points and progress toward implementation of the required transportation improvements should also be reviewed.* ~~*(New COG Travel Model runs are not required as a part of this process.)*~~

Should traffic impacts of the project be found during the annual monitoring to be different (i.e., higher than projected levels), then the County shall hold hearings, receive testimony, make findings, and take ***appropriate*** *action.* ~~*as indicated in Implementations (d) and (e) under Objective 1, and Implementations (k) and (l) under Objective 2, of Jobs/Housing and Affordable Housing. In addition to the issues and actions outlined in those sections, t*~~ *The County shall adopt findings related to whether the adopted trigger points for transportation improvements and the project's fair share of costs should be revised to ensure the timely construction of needed improvements,* ***and incorporated*** *as a condition of further development approvals."*

(i) The following implementation should be added under Objectives 2 and 3 of Telecommunication Systems (Appendix C):

"b) One or more telecommuting centers furnished with satellite telecommunication devices and computer equipment shall be constructed within the project site to reduce commuting to off-site locations."

Impact M4.12-2

Within 10 miles of the site, the project would typically increase traffic volumes on I-205, I-580 and I-5 by 10,000-23,000 daily vehicles over levels projected in 2010 without the project, representing increases of 8-20 percent. These traffic increases would exacerbate highly deficient levels of service already projected at some locations in 2010 without the project, and would increase the extent and duration of traffic congestion on these freeways. Most of the projected traffic impacts on I-205 could potentially be mitigated with regional improvements, but the impacts on I-580 west of I-205 and on I-5 north of I-205 are unavoidable.

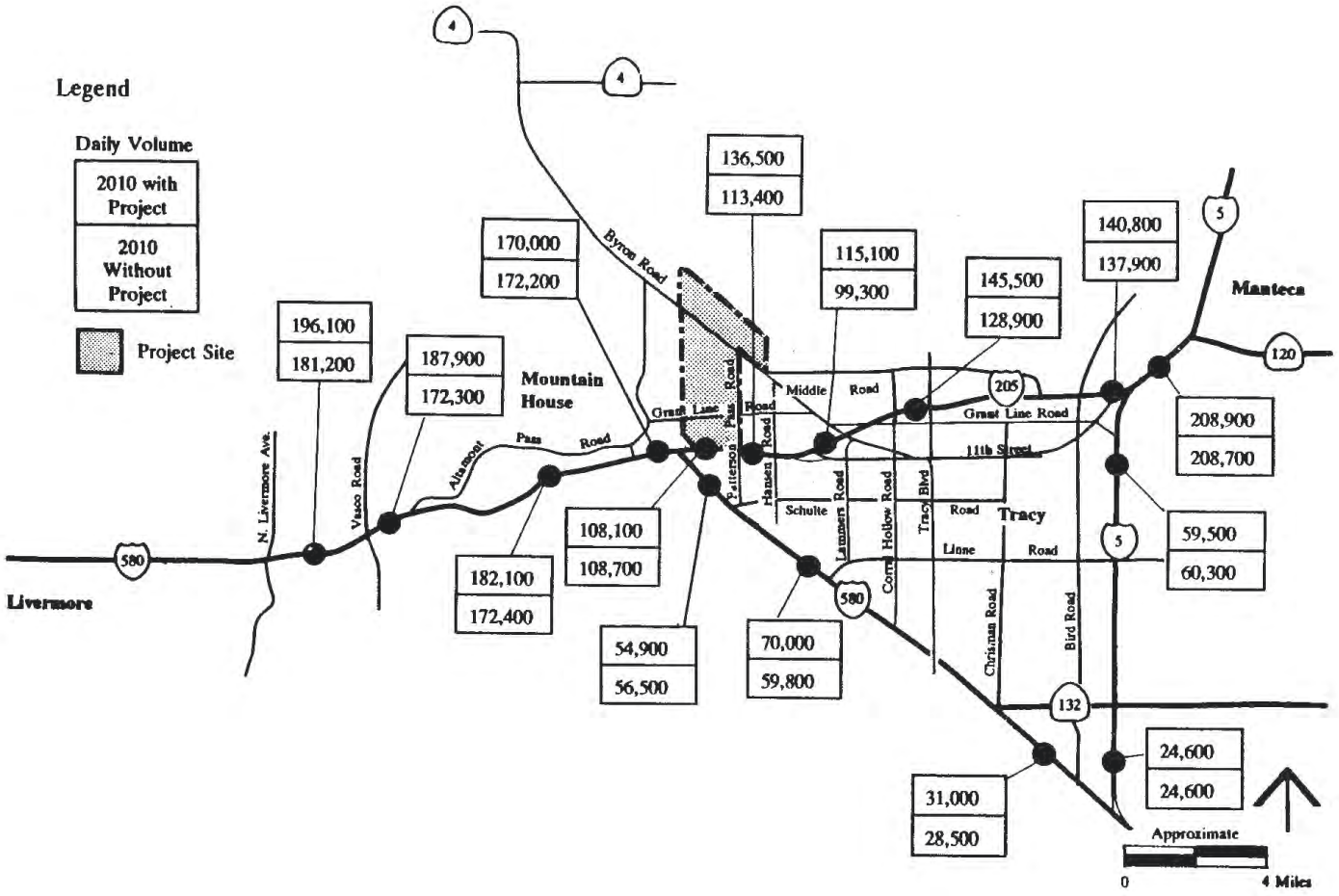
By 2010, total freeway traffic would increase significantly, compared to 1993 conditions, with or without the project. The project would be a significant contributor to future traffic growth on

regional freeways. Future freeway volumes are identified in Figure 4.12-7 and Table 4.12-4 for an area up to 10 miles from the project site.[11] Proportions of total daily traffic to or from the project site are shown in Table 4.12-5. Peak hour volumes and levels of service on I-205, I-580 and I-5 in the project vicinity are summarized in Table 4.12-6. Much of the projected 2010 traffic is associated with inter-regional growth. Deficient LOS is projected at a number of locations, indicating that the 2010 traffic demand cannot be fully met, with or without the project. Additional freeway lanes,

[11] General impacts of the project on other freeway volumes farther away were also considered. **The impacts of construction-related traffic have not been included in the following projections because it is difficult, if not impossible, to determine the origin of such traffic. The applicant estimates that up to approximately 2,000 construction workers may be employed on the site annually.**

2010 TOTAL DAILY TRAFFIC VOLUMES ON AREA FREEWAYS PROPOSED PROJECT AND NO PROJECT SCENARIOS

Figure 4.12-7



BASELINE

TABLE 4.12-4

TOTAL DAILY TRAFFIC VOLUME CHANGES ON FREEWAYS IN PROJECT VICINITY
(2010 Growth with and without the Proposed Project)

Freeway	Location	1993 Daily Traffic Volume	2010 Daily Traffic Volume		
			No Project	Project	Difference[1]
I-580	In Livermore between Vasco Road and North Livermore Avenue	103,000	181,200	196,100	14,900
	At the Altamont Pass	91,000	172,400	182,100	9,700
	West of I-205 Interchange	105,800	172,200	170,000	(2,200)
	North of Patterson Pass Road	28,500	56,500	54,900	(1,600)
I-205	West of Patterson Pass Road	65,000	108,700	108,100	(600)
	East of Patterson Pass Road	77,300	113,400	136,500	23,100
	East of 11th Street	56,000	99,300	115,100	15,800
	East of Grant Line Road	56,000	128,900	145,500	16,600
I-5	Between I-205 and SR 120	84,000	208,700	208,900	200

Source: DKS Associates.

[1] Project volume compared to "No Project" volume. Volumes in parentheses indicate segments where a decrease in traffic is projected due to the project's effects on regional job location and commuting patterns. See Table 4.12-5 for projections of 2010 daily traffic to and from project.

TABLE 4.12-5

PROJECT AND NON-PROJECT TRIPS ON I-580 AND I-205[1]
(2010 DAILY TRAFFIC)

Location	No Project	Project
I-580 at Altamont Pass		
Vehicles to/from Mountain House	0	21,100
Vehicles to/from other areas east of Altamont Pass	172,400	161,000
Total Daily Vehicles	172,400	182,100
I-205 East of Grant Line Road		
Vehicles to/from Mountain House	0	27,900
Vehicles to/from other areas to the east	128,900	117,600
Total Daily Vehicles	128,900	145,500

Source: DKS Associates.

[1] Based on select link analysis using the COG Travel Model. This analysis traces origins and destinations of all trips using the particular roadway link.

TABLE 4.12-6

YEAR 2010: PEAK HOUR, PEAK DIRECTION LEVEL OF SERVICE ON FREEWAYS

Freeway Location	Total Lanes	Without Project						With Project					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-580 north of Linne Road	4	4,110	1.03	**F**	4,720	1.18	**F**	4,580	1.15	**F**	5,210	1.30	**F**
I-580 south of I-205	4	4,000	1.00	**F**	4,060	1.02	**F**	3,990	1.00	**F**	4,010	1.00	**F**
I-580 at Altamont Pass	8	9,780	1.22	**F**	10,710	1.34	**F**	10,470	1.31	**F**	11,670	1.46	**F**
I-580 west of Vasco Road	8	12,210	1.53	**F**	13,740	1.72	**F**	12,790	1.60	**F**	14,260	1.78	**F**
I-205 west of I-5	6+HOV	7,450	0.93	D	7,740	0.96	**E**	7,780	0.97	**E**	8,230	1.03	**F**
I-205 west of Tracy Blvd.	6+HOV	6,840	0.86	D	6,590	0.82	D	7,320	0.92	D	7,410	0.93	D
I-205 south of Grant Line Road	6+HOV	5,430	0.68	C	5,920	0.74	C	5,960	0.75	C	6,670	0.83	D
I-205 west of 11th Street	6+HOV	6,620	0.83	D	7,210	0.90	D	7,400	0.93	D	8,240	1.03	**F**
I-205 west of Patterson Pass Rd.	6+HOV	6,190	0.77	C	6,720	0.84	D	6,380	0.80	D	7,240	0.91	D
I-5 south of State Route 132	4	970	0.24	A	1,130	0.28	A	940	0.24	A	1,110	0.28	A
I-5 south of Grant Line Road	4	2,440	0.61	C	2,920	0.73	C	2,400	0.60	C	2,890	0.72	C
I-5 north of I-205	8	10,260	1.28	**F**	11,070	1.38	**F**	10,730	1.34	**F**	11,810	1.48	**F**

Notes: Freeway capacity assumed at 2,000 vehicles per hour per lane. Under ideal conditions, capacities may be as high as 2,200 vehicles per hour per lane.
V/C = Volume to capacity ratio.
Bold and underlined letters indicate locations where County standards for acceptable LOS are not met.
Volumes represent peak hour demand volumes assuming existing peaking characteristics of travel. Where demands exceed capacities, actual throughput volumes would be reduced due to peak spreading and other factors, and queues would form upstream of bottleneck locations.

reduction of traffic demand through TDM efforts and transit improvements, and spreading of the peak period would be needed to accommodate the projected traffic demands.

I-205 Freeway

The San Joaquin County COG Regional Transportation Plan includes the widening of I-205 to six lanes as a high priority project. However, the General Plan 2010 FEIR (BASELINE, 1992b) projected a need for eight lanes by 2010. To avoid understating potential traffic demand on I-205, this analysis assumes that I-205 would be widened to six mixed flow and two HOV lanes by 2010, with or without the project.

East of the project site, the greatest net increase in freeway volumes due to adding the project would occur on I-205 between Patterson Pass Road and 11th Street. The project would result in a net increase of over 23,000 daily vehicles on this segment of I-205 (Table 4.12-4).

The highest total traffic volume on I-205 is projected to occur east of Grant Line Road. At this location, 128,900 daily vehicles are projected by 2010, without the project. The project would add 16,600 daily vehicles to I-205 east of Grant Line Road, for a total of 145,500 daily vehicles (Table 4.12-4). Based on "select link"[12] analysis, it is projected that 19.2 percent of all trips, or 27,900 daily vehicles, would be to or from the project (Table 4.12-5). This indicates that the project would "replace" about 11,300 trips (27,900 minus 16,600) that are projected to use I-205 in the "No Project" alternative. This replacement would occur because the project would provide jobs for some of the San Joaquin County residents who would otherwise commute on I-205 to Bay Area jobs further west.

For the No Project alternative, a deficient level of service (LOS E) is projected on I-205 during the PM peak in the segment west of I-5. Addition of the project would degrade the segment of I-205 west of I-5 from LOS E to LOS F in the PM peak and from LOS D (acceptable) to LOS E (deficient) in the AM peak. Addition of the project would also degrade the segment from 11th Street to Patterson Pass Road from LOS D (acceptable) to LOS F (deficient) in the PM peak. Other segments would maintain LOS D or better with or without the project. As noted above, these projections assume widening of I-205 to 8 lanes (6 mixed flow and 2 HOV) by 2010. With I-205 widened to only 6 lanes as currently programmed, LOS F conditions are projected along the entire I-205 corridor, with or without the project.

I-580 Freeway

No freeway improvements are assumed by 2010 for the I-580 freeway in San Joaquin and Alameda counties in this analysis. However, introduction of an Altamont Pass commuter rail line and express bus services between the project site and the Tri-Valley are included. These assumptions are

[12] "Select link" analysis traces the origins and destinations of all trips projected by the Travel Model to use a designated roadway segment.

consistent with current Alameda County Policy 164A regarding improvements at Altamont Pass and Vasco Road gateways.[13]

At the Altamont Pass, 172,400 daily vehicles are projected on I-580 by 2010 without the project.[14] The project would add about 9,700 vehicles for a total of 182,100 (Figure 4.12-7 and Table 4.12-4). (This does not include an additional 8,000 vehicles added to Altamont Pass Road by the project.) The increase due to the project and the resulting daily volume is lower than previously projected in the FSEIR (191,000 daily vehicles). The difference appears to be due to recalibration of the COG Travel Model to reflect observed 1990 commute patterns, updating of 2010 land use inputs for the Bay Area and Sacramento regions, and inclusion of transit improvements in the current analysis. Select link analysis of I-580 at the Altamont Pass indicates that 11.6 percent of all daily trips in 2010, or 21,100 vehicles, are either to or from the project site (Table 4.12-5).

Higher traffic volumes are projected on I-580 west of the Altamont Pass, with 181,200 daily vehicles just west of Vasco Road without the project. At this location, the project would increase 2010 volumes by about 14,900 daily vehicles, for a total of 196,000 daily vehicles.

South of the I-205 junction, projected volumes on I-580 are much lower than to the west. Between Grant Line Road and Patterson Pass Road, a small decrease in 2010 freeway volumes is projected with addition of the project (Table 4.12-4). The decrease is attributable to shifts in regional travel distribution. South of Patterson Pass Road, addition of the project would increase 2010 volumes by about 10,000 daily vehicles.

Unacceptable peak period levels of service, generally LOS F, are projected along most of I-580 west of the I-205 connection (Table 4.12-6), and some peak period traffic would divert to Altamont Pass Road, causing similar LOS F conditions. These conditions are projected with or without the project,

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13 Policy 164A of the East County Area Plan, adopted by the Alameda County Board of Supervisors, May 5, 1994, states that "The County shall assign priority in funding decisions to arterial and transit improvements that would improve local circulation, and to improvements that would facilitate movement of commercial goods. Improvements that would expand the capacity of the Altamont Pass and Vasco Road gateways leading into the planning area from San Joaquin and Contra Costa Counties would be inconsistent with the policies of this plan. This policy shall not preclude the County from supporting or approving any rail projects or improvements required for roadway safety."

14 The 2010 peak hour/peak direction traffic volumes on I-580 at Altamont Pass shown in this DEIR compare closely with similar projections reported in Alameda County's East County Area Plan (ECAP) DEIR (June 1993). Table 4.12-6 of this DEIR shows PM peak hour/peak direction volumes of 10,710 (No Projection alternative), which is within 5 percent of the projection of 11,309 vehicles shown in Table 5.4-2 of the ECAP DEIR. Resulting levels of service are therefore comparable. Daily traffic projections, however, differ significantly between the two DEIRs. The ECAP projects 131,500 daily vehicles, which is about 25 percent lower than the 172,400 daily vehicles projected for the No Project alternative in this DEIR (Table 4.12-4). The higher projection shown in this DEIR is based on a calibrated "gravity model" reflecting specific regional projections of 2010 population and employment distribution. The daily traffic projections in the ECAP DEIR are understood to be factored up from peak hour projections, and appear to assume relatively little non-peak direction or off-peak travel growth in the corridor. Since the daily traffic projections are not used to characterize level of service, the disparity between the two projections is not critical. Moreover, the projections in this DEIR appear to be more conservative (higher) than those reported in the ECAP DEIR.

but the project would exacerbate them. The excess traffic demand on I-580 would cause spreading of the peak period in the peak direction of travel, resulting in a lower percentage of the daily traffic occurring in the peak hour than projected by the Travel Model. In the AM period, excess demand would cause standing queues on the east side of the Altamont Pass, limiting the rate of traffic entering the Tri-Valley. In the PM, queues would occur on the west side of the Altamont Pass and reduce eastbound traffic flows on I-205 farther east.

An intensive multi-regional effort to reduce single-occupant vehicle trips generated by the proposed project and other cumulative development on both sides of Altamont Pass would be needed to mitigate future traffic growth on I-580 through Altamont Pass. The 2010 projections include potential effects of on- and off-site transit service improvements currently planned by 2010. However, the COG Travel Model does not have the capability to project traffic reduction potential associated with countywide TDM efforts such as carpool/vanpool incentive programs and flexible work hours. The project has the potential to be more effective in reducing peak hour traffic than the County as a whole due to locational advantages, the scale of the project and the comprehensive TDM program proposed in the Draft Master Plan. Emphasizing single-occupant trip reduction on both ends of the work trip would be likely to substantially reduce traffic for the project as a whole. However, recognizing the uncertainty in achieving any traffic reduction beyond that already reflected in the Travel Model, no further traffic reduction was assumed. Should further trip reduction be achieved, the impacts would be reduced from those indicated in this DEIR.

The proposed Land Use Plan seeks to maximize the proportion of work trips and shopping trips that stay within the site. A monitoring program that measures the amount of employment actually created within the site at each phase of development is essential to ensure that the projections for a high rate of internal travel remain valid. If the development and occupancy of industrial and commercial land uses were to lag substantially behind residential development, or if housing were not affordable to a sufficient number of on-site employees, more project residents would travel away from the project site than projected by the travel model, resulting in potentially greater impacts in the year 2010 than indicated above.

The feasibility of constructing truck-climbing lanes in each direction over the Altamont Pass segment of I-580 has been studied in a Project Study Report by Caltrans District 4 as part of the Inter-regional Route System 10-year plan. At this time, only Stage I of this project, consisting of adding a westbound truck lane at the I-205 junction, is included in MTC's Regional Transportation Plan. No approvals or funding have been obtained for the remaining portions of the project (Satow, 1994). This project may or may not be inconsistent with Alameda County's Policy 164A, which opposes capacity improvements to I-580 but which supports improvement to facilitate goods movement. Even with the addition of truck-climbing lanes, projected 2010 traffic demand on this section of I-580 would exceed capacity during the PM peak period due to cumulative growth, with or without the proposed project.

To maintain acceptable freeway mainline speeds, Caltrans may require installation of ramp metering at the intersections of I-205 with Patterson Pass Road and of I-580 with Grant Line Road. If ramp metering were installed, HOV bypass lanes should be provided to encourage carpooling. **Other strategies such as traveler information systems, congestion pricing, and mainline HOV lanes should also be considered.**

A Mid-State Toll Road, which has been proposed by a private company, could accommodate a portion of the excess travel demand over the Altamont Pass and on I-580 through Livermore. The Toll Road as earlier proposed would extend a new four-lane facility northeast from the I-680/SR 84 interchange in Sunol (between Fremont and Pleasanton), cross I-580 between Livermore and Pleasanton, continue northward through Oakley and Brentwood in Contra Costa County, and then connect to I-80 near Vacaville in Solano County. Preliminary analysis by proponents of that project indicates that the Toll Road could divert up to 10 percent of the total I-580 traffic through the Altamont Pass (Parsons De Leuw, 1992). Based on this estimate, the Mid-State Toll Road by itself would not reduce traffic over the Altamont Pass to acceptable levels, but in combination with further TDM efforts and some peak period spreading, LOS E could potentially be maintained in the year 2010. More recent proposals have been to extend the toll road only as far north as State Route 4. However, no approvals for the project have been received and numerous local jurisdictions and agencies involved in the planning and approval of the Mid-State Toll Road have voiced opposition to the project (McCallum, 1994). Therefore, the Mid-State Toll Road project is not assumed in any of this analysis or included in the mitigation measures below.

Altamont Pass Road could be widened from its existing two lanes to four lanes to accommodate some of the projected excess traffic demand on I-580. However, this improvement appears to be inconsistent with Alameda County Policy 164A, which opposes roadway capacity improvements to the Altamont Pass gateway, and no engineering or environmental studies have been done to determine its feasibility or cost. Widening **of Altamont Pass Road for trucks and/or high occupancy vehicles only may be consistent with the County's policy, and would free up some capacity on I-580 for other vehicles. In any case, widening** of Altamont Pass Road to four lanes is not proposed as a mitigation measure unless requested by Alameda County.

Caltrans may initiate two regional studies in 1994 to address transportation needs in the I-580 corridor, using State Planning and Research grants (Allen, 1994). One of these is to coordinate interregional travel forecasts and study goods movements between the Bay Area, Sacramento, and Central Valley areas (the Tri-Regional Intermodal Planning Study). The other is ~~a study of the Altamont Corridor~~ **the I-580/I-205 Interregional Transportation Corridor Study, which is addressing mobility improvements in the corridor, particularly for freight and high-occupancy vehicles; this study involves jurisdictions on both sides of the Altamont Pass**. The Draft Master Plan provides for participation in such studies and resulting implementation, but no implementation measures address fair share participation beyond the study phase.

I-5 Freeway

No improvements were assumed on I-5 in the project vicinity for this traffic analysis. In the segment between I-205 and SR 120, the daily traffic volume on I-5 is projected to reach 209,000 daily vehicles by 2010 without the project. Addition of the project would not significantly increase total daily traffic on this freeway segment, but a six percent increase in PM peak hour/peak direction traffic is projected.

In this segment, the projected 2010 peak hour traffic demand without the project well exceeds capacity, resulting in LOS F during both the AM and PM peak periods (Table 4.12-6). This is due to cumulative growth in the County, including development in Stockton, Manteca, and Lathrop. The project would degrade Level of Service further due to an increase in the theoretical volume/capacity ratio. As discussed for I-580 above, the peak hour demand could not be fully accommodated, resulting in standing queues, peak period spreading and reduction of traffic flows downstream.

Effects of Reduced Number of Planned Lanes on I-205

The DEIR assumes that the I-205 freeway will be widened to eight lanes (six mixed flow, two HOV lanes) by the time of buildout of the Master Plan. This assumption was based on previous General Plan 2010 and Mountain House EIR studies that indicated the need for eight or more lanes with or without the Mountain House project. However, no widening of I-205 beyond six lanes is currently planned. Accordingly, a revised County model projection was prepared assuming I-205 were widened to six lanes only to test the potential traffic shifts and LOS implications of not completing the widening to eight lanes by the time of Master Plan buildout. All other land use and network assumptions were unchanged.

Table 4.12-6A compares freeway traffic volumes for the six-lane I-205 to comparable results assuming eight lanes. Volume reductions on I-205 of as many as 7,700 daily vehicles are projected with the narrower width, representing up to 5 percent less daily traffic in 2010. A volume reduction of 6,800 daily vehicles is projected on I-5 between I-205 and SR 120. Volume changes on I-580 are relatively minor.

Table 4.12-6B shows resulting AM and PM peak hour volumes and levels of service. The primary LOS impact of the narrower width of I-205 is on I-205 itself, where a degradation from LOS D with eight lanes to LOS F with six lanes is projected. The LOS conditions on I-205 would approach conditions projected on I-580 to the west. These conditions would cause spreading of the peak period and substantial traffic queues in the peak direction of travel.

Widening of I-205 to eight lanes, as assumed in this DEIR, would mitigate much of the impact. However, according to Caltrans and the San Joaquin Council of Governments (COG), major costs and impacts would be incurred to widen the freeway beyond six lanes and connect it to I-5 to and from the north. Since the eight lane widening is unfunded, it is not included in the current COG Regional Transportation Plan. Due to the lead time involved and the need for major new funding, it is unlikely that the widening could be completed by 2010. In the absence of any improvements beyond widening of I-205 to six lanes, a significant adverse impact would occur with or without the Mountain House project.

An alternative to widening I-205 beyond six lanes is to develop a parallel, high capacity east-west arterial road north of I-205, preferably extending all the way from the City of Lathrop's Gold Rush City project to Mountain House. This arterial or expressway would follow an alignment along the existing Middle and Arbor roads, and would connect via an access road into Gold Rush City (Stanford Boulevard). A two- to four-lane arterial was assumed for this route in the DEIR analysis; this route is projected to be overloaded in 2010, with or without development of Mountain House. Widening of this route to six lanes would increase capacity in the I-205 corridor, thereby partially compensating for not widening the I-205 freeway beyond six lanes.

TABLE 4.12-6A

TOTAL DAILY TRAFFIC VOLUME CHANGES ON FREEWAYS IN PROJECT VICINITY
(2010 Volume with Six Lanes versus Eight Lanes on I-205)

Freeway	Location	2010 Daily Traffic Volume		
		Eight Lanes	Six Lanes	Difference
I-580	In Livermore between Vasco Road and North Livermore Avenue	196,100	195,300	(800)
	At the Altamont Pass	182,100	181,600	(500)
	West of I-205 Interchange	170,000	168,000	(2,000)
	North of Patterson Pass Road	54,900	56,100	1,200
I-205	West of Patterson Pass Road	108,100	107,700	(400)
	East of Patterson Pass Road	136,500	132,700	(3,800)
	East of 11th Street	115,100	110,900	(4,200)
	East of Grant Line Road	145,500	137,800	(7,700)
I-5	Between I-205 and SR 120	208,900	202,100	(6,800)

Source: DKS Associates.

TABLE 4.12-6B

YEAR 2010: PEAK HOUR, PEAK DIRECTION LEVEL OF SERVICE ON FREEWAYS
I-205 AS EIGHT LANES VERSUS I-205 AS SIX LANE

Freeway Location	With Eight Lanes on I-205						With Six Lanes on I-205					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-580 north of Linne Road	4,580	1.15	F	5,210	1.30	F	4,690	1.17	F	5,350	1.34	F
I-580 south of I-205	3,990	1.00	F	4,010	1.00	F	4,090	1.02	F	4,130	1.03	F
I-580 at Altamont Pass	10,470	1.31	F	11,670	1.46	F	10,440	1.31	F	11,640	1.46	F
I-580 west of Vasco Road	12,790	1.60	F	14,260	1.78	F	12,760	1.60	F	14,250	1.78	F
I-205 west of I-5	7,780	0.97	E	8,230	1.03	F	7,110	1.19	F	7,740	1.29	F
I-205 west of Tracy Blvd.	7,320	0.92	D	7,410	0.93	D	6,900	1.15	F	7,560	1.26	F
I-205 south of Grant Line Road	5,960	0.75	C	6,670	0.83	D	5,620	0.94	E	6,280	1.05	F
I-205 west of 11th Street	7,400	0.93	D	8,240	1.03	F	7,040	1.18	F	7,830	1.31	F
I-205 west of Patterson Pass Rd.	6,380	0.80	D	7,240	0.91	D	6,230	1.04	F	7,030	1.17	F
I-5 south of State Route 132	940	0.24	A	1,110	0.28	A	940	0.24	A	1,100	0.28	A
I-5 south of Grant Line Road	2,400	0.60	C	2,890	0.72	C	2,370	0.59	C	2,850	0.71	C
I-5 north of I-205	10,730	1.34	F	11,810	1.48	F	10,540	1.32	F	11,670	1.46	F

Notes: Freeway capacity assumed at 2,000 vehicles per hour per lane. Under ideal conditions, capacities may be as high as 2,200 vehicles per hour per lane.
V/C = Volume to capacity ratio.
Bold and underlined letters indicate locations where County standards for acceptable LOS are not met.
Volumes represent peak hour demand volumes assuming existing peaking characteristics of travel. Where demands exceed capacities, actual throughput volumes would be reduced due to peak spreading and other factors, and queues would form upstream of bottleneck locations.

Even with this mitigation measure, a significant adverse impact is projected along I-205 by 2010.

Other Regional Facilities

West of North Livermore Avenue, net impacts of the project on I-580 traffic levels are projected to be insignificant (one to two percent over No Project volumes). The relatively low impact of the project on I-580 west of Livermore is primarily due to the underlying assumption that the amount of employment growth in the Bay Area, as projected by the Association of Bay Area Governments, would occur with or without the project.

On I-580, west of SR 84, net traffic volume increases of 1,000 to 4,500 daily vehicles are projected in comparing the No Project to the Project scenarios. This represents 0.5 to 2.3 percent of the traffic projected on I-580. The actual number of project-generated trips on I-580 would be greater than this, but the project trips would replace some non-project trips that would otherwise use I-580, as discussed above.

Similar results are observed on I-680 freeway north and south of I-580 and on other regional facilities in Alameda and Contra Costa counties, where net traffic increases of the project over 2010 traffic volumes without the project are insignificant.

Fair Share Funding of Improvements

The Draft Master Plan proposes "fair share" funding of I-205 and I-580 mainline freeway improvements, but does not indicate the amount anticipated. One possible approach for establishing a fair share for a specific improvement project is to determine the proportion that project trips represent of all traffic growth between 1990 and project buildout.[15] The projected shares of traffic growth on I-205 and I-580 that are due to the project are summarized on Table 4.12-7. **These are initial estimates that are subject to refinement in the future.** Based on select link analysis (Table 4.12-5), 27,900 daily trips on I-205 east of Grant Line Road would have origins or destinations at the project; half of these would be trip origins at the site. Daily traffic on I-205 is projected to increase from 56,000 in 1990 to 145,500 in 2010 with Master Plan buildout, an increase of 89,500 daily vehicles. Therefore, the project trip origins would account for 16 percent

[15] Only the origins are considered here because use of both origins and destinations would potentially double count trips. It is assumed that, for trips with destinations in the project site, the locations of the origins would similarly be responsible for "fair share" funding of the regional improvements, including other jurisdictions such as Alameda County or, alternatively, other funding sources (e.g., State, Federal, regional fees) would be used to fund the other half of the costs. Also, only the projected increase in traffic is considered since existing traffic is accommodated by the existing roadway. This estimate could be refined in the future by calculating fair shares at additional locations along I-205 and averaging the results, and/or by using peak hour traffic projections rather than daily.

TABLE 4.12-7

PROJECT'S PERCENTAGE OF ADDED TRIPS ON REGIONAL AND COUNTY FACILITIES IN PROJECT VICINITY

Roadway	Location/Segment	Percent Project Trips[1]
Freeway Mainline:		
I-205	Patterson Pass Road to I-5	16
I-580	Altamont Pass	12
Freeway Interchanges:		
I-205/Patterson Pass Road		87
I-580/Grant Line Road		55
I-580/Patterson Pass Road		32
County Arterial Roads:		
Patterson Pass Road	Byron Road to I-205	100[2]
Patterson Pass Road	I-205 to I-580	36
Byron Road	County line to Patterson Pass Road	35
Byron Road	Patterson Pass Road to I-205	40
Byron Road	Mountain House Road to County line	28
Grant Line Road	I-580 to Byron Road	48
Grant Line Road	Byron Road to I-205	48
Grant Line Road (new)	Byron Road to I-205	36
Altamont Pass Road	Mountain House Road to I-580	50
11th Street	I-205 to Tracy Boulevard	22
Tracy Boulevard	North of Lammers	12

Source: DKS Associates.

Note: The use of these estimates for fair share contributions assume participation by other jurisdictions on a similar basis or, alternatively, use of other funding sources. Only major project impacts are included; other improvements farther from site would be funded through regional fees. Estimates may be refined in the future to consider additional locations in each segment.

1 Percentage of daily trips added (1990-2010) that have origins at Mountain House (except for I-205/Patterson Pass Road and I-580/Grant Line Road interchanges where both origins and destinations are included).

2 Percentage of added trips with origins within Mountain House not determined from select link analysis, but would be slightly less than 50%. However, the project is assumed to have full responsibility for improving this roadway segment since few trips are projected to use it in the No Project scenario, and because it is an on-site roadway.

of the projected traffic increase (13,950 project trips divided by 89,500 total trips), and this is a reasonable fair share estimate for I-205 mainline improvements.

Similarly, with buildout of the project, about 21,100 daily trips are projected on I-580 at Altamont Pass with origins or destinations there (Table 4.12-5), based on select link analysis. Half of these, or 10,550 vehicles would represent trip origins at the site. The daily volume is projected to increase from 91,000 vehicles in 1990 to 182,100 vehicles, an increase of 91,100 vehicles. The project trip origins would therefore account for 12 percent of the projected increase.

The project would impact other regional facilities throughout the County beyond those included in Table 4.12-7. These impacts are likely to be small in percentage terms at any single location, but their cumulative results on the Countywide regional system could be significant. Fair share contributions to mitigate these impacts could be determined through existing procedures for regional impact fees included in the County's Traffic Impact Mitigation Fee program (San Joaquin County, 1990), with appropriate credits applied for project funded improvements on ~~I-205 and I-580~~ **eligible facilities**.

Mitigation Measure M4.12-2

The following mitigation measures should be implemented to reduce impacts of the project on freeways; however, the impact would remain an unavoidable adverse impact.

~~*Two Policies*~~ ***Three Implementations*** *should be included under Objective 1 in Freeway Improvements (Appendix C), as follows:*

"d) The project ~~*will*~~ ***shall*** *fund its fair share of the cost of widening I-205 from* ***four lanes to six lanes, and from*** *six lanes to eight lanes between* ~~*Patterson Pass Road*~~ ***I-580*** *and I-5, either as HOV lanes or mixed flow lanes.* ***As an alternative to widening the I-205 freeway beyond six lanes, the project sponsor shall contribute a fair share to development of a parallel east-west roadway system north of I-205, extending between Mountain House and the City of Lathrop's Gold Rush City development, including the necessary multi-jurisdictional alternative/feasibility studies.***

"e) As an alternative to widening the I-580 freeway, the project sponsor shall contribute a fair share ***to safety and operational improvements and/or*** *to the widening of Altamont Pass Road west of Grant Line Road to four lanes* ***(as HOV or truck lanes)****, if determined to be consistent with Alameda County policy* ~~*and if jointly funded on a fair share basis by Alameda County*~~*.*

"f) The Public Financing Plan shall reflect the most current cost estimates and fair share contributions, based on refined San Joaquin County Travel Model estimates."

Impact M4.12-3

The project would increase traffic volumes on freeway interchanges near the site and would require interchange improvements at Grant Line Road/I-580, Patterson Pass Road/I-205 and Patterson Pass Road/I-580.

The project would primarily impact three existing freeway interchanges: I-205/Patterson Pass Road, I-580/Grant Line Road, and I-580/Patterson Pass Road. All three are currently low capacity interchanges built to rural standards, and would require substantial upgrading to accommodate projected 2010 traffic volumes with the project. The Draft Master Plan includes policies for fair share participation in the I-205/Patterson Pass Road and I-580/Grant Line Road interchange improvements, but no specific provisions are included for the I-580/Patterson Pass Road interchange.

I-205/Patterson Pass Road Interchange

The Draft Master Plan proposes the following improvements for this interchange, staged over time:

- Bridge widening, ultimately to 6 lanes
- Addition of two loop ramps (northbound to westbound on, southbound to eastbound on)
- Signals at ramp intersections
- Off-ramp widening

The ultimate interchange improvements would meet the County's LOS standards at buildout of the project site. The controlling signalized ramp intersections would provide LOS B or better service during both AM and PM peak hours (Table 4.12-11, presented later in this section), and all ramps are projected to operate satisfactorily. During preparation of the Project Study Report (PSR), further analysis would need to be conducted to determine storage lane requirements. Also, provisions need to be made for installing ramp metering with an HOV bypass lane at the southbound to westbound on ramp.

The Draft Master Plan does not quantify a fair share cost for the project. Table 4.12-7 indicates a possible fair share based on the proportion of total vehicles to or from Mountain House. About 87 percent of all vehicles entering or leaving the freeway at this interchange are projected to be to or from Mountain House and other points north of I-205, with the remainder directed to or from the south. Based on this measure, a reasonable estimate of fair share is 87 percent of total costs for upgrading the interchange.

I-580/Grant Line Road Interchange

The Draft Master Plan proposes the following interchange improvements, staged over time:

- Underpass widening to 4 lanes
- Addition of a loop ramp (southbound to eastbound on)
- Realignment and widening of other ramps
- Signals at ramp intersections

The interchange improvements would meet the County's LOS D standard at buildout of the Master Plan. The controlling signalized ramp intersections indicate that the ultimate improvements would provide LOS D or better service during both AM and PM peak hours (Table 4.12-11, presented later in this section), and all ramps would accommodate the projected ramp volumes. During preparation of the Project Study Report (PSR), further analysis should be conducted to determine storage lane requirements. Also, provisions should be made for installing ramp metering with an HOV bypass lane at the southbound to westbound on ramp.

The Draft Master Plan does not quantify a fair share for the project. A reasonable fair share, based on the proportion of all vehicles entering or leaving the freeway at this interchange to or from Mountain House, is 55 percent of the total cost of upgrading this intersection (Table 4.12-7).

I-580/Patterson Pass Road Interchange

The I-580/Patterson Pass Road freeway interchange would also be significantly impacted by the project, although a majority of the projected traffic growth at these locations appears to be attributable to other cumulative growth. The Draft Master Plan does not include specific policies for improving this interchange. Comparisons of projected 2010 traffic volumes on Patterson Pass Road with and without the project (Figure 4.12-7) indicate the potential need for improvements. Based on the Specific Plan I analysis presented later in this chapter, these improvements do not appear to be needed until some time after buildout of Specific Plan I. More detailed analysis is necessary to determine the optimal set of improvements and their phasing.

The Draft Master Plan does not quantify a fair share for the project. A preliminary estimate, based on the projected proportion of trips on Patterson Pass Road with origins at the project, is 32 percent (Table 4.12-7). This estimate should be updated at such time that further interchange studies are completed. The fair share estimate should be coordinated with the significant industrial development that is planned at the Patterson Pass Business Park.

Mitigation Measure M4.12-3

(a) Table 9.1 in the Draft Master Plan, Schedule of Freeway Interchange Improvements, should be expanded to add "Upgrade interchange, PPR/I580" with a footnote indicating that "Extent and phasing of improvements to be determined prior to approval of second Specific Plan."

(b) Table 9.1 in the Draft Master Plan should be expanded to ~~indicate~~ ***include a PSR for Grant Line/I-580 interchange improvements and*** *a trigger point for* ***its*** *completion~~ of a PSR for Grant Line/I-580 interchange improvements~~.* ***The PSR should explicitly consider other planned projects affecting the interchange such as truck climbing lanes.***

(c) Two Implementations should be added under Freeway Improvements (Appendix C) as follows:

"Interchange improvements on I-205 and on I-580 (west of I-205 junction) shall provide for ramp metering with HOV bypass lanes."

"Prior to approval of the first Development Permit in Specific Plan I and prior to approval of each subsequent Specific Plan, the County shall review and, if appropriate, revise the trigger points listed in Table 9.1 of the Draft Master Plan. These reviews shall use the latest version of the COG Travel Model and most current projections of growth, and shall be funded by the applicant. ~~Revisions shall be incorporated into subsequent specific plans.~~"

Impact M4.12-4

The project would contribute to the need for improvements on several County and other roads in the project vicinity, including portions of Grant Line Road, Patterson Pass Road, Byron Highway, Altamont Pass Road, 11th Street, State Route 4, and Tracy Boulevard leading to

SR 4. Most of these impacts could be mitigated by widening or upgrading the roadways to increase their capacities.

The proposed project would contribute to projected cumulative traffic growth, as shown in Table 4.12-8 and Figure 4.12-8. Project trips could represent a higher proportion of the total traffic on a specific road than indicated in Table 4.12-8, due to replacement of some non-project traffic that would otherwise use the facility were the project not built. To quantify the number of trips to or from the project, select link analysis was performed at a number of roadway locations (Table 4.12-9). Projected peak hour levels of service based on typical roadway capacities are shown in Table 4.12-10. The roadway capacities indicated in this table are based on generalized capacities used in the COG travel model, and may be conservatively low at some locations, particularly where raised medians, turn pockets, and roadway access controls are planned. **It should be noted that impacts due to construction-related traffic have not been included in the projections, because it is difficult, if not impossible, to determine the origin of such traffic.**

Impacts of the project are considered significant when the County's LOS C standard is not met. Locations not meeting the LOS C standard during either the AM or PM peak hour are flagged on Table 4.12-10 (bold, underlined). As noted above, the roadway capacities are generalized values that may be conservatively low; consequently, V/C ratios and LOS could be better than shown in the table. As indicated on the table, the following roadways may violate the County's current LOS C standard, requiring additional widening or upgrading to increase their capacities:

- Grant Line Road west of Marina Boulevard
- Grant Line Road east of Patterson Pass Road
- Grant Line Road east of Byron Road
- Patterson Pass Road north of I-205
- Patterson Pass Road south of I-205
- 11th Street
- Altamont Pass Road
- Byron Road west of Mountain House Road
- **Byron Road east of Lammers Road**

The Draft Master Plan proposes that LOS D be accepted on "community gateways" including portions of Grant Line Road, Patterson Pass Road, and Byron Road. Mitigation Measure M4.12-5(f) proposes an amendment to the County General Plan LOS policy for consistency with the Draft Master Plan. If the revised LOS standard is approved for community gateways, the following roadways would remain in violation of the LOS policy:

- Grant Line Road east of Patterson Pass Road
- Grant Line Road east of Byron Road
- Patterson Pass Road south of I-205
- 11th Street
- Altamont Pass Road
- Byron Road west of Mountain House Road

TABLE 4.12-8

TRAFFIC VOLUME INCREASES ON ARTERIALS ON PROJECT SITE AND PROJECT VICINITY
(Total Two-Way Daily Traffic)

Road	Location	1993 Daily Traffic Volume	2010 Daily Traffic Volume		
			No Project	Proposed Project	Difference[1]
11th Street	West of Lammers Road	11,000	15,600	22,800	7,200
Altamont Pass Road	East of Dyer Road	3,100	4,000	11,700	7,700
Grant Line Road (new)	East of Byron Road	N/A	8,700	21,100	12,400
Grant Line Road (old)	East of Byron Road	6,120	17,000	24,200	7,200
Grant Line Road	North of I-580	3,500	7,700	20,000	12,300
SR-4	West of Tracy Boulevard	5,700	12,300	15,100	2,800
SR-4	East of Tracy Boulevard	6,000	11,800	11,200	(600)
Patterson Pass Road	North of Schulte Road	1,900	7,400	18,300	10,900
Tracy Boulevard	North of Lammers Road	2,800	5,400	12,200	6,800
Corral Hollow Road	South of Lammers Road	1,200	2,900	8,300	5,400
Byron Road	North of Grant Line Road	8,300	11,600	29,000	17,400
Byron Highway	North of County Line	6,400	20,600	23,400	2,800

Source: DKS Associates.

Notes: See Figure 4.12-8 for specific locations.
Numbers in parentheses are volumes that decreased with the Proposed Project.
N/A = Not applicable.

[1] Proposed Project compared to No Project volume.

TABLE 4.12-9

PROJECT TRIPS ON SELECTED ROADWAY SEGMENTS
2010 Daily Traffic - Master Plan Buildout

Roadway	Location	Total Daily Vehicles	Vehicles Originating from Project	Percent of Total Daily Vehicles Originating from Project[1]
Byron Highway	North of County line	23,400	4,800	21
Byron Road	South of Grant Line Road	29,000	10,600	37
Altamont Pass Road	West of Grant Line Road	11,700	3,100	26
New Grant Line Road	East of Byron Road	21,100	7,600	36
11th Street	East of Lammers Road	23,700	2,800	12
Tracy Boulevard	North of Lammers Road	12,200	1,100	9

Source: San Joaquin County Travel Demand Model, DKS Associates.

[1] Based on select link analysis using County Travel Model. The select link analysis traces origins and destinations of all trips projected to use the particular roadway link.

2010 TOTAL DAILY TRAFFIC VOLUMES ON ARTERIAL ROADS PROPOSED PROJECT AND NO PROJECT SCENARIOS

Figure 4.12-8

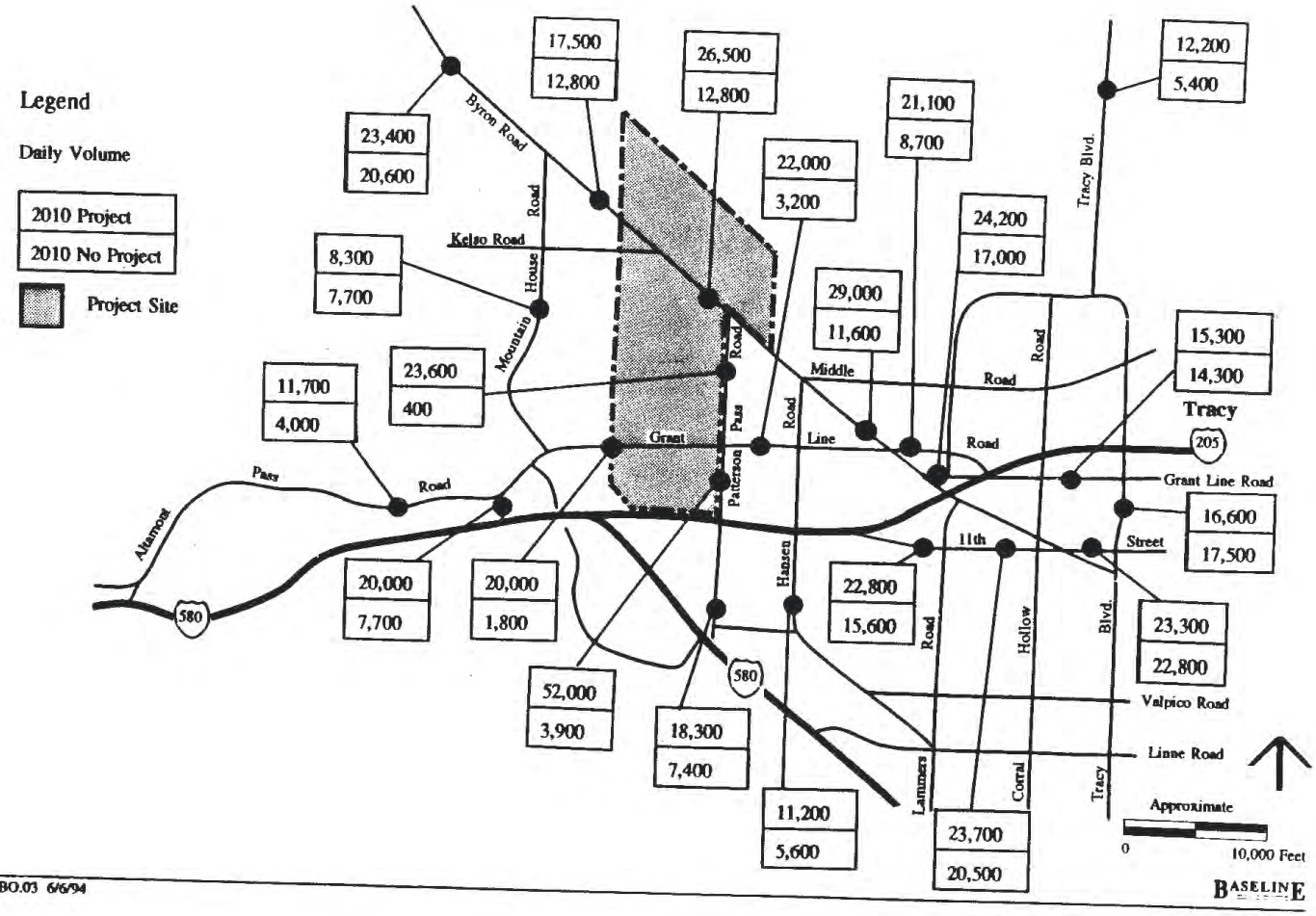

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TABLE 4.12-10

YEAR 2010 PEAK HOUR LOS ON ARTERIAL ROADS

Road	Location	Directional Lanes	Hourly Directional Capacity[1]	Time of Day	No Project			Project		
					Volume	V/C	LOS	Volume	V/C	LOS
Altamont Pass Road	West of Grant Line Road	1	900	AM	1,180	1.31	F	1,190	1.32	F
				PM	1,510	1.68	F	1,560	1.73	F
Mountain House Road	South of Kelso	1	900	AM	520	0.58	C	540	0.60	C
				PM	400	0.44	B	550	0.61	C
Byron Highway	West of Mountain House Road	1	900	AM	1,100	1.22	F	1,140	1.27	F
				PM	1,230	1.37	F	1,310	1.46	F
Byron Road	East of Mountain House Road	2	1,800	AM	890	0.49	B	840	0.47	B
				PM	1,030	0.57	C	1,010	0.56	C
Byron Road	East of Patterson Pass Road	3	2,250	AM	890	0.40	B	1,160	0.52	C
				PM	1,030	0.46	B	1,380	0.61	C
Byron Road	~~South~~ East of Grant Line Road	2	1,800	AM	760	0.42	B	1,010	0.56	C
				PM	1,040	0.58	C	1,020	0.57	C
Byron Road	**East of Lammers Road**	**1**	**900**	**AM**	**530**	**0.59**	**C**	**720**	**0.80**	**D**
				PM	**760**	**0.84**	**D**	**750**	**0.83**	**D**
Hansen Road	South of I-205	1	900	AM	270	0.3	A	230	0.26	A
				PM	380	0.42	B	660	0.73	C
Patterson Pass Road	South of I-205	2	1,500	AM	680	0.45	B	990	0.66	C
				PM	730	0.49	B	1,130	0.75	D
Patterson Pass Road	North of I-205	4	3,000	AM	170	0.06	A	2,070	0.69	C
				PM	450	0.15	A	2,610	0.87	D[2]
Patterson Pass Road	North of Central	3	2,250	AM	170	0.08	A	1,180	0.52	C
				PM	330	0.15	A	1,380	0.61	C
Patterson Pass Road	North of Grant Line Road	2	1,500	AM	140	0.09	A	1,060	0.71	C
				PM	280	0.19	A	1,230	0.82	D[2]
Grant Line Road	North of I-580	2	1,800	AM	700	0.39	B	1,170	0.65	C
				PM	330	0.18	A	1,000	0.56	C

Table 4.12-10 Year 2010 Peak Hour LOS of Arterial Roads - *continued*

Road	Location	Directional Lanes	Hourly Directional Capacity[1]	Time of Day	No Project			Project		
					Volume	V/C	LOS	Volume	V/C	LOS
Grant Line Road	West of Marina	2	1,800	AM	620	0.34	A	1,220	0.68	C
				PM	1,000	0.56	C	1,470	0.82	**D**[2]
Grant Line Road	East of Patterson Pass Road	2	1,500	AM	680	0.45	B	1,160	0.77	**D**[2]
				PM	970	0.65	C	1,540	1.03	**F**[2]
Grant Line Road (Ex.)	East of Byron Road	2	1,500	AM	510	0.34	A	780	0.52	C
				PM	760	0.51	C	1,160	0.77	**D**
Grant Line Road (New)	East of Byron Road	2	1,500	AM	780	0.52	C	1,070	0.71	C
				PM	1,150	0.77	**D**	1,110	0.74	C
11th Street	East of I-205	2	1,800	AM	1,180	0.66	C	1,440	0.80	**D**
				PM	1,290	0.72	C	1,570	0.87	**D**
11th Street	East of Corral Hollow	2	1,500	AM	1,070	0.71	C	1,070	0.71	C
				PM	1,150	0.77	**D**	1,220	0.81	**D**
11th Street	West of Tracy Boulevard	2	1,500	AM	1,000	0.67	C	1,060	0.71	C
				PM	1,230	0.82	**D**	1,260	0.84	**D**
Tracy Boulevard	North of 11th Street	2	1,800	AM	700	0.39	B	720	0.40	C
				PM	980	0.54	C	930	0.52	C
Tracy Boulevard	North of Lammers Road	1	900	AM	260	0.29	A	380	0.42	B
				PM	440	0.49	B	620	0.69	C

Source: DKS Associates.

Notes: LOS = Level of service.
V/C = Volume-to-capacity ratio.
Bold underlined letters indicate Level of Service does not meet ~~County~~ prevailing standard of the jurisdiction in which the roadway segment lies.

[1] Hourly capacities are generalized estimates based on COG travel model. Capacities may be higher (and therefore V/C ratios and LOS better) where raised medians, turn pockets, and access controls are used.

[2] Community gateways where LOS D is proposed standard in Draft Master Plan, rather than more restrictive LOS C.

Below is a discussion of the projected traffic increases, LOS impacts and mitigation for off-site roadways in the project vicinity.

Off-site project impacts would be greatest on the section of Grant Line Road between Altamont Pass Road and I-580, where daily traffic volumes would increase from 7,700 ADT without the project to approximately 20,000 ADT with the project in 2010, an increase of about 260 percent. One additional lane in each direction would be needed on the segment of Grant Line Road between I-580 and Mountain House Road to accommodate 2010 traffic with the project. The additional southbound lane on Grant Line Road could be an HOV lane, as long as projected HOV usage is high enough to provide the same or more people-moving capacity as an additional mixed-flow lane. In the northbound direction, an additional lane also would be needed to accommodate multiple turn lanes from the eastbound off-ramp at the Grant Line Road/I-580 interchange. However, this lane should not be reserved for HOV.

LOS F is projected in 2010 on Grant Line Road between Patterson Pass Road and Byron Road. This assumes widening of Grant Line Road to a four lane minor arterial (undivided). However, with a higher capacity 4-lane divided arterial having access controls (i.e., few driveways and cross-streets), LOS D could potentially be achieved.

East of Byron Road, Grant Line Road provides a key route between the project and the City of Tracy which would be a primary destination for project-generated traffic. An extension of Grant Line Road across Byron Road to the east has been assumed to occur by 2010. By 2010, the new Grant Line Road extension would be expected to carry nearly 21,100 daily vehicles (Figure 4.12-8), of which 36 percent would originate from the project site, based on select link analysis summarized in Table 4.12-9. Existing Grant Line Road East would also carry over 24,000 daily vehicles. LOS D is projected on both routes in 2010 with the project.

LOS D is projected on several segments of Patterson Pass Road, both north and south of I-205. South of I-205, the level of service closely approaches LOS C and, since the assumed capacity is conservatively low, additional lanes are not recommended beyond the 4 lanes assumed for 2010. North of I-205, the assumed capacity is also conservative for a divided major arterial, and the projected levels of service at controlling intersections along Patterson Pass Road (Table 4.12-11) indicate that LOS C or better would be maintained in 2010. Therefore, no additional mitigation is proposed for Patterson Pass Road beyond what is proposed in the Draft Master Plan.

Projected travel demand for Altamont Pass Road indicates that an additional lane in each direction between Grant Line Road and Livermore would be necessary with or without the proposed project by 2010. As congestion on I-580 increases in the future, drivers will seek alternative routes, the most likely of which is Altamont Pass Road. During the PM peak hour it is estimated that Altamont Pass Road will have 1,500 vehicles without the project and 1,600 vehicles with the project, resulting in LOS F in either case. Widening of Altamont Pass Road to four lanes would accommodate the projected traffic volumes at LOS D but may not be feasible or acceptable due to potential costs and

TABLE 4.12-11

INTERSECTION LEVEL OF SERVICE SUMMARY
AT PROJECT BUILDOUT

Locations	AM Peak Hour		PM Peak Hour	
	V/C Ratio[1]	LOS[2]	V/C Ratio	LOS
Signalized				
I-205 Eastbound Ramps/Patterson Pass Rd.	0.34	A	0.54	A
I-205 Westbound Ramps/Patterson Pass Rd.	0.58	A	0.68	B
Patterson Pass Rd./Central Pkwy. (South)	0.70	B	0.70	B
Patterson Pass Rd./Von Sosten	0.38	A	0.53	A
Patterson Pass Rd./Grant Line Rd.	0.59	A	0.79	C
Patterson Pass Rd./Mascot Blvd.	0.40	A	0.54	A
Patterson Pass Rd./Mountain House Blvd.	0.45	A	0.52	A
Patterson Pass Rd./Main St.	0.33	A	0.45	A
Patterson Pass Rd./Byron Rd.	0.84	D	0.89	D
Patterson Pass Rd. North/Central Pkwy.	0.63	B	0.98	E
Patterson Pass Rd. North/Marina Blvd.	0.50	A	0.49	A
Marina Blvd./Byron Rd.	0.71	C	0.60	A
Marina Blvd./Kelso Rd.	0.64	B	0.76	C
Marina Blvd./De Anza Blvd.	0.11	A	0.11	A
Marina Blvd./Main St.	0.12	A	0.17	A
Marina Blvd./Mascot Blvd.	0.21	A	0.33	A
Marina Blvd./Grant Line Rd.	0.59	A	0.49	A
Central Pkwy./Grant Line Rd.	0.50	A	0.84	D
Central Pkwy./Mascot Blvd.	0.35	A	0.54	A
Central Pkwy./Mountain House Blvd.	0.31	A	0.43	A
Central Pkwy./Main St.	0.51	A	0.56	A
Central Pkwy./De Anza Blvd. (north)	0.43	A	0.65	B
De Anza Blvd./Central Pkwy. (south)	0.62	B	0.85	D
De Anza Blvd./Grant Line Rd.	0.58	A	0.84	D
De Anza Blvd./Mascot Blvd.	0.53	A	0.77	C
De Anza Blvd./Mountain House Blvd.	0.67	B	0.83	D
De Anza Blvd./Main St.	0.43	A	0.75	C
I-580 Eastbound Ramp/Grant Line Rd.	0.18	A	0.53	A
I-580 Westbound Ramp/Grant Line Rd.	0.85	D	0.37	A

Table 4.12-11 Intersection Level of Service - *continued*

Locations[3]	AM Peak Hour		PM Peak Hour	
	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS
Unsignalized				
Patterson Pass Rd./A St.	A	**E**	C	**E**
De Anza Blvd./Von Sosten	B	D	A[4]	**E**
C St./Mountain House Blvd.	A	**F**	A[4]	**F**
D St./Mountain House Blvd.	A	**E**	A[4]	**F**

Source: DKS Associates.

Note: **Bold** and underlined letters indicate locations where County standards for acceptable LOS are not met.

1 V/C = Volume-to-capacity ratio.
2 LOS = Level of service.
3 Level of service shown for worst movement from minor and major street approaches.
4 Meets peak hour signal warrant.

environmental impacts. **As mentioned previously, the Alameda County Board of Supervisors has adopted a policy that opposes roadway capacity improvements to the Altamont Pass gateways. This policy does not preclude the County from supporting or approving improvements to roadway safety.** However, roadway upgrading (e.g., passing lanes, shoulder widening, realignment) may be needed for safety with the higher traffic volumes projected.

Eleventh Street in the City of Tracy is an important connection between Tracy and the project site. LOS D is projected in 2010, with the project. To accommodate cumulative 2010 development with LOS C, Eleventh Street would need to be widened to 6 lanes or upgraded to increase its capacity. However, under the City of Tracy's General Plan, LOS D would be acceptable on Eleventh Street within 1/4 mile of I-205, and may also be acceptable farther east since this is not an intra-city travel route. Based on select link analysis, traffic from the project site would account for approximately 12 percent of the expected 2010 daily traffic demand on 11th Street between I-205 and Corral Hollow Road.

Tracy Boulevard is an alternative route from the project area to East Contra Costa County, Stockton, and I-5 to the north via State Route 4. A sizable traffic increase is projected between now and 2010 on the segment of Tracy Boulevard between Howard Road and Corral Hollow Road with the No Project alternative (5,400 daily vehicles in 2010 compared to 2,800 daily vehicles in 1990), and a further increase due to the project (up to 12,200 daily vehicles in 2010). However, based on select link analysis for this roadway segment, only about 1,100 daily vehicles, or 9 percent, would be from the project. The remainder of the increase represents traffic diverted from other routes due to shifts in travel patterns when the project is added. Since much of the projected traffic increase appears to be related to diversion from the freeway or other more direct routes, the traffic increase would be overstated if peak period spreading occurs in the future. For this reason, widening of Tracy Boulevard is not proposed as a mitigation measure. A modest increase due to the project (about 3,000 daily vehicles) is also projected on SR4 west of Tracy Boulevard; this increase appears to be related to the Tracy Boulevard traffic increase. No mitigation is proposed for SR4.

One additional lane in each direction would be needed on Byron Highway from Mountain House Road in Alameda County to State Route 4 in Contra Costa County to accommodate 2010 cumulative development. Daily traffic volumes on this section of Byron Highway are projected to increase to 23,400 vehicles by 2010 (Figure 4.12-8). About 21 percent of the total traffic volume would be from the project, as shown in Table 4.12-9.

The Draft Master Plan is not anticipated to significantly impact 2010 traffic volumes on other arterial routes in Alameda and Contra Costa Counties such as Patterson Pass (Midway) Road, Vasco Road, and the SR4 Bypass (Delta Expressway). Since the overall growth in the Tri-Valley and East Contra Costa County is assumed to be the same with or without the project, addition of the project would redistribute some traffic on these routes but is not anticipated to increase traffic beyond the No Project levels.

The project would potentially increase traffic volumes over those projected without the project on a number of local rural roads in the vicinity of the project. These routes include Bethany Road (Wicklund to Corral Hollow); Kelso Road (Marina Boulevard to Mountain House Road in Alameda County); Hansen Road (south of Byron Road); Von Sosten Road (Patterson Pass Road to Hansen Road); Reeve Road (north of Byron Road); Middle Road (east of Reeve Road); and Tracy Boulevard (north of I-205). Projected traffic volumes on these roads are typically under 5,000 daily vehicles and do not warrant roadway widening. However, the increased traffic would potentially warrant pavement upgrading and/or safety improvements, particularly if used by trucks.

The development of employment opportunities within the project site would be a critical factor in the amount of traffic added to County roads adjacent to the project site. The proposed land use mix, which strives to balance housing, employment, and commercial facilities, would serve to maximize the level of internal travel.

Effects of Reduced Number of Planned Lanes on I-205

The DEIR assumes that the I-205 freeway will be widened to eight lanes (six mixed flow, two HOV lanes) by the time of Master Plan buildout. However, funding and lead time requirements may preclude widening beyond six lanes by 2010. For this reason, a separate analysis was done to evaluate potential impacts of the Mountain House project on arterial roads assuming I-205 is widened only to six lanes, as currently planned.

Table 4.12-11A indicates the 2010 daily traffic volumes on arterials assuming I-205 is widened to six lanes only, and compares the volumes to volumes projected assuming widening of I-205 to eight lanes. The primary change in arterial volumes occurs on the Middle Road extension, a two- to four-lane east-west arterial parallel to and north of I-205 that connects the City of Lathrop's Gold Rush City development to Tracy and County lands to the west. Increases of up to 7,200 daily vehicles are projected in 2010 on this arterial roadway if I-205 is widened to only six rather than eight lanes. Traffic increases are also projected on most other arterial roads in the area, including 11th Street and Grant Line Road, which parallel I-205; however, the increases are relatively minor.

Table 4.12-11B shows the effects on 2010 peak hour arterial volumes and levels of service if I-205 is widened to six rather than the assumed eight lanes. These effects are relatively minor, with volumes and volume/capacity ratios typically varying by only 1 percent or less, and levels of service remaining unchanged. The only exceptions are along the Middle Road extension paralleling I-205 where, east of Tracy Boulevard, a degradation from LOS D to E is projected in the AM and a LOS F condition is worsened in the PM peak. The results indicate that, except for the Middle Road route, arterial routes are not sufficiently attractive as alternative routes to divert significant volumes of regional traffic from I-205, either because they involve too much out-of-direction travel, are too slow in speed, or are too heavily used by local traffic. Mitigation Measure M4.12-2 addresses the applicant's fair share contribution to development of the Middle Road corridor.

TABLE 4.12-11A

TRAFFIC VOLUME COMPARISONS ON ARTERIALS ON
PROJECT SITE AND PROJECT VICINITY
I-205 AS EIGHT LANES VERSUS SIX-LANES
(Total Two-Way Daily Traffic)

Road	Location	2010 Daily Traffic Volume		
		I-205 as Eight Lanes	I-205 as Six Lanes	Difference
11th Street	West of Lammers Road	22,800	23,100	300
Altamont Pass Road	East of Dyer Road	11,700	11,600	(100)
Grant Line Road (new)	East of Byron Road	21,100	21,700	600
Grant Line Road (old)	East of Byron Road	24,200	24,000	(200)
Grant Line Road	North of I-580	20,000	19,800	(200)
SR-4	West of Tracy Boulevard	15,100	15,300	200
SR-4	East of Tracy Boulevard	11,200	11,400	200
Patterson Pass Road	North of Schulte Road	18,300	18,100	(200)
Tracy Boulevard	North of Lammers Road	12,200	12,400	200
Corral Hollow Road	South of Lammers Road	8,300	8,900	600
Byron Road	North of Grant Line Road	29,000	29,100	100
Byron Highway	North of County Line	23,400	23,500	100
Middle Road	East of Byron Road	4,500	5,000	500
Middle Road/Arbor	East of Tracy Boulevard	15,300	22,500	7,200
Stanford Extension	East of Paradise Road	22,200	26,800	4,600

Source: DKS Associates.

Notes: See Figure 4.12-8 for specific locations.
Numbers in parentheses are volumes that decreased with I-205 assumed as six lanes.

TABLE 4.12-11B

YEAR 2010 PEAK HOUR LOS ON ARTERIAL ROADS
I-205 AS EIGHT LANES VERSUS I-205 AS SIX LANES

Road	Location	Directional Lanes	Hourly Directional Capacity[1]	Time of Day	I-205 as Eight Lanes			I-205 as Six Lanes		
					Volume	V/C	LOS	Volume	V/C	LOS
Altamont Pass Road	West of Grant Line Road	1	900	AM	1,190	1.32	F	1,180	1.32	F
				PM	1,560	1.73	F	1,550	1.73	F
Mountain House Road	South of Kelso	1	900	AM	540	0.60	C	550	0.60	C
				PM	550	0.61	C	510	0.61	C
Byron Highway	West of Mountain House Road	1	900	AM	1,140	1.27	F	1,140	1.27	F
				PM	1,310	1.46	F	1,310	1.46	F
Byron Road	East of Mountain House Road	2	1,800	AM	840	0.47	B	830	0.47	B
				PM	1,010	0.56	C	1,010	0.56	C
Byron Road	East of Patterson Pass Road	3	2,250	AM	1,160	0.52	C	1,180	0.52	C
				PM	1,380	0.61	C	1,390	0.61	C
Byron Road	South of Grant Line Road	2	1,800	AM	1,010	0.56	C	990	0.56	C
				PM	1,020	0.57	C	1,010	0.57	C
Hansen Road	South of I-205	1	900	AM	230	0.26	A	220	0.26	A
				PM	660	0.73	C	670	0.74	C
Patterson Pass Road	South of I-205	2	1,500	AM	990	0.66	C	1,000	0.66	C
				PM	1,130	0.75	D	1,140	0.75	D
Patterson Pass Road	North of I-205	4	3,000	AM	2,070	0.69	C	2,000	0.69	C
				PM	2,610	0.87	D[2]	2,520	0.84	D[2]
Patterson Pass Road	North of Central	3	2,250	AM	1,180	0.52	C	1,170	0.52	C
				PM	1,380	0.61	C	1,340	0.61	C
Patterson Pass Road	North of Grant Line Road	2	1,500	AM	1,060	0.71	C	1,050	0.71	C
				PM	1,230	0.82	D[2]	1,220	0.82	D[2]
Grant Line Road	North of I-580	2	1,800	AM	1,170	0.65	C	1,180	0.65	C
				PM	1,000	0.56	C	890	0.56	C
Grant Line Road	West of Marina	2	1,800	AM	1,220	0.68	C	1,200	0.68	C
				PM	1,470	0.82	D[2]	1,520	0.84	D[2]

Table 4.12-11B Year 2010 Peak Hour LOS of Arterial Roads, I-205 as Eight versus Six Lanes - *continued*

Road	Location	Directional Lanes	Hourly Directional Capacity[1]	Time of Day	I-205 as Eight Lanes			I-205 as Six Lanes		
					Volume	V/C	LOS	Volume	V/C	LOS
Grant Line Road	East of Patterson Pass Road	2	1,500	AM	1,160	0.77	D[2]	1,250	0.83	D[2]
				PM	1,540	1.03	F[2]	1,630	1.12	F[2]
Grant Line Road (Ex.)	East of Byron Road	2	1,500	AM	780	0.52	C	850	0.57	C
				PM	1,160	0.77	D	1,300	0.87	D
Grant Line Road (New)	East of Byron Road	2	1,500	AM	1,070	0.71	C	1,090	0.73	C
				PM	1,110	0.74	C	1,100	0.74	C
11th Street	East of I-205	2	1,800	AM	1,440	0.80	D	1,470	0.82	D
				PM	1,570	0.87	D	1,570	0.87	D
11th Street	East of Corral Hollow	2	1,500	AM	1,070	0.71	C	1,080	0.71	C
				PM	1,220	0.81	D	1,230	0.82	D
11th Street	West of Tracy Boulevard	2	1,500	AM	1,060	0.71	C	1,100	0.73	C
				PM	1,260	0.84	D	1,260	0.84	D
Tracy Boulevard	North of 11th Street	2	1,800	AM	720	0.40	B	730	0.40	B
				PM	930	0.52	C	910	0.52	C
Tracy Boulevard	North of Lammers Road	1	900	AM	380	0.42	B	400	0.44	B
				PM	620	0.69	C	630	0.70	C
Middle/Arbor	East of Byron Highway	1	750	AM	300	0.40	B	340	0.45	C
				PM	460	0.61	C	520	0.69	C
Middle/Arbor	East of Tracy Boulevard	1	750	AM	650	0.87	D	740	0.99	E
				PM	910	1.21	E	1,030	1.37	F
Stanford Extension	East of Paradise Road	2	1,800	AM	980	0.54	C	980	0.54	C
				PM	1,450	0.81	D	1,430	0.80	D

Source: DKS Associates.

Notes: LOS = Level of service.
V/C = Volume-to-capacity ratio.
Bold underlined letters indicate Level of Service does not meet County standard.

[1] Hourly capacities are generalized estimates based on COG travel model. Capacities may be higher (and therefore V/C ratios and LOS better) where raised medians, turn pockets, and access controls are used.

[2] Community gateways where LOS D is proposed standard in Draft Master Plan, rather than more restrictive LOS C.

Fair Share Funding of Improvements

The establishment of fair share responsibilities for the project and specific Traffic Impact Mitigation Fees for county arterial improvements in the project vicinity are subject to review and approval of the County. To assist in reviewing initial fair share estimates of improvement costs, this DEIR identifies the proportion of added traffic due to the project on roadways in the project vicinity anticipated to require improvements (Table 4.12-7). The table does not necessarily represent the total potential contribution to transportation improvements by the applicant that would need to be included in the Public Financing Plan since only primary impacts on local streets and nearby regional facilities are included. As indicated above, these estimates are subject to refinement at the time an individual project is designed. Also, the project would be subject to any fees for regional improvements which are included in the county's Traffic Impact Mitigation Fee program.

The following mitigation measures are similar to those included in the FSEIR, with additional measures for certain roads to reflect the results of the updated traffic analysis.

Mitigation Measure M4.12-4

(a) Policy f) under Objective 1 in County Arterials should be amended to specifically call out 11th Street, ***Grant Line Road (east),*** *Altamont Pass Road, and Byron Highway, as follows:*

"f) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures with other counties or cities whose roadways are impacted by the community. The specific roadway improvements that shall be studied include 11th Street ***and Grant Line Road (east of Patterson Pass Road)*** *(City of Tracy), Altamont Pass Road (Alameda County), and Byron Highway (Alameda and Contra Costa counties). Where roadway widening for additional capacity is not feasible or acceptable, safety and operational improvements shall be considered in order to better accommodate increased traffic."*

(b) ~~*A new*~~ *Implementation* ***a)*** ~~*should be added*~~ *under Objective 1 in* ~~*County Arterials*~~ ***Transit*** *(Appendix C)* ***should be amended as follows:***

"h) ~~*Local transit service from the City of Tracy shall be extended to the project site to reduce the number of project vehicle trips on 11th Street and Grant Line Road East. The Community shall contribute a fair share for funding and operating the transit service. The fair share arrangements shall be determined by the County, the City of Tracy, and the project sponsor, and shall be consistent with Countywide transit service arrangements.*~~ ***No later than occupancy of the twenty-fifth dwelling unit, a service agreement shall be executed to establish bus service between Mountain House and Tracy."***

(c) Table 9.2 of the Draft Master Plan should be revised to include the realignment of Grant Line Road to form a continuous s[illegible]ment where it meets Byron Road. A trigger point should be established for this improvem[illegible] Also, a new Implementation should be added under Objective 1 in County Arterials (Appendix C):

*"~~i~~ **g)** The community shall, to the extent of its fair share, participate in study and implementation of a grade-separated crossing of the existing Southern Pacific railroad tracks at Grant Line Road to accommodate traffic associated with the proposed project and the proposed Tracy regional mall."*

(d) Table 9.2 of the Draft Master Plan should be revised to include the road segment of Grant Line Road, Patterson Pass Road to the Tracy regional mall. The "Lanes" column should read "To 4", and a trigger point should be established for this improvement. A footnote to Table 9.2, referring to the new segments, should state: "The Master Developer shall provide fair share funding for the widening of Grant Line Road, based on more detailed studies that identify both Mountain House and City of Tracy fair share contributions to the widening."

(e) Table 9.2 of the Draft Master Plan should be revised to include Byron Road, east of Lammers Road with a footnote to indicate this improvement would be required if the County does not accept LOS D on this route. The "lane" column should read "To 4" and a trigger point should be established.

(f) Table 9.2 of the Draft Master Plan should be revised to include the road segment of Altamont Pass Road, Greenville Road to Grant Line Road. Under the "Lanes" and "Trigger DU's" columns, the notation "n.a." (not applicable) should be entered. A footnote to Table 9.2, referring to the new segment, should state: "Safety and operational improvements may include passing lanes, realignments, and shoulder widening. No additional capacity improvements may be constructed on Altamont Pass Road if it is determined that such improvements would violate Alameda County policy."

*~~(d)~~ **(g)** ~~Two~~ **Three** new Implementations should be added under Objective 1 in County Arterials (Appendix C), as follows:*

*"~~j~~ **h)** The community shall, to the extent of its fair share, participate in upgrading of existing pavement sections and/or safety improvements (e.g., standard pavement widths and paved shoulders) on rural ~~County~~ roads (such as **Bethany, Kelso, Hansen, Von Sosten, Reeve, Middle, and** Tracy Boulevard ~~north of I-205~~), where necessary to accommodate additional traffic caused by the project.*

*"~~k~~ **l)** Prior to initial occupancy of any specific plan, the County shall review and, if appropriate, revise the trigger points listed in Table 9.2 of the Draft Master Plan. These revisions shall use the latest version of the COG Travel Model and most current projections of growth, and shall be funded by the applicant. Revisions shall be incorporated into subsequent specific plans. Improvements shall be constructed at or before ~~occupancy of~~ **issuance of building permits for** the number of units specified in the applicable trigger point."*

"j) The community shall submit a Construction Truck Traffic Management Plan to the County prior to the issuance of the first Development Permit. The plan shall

Identify the preferred routes for trucks bringing construction materials to the site, and shall include measures to ensure compliance by general contractors."

(h) The existing footnote to Table 9.2 of the Draft Master Plan should be revised to delete the reference to "the Mountain House EIR traffic model," because it was not used to determine the "trigger DU's." The footnote should also explain that the "Trigger DU's" column refers to when during project buildout the improvements would be completed.

Impact M4.12-5

Project-generated trips would result in significant traffic levels on roadways internal to the site, requiring construction of adequately sized internal roadways and intersections to maintain acceptable LOS at buildout of the project.

The Draft Master Plan proposes three existing roads, Byron Road, Grant Line Road, and Patterson Pass Road, for primary circulation of both through traffic and traffic to or from the project site (Figure 3.8 in Chapter 3 of this DEIR). The Draft Master Plan proposes to improve these roads to major arterial status within the project boundaries. Byron Road would be widened to four lanes from the Alameda County line to Patterson Pass Road and eventually to six lanes from Patterson Pass Road to Wicklund Road in the Draft Master Plan. Grant Line Road would be widened to four lanes from I-580 to Byron Road throughout three different stages of the project's development. Patterson Pass Road is planned to be widened to as much as eight lanes from Central Boulevard to I-205, six lanes from Main Street to Byron Road, and four lanes from I-205 to I-580.

Additional minor arterial roadways proposed in the Draft Master Plan for internal circulation include:

Central Parkway
De Anza Boulevard
Marina Boulevard
Mountain House Boulevard
Main Street
North Patterson Pass Road
Bethany Road

All of these minor arterial roadways would be constructed to two lanes in each direction. The Draft Master Plan also proposes Mascot Boulevard and several shorter streets as two-lane collector roads.

Review of projected 2010 traffic volumes indicates that the planned number of lanes for the internal arterial and collector roads would generally accommodate buildout of the project at LOS C or better, as required by the County General Plan 2010. The key exception is Mascot Boulevard. Projected traffic volumes at buildout are slightly greater than 10,000 ADT, and this exceeds the Draft Master Plan's traffic threshold of 7,000 ADT for collector roads. In light of the projected traffic volumes, its distance from other arterials, and its length, Mascot Boulevard should be designated as a four-lane minor arterial along its full length.

Intersection Levels of Service

The County General Plan 2010 contains an additional policy that requires all intersections to operate at LOS D or better. The Draft Master Plan proposes signalization of 28 intersections, and channelization (additional turn lanes) at 17 intersections (Figure 4.12-9). Table 4.12-11 shows the 2010 intersection Level of Service results for the Master Plan buildout assuming the intersection lanes included in the Draft Master Plan. The AM and PM peak hour volume-to-capacity (V/C) ratio and LOS are shown for each intersection. Planning level methods were used due to the long range nature of the forecasts and the lack of existing intersections at present.

The following four unsignalized intersections would have minor street movements that would operate at deficient conditions (LOS E or worse) at project buildout:

- Patterson Pass Road/A Street (AM, PM)
- C Street/Mountain House Boulevard (AM, PM)
- D Street/Mountain House Boulevard (AM, PM)
- De Anza Boulevard/Von Sosten (PM)

In addition, the signalized intersection of Patterson Pass Road North/Central Parkway would operate at deficient conditions during the PM peak hour. All of the remaining study intersections would operate at acceptable conditions (LOS D or better) in the AM and PM peak hours for the Master Plan scenario (Table 4.12-11).

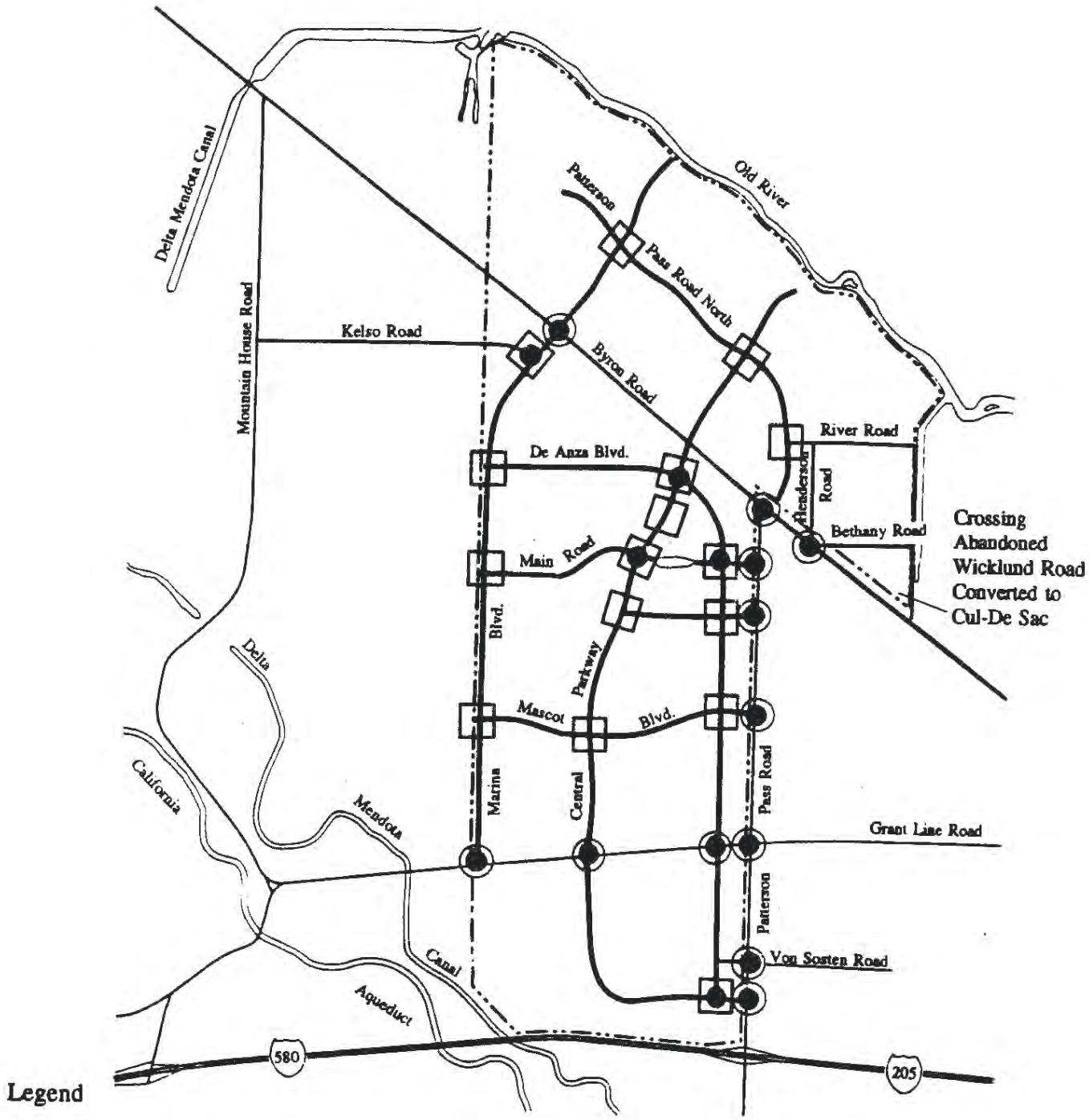
All of the deficient unsignalized intersections above (except Patterson Pass Road/A Street) would meet the Caltrans' Peak Hour Signal Warrant minimum requirement for either the AM or PM peak hour at buildout of the project.[16]

With signalization, the three intersections meeting peak hour signal warrants would operate at acceptable conditions (LOS D or better) in both peak hours. At Patterson Pass Road North/Central Parkway, an additional westbound lane would mitigate the projected Level of Service deficiency.

[16] This is only one of several warrants that should be evaluated before a traffic signal is actually installed and operated at any intersection.

PROPOSED INTERSECTION SIGNALIZATION AND CHANNELIZATION

Figure 4.12-9



Legend

INTERSECTIONS REQUIRING SIGNALIZATION:

- ○ Major Arterial Intersection (County)
- ● Intersection Requiring Channelization
- □ Minor Arterial Intersection (Community)
- — · — Project Site Boundary

0 3000 Feet

Source: The SWA Group, 1994a.

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BASELINE

TABLE 4.12-12

INTERSECTION LEVEL OF SERVICE WITH MITIGATION
Project Buildout in Year 2010

Location	2010 LOS without Mitigation	2010 LOS with Mitigation	Mitigation
Patterson Pass Road North/Central Parkway	E (PM)	D	Additional westbound lane
Patterson Pass Road/Marina Boulevard	F (AM/PM)	A	Signalize intersection
Marina Boulevard/Kelso Road	F (AM/PM)	C (PM)	Signalize intersection
De Anza Street/Von Sosten Road	E (PM)	A	Signalize intersection
C Street/Mountain House Boulevard	F (AM/PM)	A	Signalize intersection
D Street/Mountain House Boulevard	F (PM)	A	Signalize intersection

Table 4.12-12 shows the results of mitigation on the study intersections. It should be noted that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be desired to accommodate left-turning vehicles.

The minor left-turn movement at the intersection of Patterson Pass Road/A Street would operate at LOS E in both peak hours for the Master Plan scenario. However, because this intersection does not meet the Peak Hour Warrant requirement, and the demand for the critical minor street left-turn movement is low (under 40 vehicles per peak hour), no mitigation is recommended.

Consistency with County General Plan 2010

Several policies and assumptions in the Draft Master Plan do not appear to be consistent with adopted policies and performance standards in the County General Plan 2010. The inconsistencies involve:

- The Draft Master Plan states that all project roadway improvements will maintain LOS C during peak periods, except that "LOS D shall be allowed on segments in order to discourage single occupant vehicle commuting and to encourage and support the use of alternate modes of travel including buses and high occupancy vehicles" (Policy a) under County Arterials). Gateway road segments include Byron Road, Grant Line Road, and Patterson Pass Road. This language conflicts with the General plan policy that requires LOS C on all County road segments in the Tracy planning area.

- The Draft Master Plan includes Road Classifications and Standards (Table 9.6) that do not conform with standards in the General Plan (Table IV-8, Volume I). Draft Master Plan standards allow Local Residential roadway widths of 39, 43, and 47 feet, and allow minimum widths for Major Arterials of 108 feet, which are lower than the minimum right-of-way standards in the General Plan.

- The projected daily traffic volumes of 52,000 vehicles on Patterson Pass Road between Grant Line Road and the I-205 freeway exceed the capacity standard in the General Plan of 45,000 ADT for Major Arterials.

Mitigation Measure M4.12-5

The following revisions should be made under Objective 1 in Arterial Intersections (Appendix C):

(a) Implementation c) and the accompanying Figure 9.3 in the Draft Master Plan should be revised to include possible signalization when warranted at the following three intersections:

- De Anza Boulevard/Von Sosten
- C Street/Mountain House Boulevard
- D Street/Mountain House Boulevard

(b) Implementation d) should be revised to provide channelization at 18 intersections. Figure 9.3 of the Draft Master Plan should be revised to include channelization at the intersection of Central Parkway and Patterson Pass Road North, where an exclusive westbound left-turn lane should be added.

(c) A Policy should be added under Objective 1 in On-Site Roadway Circulation and Design (Appendix C) as follows:

*"~~j~~ **p)** ~~Specific plans shall be designed~~ **Unnecessary cul-de-sacs shall be avoided** to ensure that access between adjacent neighborhoods is not restricted ~~by eliminating unnecessary cul-de-sacs.~~"*

~~(d) An Implementation should be added under Objective 2, Bicycle and Pedestrian Circulation (Appendix C) as follows:~~

~~"g) Specific Plan design shall encourage siting of neighborhood stores at the intersection of residential streets, where possible, as a means to encourage and facilitate pedestrian travel."~~

*~~(e)~~ **(d)** Figure 9.4 of the Draft Master Plan (Roadway Classification Diagram) should be revised to indicate Mascot Boulevard as a minor arterial (4 lanes) from Marina Boulevard to Patterson Pass Road. Figure 9.19 (Mascot Boulevard-Collector) should likewise be revised to reflect the minor arterial designation.*

*~~(f)~~ **(e)** For consistency with the Draft Master Plan, and to promote transit/HOV usage and efficient land use, the County should amend its General Plan policy that requires LOS C on all county road segments in the Tracy planning area, as follows: "Permit LOS D on new community gateways that are used as major commute routes, subject to the approval of the county."*

*~~(g)~~ **(f)** Amend Table IV-8 (page IV-102) of the General Plan to indicate that major arterials may be up to 8 lanes wide in some segments if needed for capacity and if operationally feasible. Also amend this table to indicate that the daily capacities are approximate only, and may be superseded by more detailed level of service analysis based on peak hour volumes and controlling intersections and will be higher on roadway segments where LOS D is approved by the county.*

*~~(h)~~ **(g)** Mitigation Measures M4.2-1 (e) and (f) in the General Plan and Development Title Consistency section of this DEIR call for the conflicting language and standards in the Master Plan transportation chapter to be revised or, alternatively, a General Plan Text Amendment should be submitted that would allow new communities, or projects that have an adopted Master and/or Specific plan, to deviate from the General Plan standards.*

Impact M4.12-6

The project would generate a significant demand for parking.

The Draft Master Plan includes provisions for on-site parking, including minimum and maximum parking requirements for each land use type. These standards appear to adequately accommodate the project's potential parking demand while providing flexibility to encourage use of alternative modes of transportation where feasible. In particular, the mixed-use areas of the project site (e.g., the Town Center area) present opportunities to reduce the land area devoted to parking by sharing parking areas based on peak demands for adjacent land uses occurring at different times of the day.

Mitigation Measure M4.12-6

(a) Policy a) under Objective 1 in Vehicular Parking (Appendix C) should be amended as follows:

"Within mixed-use districts, including community commercial areas, the shared parking guidelines published by the Urban Land Institute shall be used wherever feasible to reduce total parking supply."

(b) A new policy should be added under Objective 1 in Vehicular Parking as follows:

*"l) For non-residential uses, use of the minimum parking space requirements shall be encouraged where possible in order to promote use of alternatives **to the automobile** ~~modes~~, subject to completion of a Parking Demand Study for the site use(s)."*

Impact M4.12-7

The project would increase the demand for bicycle travel within the project site as well as between the site and adjacent developed areas.

The scale of the project would generate a significant demand for bicycle travel. The Draft Master Plan includes provisions for Class I facilities (paths) on 11 arterial segments, Class II facilities (bike lanes) on another 6 arterials, and Class III facilities (signed bike routes) on all collectors. The Draft

Master Plan also includes implementation actions for bike route signage and amenities such as bicycle racks. The project does not provide for fair share contributions to regional bike trails.

Mitigation Measure M4.12-7

*Implementation ~~k)~~ **j)** under Objective 1 in Bicycle and Pedestrian Circulation (Appendix C) should be revised:*

*"The community shall participate on a fair share basis in the planning and implementation of off-site bicycle facilities on and connecting with regional bike routes **designated on the County Regional Bicycle Plan** within five miles of the project, including those along Grant Line Road, Patterson Pass Road, Byron Road, Schulte Road, and the Edmund G. Brown Aqueduct."*

Impact M4.12-8

The project would increase the number of vehicles crossing the existing Southern Pacific railroad track that runs through the site.

Three grade crossings within the project site exist along the Southern Pacific Transportation Company (Mococo line) railroad track that runs through the site parallel to the Byron Highway. These crossings are located on Kelso Road, Henderson Road, and Wicklund Road. The Draft Master Plan proposes to upgrade the existing at-grade crossings at Kelso Road and Henderson Road. The Wicklund Road crossing is proposed to be closed. A new at-grade crossing is proposed at Patterson Pass Road. A new grade-separated crossing would be constructed as an extension of Central Parkway across both Byron Road and the railroad tracks.

Mitigation Measure M4.12-8

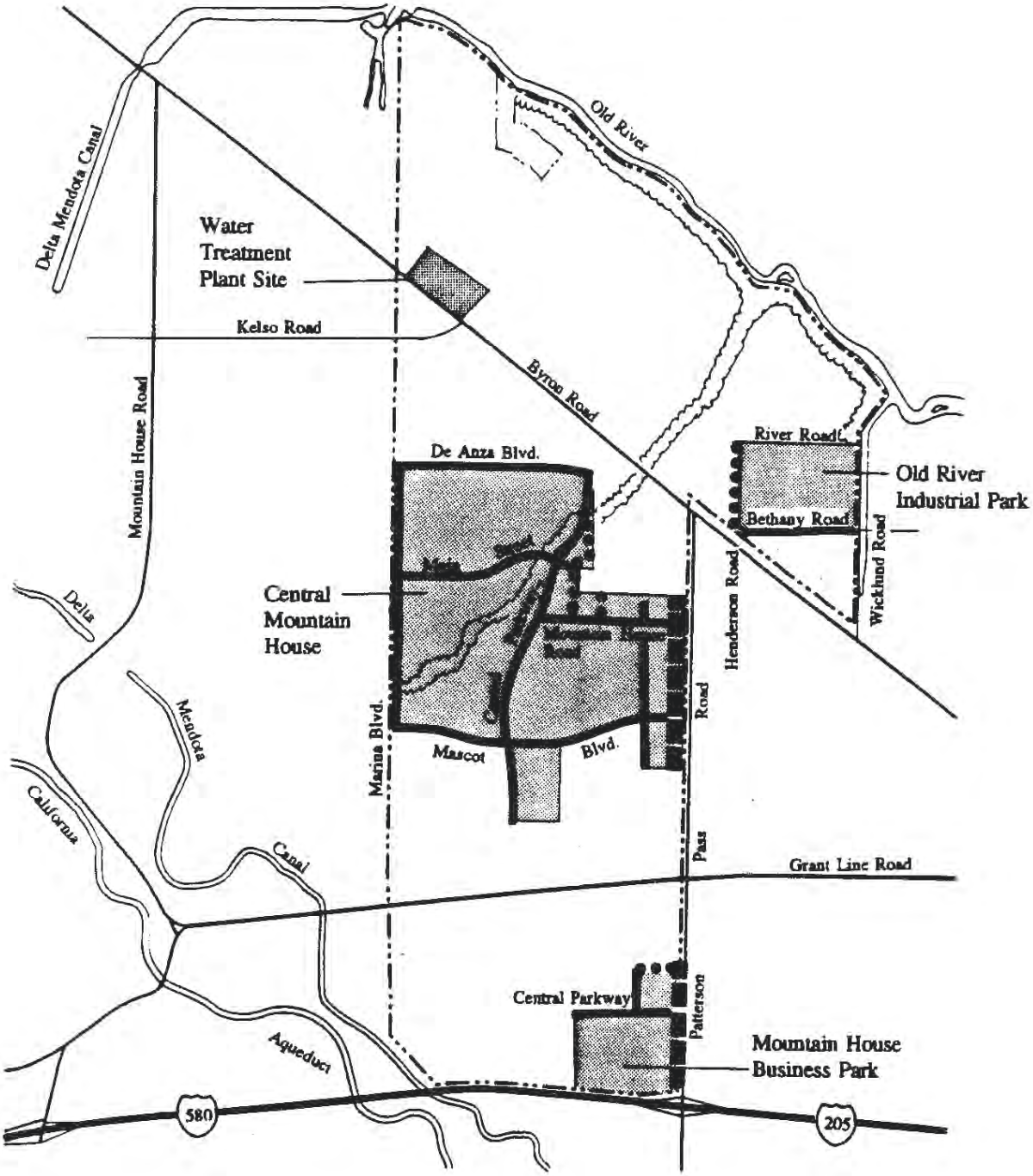
*Implementation a) under Objective ~~1~~ **3** in ~~Rail Crossings~~ **Transit** (Appendix C) should be revised to include: ". . .Any proposed new vehicular, pedestrian, or bicycle railroad crossing. . ."*

SPECIFIC PLAN I

Internal circulation at the project site would consist of a series of major arterials, minor arterials and collectors (Figure 4.12-10). Patterson Pass Road would be improved to a four-lane major arterial from I-205 to Byron Road, linking the three Specific Plan I development areas to each other. The I-205/Patterson Pass Road freeway interchange would be improved for regional access to and from the project. Portions of minor arterials within the three development areas would be constructed with two to four lanes, but segments of Master Plan arterials outside the Specific Plan I areas would not be constructed. In particular, Central Parkway would not extend north to Byron Road or south to Grant Line Road, and Main Street would stub on the west side of the Town Center. Improvements to existing Grant Line Road and Byron Road are not included in Specific Plan I. Traffic signals are proposed at six intersections. The existing rail crossing at Henderson Road would be improved for access to Old River Industrial Park, but no new crossings would be constructed across the SP tracks.

SPECIFIC PLAN I INTERNAL CIRCULATION AND ROAD CLASSIFICATION

Figure 4.12-10



Legend

- Major Arterial
- Minor Arterial
- Collector
- Project Site Boundary

0 4000 Feet

BASELINE

The project includes provisions for bus and rail passenger transit services. Local transit service would initially be demand-responsive, and would convert to all day fixed route service operating along a route connecting neighborhood centers and the two industrial parks upon occupancy of 3,200 residential units. Interim regional bus service would initially operate as demand-responsive service to Tracy and as subscription bus service to other locations, consistent with CMP requirements. Specific Plan I makes provisions for conversion of demand responsive service to other cities to fixed route service upon occupancy of 3,200 residential units. No direct connections to BART are specifically proposed. An interim transfer point would be provided within the Specific Plan I area for transfers between local and regional routes. If Altamont Corridor commuter rail service were initiated, a van shuttle service is proposed between Mountain House and the nearest rail station. Mountain House is anticipated to contribute towards capital costs for a station, and peak hour transit service would be provided to the station.

A network of bicycle and pedestrian routes is included in Specific Plan I, consisting of multi-use paths and on-street bike lanes where streets are constructed.

TDM measures to reduce the use of single occupant vehicles within, to, and from the site would be implemented as described for the Master Plan. The TDM program incorporates San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) measures, other strategies and a monitoring program, implemented under the structure of a TMA. The project appears to meet transit/TDM requirements of the County General Plan 2010 and the Congestion Management Program (ConMAG, 1991).

DEIR Analysis Methodology and Assumptions

The transportation impacts of the Draft Specific Plan I are examined in this DEIR in the context of projected growth to 2000. For this analysis, the project was superimposed onto 2000 projections of housing and employment in the remainder of San Joaquin County and the surrounding region, including the nine-county Bay Area, Sacramento County, and Stanislaus County.

Two scenarios for Specific Plan I were analyzed for transportation impacts. The "Expected Employment" scenario assumes full buildout of the residential components of the Specific Plan, as shown in Table 3.1 of the Draft Specific Plan I, but only the amount of employment that is anticipated to be absorbed by the time that residential buildout is reached (the seventh year of the project or approximately 2000), as shown in Table 3.3 of Draft Specific Plan I. The Expected Employment scenario includes 4,139 dwelling units and 4,370 jobs (see Tables 3.1 and 3.3 of the Draft Specific Plan I).[17] The second alternative, referred to as the "Full Employment" scenario, assumes full buildout of both residential and employment components of the project, the latter of which would not occur until beyond 2000. The Full Employment alternative includes 4,139 dwelling units and 9,696 jobs, as indicated in Table 3.1 of the Draft Specific Plan I. In sum, the Expected

[17] The travel projections for Specific Plan I assume a total of 4,593 jobs based on an earlier draft Specific Plan absorption rate, and are therefore slightly conservative (high) compared to the revised projection of 4,370 jobs.

Employment scenario includes the same number of dwelling units and slightly less than half the number of jobs as the Full Employment scenario.

Procedures for analyzing transportation impacts of Specific Plan I are consistent with those used for the Draft Master Plan analysis. Travel forecasts are based on the current multi-modal San Joaquin County COG Travel Model (Appendix F). For the Specific Plan I analysis, changes were made to the model network and land use inputs to reflect year 2000 conditions. The land use and network assumptions for year 2000 are described in detail in Appendix F and summarized as follows:

- The land uses for the site were revised to correspond to the Full Employment and Expected Employment scenarios for Specific Plan I.

- For other San Joaquin County areas, it was assumed that other new towns (including New Jerusalem and Gold Rush City) would remain undeveloped by 2000, and that 40 percent of the projected growth from 1990 to 2010 would occur in all remaining areas.

- For the Bay Area, Sacramento, and Stanislaus County, 2000 land uses were interpolated from 1990 and 2010 land uses to reflect most current projections to 2000.

- The 2000 regional highway network was developed by scaling back the 2010 network to reflect anticipated near-term projects based on applicable Capital Improvement Programs and agency staff input. The I-205 freeway was assumed to be widened from 4 lanes to 6 lanes by 2000~~, as compared to 8 lanes in 2010~~. The 2000 network in the Tracy area reflects more modest growth on the west side of Tracy than assumed in 2010, and no new arterials are assumed north of I-205.

- Key transit improvements by 2000 include the planned Altamont commuter rail line (at a reduced speed and frequency than assumed in 2010), and a BART extension to Dublin. San Joaquin County transit services were based on the 2010 RTP "Balanced Alternative," with reduced service frequencies. Modest transit services to, from, and within the project site were added in accordance with the proposed project provisions.

Impact S4.12-1

The project, under the Full Employment scenario, would generate approximately 71,500 daily vehicle trips to, from, or within the site. With the Expected Employment scenario, the project would generate about 55,300 daily vehicle trips, or 23 percent fewer than the Full Employment scenario in year 2000. The added vehicle trips would cause associated impacts such as traffic growth and LOS deficiencies on the road system, particularly in the vicinity of the site, and increases in vehicle miles of travel. Some of these associated impacts would be significant and unavoidable. The project would also generate the need and demand for transit services to, from, and within the site. Since transit services are proposed in the Draft Specific Plan I to accommodate the projected transit ridership, this trip generation impact is not significant.

The project's potential trip generation was estimated using the 1993 COG Travel Model. The model first estimates person trips by all modes, and then allocates person trips to vehicle and transit passenger modes. Person trip-ends by mode generated by the Specific Plan Expected and Full Employment Scenarios are shown in Tables 4.12-13 and 4.12-14, respectively. Projected vehicle trips are presented in Tables 4.12-15 and 4.12-16. Table 4.12-17 compares peak hour external vehicle trips generated by the two scenarios.

The project would generate 109,700 daily person trip ends with the Expected Employment level, and 140,300 daily person trip ends with the Full Employment level. A high proportion of trips is projected to be in vehicles, either as drivers or passengers. Transit passengers would account for 1.8 to 1.9 percent of work trips and 0.4 to 0.5 percent of all trips (Tables 4.12-13 and 4.12-14).

The transit shares projected for Mountain House are not high enough to significantly reduce traffic impacts of the project over the day. The low percentages are typical of suburban development and may be due to various factors. Only those transit services fully committed in the Draft Specific Plan I or programmed by other agencies were assumed for forecasting purposes. The 2000 regional transit network includes an Altamont commuter rail line to the Bay Area, but the closest currently planned station is in Tracy, and access to Tri-Valley employment sites would require transfers to local buses. Also, BART was assumed to extend only to Dublin/Pleasanton, as currently funded. A local fixed route bus line was assumed to circulate around the project site as proposed in Specific Plan I, but its relatively slow travel speeds, low service frequency, and requirements for transfers would limit its ridership potential.

Tables 4.12-15 and 4.12-16 show daily and peak hour vehicle trips to, from, and within the project. The Full Employment scenario is projected to generate about 71,500 trips, while the Expected Employment scenario would generate about 55,300 vehicle trips over the day. The percentage of internal trips to all trips does not differ significantly for the two scenarios, accounting for about 37 percent of all trips over the day. Internal trips would account for about 31 percent of the AM peak hour and 33 percent of the PM peak hour vehicle trips generated by either of the two scenarios. The projected daily vehicle trip generation of Specific Plan I is about 20 or 26 percent of the generation of the Draft Master Plan (Table 4.12-3), depending on the level of employment assumed in Specific Plan I.

Table 4.12-17 compares external trip generation of the two scenarios. In the AM peak hour, the Full Employment scenario would generate slightly fewer trips outbound to other areas, but significantly more trips inbound from other areas than would the Expected Employment scenario. Likewise, the Full Employment scenario would generate nominally fewer trips inbound to the site, but significantly more outbound trips than the Expected Employment scenario. Overall, the Full Employment scenario is a worst case scenario for traffic generation.

TABLE 4.12-13

DAILY TRIP ENDS BY MODE
Specific Plan I – Expected Employment

	Person Trip Ends		Vehicle Trip Ends	Number of Persons per Vehicle
	Number	Percent		
Home-Based Work:				
Drive alone	12,170	82.4	12,170	
Shared ride	2,320	15.7	1,040	
Transit	270	1.8	--	
Total	14,760	99.9	13,210	1.12
Other:				
Drive alone/shared ride	94,780	99.8	62,750	
Transit	170	0.2		
Total	94,950	100.0	62,750	1.51
Total:				
Drive alone/shared ride	109,270	99.6	75,960	
Transit	440	0.4		
Total	109,710	100.0	75,960	1.44

Source: DKS Associates.

TABLE 4.12-14

DAILY TRIP ENDS BY MODE
Specific Plan I – Full Employment

	Person Trip Ends		Vehicle Trip Ends	Number of Persons per Vehicle
	Number	Percent		
Home-Based Work:				
Drive alone	17,530	82.5	17,530	
Shared ride	3,310	15.6	1,450	
Transit	400	1.9	--	
Total	21,240	100.0	18,980	1.12
Other:				
Drive alone/shared ride	118,760	99.8	78,930	
Transit	260	0.2		
Total	119,020	100.0	78,930	1.51
Total:				
Drive alone/shared ride	139,590	99.5	97,910	
Transit	660	0.5		
Total	140,250	100.0	97,910	1.43

Source: DKS Associates.

TABLE 4.12-15

PROJECT VEHICLE TRIPS AT BUILDOUT
Specific Plan I Expected Employment

	Vehicle Trips Generated					
	AM Peak		PM Peak		Daily	
	Number	Percentage	Number	Percentage	Number	Percentage
Inbound	1,000	29.9	1,650	37.2	17,280	31.3
Outbound	1,310	39.1	1,320	29.7	17,280	31.3
Internal[1]	1,040	31.0	1,470	33.1	20,700	37.4
TOTAL	**3,350**	**100.0**	**4,440**	**100.0**	**55,260**	**100.0**

Source: DKS Associates

[1] Trips with both ends within project boundaries.

TABLE 4.12-16

PROJECT VEHICLE TRIPS AT BUILDOUT
Specific Plan I Full Employment

	Vehicle Trips Generated					
	AM Peak		PM Peak		Daily	
	Number	Percentage	Number	Percentage	Number	Percentage
Inbound	1,900	41.9	1,630	28.0	22,570	31.6
Outbound	1,250	27.5	2,280	39.2	22,570	31.5
Internal[1]	1,390	30.6	1,910	32.8	26,380	36.9
TOTAL	**4,540**	**100.0**	**5,820**	**100.0**	**71,520**	**100.0**

Source: DKS Associates

[1] Trips with both ends within project boundaries.

Mitigation Measure S4.12-1 (C,O,M)

In addition to mitigation measures proposed for the Master Plan (Mitigation Measure M4.12-1), the following mitigation measures are recommended to reduce vehicle trips generated by the Specific Plan I project:

(a) ~~*Regional commute period*~~ ***Local*** *bus routes should extend from the interim central transfer facility on Patterson Pass Road into Neighborhoods E, F, and G,* ~~*to provide*~~ ***providing*** *no-transfer service within one-quarter mile walking distance to a majority of the residents,* ***and providing convenient connections to regional commute period bus routes at the interim transfer facility****. For example, this could be a one-way loop along westbound Mountain House Boulevard, northbound Central Parkway, westbound Main Street, southbound Marina Boulevard, and eastbound Mascot Boulevard.*

TABLE 4.12-17

COMPARISON OF EXTERNAL VEHICLE TRIPS[1]
Specific Plan I, Full versus Expected Employment

	Expected Employment	Full Employment	Percentage Difference[2]
AM Peak Hour			
Inbound	1,000	1,900	+90
Outbound	1,310	1,250	-5
Total External	2,310	3,150	+36
PM Peak Hour			
Inbound	1,650	1,630	-1
Outbound	1,320	2,280	+73
Total External	2,970	3,910	+32
Daily			
Inbound	17,280	22,570	+31
Outbound	17,280	22,570	+31
Total External	34,560	45,140	+31

1 External vehicle trips are trips that either enter or leave the project site.

2 Increase (+) or decrease (-) of Full Employment Scenario as compared to Expected Employment Scenario.

(b) The Specific Plan I land use map should be revised ~~*to show four or more neighborhood commercial areas, as compared to the three areas shown. The areas should be situated to maximize the total number of*~~ ***so that as many*** *homes* ***as possible are*** *within one-quarter mile walk of the closest neighborhood or community* ***shopping*** *area.*

(c) A park and ride lot should be established in the Mountain House Business Park.

Impact S4.12-2 (C,O,M)

The project would contribute to cumulative traffic growth and resulting Level of Service deficiencies on I-205, I-580 and I-5 freeways, with projected year 2000 peak hour traffic demand in the peak direction exceeding capacity. Due to the lead time required for freeway widening and, in the case of I-580, ~~**legislative restrictions**~~ **current policy limitations on widening, these impacts are considered significant and unavoidable.**

By 2000, total freeway traffic would increase significantly compared to 1993 conditions, under the Expected Employment scenario. The Full Employment scenario would further increase freeway

volumes east of the site while reducing freeway volumes to the west; due to the lag time in employment absorption, the Full Employment traffic levels would not occur until beyond 2000. In either case, the project would be a significant contributor to future traffic growth on regional freeways. Future freeway volumes are identified in Figure 4.12-11 and Table 4.12-18 for an area

2000 SPECIFIC PLAN TOTAL DAILY TRAFFIC VOLUMES ON AREA FREEWAYS, FULL AND EXPECTED EMPLOYMENT SCENARIOS

Figure 4.12-11

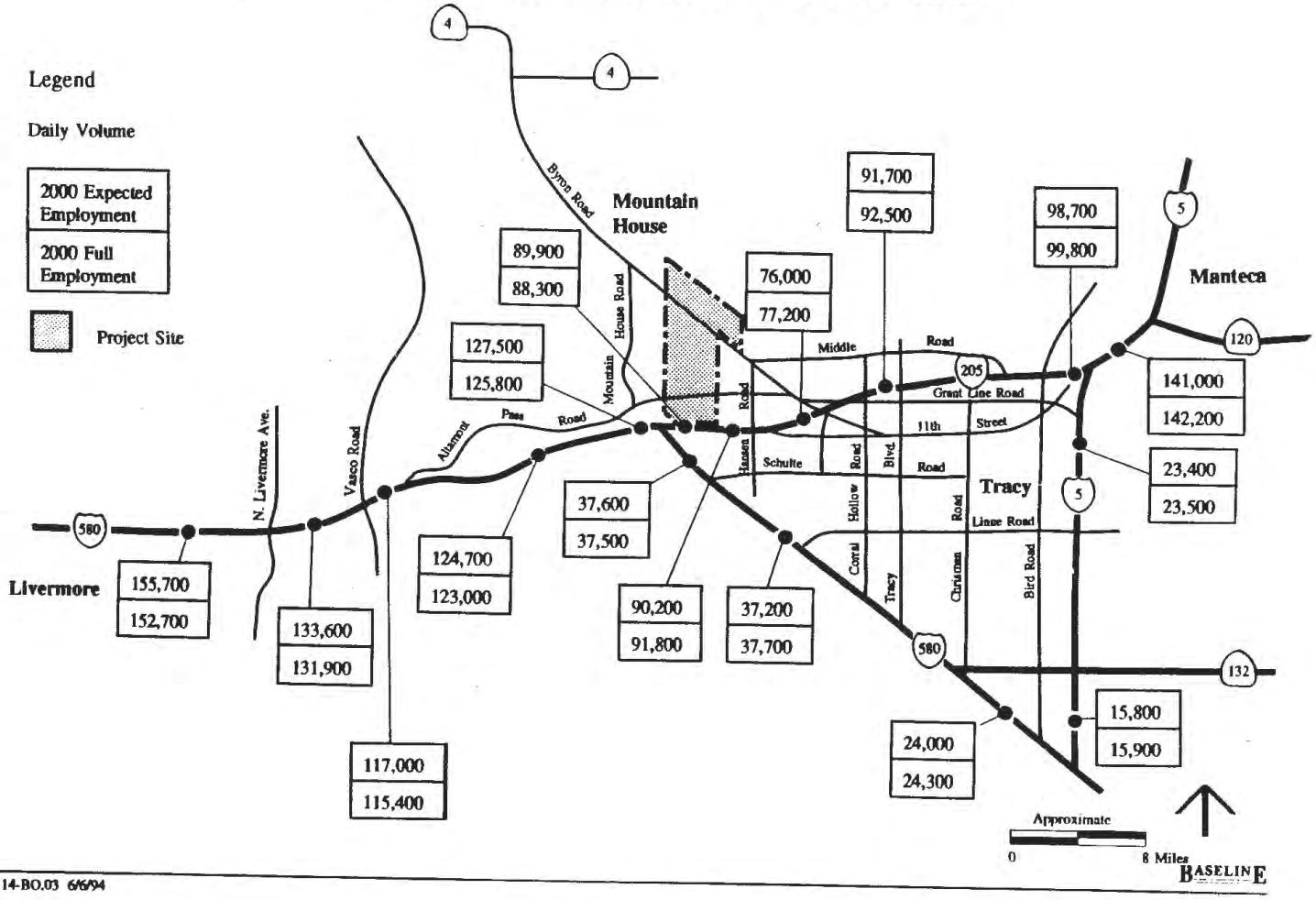


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TABLE 4.12-18

TOTAL DAILY TRAFFIC VOLUME CHANGES ON FREEWAYS IN PROJECT VICINITY
Year 2000: Specific Plan I

Freeway	Location	1993 Daily Traffic Volume	2000 Daily Traffic Volume		
			Expected Employment	Full Employment	Difference[1]
I-580	In Livermore between Vasco Road and North Livermore Avenue	103,000	133,600	131,900	(1,700)
	At the Altamont Pass	91,000	124,700	123,000	(1,700)
	West of I-205 Interchange	105,800	127,500	125,800	(1,700)
	North of Patterson Pass Road	28,500	37,600	37,500	(100)
I-205	West of Patterson Pass Road	65,000	89,900	88,300	(1,600)
	East of Patterson Pass Road	77,300	90,200	91,800	1,600
	East of 11th Street	56,000	76,000	77,200	1,200
	East of Grant Line Road	56,000	91,700	92,500	800
I-5	Between I-205 and SR 120	84,000	141,000	142,200	1,200

Source: DKS Associates.

[1] Full Employment volume compared to Expected Employment volume. Volumes in parentheses indicate segments where a decrease in traffic is projected for the Full Employment scenario due to the effect of increased on-site jobs on regional and commuting patterns.

up to 10 miles from the project site.[18] Projected 2000 peak hour volumes and levels of service on I-205, I-580 and I-5 in the project vicinity are summarized in Table 4.12-19. Deficient LOS are projected at a number of locations. These represent potential peak hour demands associated with cumulative regional growth to 2000 and, due to capacity limitations on the freeway facilities, may be higher than actual hourly volumes that would be observed. Additional freeway capacity is not anticipated to be developed beyond assumed 2000 levels. Therefore, reduction of traffic demand through TDM efforts and transit service improvements, and further spreading of the peak period would have to occur to accommodate the projected traffic demands. These measures are not anticipated to fully mitigate the projected level of service deficiency.

[18] General impacts of the project on other freeway volumes farther away were also considered.

TABLE 4.12-19

YEAR ~~2010~~ 2000: PEAK HOUR, DIRECTIONAL LEVEL OF SERVICE ON FREEWAYS

Freeway Location	Total Lanes	Expected Employment						Full Employment					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-580 north of Linne Road	4	2,160	0.54	B	2,780	0.70	C	2,430	0.61	C	2,830	0.71	C
I-580 south of I-205	4	2,520	0.63	C	2,850	0.71	C	2,450	0.61	C	2,830	0.71	C
I-580 at Altamont Pass	8	8,770	1.10	**F**	8,630	1.08	**F**	8,440	1.06	**F**	8,300	1.04	**F**
I-580 west of Vasco Road	8	8,520	1.07	**F**	10,270	1.28	**F**	8,100	1.01	**F**	10,220	1.28	**F**
I-580 west of Livermore Ave.	8	11,920	1.49	**F**	12,990	1.62	**F**	11,890	1.49	**F**	12,850	1.61	**F**
I-205 west of I-5	4+HOV	5,710	0.95	**E**	6,040	1.01	**F**	5,820	0.97	**E**	6,150	1.03	**F**
I-205 west of Tracy Blvd.	4+HOV	5,230	0.87	D	5,780	0.96	**E**	5,400	0.90	D	5,850	0.98	**E**
I-205 south of Grant Line Road	4+HOV	5,010	0.84	D	5,310	0.89	D	5,000	0.83	D	5,370	0.90	D
I-205 west of Hansen Road	4+HOV	6,310	1.05	**F**	6,490	1.08	**F**	6,250	1.04	**F**	6,600	1.10	**F**
I-205 west of Patterson Pass Rd.	4+HOV	6,230	1.04	**F**	6,550	1.09	**F**	6,020	1.00	**F**	6,310	1.05	**F**
I-5 south of State Route 132	4	640	0.16	A	720	0.18	A	640	0.16	A	760	0.19	A
I-5 south of Grant Line Road	4	770	0.19	A	850	0.21	A	770	0.19	A	870	0.22	A
I-5 north of I-205	8	8,220	1.03	**F**	9,100	1.14	**F**	8,370	1.05	**F**	9,270	1.16	**F**

Notes: Freeway capacity assumed as 2,000 vehicles per hour per lane. Under ideal conditions, capacities may be as high as 2,200 vehicles per hour per lane.
V/C = Volume to capacity ratio.
Bold and underlined letters indicate locations where ~~County~~ **prevailing** standards for acceptable LOS are not met.
Volumes represent peak hour demand volumes assuming existing peaking characteristics of travel and reflecting generalized capacity constraints on the network. Where demand volumes exceed capacities, actual throughput volumes would be lower due to peak spreading and other factors, and queues would form upstream of bottleneck locations.

I-205 Freeway

The traffic analysis assumes widening of I-205 to a total of six lanes by 2000, with the added lanes for HOV's, consistent with the COG's Regional Transportation Plan.

East of the project site, the greatest net increase in freeway volumes by 2000 would occur east of Grant Line Road, with an increase of 36,500 daily vehicles over current volumes. A sizable increase of almost 25,000 daily vehicles is also projected west of Patterson Pass Road. Under both the Expected and Full Employment scenarios, LOS F conditions are projected on both the east and west end of I-205 during both AM and PM peak hours.[19]

~~Widening of I-205 to eight lanes (including HOV lanes) would accommodate the projected 2000 traffic volumes at LOS D or better. Given the lead time for freeway project development, it is unlikely that the widening could be completed by the~~ Since I-205 is anticipated to be widened to six lanes by 2000, the projected LOS deficiency is largely dependent on the amount of cumulative regional growth that occurs by 2000. This impact is therefore considered an unavoidable adverse impact if growth occurs as projected.

I-580 Freeway

No freeway improvements for I-580 are assumed by 2000 in this analysis, although an Altamont Pass commuter rail line and express bus services between the project site and the Tri-Valley are included.

At the Altamont Pass, 124,700 daily vehicles are projected on I-580 by 2000 with the Expected Employment scenario and other cumulative regional growth. This represents an increase of 37 percent over current volumes. For the Full Employment scenario, 123,000 daily vehicles are projected, a reduction of less than two percent from the Expected Employment scenario.

Higher traffic volumes are projected on I-580 west of the Altamont Pass, with up to almost 134,000 daily vehicles just west of Vasco Road. South of the I-205/I-580 junction, projected volumes on I-580 are much lower than to the west, with an increase of 9,000 daily vehicles over current levels projected south of Patterson Pass Road.

Unacceptable levels of service, generally LOS F, are projected along I-580 west of the I-205 junction, with either Expected or Full Employment (Table 4.12-19). Slightly lower traffic demands are projected for the Full Employment scenario. Given the lack of parallel routes over much of the road, the excess traffic demand would cause spreading of the peak period in the peak direction of travel, resulting in a lower percentage of the daily traffic occurring in the peak hour than projected by the Travel Model. In the AM period, excess demand would cause standing queues on the east side of the Altamont Pass, limiting the rate of traffic entering the Tri-Valley. In the PM, queues

[19] It should be noted that the CMP standard for I-205 from the County line to Tracy Boulevard is LOS F, and the CMP standard for the segment from MacArthur to I-5 is LOS E (ConMAG, 1991).

would occur on the west side of the Altamont Pass and reduce eastbound traffic flows on I-205 farther east.

An intensive multi-regional effort to reduce single-occupant vehicle trips generated by the proposed project and other cumulative development on both sides of Altamont Pass would be needed to address future traffic growth on I-580 through Altamont Pass. The 2000 projections include potential effects of on- and off-site transit service improvements currently planned by 2000. However, the COG Travel Model does not have the capability to project traffic reduction potential associated with countywide TDM efforts such as carpool/vanpool incentive programs, flexible work hours, and the like. The project could be more effective in reducing peak hour traffic than the County as a whole due to locational advantages, the scale of the project and the comprehensive TDM program proposed in the Draft Master Plan. Emphasizing single-occupant trip reduction on both ends of the work trip would be likely to substantially increase the level of traffic reduction for the project as a whole. However, recognizing the uncertainty in achieving any traffic reduction beyond that already reflected in the Travel Model, no further traffic reduction was assumed. Should further trip reduction be achieved, the impacts would be reduced from those indicated in this DEIR.

There are no plans to widen I-580 freeway within the corridor, and projects to increase the capacity of I-580 in Alameda County are inconsistent with Alameda County's Policy 164A. The feasibility of constructing truck-climbing lanes in each direction over the Altamont Pass has been studied by Caltrans District 4 as part of the Inter-regional Route System 10-year plan and a draft Project Study Report has been prepared (Satow, 1994). However, only a Stage 1 project involving truck operational improvements at the I-205/I-580 has been approved for inclusion in MTC's Regional Transportation Plan Track 1 list of projects for funding. Truck climbing lanes may or may not be inconsistent with Alameda County's Policy 164A which opposes capacity improvements to I-580 but which supports improvements to facilitate goods movement. With truck-climbing lanes, level of service on the applicable sections of I-580 is projected to improve to LOS D, but deficient levels of service would remain "upstream" and "downstream" of the lanes. This impact on I-580 west of the I-205 junction is therefore considered an unavoidable adverse impact.

To maintain acceptable freeway mainline speeds, Caltrans may require installation of ramp metering at the intersections of I-205 with Patterson Pass Road and I-580 with Grant Line Road. If ramp metering were installed, HOV bypass lanes should be provided to encourage carpooling.

I-5 Freeway

No improvements were assumed on I-5 in the project vicinity. In the segment between I-205 and SR 120, the daily traffic volume on I-5 is projected to reach up to 142,000 daily vehicles by 2000 under the Full Employment scenario, an increase of 68 percent over existing traffic levels (Table 4.12-18). The Expected Employment scenario would reduce the projected demand by less than one percent.

LOS F conditions are projected during both the AM and PM peak hours, with potential demand well exceeding freeway capacity (Table 4.12-19). As discussed for I-580 above, the peak hour demand

could not be fully accommodated, resulting in standing queues, peak period spreading and reduction of traffic flows downstream. This is considered a significant unavoidable impact of cumulative regional growth.

Other Regional Facilities Farther from the Site

West of North Livermore Avenue, net impacts of the project on I-580 traffic levels are projected to be insignificant (one to two percent over No Project volumes). The relatively low impact on I-580 west of Livermore is primarily due to the underlying assumption that the amount of employment growth in the Bay Area would not increase beyond growth projected by the Association of Bay Area Governments due to construction of the project.[20]

Similar results are observed on I-680 freeway north and south of I-580 and on other regional facilities in Alameda and Contra Costa counties, where net traffic increases of the project over 2000 traffic volumes without the project are insignificant.

Mitigation Measure S4.12-2 (C,O,M)

Refer to Mitigation Measure M4.12-2. This is an unavoidable adverse impact.

Impact S4.12-3 (C,O,M)

The project would increase traffic volumes at nearby freeway interchanges, requiring improvements to the Patterson Pass Road/I-205 interchange.

The project would primarily impact the existing freeway interchange at I-205/Patterson Pass Road. Lesser impacts may occur at the I-580/Grant Line Road and I-580/Patterson Pass Road interchanges. All three are currently low capacity interchanges built to rural standards, and would require substantial upgrading to accommodate projected 2010 traffic volumes with the project. The Draft Specific Plan includes improvements to the I-205/Patterson Pass Road interchange, and the Draft Master Plan includes "fair share" participation in required studies and funding of the improvements.

I-205/Patterson Pass Road Interchange

Draft Specific Plan I proposes the following interchange improvements, staged over time, based on trigger points:

- Interim traffic signals
- Overpass widening to 4 lanes
- Addition of loop ramp (southbound to eastbound on)

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[20] If fewer internal trips were generated at Mountain House than projected in this DEIR, additional Mountain House trips would use I-580. However, the net traffic increase would be relatively small because only 60 percent of the non-internal trips by Mountain House residents are to Bay Area workplaces reached by I-580, and because the added Mountain House trips would "displace" some other trips that would otherwise use I-580.

- Signals at ramp intersections
- Westbound off-ramp widening

The above interchange improvements would meet the County's LOS standards at buildout of Specific Plan I. Under both the Expected and Full Employment scenarios, the controlling signalized ramp intersections would operate at LOS A during both AM and PM peak hours (Table 4.12-22, presented later in this section), and all ramps are projected to operate satisfactorily. During preparation of the Project Study Report (PSR), further analysis should be conducted to determine storage lane requirements. Also, provisions should be made for installing ramp metering with an HOV bypass lane at the southbound to westbound on ramp. The fair share for this project should be as established for the Draft Master Plan (Table 4.12-7).

I-580/Grant Line Road Interchange

The Draft Specific Plan I does not include any interchange improvements. The existing interchange is projected to meet the County's LOS D standard at buildout of Specific Plan I based on projected 2000 traffic volumes. The controlling unsignalized ramp intersections would operate at LOS C or better during both AM and PM peak hours (Table 4.12-22, presented later in this section), and all ramps would accommodate the projected ramp volumes.

However, should some site traffic be diverted from the I-205/Patterson Pass Road interchange due to congestion on I-205 and/or revision of the Specific Plan to provide an additional north-south arterial (see Mitigation Measure S4.12-4(c)), traffic volumes at the I-580/Grant Line Road interchange may be increased over the projected levels. Such increases may accelerate the need for improvements at the I-580/Grant Line Road interchange.

I-580/Patterson Pass Road Interchange

The I-580/Patterson Pass Road interchange would not be significantly impacted by the project, and a comparison of projected 2000 traffic volumes on Patterson Pass Road with existing conditions (Table 4.12-20) does not indicate the need for any improvements by 2000.

Mitigation Measure S4.12-3

(a) As a part of a Land Use/Traffic Monitoring program (Mitigation Measure M4.12-1(j)), traffic growth trends and levels of service at the Grant Line Road/I-580 interchange shall be monitored and reported to the County. Should the review indicate the need for interchange improvements at I-580/Grant Line at or before buildout of Specific Plan I, the required interchange improvements should be added to Table 9.1 of Draft Specific Plan I accordingly. (C)

(b) The I-205 Interchange section of Table 9.1 should be amended to specifically provide for future ramp metering with HOV bypass lane. This may involve widening and lengthening of the westbound on-ramp. (C,O,M)

TABLE 4.12-20

TRAFFIC VOLUME INCREASES ON ARTERIALS IN PROJECT VICINITY
Year 2000: Specific Plan I

Road	Location	1993 Daily Traffic Volume	2000 Daily Traffic Volume		
			Expected Employment	Full Employment	Difference[1]
11th Street	West of Lammers Road	11,000	14,300	14,600	300
Altamont Pass Road	East of Dyer Road	3,100	6,300	6,200	(100)
Grant Line Road	Between Mountain House and Patterson Pass roads	1,800	1,800	1,800	0
Grant Line Road	North of I-580	4,100	4,100	4,100	0
SR-4	West of Tracy Boulevard	5,700	8,300	9,000	700
SR-4	East of Tracy Boulevard	6,000	9,300	9,300	0
Patterson Pass Road	North of Schulte Road	1,900	2,300	2,700	400
Tracy Boulevard	North of Lammers Road	2,800	2,900	3,600	700
Corral Hollow Road	South of Lammers Road	1,200	1,700	1,700	0
Byron Road	North of Grant Line Road	8,300	11,000	13,800	2,800
Byron Highway	North of County line	6,400	14,100	15,000	900

Source: DKS Associates.

[1] Full employment volume compared to expected employment volume. Volumes in parentheses indicate segments where a decrease in traffic is projected due to the project's effects on regional job location and commuting patterns.

Impact S4.12-4 (C,O,M)

The project would contribute to the need for improvements on several County and other roads in the project vicinity, including portions of Grant Line Road, Patterson Pass Road, Byron Road, and Altamont Pass Road.

The proposed project would contribute to the projected cumulative traffic growth on these roads, as shown in Table 4.12-20 and Figure 4.12-12. The differences in off-site impacts between the Expected and Full Employment scenarios are typically small, with some projected volumes with the Full Employment scenario slightly higher and some slightly lower. The projected difference is largest on Tracy Boulevard north of Lammers Road where daily traffic volumes would increase by 700 vehicles with Full Employment (from 2,900 ADT with Expected Employment to approximately 3,600 ADT with Full Employment).

Impacts of the project are considered significant when the County's LOS C standard is not met. Locations not meeting the LOS C standard during either the AM or PM peak hour are flagged on

2000 SPECIFIC PLAN TOTAL DAILY TRAFFIC VOLUMES IN PROJECT SITE VICINITY
FULL AND EXPECTED EMPLOYMENT SCENARIOS

Figure 4.12-12

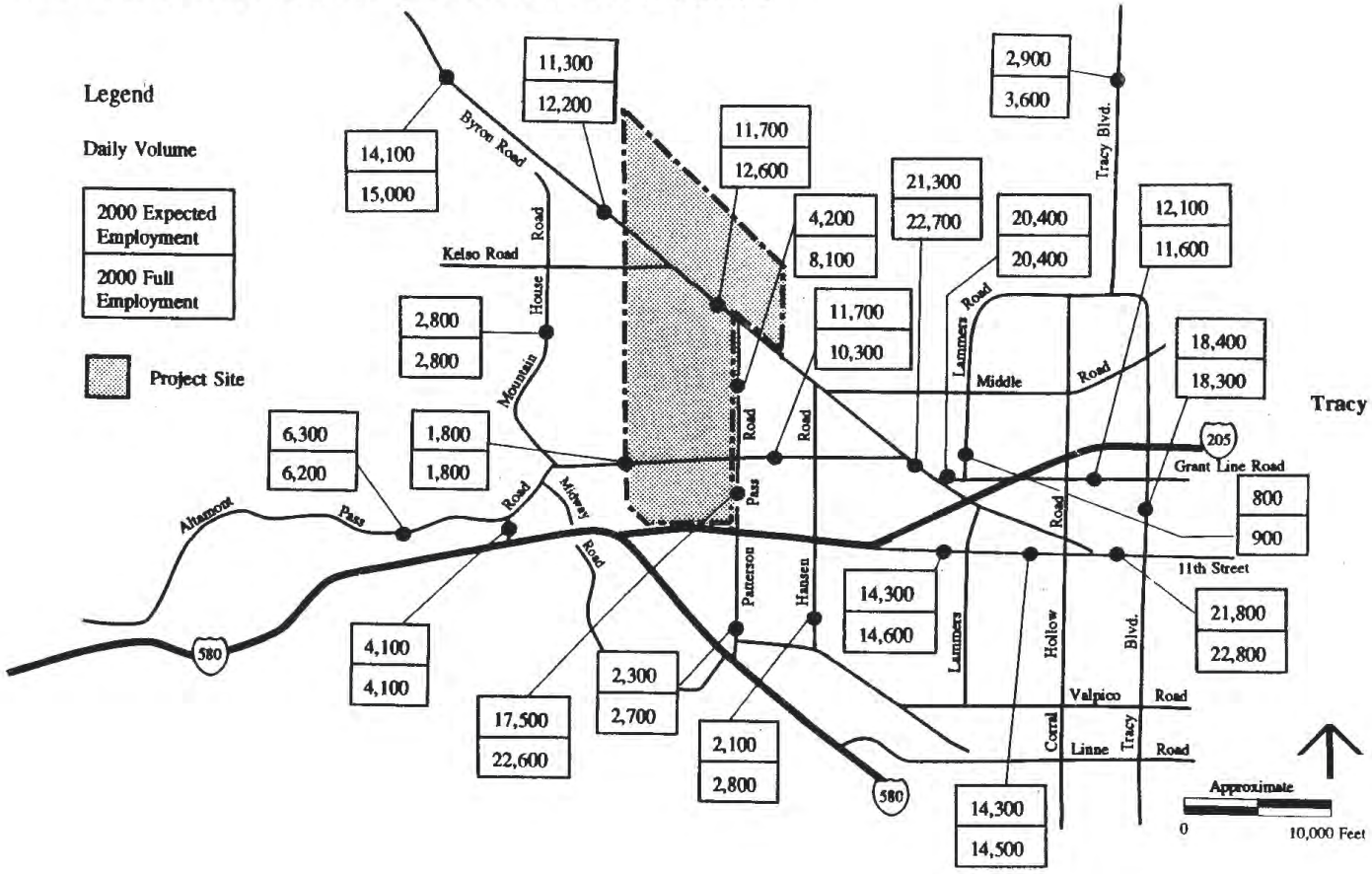


Table 4.12-21 (bold, underlined). The roadway capacities are generalized values that may be conservatively low; consequently, V/C ratios and LOS could be better than shown in the table. As indicated on the table, the following roadways may violate the County's current LOS C standard, requiring additional widening or upgrading to increase their capacities:

- Grant Line Road, I-580 to Marina Boulevard
- Grant Line Road east of Patterson Pass Road
- Grant Line Road east of Byron Road
- Patterson Pass Road north of Grant Line Road
- Altamont Pass Road
- Byron Highway west of Mountain House Road
- Byron Road east of Patterson Pass Road

The Draft Master Plan proposes that LOS D be accepted on "community gateways" including portions of Grant Line Road, Patterson Pass Road, and Byron Road. Mitigation Measure M4.12-5(f) proposes an amendment to the County General Plan LOS policy for consistency with the Draft Master Plan. If the revised LOS standard is approved for community gateways, the following roadways would remain in violation of the LOS policy:

- Grant Line Road, I-580 to Marina Boulevard
- Grant Line Road east of Patterson Pass Road
- Patterson Pass Road north of Grant Line Road
- Altamont Pass Road
- Byron Highway west of Mountain House Road

Below is a discussion of the projected traffic increases, LOS impacts and mitigation for off-site roadways in the project vicinity.

On Byron Highway west of Mountain House Road, the existing two-way daily traffic volume of 6,400 would increase to 14,100 ADT with the Expected Employment scenario in year 2000. Traffic volumes on this section of roadway would increase by another 900 vehicles daily with the Full Employment scenario. With Expected Employment, LOS D is projected in 2000, LOS D-E is projected with Full Employment. The projected LOS does not appear to warrant widening Byron Highway to four lanes; however, operational and safety improvements may be needed considering the significantly higher traffic volumes than at present.

East of Patterson Pass Road, Byron Road would have an LOS of D during the PM peak hour for the Full Employment scenario; LOS C is projected for the Expected Employment scenario. To achieve LOS C along this section of roadway, an additional travel lane in each direction would be required. Since LOS D is projected only with Full Employment, and is just marginally beyond LOS C, widening to four lanes does not appear warranted until beyond year 2000.

TABLE 4.12-21

YEAR 2000 PEAK HOUR LOS ON ARTERIAL ROADS

Road	Location	Directional Lanes	Hourly Directional Capacity[1]	Time of Day	Expected Employment			Full Employment		
					Volume	V/C	LOS	Volume	V/C	LOS
Altamont Pass Road	West of Mountain House Road	1	900	AM	1,000	1.11	**F**	960	1.07	**F**
				PM	1,210	1.34	**F**	1,180	1.31	**F**
Mountain House Road	South of Kelso Road	1	900	AM	310	0.34	A	290	0.32	A
				PM	240	0.27	A	280	0.31	A
Byron Highway	West of Mountain House Road	1	900	AM	690	0.84	**D**	760	0.84	**D**
				PM	760	0.84	**D**	880	0.98	**E**
Byron Road	East of Mountain House Road	1	900	AM	380	0.42	B	470	0.52	C
				PM	530	0.59	C	610	0.68	C
Byron Road	East of Patterson Pass Road	1	900	AM	440	0.49	B	620	0.69	C
				PM	670	0.74	C	730	0.81	**D**[2]
Hansen Road	South of I-205	1	900	AM	60	0.07	A	110	0.12	A
				PM	90	0.10	A	130	0.14	A
Patterson Pass Road	South of I-205	2	1,500	AM	310	0.21	A	300	0.20	A
				PM	370	0.25	A	350	0.23	A
Patterson Pass Road	North of I-205	2	1,500	AM	360	0.24	A	630	0.42	B
				PM	860	0.57	C	1,030	0.69	C
Patterson Pass Road	North of Grant Line Road	2	1,500	AM	1,240	0.83	**D**	1,100	0.73	C
				PM	1,410	0.94	**E**	1,410	0.94	**E**
Grant Line Road	North of I-580	1	900	AM	280	0.31	A	240	0.27	A
				PM	780	0.87	**D**	840	0.93	**E**
Grant Line Road	West of Marina	1	900	AM	420	0.47	B	260	0.29	A
				PM	870	0.97	**E**	760	0.84	**D**[2]
Grant Line Road	East of Patterson Pass Road	1	900	AM	530	0.71	C	640	0.85	**D**[2]
				PM	1,090	1.45	**F**	1,060	1.41	**F**
Grant Line Road	East of Byron Road	1	900	AM	810	0.90	**E**	930	1.03	**F**
				PM	1,240	1.38	**F**	1,260	1.40	**F**

Source: DKS Associates.

[1] Hourly capacities are generalized estimates based on COG travel model. Capacities may be higher (and therefore V/C ratios and LOS better) where raised medians, turn pockets, and access controls are used.

[2] Community gateways where LOS D is proposed standard in Draft Master Plan, rather than more restrictive LOS C.

Notes: LOS = Level of service.
V/C = Volume-to-capacity ratio.
Bold and underlined letters indicate locations where County standards for acceptable LOS are not met.

On Altamont Pass Road between Dyer Road and Grant Line Road, existing ADT volumes are projected to double by 2000 with either the Expected or Full Employment scenarios. This increase appears to be due to diversion of some vehicles off I-580 freeway as traffic congestion on the freeway increases over time due to cumulative traffic growth. The Draft Master Plan and Mitigation Measures 4.12-4(a) and S4.12-4(f) address this potential impact.

Projected LOS E on Patterson Pass Road north of Grant Line Road indicates that widening of the roadway to six lanes would be required by 2000. However, there are no provisions in the Draft Specific Plan I for widening Patterson Pass Road beyond four lanes north of Grant Line Road. As an alternative to widening this section of Patterson Pass Road to six lanes, either Central Parkway or another north-south arterial could be extended south to connect the project with Grant Line Road. This additional north-south connection would alleviate any traffic bottleneck caused by the four-lane Patterson Pass Road.

An additional travel lane in each direction would be required on Grant Line Road from I-580 to east of Byron Road to accommodate future traffic volumes at LOS C or better. Projected traffic increases on the west end of Grant Line Road appear to be primarily related to diversion of project and non-project traffic from I-205 freeway during peak periods.

Mitigation Measure S4.12-4 (C,O,M)

Table 9.1 in Section 9.4 of Specific Plan I should be amended to include the following arterial improvements, and to add trigger points for each:

a) *Byron Road widening east of Patterson Pass road to four lanes, concurrently with the beginning of construction of the Old River Industrial Park (unless the General Plan is amended to accept LOS D as the gateway standard).*

b) *North-South arterial or widening of Patterson Pass Road north of Grant Line Road. A traffic analysis shall be carried out prior to beginning construction of housing over the 3,200 unit level to determine the need and feasibility of extending Central Parkway or De Anza Boulevard southerly to at least Grant Line Road, and/or widening of Patterson Pass Road beyond four lanes. Subject to findings of this study and review by the County, Figures 9.3 and 9.4 will be revised accordingly.*

c) *Grant Line Road widening between I-580 and Mountain House Road to four lanes. Widening shall proceed concurrently with the beginning of construction of the Mountain House Business Park.*

d) *Grant Line Road safety and operational improvements between Mountain House Road and Byron Road.* ***These improvements*** *shall* ~~*proceed*~~ ***begin*** *concurrently with* ***approval of the first discretionary permit.*** ~~*the beginning of construction of the Mountain House Business Park.*~~

e) *Initiation of discussions with Contra Costa and Alameda county representatives regarding mutually agreeable measures to address traffic increases on Byron Highway in accordance with the Draft Master Plan (Policy g) under Objective 1 in County Arterials (Appendix C). Interim improvements to accommodate traffic growth to year 2000 may consist of safety/operational improvements.*

f) *Initiation of discussions with Alameda County representatives regarding mutually agreeable measures to address traffic increases on Altamont Pass Road* ***and all Alameda County roads****, in accordance with the Draft Master Plan (Policy g) under Objective 1 in County Arterials (Appendix C)), and Alameda County Policy 164(a).*

g) *Initiation of discussions and improvement plans with City of Tracy regarding improvements to Grant Line Road east of Byron Road (widening to 4 lanes) to accommodate traffic between Mountain House and Tracy Regional Mall).* ***The Master Developer shall provide fair share funding for the widening of Grant Line Road, based on more detailed studies that identify both Mountain House and City of Tracy fair shares.***

Impact S4.12-5 (C,M)

Project-generated trips would result in significant traffic levels on roadways internal to the site, requiring construction of adequately sized internal roadways and intersections in order to maintain acceptable LOS at buildout of the project.

Specific Plan I uses Patterson Pass Road for primary circulation of both through traffic and traffic to or from the project site (Figure 4.12-10) and proposes to widen it to a four-lane major arterial from I-205 to Byron Road, in three separate phases. No improvements are proposed for either Byron Road or Grant Line Road.

Additional roadways proposed in Draft Specific Plan I for internal circulation include:

Central Mountain House
- Central Parkway - De Anza to south of Mascot Blvd. (4-lane minor arterial)
- De Anza Boulevard - two segments (4-lane minor arterial)
- Mascot Boulevard (2-lane collector)
- Mountain House Boulevard (4-lane minor arterial)
- Main Street - Marina Blvd. to west of Town Center (4-lane minor arterial)
- Marina Boulevard - Mascot Blvd. to De Anza Blvd. (4-lane minor arterial)

Old River Industrial Park
- Henderson Road (2-lane collector)
- Bethany Road (2-lane minor arterial)

Mountain House Business Park
- Central Parkway - one segment (4-lane minor arterial)
- De Anza Boulevard (2- to 4-lane collector)

Neither Marina Boulevard, Central Parkway nor De Anza Boulevard would connect to Grant Line Road from the north, and connections to Byron Road from the project areas to the south would be limited to Patterson Pass Road. The resulting circulation system focuses all but local trips onto Patterson Pass Road. Additionally, Mascot Boulevard would function as a primary connecting route from Central Mountain House to Patterson Pass Road.

Review of projected 2000 traffic volumes indicates that the planned number of lanes for the internal arterial and collector roads would generally accommodate buildout of the Master Plan at LOS C or better, as required by the County's General Plan 2010. One potential exception is Patterson Pass Road. As stated previously (Impact S4.12-4), the segment of Patterson Pass Road north of Grant Line Road would operate at LOS E. The intersection at Grant Line Road has a projected LOS D in the PM peak hour under both the Expected and Full Employment scenarios, and closely approaches LOS E (V/C ratio of 0.90) for the Expected Employment scenario. The relatively high projected through-volumes on Patterson Pass Road (over 1,400 vehicles per hour in one direction) and the lack of any parallel through-routes would adversely impact circulation and access within the site. During later phases of Specific Plan I, it would be desirable to extend Central Parkway or, alternatively, De Anza Boulevard to connect Central Mountain House with the Mountain House Business Park. A possible alternative is to widen Patterson Pass Road to six lanes but this is inconsistent with the ultimate four lanes proposed in the Draft Master Plan. These alternatives are addressed under Mitigation Measure S4.12-4(c).

Another potential on-site circulation deficiency is on Mascot Boulevard. On its east end (between Central Parkway and Patterson Pass Road), daily traffic volumes of 8,000-18,000 vehicles are projected for either the Expected or Full Employment scenario. This exceeds the volume threshold of a two-lane collector (7,000 daily vehicles) proposed in the Draft Master Plan, and would result in a Level of Service deficiency. Ultimate traffic volumes at Master Plan buildout are somewhat lower (due to the presence of additional north-south outlets), but still warrant development of Mascot Boulevard as a four-lane minor arterial.

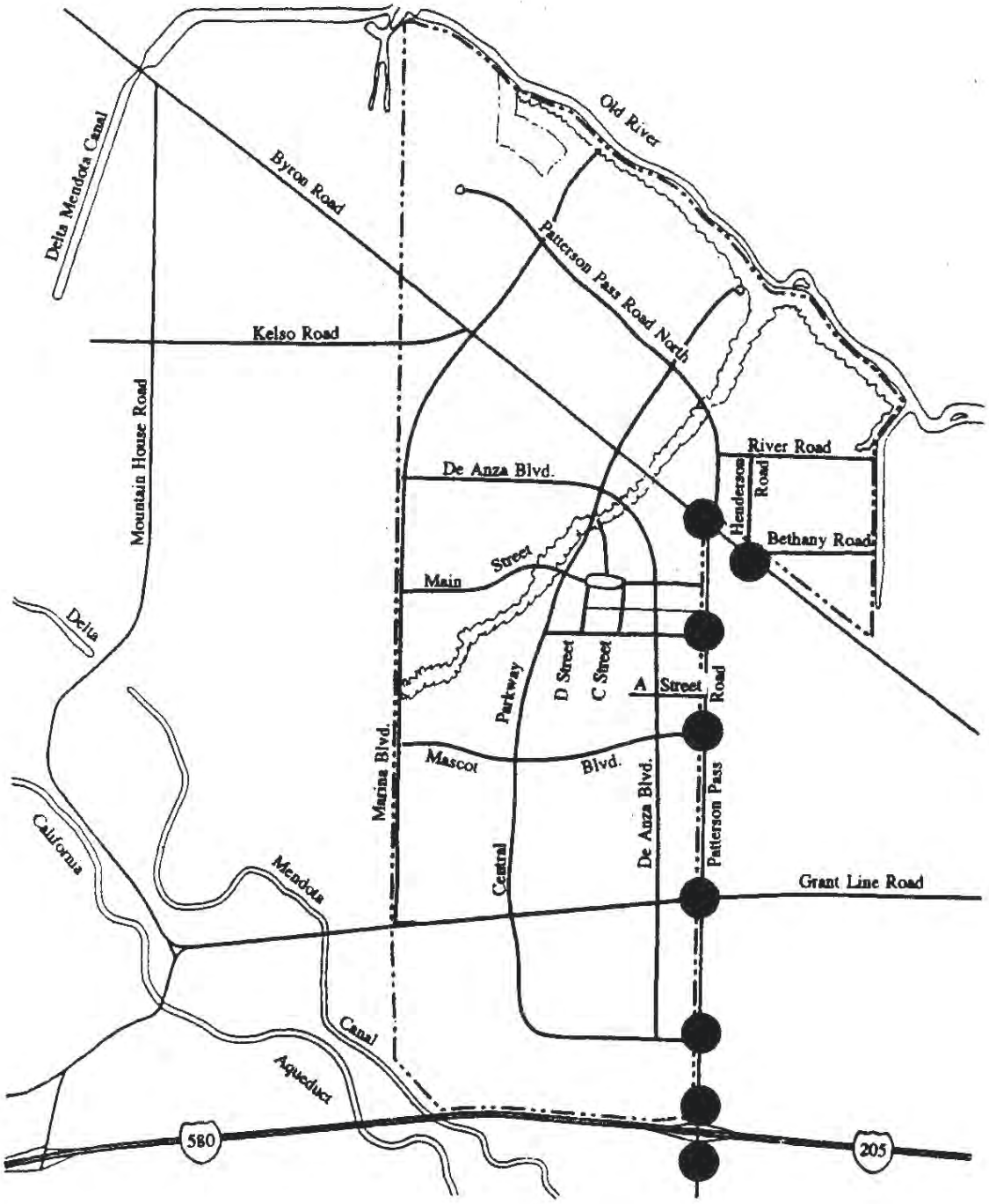
Marina Boulevard is proposed in Draft Specific Plan I to be developed to its ultimate width as a four-lane minor arterial. Due to its location on the west edge of Central Mountain House and the lack of any direct connections to points south or north, projected traffic volumes are below 200 daily vehicles. The low volumes on this relatively remote route could pose problems of high traffic speed and difficult enforcement. Therefore, Marina Boulevard should be constructed as an interim two-lane road, with widening to four lanes beyond year 2000.

The Draft Specific Plan I proposes signalization of six intersections along Patterson Pass Road and Byron Road (Figure 4.12-13). Traffic signals are also proposed at the two ramp intersections at the I-205/Patterson Pass Road intersection. Turn lanes would be provided at these intersections. Other intersections would be unsignalized.

Table 4.12-22 shows the projected 2000 levels of service for key signalized and unsignalized intersections assuming the intersection lanes indicated in the Draft Specific Plan I. The AM and PM

SPECIFIC PLAN I
SIGNALIZED INTERSECTIONS

Figure 4.12-13



Legend

- Signalized Intersections
- Project Site Boundary

0 4000 Feet

BASELINE

TABLE 4.12-22

YEAR 2000 INTERSECTION LEVEL OF SERVICE SUMMARY
Specific Plan I Full Versus Expected Employment Scenarios

Locations	Expected Employment				Full Employment			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	V/C Ratio[1]	LOS[2]	V/C Ratio[1]	LOS[2]	V/C Ratio[1]	LOS[2]	V/C Ratio[1]	LOS[2]
Signalized								
I-205 Eastbound Ramps/Patterson Pass Rd.	0.21	A	0.49	A	0.28	A	0.50	A
I-205 Westbound Ramps/Patterson Pass Rd.	0.24	A	0.33	A	0.36	A	0.44	A
Patterson Pass Rd./Central Pkwy. (South)	0.18	A	0.31	A	0.32	A	0.48	A
Patterson Pass Rd./Grant Line Rd.	0.62	B	0.90	D	0.71	C	0.86	D
Patterson Pass Rd./Mascot Blvd.	0.62	B	0.70	B	0.56	A	0.69	B
Patterson Pass Rd./Mountain House Blvd.	0.24	A	0.39	A	0.30	A	0.47	A
Patterson Pass Rd./Byron Rd.	0.27	A	0.47	A	0.38	A	0.48	A

Locations	Expected Employment				Full Employment			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS
Unsignalized[3]								
Patterson Pass Road/Von Sosten	A	B	A	E	A	D	A[4]	F
Patterson Pass Rd./A St.	A	B	A	A	A	C	A	C
Marina Blvd./Byron Road	A	A	A	A	A	A	A	A
Marina Blvd./De Anza Blvd.	A	A	A	A	A	A	A	A
Marina Blvd./Main Street	A	A	A	A	A	A	A	A

Table 4.12-22 Intersection Level of Service - *continued*

Locations	Expected Employment				Full Employment			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS
Marina Blvd./Mascot Blvd.	A	A	A	A	A	A	A	A
Marina Blvd./Grant Line Road	A	A	A	A	A	A	A	A
De Anza Blvd. (S.)/Central Parkway	A	A	A	A	A	D	A	**E**
Central Parkway/Mascot Blvd.	A	C	A	D	A	C	A	D
Central Parkway/Mountain House Blvd.	A	D	A	D	A	D	A	D
Central Parkway/Main Street	A	B	B	**E**	A	B	A	**E**
Central Parkway/A Street	A	A	A	A	A	A	A	A
De Anza Blvd./Von Sosten	A	A	A	A	A	A	A	A
De Anza Blvd./Mascot Blvd.	A	**F**	A[4]	**F**	A	**F**	A[4]	**F**
De Anza Blvd./A Street	A	B	A	C	A	B	A	C
De Anza Blvd./Mountain House Blvd.	A	D	A	**F**	A	**E**	A	**F**
C Street/Mountain House Blvd.	A	D	A	D	A	D	A	**E**
D Street/Mountain House Blvd.	A	**E**	A[4]	**F**	A	**E**	A[4]	**F**
I-580 Eastbound Ramps/Grant Line Road	A	A	A	C	A	A	A	C
I-580 Westbound Ramps/Grant Line Road	A	A	A	A	A	A	A	A

Source: DKS Associates.

Note: **Bold** and underlined letters indicate locations where County standards for acceptable LOS are not met.

1 V/C = Volume-to-capacity ratio.
2 LOS = Level of service.
3 Level of service shown for worst movement from minor and major street approaches.
4 Meets peak hour signal warrant.

peak hour volume-to-capacity (V/C) ratio and LOS are shown for each intersection for both the Expected and Full Employment scenarios. Planning level methods were used due to the long range nature of the forecasts and the lack of existing intersections at present.

During both the AM and PM peak hours, all six signalized intersections are projected to provide acceptable levels of service, with LOS A or B in all cases except at the Patterson Pass Road/Grant Line Road intersection. This intersection would operate at LOS D, approaching LOS E, during the PM peak hour.

Under the Expected Employment scenario, five unsignalized intersections would have minor street movements that are deficient (LOS E or worse) in the AM and/or PM peak hours:

- Patterson Pass Road/Von Sosten Road
- Central Parkway/Main Street
- De Anza Boulevard/Mascot Boulevard
- De Anza Boulevard/Mountain House Boulevard
- D Street/Mountain House Boulevard

In addition to these five intersections, the following two unsignalized intersections would have minor street movements that are deficient under the Full Employment scenario:

- De Anza Boulevard (south)/Central Parkway
- C Street/Mountain House Boulevard

Three of the seven deficient unsignalized intersections (Patterson Pass Road/Von Sosten Road, De Anza Boulevard/Mascot Boulevard, and D St./Mountain House Blvd.) meet the Caltrans Peak Hour Signal Warrant minimum requirement for either the AM or PM peak hour.[21] Minor movements at the other four intersections would operate at LOS E in one or both peak hours. However, because the intersections do not meet Peak Hour Warrant requirements, and the volumes on the critical minor street movements are low, no mitigation is recommended. All of the remaining study intersections would operate acceptably (LOS D or better) in the AM and PM peak hours for both Specific Plan scenarios.

The following measures would mitigate deficient intersection levels of service at Specific Plan I buildout. Table 4.12-23 shows the resulting LOS after mitigation on the study intersections.

[21] This is only one of several warrants that should be evaluated before a traffic signal is actually installed and operated at any intersection.

TABLE 4.12-23

INTERSECTION LEVEL OF SERVICE MITIGATION
Specific Plan Year 2000

Location	Year 2000 Expected Employment			Year 2000 Full Employment		
	LOS without Mitigation	LOS with Mitigation	Mitigation	LOS without Mitigation	LOS with Mitigation	Mitigation
Patterson Pass Road/Grant Line Road	D/E (PM)	C	Add second eastbound through lane	N/A	N/A	N/A
De Anza Boulevard/Mascot Boulevard	F (AM/PM)	D (PM)	Signalize intersection	F (PM)	C	Signalize intersection
D Street/Mountain House Boulevard	F (PM)	A	Signalize intersection	F (PM)	A	Signalize intersection
Patterson Pass Road/Von Sosten	N/A	N/A	N/A	F (PM)	A	Signalize intersection

Source: DKS Associates.

Note: Second northbound left-turn lane recommended at Patterson Pass Road/Mascot Boulevard.

Mitigation Measure S4.12-5

(a) Figure 9.4 of Specific Plan I should be revised to include the following intersections:

- *De Anza Boulevard/Mascot Boulevard*
- *D Street/Mountain House Boulevard*

Both intersections would operate acceptably (LOS D or better) in both peak hours when signalized. Note that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be needed to accommodate left-turning vehicles. (C)

(b) Figure 9.7 of Specific Plan I should be revised to include the following intersection:

- *Patterson Pass Road/Von Sosten Road*

This intersection would operate acceptably (LOS D or better) in both peak hours when signalized. Note that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be needed to accommodate left-turning vehicles. (M)

(c) Figure 9.3 of Specific Plan I (Road Classification Diagram) should be revised to designate Mascot Boulevard as a minor arterial from Marina Boulevard to Patterson Pass Road, with four lanes to be provided between Central Parkway and Patterson Pass Road at a minimum. (C)

(d) Figure 9.4 of Specific Plan I (Central Mountain House Street System) should be revised to designate an interim width of two lanes on Marina Boulevard while retaining the ultimate four-lane width. (C)

Impact S4.12-6 (C)

The project would generate a significant demand for parking.

The Master Plan includes provisions for on-site parking, including minimum and maximum parking requirements for each land use type. Specific Plan I would conform to these standards. This DEIR has not evaluated the adequacy of the standards to accommodate the project's potential parking demand. The standards would provide flexibility to encourage use of alternative modes of transportation. In particular, the community commercial areas may present opportunities to reduce the land area devoted to parking by sharing parking areas based on peak demands for adjacent land uses occurring at different times of the day.

Mitigation Measure S4.12-6 (C)

Policy a) of Section 9.7 of the Draft Master Plan should be amended to state "Within mixed-use districts, including community commercial areas, the shared parking guidelines published by the Urban Land Institute shall be used wherever feasible to reduce total parking supply."

Impact S4.12-7 (C)

The project would increase the demand for bicycle and pedestrian travel within the project site as well as between the site and adjacent developed areas.

The project would generate a significant demand for bicycle travel. Specific Plan I would conform to Master Plan requirements for bicycle and pedestrian facilities. The Draft Master Plan also includes implementation actions for bike route signage and amenities such as bicycle racks.

In the Central Mountain House area, Class I (off-street) multi-use paths are proposed along Mountain House Creek, Main Street, De Anza Boulevard, where constructed, and Mountain House Boulevard (Figure 9.6 of Specific Plan I). Combined Class I multi-use paths and Class II bike lanes are proposed along Central Parkway, Patterson Pass Road, Mascot Boulevard, and Marina Boulevard. Similarly, bicycle/pedestrian provisions are proposed within the Mountain House Business Park on Patterson Pass Road and constructed portions of Central Parkway and De Anza Boulevard (Figure 9.8 of Draft Specific Plan I). Class III bike routes (signage only) are indicated in the Old River Industrial Park (Figure 9.10 of the Draft Specific Plan I).

This system, combined with other Class III (signed) routes on collectors, would provide excellent bicycle circulation within Specific Plan I areas. However, due to street discontinuities, regional access and access among the three areas are limited.

Mitigation Measure S4.12-7 (C)

*Should Central Parkway or another north-south arterial be extended south to or beyond Grant Line Road as described in Mitigation Measure S4.12-4 ~~(c)~~ **b)**, bicycle provisions should be included as prescribed in the Master Plan.*

Impact S4.12-8 (O)

The project would increase the number of vehicles crossing the existing Southern Pacific railroad track that runs through the site.

Three grade crossings within the project site exist today along the Southern Pacific Transportation Company (Mococo line) railroad track that runs through the site parallel to the Byron Highway. These crossings are located on Kelso Road, Henderson Road, and Wicklund Road. The Draft Master Plan proposes to upgrade the existing at-grade crossing at Henderson Road. No specific provisions for rail crossings are included in Table 9.1 of Draft Specific Plan I.

Mitigation Measure S4.12-8 (O)

Implementation c) under Rail Crossings in the Draft Master Plan should be revised to add: "Improvements to the rail crossing shall include provisions for bicyclists."

FINAL
ENVIRONMENTAL IMPACT REPORT

SCH #90020776

MOUNTAIN HOUSE
MASTER PLAN AND SPECIFIC PLAN I

Volume II

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APPENDIX C

MASTER PLAN GOALS, OBJECTIVES, POLICIES, AND IMPLEMENTATION

b) Utilities (electrical distribution, telephone, cablevision, natural gas, and other) underground or conceal public facilities, including surface access boxes or manholes, shall be located such that they will have a minimum impact on maintenance and vehicular pedestrian traffic.

c) Future development plans shall closely coordinate the placement of surface mounted public facilities with the architectural design of the community to minimize the adverse impact on aesthetics.

d) Public safety and convenience shall be considered in the design and placement of public utilities and facilities.

c) Whenever possible, electrical substation facilities shall be located in commercial or industrial areas. Electrical substations sites shall be buffered around its perimeter by tall fences and landscaping. All setbacks shall comply with County codes.

d) Electrical transformers within residential neighborhoods shall be in underground vaults. Where located in commercial areas and in the downtown area, transformers may be mounted above-ground provided they are adequately shielded by landscaping. All setbacks shall comply with County codes.

TRANSPORTATION AND CIRCULATION

Objective 1: To establish thresholds in the buildout of the community when specific transportation improvements are required.

Policy:

a) Trigger points shall be used as guidelines for future planning and fee structuring, and not as actual construction dates. Trigger points shall be tied to residential occupancy.

Implementation:

a) Trip Analysis. Once a trigger point is reached for a given improvement, a trip analysis shall be required based on a run of an updated traffic model. An actual construction and financing plan shall then be developed and implemented.

Freeway Improvements

Objective 1: To provide for a comprehensive, efficient and safe vehicular circulation system permitting access to and from the Mountain House community via the freeway system.

Policy:

a) The community shall participate in the implementation of regional freeway improvements, including freeway improvement, on a "fair share" basis. Freeway improvements include mainline, interchanges, HOV lanes, ramp metering, truck lanes, study reports, and plans.

b) Major improvements to State routes shall be completed in phases, consistent with the travel demand estimated by State project study reports or County improvement plans for regional transportation facilities.

c) Community access to I-205 and I-580 shall be directed to existing interchanges.

Implementation:

a) Benefit District. In conjunction with improvement conclusions of each project study report, an area of benefit district shall be set up to allocate the fair share to all parties impacting the improvement.

b) Freeway Improvements. The community shall participate in the study of identified improvements on I-205 and I-580.

c) Altamont Corridor. The community shall participate in the completion of a Strategic Transportation Plan for the Altamont Corridor, in cooperation with the County, State, and the City of Tracy.

d) Interchange Improvements. The community shall participate, with the County, the State, and the City of Tracy, in identifying future freeway interchange improvement needs in the project vicinity, incorporating appropriate demand management strategies such as ramp metering and HOV lanes.

e) HOV Lanes. Should high-occupancy vehicle (HOV) lanes be added on I-205 between I-580 and Grant Line Road, a community "fair share" participation shall be required.

f) Truck Climbing Lanes. Should truck climbing lanes be built on I-580 between I-205 and Greenville Road, the community shall provide a "fair share" participation.

g) Freeway Interchange Schedule of Improvements. The community shall participate in project study reports and the fair share allocations determined by the reports for the freeway interchange improvements identified in Draft Master Plan Table 9.1: Schedule of Freeway Interchange Improvements. The provided schedule shall be used as a guideline for the planning schedule and revenue generation necessary to meet the group benchmarks listed in the schedule. The schedule shall not be considered as the real schedule, but rather as the current best estimate of projected traffic growth. Schedule modifications shall be varied according to the program developed in the project study report.

h) Freeway Mainline Improvements. The community shall participate in project study reports, including, but not limited to, the freeway segments affected by the development of Mountain House and shall participate in a fair share benefit district to the extent of the community's impacts.

i) Determination of Fair Share. "Fair share" contribution for regional transit and freeway improvements, identified in the Master Plan, shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the design stages of the individual improvements.

County Arterials

Objective 1: To adequately plan for and assign fair share responsibility to all County Arterials that may be significantly impacted by the community.

Policy:

a) To avoid over-designing the local roadway system and further encouraging the use of single-occupant vehicles during commute periods, designated improvements at community gateway locations shall be designed to maintain a minimum of LOS D.

b) LOS D shall be allowed during peak hours on Mountain House Gateway road segments in order to discourage single occupant vehicle commuting and to encourage and support the use of alternative modes of travel including buses and high occupancy vehicles.

c) The community shall participate on a proportionate "fair share" basis for improvements to Byron Road, Patterson Pass Road, and Grant Line Road to allow non-community traffic to move through and around the community rapidly and efficiently.

d) Traffic signals, turn lanes, and additional through lanes shall be utilized to preserve the flow of traffic on County Arterials.

e) The community shall, when it is determined to be the primary new traffic contributor, initiate appropriate traffic studies and improvement measures for all County Arterials listed in Draft Master Plan Table 9.2 when such Arterials are impacted by the community.

f) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures for all County Arterials impacted by the community.

g) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures with other Counties or cities whose roadways are impacted by the community; provided that the other jurisdictions allow equal consideration of their jurisdiction's traffic impacts on Mountain House.

Implementation:

a) Traffic Studies. Traffic studies shall be initiated, as directed by the above policies, to determine design specifications and fair share improvement measures based on the projected improvements schedule and phasing listed in Draft Master Plan Table 9.2.

b) Specific Plan Requirements. Each Specific Plan and accompanying environmental review shall assess the transportation impacts of Mountain House development on other Counties or cities.

c) Determination of Fair Share. "Fair share" contribution toward improvement of County Arterials, identified in this Master Plan, shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share for a given improvement project shall be made during the funding stages of the individual improvements.

d) County Traffic Impact Mitigation Fee Program. The County "Traffic Impact Mitigation Fee" Program (TIMF) shall be amended to create a Mountain House planning area. The local portion of fees collected within this planning area shall be used to fund County Arterial improvements as identified in the Engineer's Report of the TIMF program within Mountain House. The TIMF program amendment and supporting engineering report shall be funded by the Master Developer and shall be approved prior to the submittal of the first Development Permit.

e) Benefit Districts. Areas of benefit districts shall be formed when appropriate to determine fair share participation of the community and other area property owners and impacted jurisdiction.

f) Community Participation. The community shall participate in the traffic studies and improvement measures for improvements not listed on the Draft Master Plan Table 9.2 schedule if warranted by the traffic monitoring program, or, if initiated by others, when it is determined that the community will have a significant traffic impact on the needed improvement.

Arterial Intersections

Objective 1: To ensure that traffic, on all Arterials in and around the community, flows in a safe and efficient manner in compliance with County LOS standards.

Policy:

a) Intersections on existing County Arterials shall be spaced at least 1/8 mile apart. New driveways and minor access points shall be prohibited on existing County Arterials. Existing driveways and access points may remain, but shall be encouraged to relocate. No new building or increased traffic uses shall be allowed on existing access points.

b) The community shall to the extent of its fair share, provide signalization and channelization at County arterial intersections within the traffic impact area of the community.

c) Safe intersections shall be provided through properly designed signalization and lane channelization at appropriate locations.

Implementation:

a) Traffic signals. Traffic signals will be provided within the community at 12 County major arterial intersections, which are on existing County Arterials as identified in Draft Master Plan Table 9.3 and shown in Draft Master Plan Figure 9.2: Intersection Signalization and Channelization.

b) Requirements at 4,100 DU Buildout. Of the intersections specified in a) in Draft Master Plan Table 9.3 above, those shown with an * shall be completed upon 4,100 DU Master Plan buildout or sooner, if standard signal warrants are met prior to 4,100 DU Master Plan buildout in terms of traffic. Each Specific Plan shall include provisions for necessary intersection improvements required to serve the cumulative traffic of the community.

Monitoring of intersections within and immediately adjacent to the site for signal warrants shall be required on an annual basis.

c) Community Arterial Intersections. Intersection signalization shall be required at the community arterial intersections listed in Draft Master Plan Table 9.4.

d) Channelization. Channelization, that is, provision of additional turn and storage lanes, shall be provided at 16 intersections on and adjacent to the site as follows in Draft Master Plan Table 9.5.

e) Coordination with Roadway Improvements. All signalization and channelization shall be provided in conjunction with the roadway improvements or as needed if traffic studies support a deferral.

f) Determination of Fair Share. "Fair share" contribution toward improvement of County Arterial intersections identified on Draft Master Plan Table 9.3 shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the design stages of the individual improvements.

On-Site Roadway Circulation and Design

Objective 1: To facilitate the movement of vehicular traffic within the community by providing a safe, efficient, and easily understood on-site circulation system at a LOS C for all roadways except at certain gateway locations.

Policy:

a) Pavement widths shall be minimized, consistent with safety considerations, to reduce development costs and improve the visual appearance and scale of street corridors, especially within neighborhoods.

b) Design standards for local streets shall be based upon the needs of the neighborhood, only, and shall ensure that:

- Pedestrian safety will not be compromised.
- The width of the street is based upon the number of cars expected to use that street.
- The street will safely accommodate the expected traffic.
- The arrangement of streets encourage short, quiet streets, that discourage through traffic.

c) Road signs shall be developed in accordance with County policy and broadly adopted guidelines on uniform traffic signage. This applies to regulatory, warning, and guidance signs.

d) Access standards shall define appropriate level of access to and from each type of street in the functional classification system. Unsignalized "right turn in, right turn out" intersections (excluding those in Draft Master Plan Table 9.3) may be permitted on major Arterials, if consistent with safety criteria such as sight distance and minimum spacing.

e) Minor Arterials and Collector streets may have unsignalized intersections, in addition to those that are signalized.

f) Driveways serving individual homes are prohibited from Arterials. Driveways for individual homes may be accessed from Collectors, except for homes fronting Mascot Boulevard. Access to residential lots fronting on Central Parkway shall be from local streets, common driveways, or alleys.

g) In commercial areas, a pedestrian-oriented street design shall be developed, including on-street parking, that is conducive to an active street life and meets minimum pedestrian crossing requirements contained in standard urban design guidelines.

h) Landscaped medians shall be constructed along high volume major Arterials, and driveway access and on-street parking shall be prohibited (see Landscape Treatments Section).

i) Roadways within the community shall be constructed in coordination with phased development to accommodate vehicular travel demand and to minimize intrusion of through traffic into residential neighborhoods.

j) Stormwater runoff from publicly owned alleys shall be directed to publicly owned collection and disposal facilities. Runoff from privately owned alleys shall be directed to public or private facilities, depending on the nature of the development being served by the alley.

k) Residential access streets may intersect or take access from any street type. Turning movements may be restricted where local streets intersect with major Arterials.

l) Collector Residential Streets shall be the primary means of movement through and between neighborhoods.

m) To improve traffic flow and reduce automobile emissions, traffic signals throughout Mountain House shall be synchronized to the maximum extent possible.

n) Lane striping shall be required for all Arterial Streets. Collector streets may be striped based upon a determination by the Department of Public works. Local streets shall not be striped.

o) Assignment of speed limits take into account several factors including design speed, sight distance, adjacent land use, and street function. Limits typically are 35 to 45 miles per hour (mph) on Major Arterial streets, and 25 to 30 mph on Minor Arterials and Collector streets.

Implementation:

a) Corner Radii. Street corner radii shall be as small as possible to minimize pedestrian crossing distances (maximum curve radii of 20 to 30 feet for Arterials and Collectors, and 10 to 20 feet for local streets). Bulb or bumpout corner radii may be used where it can be determined that safety will not be impaired. Radii less than 20 to 25 feet should not be used for street corners at

intersections which are (or may be) part of a transit route or school bus route.

b) Speed Limits. Speed limits shall be established on individual Arterial and Collector streets in the Design Manual. Special speed zones shall be identified as dictated by sensitive land uses such as schools, hospitals, or other institutional uses.

c) Intersection Spacing. Arterials shall have access limited to signalized intersections at minimum 1/8 mile spacing. Intersections of Collector streets with other Collector streets shall be spaced no closer than 300 feet. Intersections or offsets of local streets with Collector streets shall be spaced no closer than 200 feet.

d) Street Classifications. Classification of the streets including Major Arterial, Minor Arterial and Collector streets, shall be as cited in Draft Master Plan Figure 9.4: Roadway Classification Diagram.

e) Typical Sections. Roads within the community shall be designed according to the typical sections shown by Draft Master Plan Figures 9.5 through 9.29. Travel lanes shall be measured to exclude the gutter-pan. Parking lanes shall be measured to include the gutter-pan.

f) Street Locations. Final locations of Residential Collector Streets shall be designated in each Specific Plan.

g) Loop Streets. Both ends of local loop streets shall intersect the same collecting street in order to discourage through traffic.

h) Limit on Residential Drives. No more than 16 homes may be served by a street with a single point of access.

i) Intersections. The intersecting angle between two streets shall not deviate from the perpendicular by more than 10°.

j) Deceleration/Turning Lanes. Deceleration or turning lanes shall be required along existing and proposed streets as determined by a traffic study to be completed prior to the submittal of all appropriate Development Permits.

k) Rolled Curbs. Local and Collector residential streets shall utilize a 'rolled curb' section to the extent possible, in order to minimize the impacts of individual driveway cuts, except for Type I Local Streets, which shall utilize a vertical curb.

l) Sidewalk Widths. Sidewalks shall be a minimum of five feet in width, except where adjacent to rolled curbs where the shall be a minimum of six feet in width, excluding the curb.

m) Alley Standards. Alleys serving individual or group residential units may be permitted. Design, construction and maintenance standards for alley shall be developed and approved by the County prior to submittal of the first Development Permit. All alleys shall be designed to meet or exceed the minimum standards for pavement design and drainage appropriate for the type of development being served.

Roadway Maintenance

Objective 1: To provide for adequate and cost effective maintenance including routine maintenance, resurfacing, signal maintenance, and landscaping.

Policy:

a) Roads within the Mountain House community shall be adequately maintained to facilitate safe vehicular travel and according to a pavement management system (PMS) which maximizes pavement life.

b) Road maintenance shall cover routine maintenance, resurfacing, signal maintenance, and landscaping.

c) Alleys shall be maintained to acceptable standards for the type of development being served.

Parking

Objective 1: To provide on- and off-street parking facilities in a manner that both meets the parking demand of the planned land uses and encourages the use of alternative modes to the automobile.

Policy:

a) Within mixed-use districts the shared parking guidelines published by the Urban Land Institute may be used as an option, to reduce total parking supply.

b) On-street parking shall be permitted along collector roads and local residential and commercial streets, and shall be generally permitted on Minor Arterials and prohibited on

Major Arterials except for designated emergency parking.

c) Access to transit and rail travel shall be facilitated through the provision of adequate park-and-ride facilities at major transit and transfer locations.

d) An on-street parking policy in commercial areas shall encourage turnover, ensure the availability of parking, and discourage use of parking by employees.

e) Park-and-ride lots shall be provided at transit locations as described in the Transit section.

f) Parking for carpools and cleaner fuels vehicles shall be located in the preferred parking spaces, such as in shaded, convenient locations close to building entrances. In order to facilitate disembarking and embarking of passengers with respect to rideshare vehicles, passenger loading/unloading areas shall be required at or near building entrances.

g) Compact spaces shall be included throughout the project's parking areas through allocation of designated compact spaces to comprise up to 40% of total parking spaces. Alternatively, standard parking stall dimensions may be reduced to 8.5 by 18 feet for all parking spaces to serve both full-sized and compact cars.

h) On street parking shall be accommodated within a seven-foot wide parking lane, which includes up to two feet of gutter pan.

i) Parking areas for industrial and office uses shall be located at the sides and rear of buildings, to the degree possible.

j) Areas for receiving and loading of materials on the premises of commercial and industrial uses shall be located away from the public street to which the use is oriented. Loading areas shall be screened from all public streets and public view to the greatest extent possible.

k) For all industrial and commercial uses except mixed-use, a landscape strip shall be installed between parking areas and adjacent public street rights-of-way.

Implementation:

a) Parking Management Plan. Prior to submittal of the first Development Permit, parking management program shall be developed for on- and off-street parking in commercial areas which limits or controls long term (e.g., more than two or four hours) parking. The enforcement of the parking management program shall be designed to assist in turnover and parking availability.

b) Specific Plan Requirements. If an individual Specific Plan includes land uses with large parking concentrations such as the Town Center and the multi modal transit station, that might benefit from a structured parking plan, then the Specific Plan shall contain a generalized assessment of parking demand based upon the averages of the parking requirements for various land use designations included in the plan. This assessment shall contain TDM measures. The opportunity for shared parking shall be evaluated based upon the types of uses anticipated within a given zone and general estimates for required parking. At the building permit stage, precise parking requirements shall be determined based on the standards listed in Draft Master Plan Table 9.7.

c) Design Manual. The Design Manual shall provide design guidelines for the layout of parking lots, prior to the submittal of the first Development Permit.

Bicycle and Pedestrian Facilities

Objective 1: To provide ample bicycling, rollerblade, and electric cart amenities within the community to serve as an incentive for reducing use of the private automobile for short utility and commute trips and to encourage and enhance recreational bicycle travel and to separate high speed commuter bikers from recreational use whenever practical.

Policy:

a) Class I and II bikeways shall provide a continuous, comprehensive network minimizing the need for cyclists to share roadway space with motorists.

b) The bicycle network shall provide adequate facilities to separate the slowly moving family-oriented bicyclists from the faster commuter bikers.

c) Class III bikeways shall be provided along collector streets to guide bicyclists through neighborhoods. These should only be used for short distances to connect to major routes.

d) The bikeway system shall be coordinated with regional bikeways.

e) Mountain House shall work with the City of Tracy to develop and implement a direct bicycle route between the two communities.

f) All bike paths, routes, and lanes shall be designed to conform with standards established by the community and in compliance with Caltrans guidelines.

g) Rest areas, bike racks, drinking fountains, and other appropriate amenities shall be provided at significant destinations on the network of Class I and Class II facilities.

h) A "fair share" participation towards bicycle routes to regional destinations shall be provided whenever off-site roadway improvements are undertaken on designated regional bike routes, over the length of the improved sections. Participation shall be required when regional improvements in the area are initiated and the degree of participation shall be established by benefit district study.

h) Rollerblade and electric cart use of bikeways and multi-use paths shall be allowed whenever pedestrian and bicycle use is not compromised. Additional width and other design considerations may be required to accommodate the size and speed of electric carts.

Implementation:

a) Bikeway System. Multi-purpose Class I paths, Class II bike lanes, and Class III bike routes shall be provided as shown on Draft Master Plan Figures 9.30 and 9.31 and described below.

b) Class I Bike/Multi-Use Path. The following Class I Bike Paths shall be constructed at the same time as adjacent roads. Class I Bike Paths shall parallel major Arterials except within Mountain House Creek Community Park and Old River Linear Park, where multi-use paths shall be constructed as specified in the Parks and Open Space Plan. All multi-purpose Class I paths shall have curb ramps and crosswalk striping when crossing streets.

- Mascot Boulevard
- Kelso Road
- Central Parkway
- De Anza Boulevard
- Patterson Pass Road
- Main Street (Patterson Pass to De Anza Boulevard and Marina Boulevard to Central Parkway)
- Grant Line Road
- Mountain House Boulevard
- Marina Boulevard (Old River to Grant Line Road)
- Mountain House Creek Community Park (Marina Boulevard to Old River)
- Old River Regional Park

c) Class II Bike Lanes. The following roadways shall be designed to include six-foot paved shoulders with signing, pavement legends, and lane striping separating the shoulders from automobile traffic so that Class II bike lanes are constructed concurrent with the roadway.

- Marina Boulevard
- Grant Line Road (Marina Boulevard to Patterson Pass Road)
- Central Parkway (Patterson Pass Road to North Patterson Pass Road)
- Patterson Pass Road (I-205 to Byron Road)
- Byron Road
- Mascot Drive

d) Class III Bike Routes. Class III bike routes will be provided concurrent with construction of roadways to ensure a continuous, safe bicycle network. All Collectors shall be designated as Class III routes.

e) Bikeway Development. All bikeways shall be part of the roadway development/design when they are within the road right of way.

f) Commuter Travel. A subset of the Class I and II bikeways shall be designated as "commuter" routes indicating the most efficient path of travel for the dedicated bike commuter. This subset of bikeways shall include directional signage, direct access routes, and secure bike storage facilities at all park-and-ride lots and transit centers which shall be included in the roadway design.

g) Traffic Signalization. Where designated bicycle facilities intersect traffic signal locations, those traffic signals shall include the latest technology for bicycle actuation, or if such technology does not exist, pedestrian equipment to allow cyclist actuation.

h) Bicycle Facilities and Parking. The improvement plan for each industrial and commercial site shall provide secured bicycle facilities free-of-charge to all employees. These facilities shall include Class I lockers or Class II racks as appropriate. Bicycle storage for commercial, industrial, office, and public uses shall be provided at a rate of five spaces per building complex plus one space for every 15 automobile parking spaces. Office buildings or office complexes that are 50,000 net rentable square feet or larger shall include shower and locker facilities as an incentive for visitors to walk, jog, or bicycle.

i) Racks on Transit Vehicles. Transit vehicles shall include bicycle racks to encourage bicycle access to the system.

j) Determination of Fair Share. "Fair share" contribution toward improvement of regional bicycle facilities shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the design stages of the individual improvements.

k) Specific Plan Requirements. At each Specific Plan stage the bikeway system shall be reviewed and updated to ensure conformance with goals and current conditions, and to ensure consistency with bikeways adjacent to the site.

Objective 2: To encourage and enhance pedestrian travel through provision of a complete network of walking paths and sidewalks.

Policy:

a) In addition to the multi-use paths, additional pedestrian facilities shall be provided along roadways, within parks, and at higher intensity areas such as the Town Center. Pedestrian facilities shall include sidewalks, pedestrian crossings, benches, lighting, trash containers, and signage.

b) The design of the multi-use paths described above shall facilitate safe pedestrian travel in addition to bike travel.

Implementation:

a) Standards for Multi-Use Paths. Multi-use paths shall be eight feet in width, except for the Old River multi-use path which shall be 12 feet wide, and may be constructed of decomposed granite, asphalt or concrete as appropriate to use and location. Collector and local streets shall incorporate walks, five feet in width (see Draft Master Plan Figure 9.32: Pedestrian Walk and Path Standards). Walks and paths relationships to streets are shown in street sections, Draft Master Plan Figures 9.4 to 9.29. Multi-purpose path routes are shown in Draft Master Plan Figure 9.30 under the Class I bike routes.

b) Commercial/Industrial Collector Streets. Commercial and industrial Collector streets shall have walks or paths on at least one side of the street, and on both sides where the street supports commercial frontage.

c) Residential Streets. Residential Collector and Local streets shall have a walk on each side of the street.

d) Pedestrian Crossings. At each signalized intersection where pedestrians are expected to cross, a pedestrian crossing signal shall be provided.

e) Pedestrian Features. The design of each commercial area and the Town Center shall include pedestrian-oriented features, such as narrowed intersections to reduce crosswalk distance, small-radius corners, and pedestrian-actuated signals. Site plans prepared as part of Development Permit applications shall incorporate direct and convenient pedestrian connections, including those between sidewalks and building entrances and between cul de sacs and abutting streets.

f) Transit Centers. A design for each neighborhood transit center shall be included in the Special Purpose Plan for the affected Neighborhood Center. A design for the intermodal station on the Mococo line shall be prepared prior to the submittal of the first Development Permit within the affected Specific Plan Area. Each transit center shall permit direct pedestrian access from

the closest Arterial streets, without introducing long, circuitous access routes.

Transit

Objective 1: To reduce reliance upon the private automobile by offering attractive, competitive bus transit service locally within the community and to major regional destinations.

Policy:

a) Local transit service shall be provided between the twelve residential neighborhoods and the commercial, retail, and employment uses within the project at a service frequency that provides a viable alternative to the automobile for local peak and off-peak travel.

b) Transit service provided within the community and to regional destinations shall be consistent with the San Joaquin County Congestion Management Plan.

c) Commensurate with the number of occupied dwelling units specified in the CMP and employee base, regional transit service shall be provided between the Mountain House community and Tracy, Stockton, Lawrence Livermore Laboratories, and the BART East Dublin/Pleasanton station (open by 1997) at a service frequency that provides a realistic alternative to the automobile for peak-hour travel between the community and these regional destinations. This service shall facilitate the transfer of passengers to other transit services in the region serving these destinations.

d) The twelve neighborhood centers shall serve as the focal point for passenger collection and distribution. Transfers between local and regional bus service shall be accommodated at major transfer points among the neighborhood centers and the Town Center.

e) The Town Center shall include a central transfer facility to serve as the intermodal transfer center prior to completion of the Mococo Station.

f) Transit service amenities to promote use of bus service shall be located throughout the community to enhance service accessibility. Such amenities shall include bike racks, bike lockers, shelters, telephones, safety stop areas, etc.

g) Neighborhood impacts shall be minimized and service attractiveness enhanced through the use of smaller, clean-fuel vans for local transit service.

h) Local transit routes shall be designed to provide stops within one-quarter mile of the majority of residential, retail, and employment. Pull-outs and bus shelters shall be provided at all major stops on local bus routes. Bus schedules shall be posted at all stops and route maps shall be displayed at all major stops.

i) The community shall participate in the implementation of bus transit facilities on a "fair share" basis.

Implementation:

a) Initiation of Regional Transit Service. Upon sale of the 25th dwelling unit, transit service between the existing neighborhood and regional transit connections in Tracy and major employment destinations shall be offered on a demand-responsive basis. Upon sale of 700 dwelling units, local transit service shall be offered on a demand-responsive basis between the existing neighborhood centers and existing employment and retail areas within the community.

b) Regional Service. Prior to the sale of approximately 4,100 dwelling units, the demand-responsive service provided between the community and Tracy shall be expanded to a regional fixed route transit service connecting the major transfer points among existing neighborhood centers with Tracy, Stockton, Lawrence Livermore Laboratories, and the BART East Dublin/Pleasanton station (when open). Service shall be offered using lift-equipped buses.

c) Expansion of Local Service. Prior to the sale of 8,200 dwelling units, local and regional transit service shall be expanded to provide more frequent service.

d) Funding. As new major regional destinations may emerge and travel demand warrants, regional transit service between the community and these new destinations, consistent with the service levels defined above, shall be funded by the community on a "fair share" basis in cooperation with major regional employers and the County transit agency. "Fair share" contribution toward improvement of bus transit facilities shall be determined in the

Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the funding stages of the individual improvements.

e) Coordination of Service. Provision of regional transit service shall be coordinated by the community and the regional transit agency to promote creation of a coordinated county-wide service plan and to determine the most effective means of administration.

f) Neighborhood Transit Centers. Each Specific Plan shall include provisions for a neighborhood transit center. A neighborhood transit center shall be constructed within each neighborhood in conjunction with the neighborhood park which shall provide the following amenities: lighted bus shelter, bench, telephone, waste receptacle, bicycle racks, and bike lockers.

g) Town Center. The Town Center Specific Plan shall incorporate a central transfer facility. This facility shall provide the following amenities: bus parking, park-and-ride lot, bicycle lockers, sheltered passenger waiting area, rest rooms, ticket booths, and comprehensive map and schedule information.

Objective 2: To actively support and participate in obtaining passenger rail transportation between Mountain House and nearby rail stations, and regional destinations.

Policy:

a) Passenger rail service on the Altamont and Mococo lines and shall be promoted.

b) Access between Mountain House and the new Altamont and Mococo rail stations shall be provided.

c) Development along the Mococo should be located in light of the fact that this line will carry passenger traffic at some point in the future and thus frequency and speed of trains will rise over current use. The impact of rail service on any development within the community adjacent to the Mococo line shall be minimized.

d) The community shall participate in the implementation of the rail transit facilities, including but not limited to those identified in this Master Plan, on a "fair share" basis.

Implementation:

a) Altamont Pass Service. Upon implementation of passenger service over the Altamont Pass on either the SP or UP lines, bus and/or shuttle service shall be provided between the Town Center (or another central transfer location if the Town Center has not yet been built) and the nearest station at a service frequency consistent with the passenger rail service schedule.

b) Facilities on Mococo Line. Upon implementation of passenger service on the Mococo line through the community, a passenger platform, and multi-modal station or other facility commensurate with passenger boarding demand, shall be developed on the Mococo line north of Byron Road and west of Patterson Pass Road to serve the Mountain House community.

c) Altamont Station Contribution. A proportionate "fair share" contribution, based upon projected ridership shall be made towards development of a new Altamont platform near I-580 at the time that service is implemented and at least 4,100 dwelling units have been occupied. "Fair share" contribution toward improvement of these facilities shall be determined in the Public Financing Plan and shall be based upon estimates provided in the most current EIR for the purpose of establishing and collecting the fees only. The final determination of fair share to a given improvement project shall be made during the funding stages of the individual improvements.

d) Mococo Station and Service. Upon implementation of passenger service and completion of the Mococo Station facility, the station shall be incorporated into existing local transit routes at a service frequency consistent with the passenger rail service schedule on the Mococo line. Existing feeder service between the Town Center and other stations on the Mococo line shall be discontinued at this time. This station shall serve as the designated intermodal transfer facility which shall provide a hub for passenger activity and shall provide comprehensive information regarding access to alternative modes, access for the disabled, and route maps and schedules for community and regional transit operators (BART, AC Transit,

SMART, Contra Costa County Transit Agency, and AMTRAK).

e) Development Proposals. All residential development proposals for the area adjacent to the Mococo line shall be reviewed to ensure the issues of noise and vibration have been addressed. A building setback sufficient to provide a safety and aesthetic buffer to adjacent uses shall be established along the Mococo line. This setback shall be described in the Specific Plan for the applicable area.

Objective 3: To ensure that roadway crossings of the Mococo line accommodate the circulation needs of the community and facilitate safe passage for motorists, pedestrians, and bicyclists.

Policy:

a) Rail crossings shall be provided as defined in Draft Master Plan Figure 9.33: Railroad Crossing Concept.

b) All at-grade rail crossings shall include a pull-out lane for specially designated vehicles which are required to stop at crossings.

c) All at-grade rail crossings shall include crossing gates, flashing lights and available signals.

d) All road and trail crossings of the Mococo line shall provide adequate pedestrian and bicycle facilities.

e) Access to the Mococo line right-of-way by pedestrians shall be limited to minimize safety hazards.

f) The Central Parkway rail over-crossing of the Mococo line shall accommodate travel by school children and others between the northern and southern portions of the site and shall incorporate sidewalks and bicycle lanes.

g) To ensure that access to the community is not accidentally obstructed by a train-related incident, at least two at-grade crossing of the rail line shall be maintained to serve the area north of Byron Road.

Implementation:

a) PUC Standards. Any proposed new railroad crossing or change to an existing crossing shall be approved by the California Public Utilities Commission and its standards for traffic control, lighting, signage, and other warning devices.

b) Wicklund Road Crossing. Upon completion of the new at-grade rail crossing at Patterson Pass/Byron Road, the existing at-grade crossing at Wicklund Road shall be closed.

c) Henderson Road Crossing. Prior to commencement of commercial or industrial building construction in the North Industrial Area, the existing at-grade crossing at Henderson Road shall be improved to include crossing gates, flashing lights, and audible signals.

d) Rail Crossings. The first residential Specific Plan north of Byron Road shall provide at least two rail crossings to serve the area north of Byron Road. One of these crossings shall be the grade-separated crossing at Central Parkway. The location of the at-grade crossing shall be determined by the location of initial residential development north of Byron Road.

e) Bike/Pedestrian Facilities. Sidewalks and Class II bike lanes shall be provided on all roadways crossing the SP tracks.

f) Creek Multi-Use Path. The Mountain House Creek multi-use path shall be grade separated where it crosses the SP tracks.

g) Fencing. Upon development north of Byron Road, fences or other obstacles shall be constructed along the SP right-of-way boundary to prohibit pedestrian access across the right-of-way except at designated crossings.

h) Coordination with SP. Prior to submitting plans to the California Public Utilities Commission for the review and approval of proposed alterations to rail crossings, the proposed changes shall be discussed with the Southern Pacific Transportation Company and obtain their accord.

AIR QUALITY AND TRANSPORTATION MANAGEMENT

Overall Issues and Cross-References

Objective 1: To reduce air quality impacts associated with development of residential, employment, and other land uses at Mountain House.