4.15 TRANSPORTATION AND TRAFFIC

This section presents an evaluation of existing traffic conditions and baseline (no project) conditions in the project area and analyzes potential traffic quality impacts associated with implementation of the proposed AMP project. The analysis includes parking demand, project trip generation, vehicle distribution, intersection Level of Service (LOS) with project and future baseline conditions, and the implications for future congestion and delay on the surrounding roadway network. Cumulative Year 2030 traffic projections are also been analyzed based on both Alameda County and San Joaquin County data. Where necessary, transportation improvements have been recommended to assure acceptable levels of traffic flow in the project vicinity. The information presented below is drawn from the traffic impact analysis prepared by OMNI-MEANS.

4.15.1 ENVIRONMENTAL SETTING

The proposed project is located on the east side of Midway Road, just south of Interstate 580. **Figure 4.15-1, Project Site Location Map**, illustrates the project location and project vicinity map.

4.15.1.1 Traffic Scenarios

As established in the 1996 CUP for the Altamont Motorsports Park, the site has existing auto-racing activities occurring at this time. The proposed project would not alter any of the currently allowed uses. The 1996 CUP allows a maximum site capacity of 8,000 people (as stated in **Section 3.0, Project Description**, which includes spectators, vendors, competitor teams and crews, employees, and service providers). The schedule of activities for the track indicates that auto-racing events occur from March through October during the calendar year. The racetrack is closed to events November through February. Typically, major events are held on Thursday, Friday, Saturday, and Sundays. Actual events vary from free open road testing, enduro's, to regular NASCAR Whelen All-American Series races. A review of attendance and participant information for the 2005–2007 racing seasons (see **Appendix 4.0, Altamont Motorsports Park 2005–2007 Attendance Levels**) indicates that the greatest spectator attendance recorded during the period was 5,500 people, which occurred on Saturday, September 10, 2005, for a monster truck, motocross, and jet powered car event. On that same day, there were 500 people in the pit/paddock area, and 150 employees and service providers on site, for a total of 6,150 people.

The project site has one main access road/driveway off of Midway Road. This roadway is gated and has wide travel lanes (three) providing access to the race track and parking areas. The gated access driveway forms a "T" intersection with Midway Road.

Specific analyses outlined above have been further detailed as follows:

- Approved/pending projects within the project vicinity, along with quantification of trip generation and distribution associated with those projects, and their combined impacts on existing Friday weekday PM peak and Sunday weekend peak hour intersection and peak hour freeway operations (consistent with peak racing schedule).
- Quantification of the trip generation and trip distribution associated with the proposed project, and the resulting impacts on Baseline (existing + approved/pending) peak hour intersection and freeway operations;
- Freeway segment operations, assuming other regional approved/pending projects are in place.
- The projected cumulative (year 2030) peak hour intersection and freeway segment operations with and without the development of the proposed project.

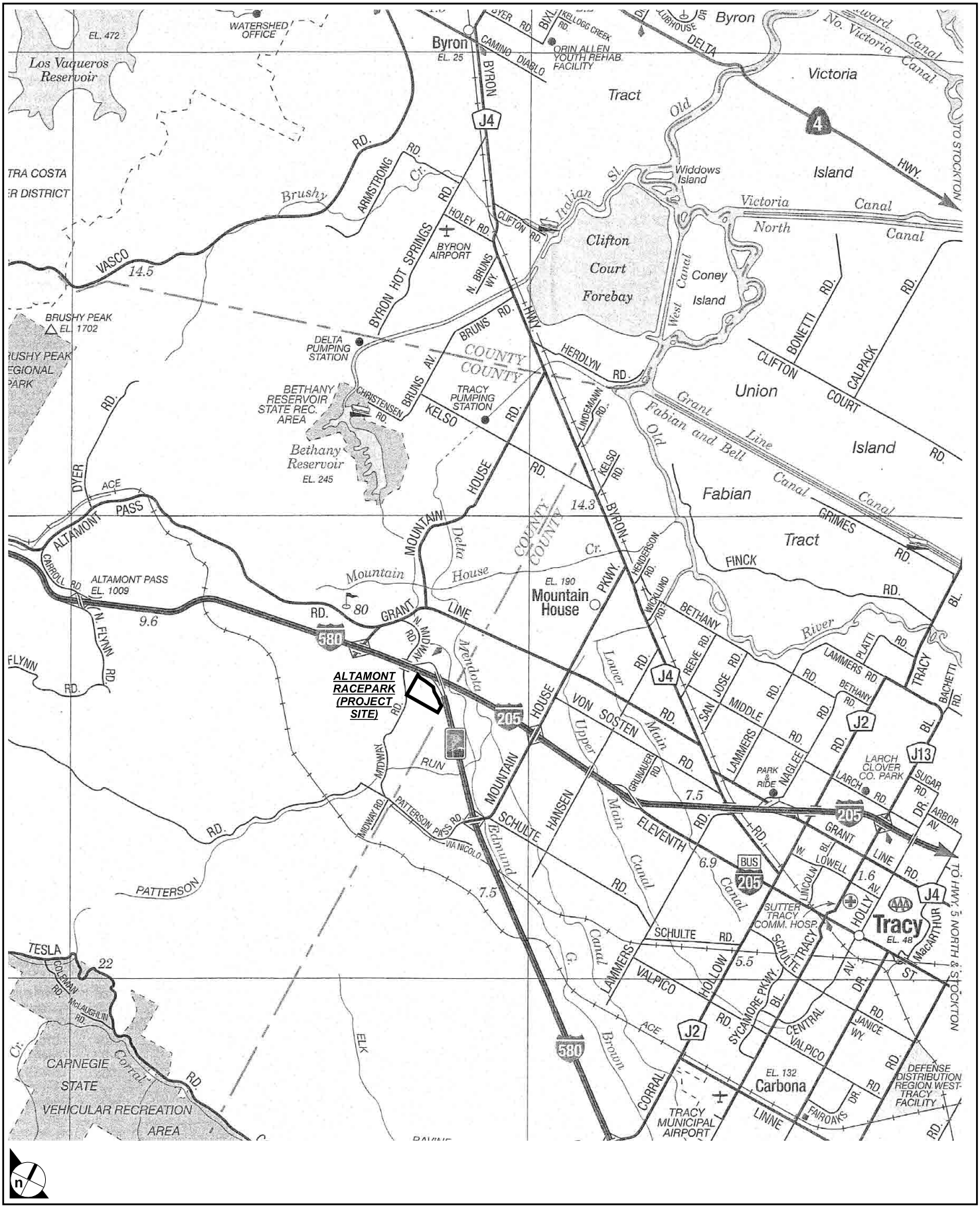
Baseline improvements and project-related mitigation measures are identified which would alleviate unacceptable traffic operations at the study intersections and roadway segments, under conditions both without and with the development of the proposed project. The following traffic scenarios are analyzed as a part of this section:

- *Existing* Conditions
- *Baseline No Project* Conditions (Existing + Approved/Pending Projects Scenario)
- *Baseline Plus Project* Conditions (Existing + Approved/Pending + Project Scenario)
- *Cumulative Year 2030 No Project* Conditions
- *Cumulative Year 2030 Plus Project* Conditions

Existing conditions describes the existing transportation facilities serving the project site, and the traffic operations which currently exist for those facilities.

Baseline conditions refer to analysis scenarios which will typically exist a few years in the future from *Existing* conditions. *Existing* Conditions and *Baseline No Project* conditions are used interchangeably in this Draft EIR. The *Baseline plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project are investigated in comparison to the *Baseline No Project* condition scenario.

Cumulative conditions refer to analysis scenarios which would exist following assumed build out of the area in the Year 2030. Using both Alameda County and San Joaquin County transportation model projections, cumulative conditions are assumed as those which will exist in the year 2030 based on ABAG and County employment and land uses. The *Cumulative plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project are investigated in comparison to the *Cumulative No Project* condition scenario.



SOURCE: Omni-Means - June 2008

FIGURE **4.15-1**

Project Site Location Map

The above traffic scenarios are described in further detail and evaluated in subsequent sections of this section.

4.15.1.2 Regional Access

Regional access to the proposed project site is provided by Interstate 580 (I-580) and Interstate 205 (I-205). In the project study area, Interstate 580 mainly extends east west providing access to Oakland, Castro Valley, Dublin, and Livermore before extending east over the Altamont Pass to Tracy. In the project study area, I-580 is a multi-lane facility with four travel lanes in each direction before intersecting I-205. From I-205, I-580 extends a short distance south connecting with Interstate 5. In this segment, I-580 has two travel lanes in each direction and provides access to the Patterson Pass Road/Mountain House Parkway interchange. Interstate 205 is an east-west freeway that extends between I-580 and I-5 and provides direct access to the City of Tracy. In the project study area, I-205 has three travel lanes in each direction.

4.15.1.3 Local Roadways

Streets that provide access into and around the project site include Midway Road, North Midway Road, Patterson Pass Road, Mountain House Parkway, Altamont Pass Road/Grant Line Road, Schulte Road, and Via Nicolo. A brief description of each roadway follows:

4.15.1.3.1 Midway Road

Midway Road extends in a north-south direction between Patterson Pass Road and Interstate 580. In this segment, Midway Road is narrow, two lane rural roadway. The roadway provides access to agricultural grazing areas and large ranchettes, as well as direct access the proposed project site. Midway Road varies in width from 20-24 feet and has unimproved shoulders. In certain segments, fencing to contain cattle grazing directly abuts the dirt shoulders. In addition, where Midway Road intersects with Patterson Pass Road to the south, there are two intersecting approach legs which form the intersection. One approach leg of Midway Road is one-way southbound and generally allow access to Patterson Pass Road to the west and is stop-sign controlled. The other Midway Road approach leg at Patterson Pass Road veers southeast and is a two-way (yield controlled) intersection.

4.15.1.3.2 North Midway Road

North Midway Road extends between I-580 and Grant Line Road and continues as a rural two-lane roadway. No vehicle access to I-580 is provided where North Midway Road crosses under the freeway. Providing access to larger residential ranchettes, North Midway Road intersects Grant Line Road adjacent to the Edmond G. Brown California Aqueduct just east of the roadway.

4.15.1.3.3 Patterson Pass Road

Patterson Pass Road is located south of the proposed project site and extends in an east-west direction. From I-580, Patterson Pass Road is a wide two-lane roadway extending past Via Nicolo Road towards Midway Road. Once past Via Nicolo Road, Patterson Pass Road becomes a rural two-lane roadway and narrows with unimproved shoulders. In this area, the roadway provides access to large ranchettes and grazing pastures. West of Midway Road, the roadway narrows considerably (20 feet or less) as it passes the PG&E substation.

4.15.1.3.4 Mountain House Parkway

Mountain House Parkway extends between I-580 and Byron Road in a north-south direction. From I-580 to I-205, Mountain House Parkway is essentially a two-lane roadway except near Schulte Road where it briefly widens to four travel lanes with auxiliary turning lanes for trucks. North of I-205, the roadway has been improved to four travel lanes extending through Grant Line Road. Mountain House Parkway provides access to light industrial and distribution uses adjacent to I-580 and agriculture and residential areas as it extends north past I-205 and Grant Line Road.

4.15.1.3.5 Altamont Pass Road/Grant Line Road

Altamont Pass Road/Grant Line Road is located north of the proposed project and I-580. Extending in an east-west direction, the roadway provides access to agricultural, recreational, and residential areas on the north side of I-580. From I-580, Grant Line Road extends north towards Altamont Pass Road and is a two-lane rural roadway. In this area, a diamond interchange provides full east-west access to I-580 and a park and ride lot is located just south of the interchange. East of Altamont Pass Road, Grant Line Road continues as a rural, two-lane roadway extending to North Midway Road, Mountain House Road, and Mountain House Parkway. Between Mountain House Road and Mountain House Parkway, Grant Line Road provides access to existing residential areas on the south side of the roadway. In this area, posted vehicle speed limits are reduced.

4.15.1.3.6 Schulte Road

Schulte Road is a wide, four-lane roadway with auxiliary lanes that extends southeast from Mountain House Parkway. Schulte Road provides access to large distribution centers (Safeway and Costco) on the west side of the roadway and extends south through Hansen Road to Lammers Road.

4.15.1.3.7 Via Nicolo

Via Nicolo is a short, two-lane roadway that extends south from Patterson Pass Road just west of I-580. This roadway provides access to agricultural areas.

4.15.1.4 Study Intersections

A principal concern raised by the proposed project is the related traffic increases that would occur during peak and non-peak periods on the surrounding street network. The following sections describe the project study intersections, level of service concepts, and existing intersection capacity on the surrounding street network.

Intersection operation is usually considered the key factor in determining the traffic handling capacity of a local circulation system. Based on discussions with Alameda County and San Joaquin County engineering staff, the following 11 intersections were selected for evaluation of current operational characteristics:[1]

1.	Grant Line Road/Interstate 580 eastbound ramps	Stop Control (off-ramp)
2.	Grant Line Road/Interstate 580 westbound ramps	Stop Control (off-ramp)
3.	Grant Line Road/Altamont Pass Road	Stop Control (Altamont)
4.	Grant Line Road/N. Midway Road	Stop Control (N. Midway)
5.	Altamont Speedway Driveway/Midway Road	Stop Control (Speedway)
6.	Patterson Pass Road/Midway Road	Stop Control (Midway)
7.	Patterson Pass/Interstate 580 southbound ramps	Stop Control (off-ramp)
8.	Mountain House Parkway/Interstate 580 northbound ramps	Stop Control (off-ramp)
9.	Mountain House Parkway/Interstate 205 eastbound ramps	Signalized
10.	Mountain House Parkway/Interstate 205 westbound ramps	Signalized
11.	Mountain House Parkway/Grant Line Road	Signalized

[1] Alameda County Planning and Engineering Department, Proposed Altamont Motorsports Project, Meeting with John Bates and Arthur Valderrama (Alameda County Engineering) and Dain Anderson and Shauna Stringham (Impact Sciences), August 2, 2007.

LOS is the primary indicator for traffic operation performance at intersections. At a signalized intersection, LOS is determined by calculating the volume of conflicting traffic movements at an intersection during one hour and dividing that total by the capacity designed to accommodate those turning movements. This type of calculation yields a volume/capacity (V/C) ratio and vehicle delay in seconds. The resulting v/c ratio-vehicle delays correspond to LOS ratings, which range from LOS "A" to "F." The range describes increasing traffic demand, delays, and deterioration of services. (Please refer to Appendices for LOS definitions).

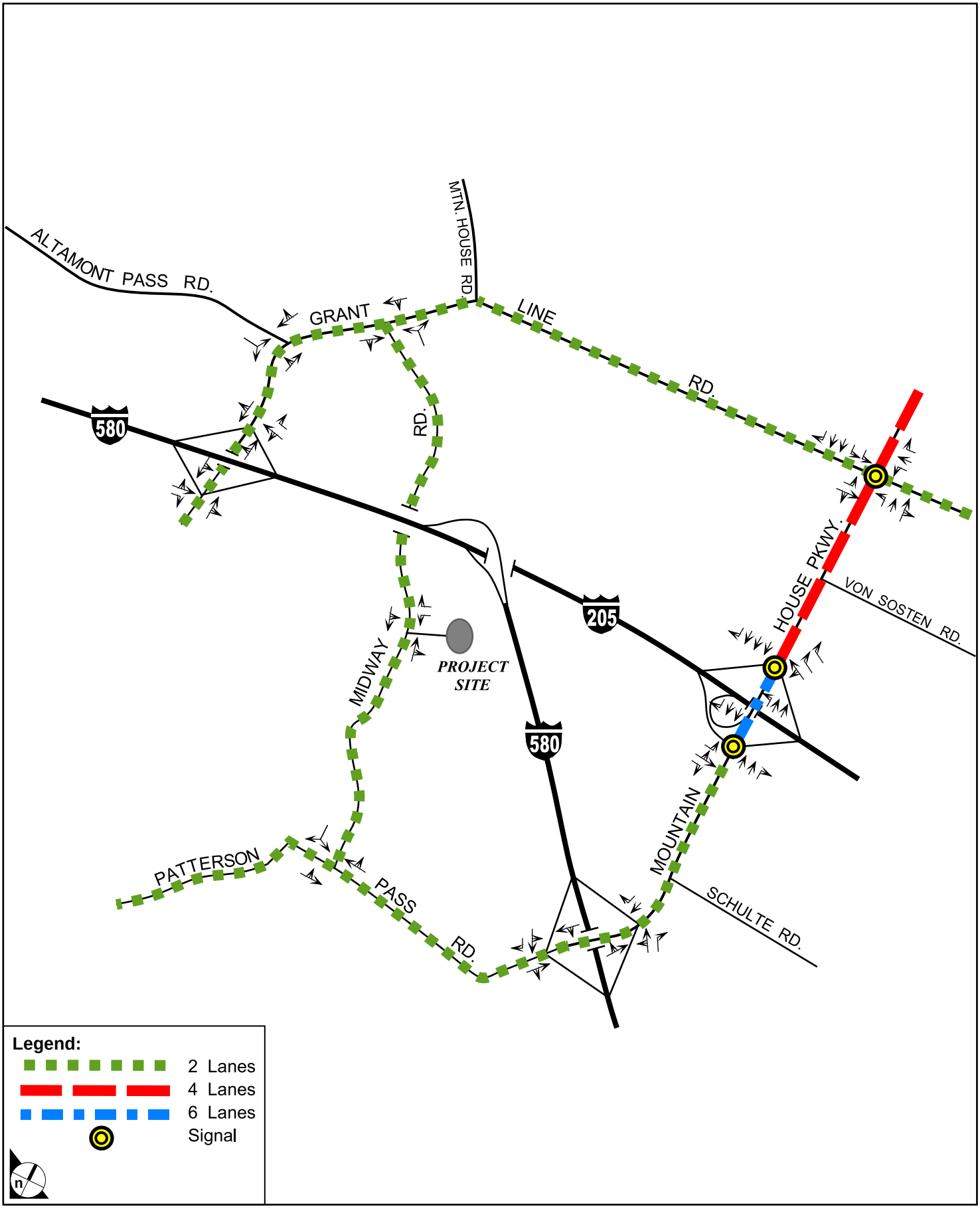
At an unsignalized intersection, the calculation methodologies are different from a signalized intersection. At an unsignalized intersection where the minor street is controlled by stop signs, the resulting LOS reflects delays experienced by that minor street traffic. Thus, while the major street's LOS may be "C" or better, a minor street turning movement may be functioning at LOS "D" or "E."

Intersection turning lane geometrics and traffic control for the above critical study intersections are illustrated on **Figure 4.15-2, Existing Lane Configurations and Signal Control**.

4.15.1.5 Freeway Study Segments

The following freeway segments were selected in coordination with the County of Alameda and Caltrans for analysis within this study on a peak hour volume-to-capacity ratio basis:

1. Interstate 580 – West of Grant Line Road (east and west)
2. Interstate 580 – Between Grant Line Road and I-205 Flyover (east and west)
3. Interstate 580 – Between I-205 Flyover and Patterson Pass Road (north and south)
4. Interstate 580 – South of Patterson Pass Road (north and south)
5. Interstate 205 – Between I-580 Flyover and Mountain House Parkway (east and west)
6. Interstate 205 – East of Mountain House Parkway (east and west)



SOURCE: Omni-Means - June 2008

FIGURE **4.15-2**

Existing Lane Configurations and Signal Control

4.15.1.6 Existing Traffic Volumes

Existing traffic counts were collected by Baymetrics Traffic Resources and OMNI-MEANS in August 2007 at the critical study intersections in the project area.[2,3] Existing freeway segment volumes were derived from the latest Caltrans 2006 Traffic Volumes on the California State Highway System listed above. Weekday AM peak hour and PM peak hour turning movement volume counts were collected at the critical study intersections. The PM peak hour is defined as the one-hour of peak traffic flow (which is the highest total volume count over four consecutive 15-minute count periods) counted between 4:00 PM and 6:00 PM on a typical weekday. To match the project description, peak period counts were also conducted on a Sunday evening between 6:00—8:00 PM. This Sunday period coincides with peak outbound flow of a major event being held at the race track. For the freeway segments, the peak hour directional flows were obtained by taking the annual average daily traffic (AADT) volume for each freeway segment and then applying the peak hour directional flow percentage to obtain those volumes.

Existing weekday PM peak hour and Sunday peak hour traffic volumes at the study intersections identified above are shown on **Figure 4.15-3, Existing Volumes Friday PM and Sunday PM Peak Hour**.

4.15.1.7 Existing Pedestrian Facilities

Within the study area, there are no sidewalks along either side of Midway Road, Grant Line Road, Patterson Pass Road and only very limited sidewalks along the Mountain House Parkway (at I-580 and I-205). Pedestrian signal facilities exist at the existing traffic signals.

4.15.1.8 Existing Transit Service

Local bus service is provided by the San Joaquin Regional Transit District (SJRTD) Interregional Commuter Bus Service that includes 19 fixed routes. In the project vicinity, the closest bus stop is located east in Tracy at the Grant Line Road/Naglee Road intersection, which is approximately 2 miles from the project site. There are 15 bus routes that travel east-west between Stockton, Tracy, and Manteca to Livermore, Pleasanton, Dublin, and the Lockheed Martin facility in Pleasanton. The remaining bus routes serve north-south commuters traveling to Sacramento or Ripon/Escalon.[4]

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2 Baymetrics Traffic Resources, Peak period intersection counts, Grant Line Road, Mountain House Parkway, Patterson Pass Road, and Midway Road, County of Alameda, August 12 (4:00-6:00 PM) and 18 (6:00-8:00 PM), 2007.

3 Omni-Means Engineers & Planners, Peak period intersection count, Altamont Motorsports Park Driveway/Midway Road, August 12 and 18, 2007.

4 San Joaquin County Regional Transit District, Route Map and Schedules, effective October 31, 2007.

In addition to bus service, the Altamont Commuter Express (ACE) operates a train service that provides access between Stockton and San Jose during the morning and evening commute periods on weekday basis. Specifically, there are four westbound trains during the morning commute period and four eastbound trains during the evening commute period. The closest station to the project site is located in the City of Tracy at Tracy Boulevard/Linne Road. At the Tracy station, ACE train headways during the morning commute period are 4:52, 6:07, 7:12, and 10:02 AM. During the afternoon-evening commute period, headways are at 1:39, 5:09, 6:09, and 7:09 PM.[5]

4.15.1.9 Level of Service

Traffic operations are quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an intersection or roadway segment, representing progressively worsening traffic operations.

Levels of Service are calculated for all intersection control types using methods documented in the Transportation Research Board (TRB) Publication *Highway Capacity Manual, Fourth Edition, 2000* (HCM-2000). For two-way-stop-controlled (TWSC) intersections, the "worst-case" movement delays and LOS is reported, computed based on HCM-2000. For signalized intersections and all-way-stop-controlled (AWSC) intersections, the intersection delays and LOS reported are the average values for the whole intersection, computed based on HCM-2000. The delay-based LOS criteria for different types of intersection control are outlined in **Table 4.15-3, Level of Service Criteria for Intersections**. The LOS definitions shown in these tables are used in the traffic study.

To determine another level of "significance" associated with unsignalized intersection operations, a supplemental traffic signal "warrant" analysis has also been completed. The term "signal warrants" refers to established criteria used quantitatively to justify or ascertain the need for installation of a traffic signal at an otherwise unsignalized intersection location. This study employs the signal warrant criteria presented in the *California Department of Transportation California Manual on Uniform Traffic Control Devices* (*California MUTCD*). The signal warrant criteria are based upon several factors including volume of vehicular and pedestrian traffic, frequency of accidents, location of school areas etc. The *MUTCD* indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. However, it should be noted that agencies rarely install traffic signals until several of the warrants are met. Specifically, this study utilizes the *MUTCD* Peak Hour based Warrant Number 3 as the representative type of traffic signal warrant analysis.

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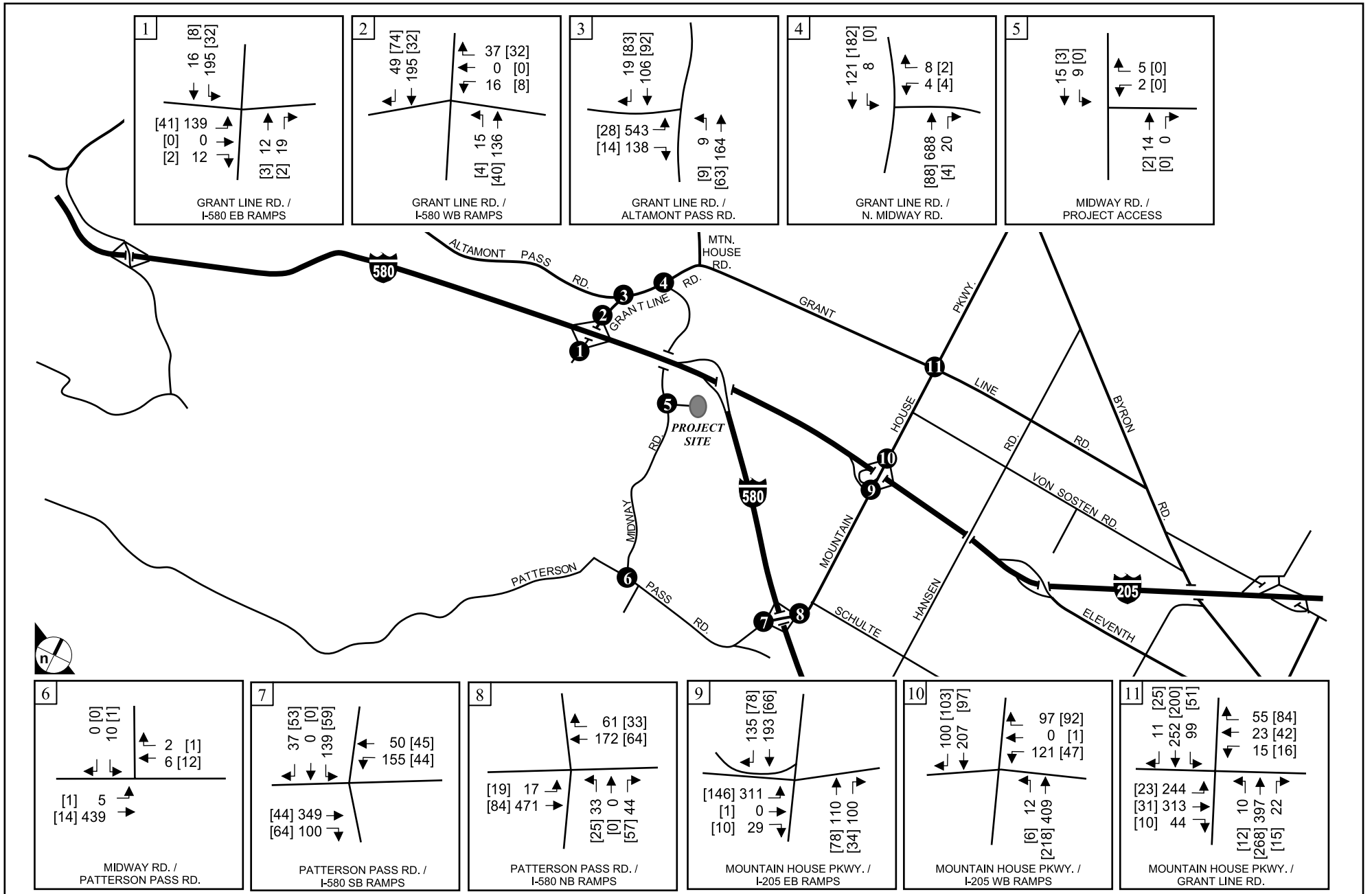
5 Altamont Commuter Express, Route Map and Schedules, Website information, effective August 28, 2006.



SOURCE: Omni-Means - June 2008

FIGURE **4.15-3**

Existing Volumes Friday PM and [Sunday PM] Peak Hour

931-002•06/08

Table 4.15-1
Level of Service Criteria for Intersections

LOS	Type of Flow	Delay	Maneuverability	Control Delay (seconds/vehicle)		
				Signalized	Unsignalized	All-Way Stop
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10 and ≤ 20.0	>10 and ≤ 15.0	>10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and ≤ 35.0	>15 and ≤ 25.0	>15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and ≤ 55.0	>25 and ≤ 35.0	>25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and ≤ 80.0	>35 and ≤ 50.0	>35 and ≤ 50.0

LOS	Type of Flow	Delay	Maneuverability	Control Delay (seconds/vehicle)		
				Signalized	Unsignalized	All-Way Stop
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

Source: Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000.

4.15.1.10 Existing Traffic Operations

Existing conditions were calculated by using existing intersection and roadway traffic volumes.

4.15.1.10.1 Intersections

Existing peak hour intersection traffic operations were analyzed utilizing existing traffic volumes (shown on **Figure 4.15-3**) and existing intersection lane geometrics and control (shown on **Figure 4.15-2**). **Table 4.15-2, Existing Conditions: Intersection Levels of Service** provides a summary of the *Existing* peak hour intersection levels of service.

As shown in **Table 4.15-3, Existing Conditions: Freeway Segment Levels of Service**, all study intersections are found to be currently operating at acceptable LOS conditions except for the following intersection:

Grant Line Road/Altamont Pass Road: This unsignalized intersection is found to be currently operating at LOS "E" conditions during the Friday PM peak hour period. This unacceptable level of service is caused by the delay experienced by the eastbound vehicles on Altamont Pass Road that are trying to enter gaps in the uncontrolled traffic flow on Grant Line Road. This intersection is also found to meet the peak hour volume signal warrant under the Friday PM peak hour conditions. During the Sunday evening peak hour, the intersection is currently operating at LOS "A."

All remaining study intersections are operating at acceptable levels (LOS D or better) with existing traffic volumes.

4.15.1.10.2 Freeway Segments

Freeway segments in the project study area were analyzed based on existing Caltrans traffic volume records for the year 2006. Peak hour directional flows were obtained by taking the annual average daily traffic (AADT) volume for each freeway segment and then applying the peak hour directional flow percentage to obtain those volumes. Volume projections are only available for the weekday Friday PM peak hour.

As shown in **Table 4.15-3, Existing Conditions: Freeway Segment Levels of Service**, all freeway segments are calculated to be operating at LOS D or better during the PM peak hour. However, the studied freeway segments on I-580 and I-205 can experience slow progression and vehicle queuing during peak commute periods. This is particularly true for freeway segments in the eastbound commute direction and during these time periods segments are likely operating at unacceptable conditions (LOS E-F) during the Friday PM peak hour.

Table 4.15-2
Existing Conditions – Intersection Levels of Service

#	Intersection	Control Type	AM Peak Hour Delay	AM Peak Hour LOS	AM Peak Hour Vehicle Queuing	PM Peak Hour Delay	PM Peak Hour LOS	PM Peak Hour Vehicle Queuing
1	Grant Line Rd./I-580 EB Ramps	TWSC	16.8	C		9.3	A	
2	Grant Line Rd./I-580 WB Ramps	TWSC	10.2	B		9.3	A	
3	Grant Line Rd./Altamont Pass Rd.	TWSC	37.8	E	Yes	9.6	A	
4	Grant Line Rd./Midway Rd.	TWSC	15.2	C		9.5	A	
5	Midway Rd./AMP Driveway	TWSC	8.8	A		1.0	A	
6	Patterson Pass Rd./Midway Rd.	TWSC	11.4	B		7.2	A	
7	Patterson Pass Rd./I-580 SB Ramps	TWSC	31.3	D		9.8	A	
8	Mountain House Pkwy./I-580 NB Ramps	TWSC	17.2	C		10.0	B	
9	Mountain House Pkwy./I-205 EB Ramps	Signal	16.0	B		13.1	B	
10	Mountain House Pkwy./I-205 WB Ramps	Signal	9.3	A		9.1	A	
11	Mountain House Pkwy./Grant Line Rd.	Signal	23.2	C		15.5	B	

Intersection LOS based on the Transportation Research Board (TRB) Highway Capacity Manual (HCM) 2000 methodology. Synchro-Simtraffic software Version 6.0. Legend: TWSC = Two-Way-Stop Control.

Table 4.15-3
Existing Conditions: Freeway Segment Levels of Service

Intersection	# Of Lanes	PM Peak Hour Capacity	PM Peak Hour PM Peak Volume	PM Peak Hour V/C	PM Peak Hour LOS
Interstate 580					
West of Grant Line Road					
Eastbound	4	8000	6630	0.83	D
Westbound	4	8000	3570	0.45	A
Between Grant Line Rd. & I-205					
Eastbound	4	8000	6630	0.83	D
Westbound	4	8000	3570	0.45	A
Between I-205 & Patterson Pass Rd.					
Eastbound	2	4000	2605	0.65	B
Westbound	2	4000	1345	0.34	A
South of Patterson Pass Rd.					
Eastbound	2	4000	2605	0.65	B
Westbound	2	4000	1345	0.34	A

Intersection	# Of Lanes	PM Peak Hour Capacity	PM Peak Volume	V/C	LOS
Interstate 205					
Between I-580 & Mt. House Pkwy.					
Eastbound	3	6000	4580	0.76	C
Westbound	3	6000	3320	0.55	A
East of Mt. House Pkwy.					
Eastbound	3	6000	4580	0.76	C
Westbound	3	6000	3320	0.55	A

Level of Service based on the TRB, 2000 Highway Capacity Manual, Chapter 3, Table 3-1, LOS Criteria for Basic Freeway Segments. Assumes maximum service flow rate of 2,000 passenger cars per hour per lane (pcphpl) for freeway segments.

4.15.2 REGULATORY SETTING

Applicable regulatory setting criteria are discussed in section **4.15.3, Environmental Analysis**.

4.15.3 PROJECT ENVIRONMENTAL ANALYSIS

4.15.3.1 Thresholds of Significance

The proposed project would result in a significant impact if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections.

  Level-of-Service Thresholds

  LOS thresholds and standards used in this analysis have been taken from the Alameda County Congestion Management Plan, San Joaquin County Congestion Plan, Mountain House Master Plan/Specific Plans, Alameda County East County Area Plan, and Caltrans.

  In accordance with previous transportation studies conducted, the following criteria are used to determine if an impact is significant and requires mitigation:

  - *Signalized Intersections*: The project is considered to have a significant effect if it would:
    - Cause intersections on State facilities/freeways to operate below LOS D;
    - Cause intersections in Alameda County to operate below LOS D;
    - Cause intersections in San Joaquin County to operate below LOS D;

- *Unsignalized Intersections*: At unsignalized intersections, intersection LOS is generally based on the minor street (stop-sign controlled) vehicle delay. LOS is calculated for both the minor street and major street approaches. However, as is often the case, the minor street approach might be operating at LOS E or F, while the major street turning movements are operating at LOS C or better. Unsignalized intersections operating at LOS E-F for the minor street approach do not automatically qualify for signalization (as noted in LOS Methodologies). A signal warrant would need to be met for consideration of additional control. This would especially be true if a minor street operating at LOS E-F has minimal side-street traffic volumes.

- *Freeways Segments*: Caltrans maintains that an LOS of C or D is desirable for the freeway facilities of Interstate 580 and Interstate 205. However, the San Joaquin County Congestion Management Agency identifies these two facilities as "Routes of Regional Significance" in their Congestion Management Plan (CMP). LOS E or better is considered acceptable (except where LOS F was originally measured), in which case the standard shall be LOS F.

- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency or the ECAP for designated roads or highways

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

- Result in inadequate emergency access

- Result in inadequate parking capacity

- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

4.15.3.2 Technical Analysis Parameters

This traffic study generally provides a "preliminary operations level" evaluation of traffic operating conditions, which is considered sufficient for CEQA purposes. The preliminary operations level evaluation incorporates appropriate heavy vehicle adjustment factors, peak hour factors, and signal lost-time factors and report the resulting intersection delays and LOS as estimated using HCM-2000 based analysis methodologies. A passenger car equivalent of 2.0 and a general Peak Hour Factor (PHF) of 0.92 (as recommended by HCM-2000) were applied in the analysis of all study intersections under all analysis scenarios in this study. Truck traffic was considered based on actual field counts conducted as part of this analysis (for each intersection turn movement) and applied as a percentage. The HCM-2000 analysis methodologies are implemented using the simulation software *Synchro 6* developed by Trafficware.

A "design level" evaluation (which would include queuing on intersection lane groups, stacking length requirements, coordinated signal operations analyses etc.) is not included in this planning-level study.

However, the analysis does provide some qualitative and quantitative discussions regarding queuing, stacking length requirements, etc. within descriptions of mitigation and recommended improvements.\

4.15.4 EXISTING TRAFFIC OPERATIONS

Existing conditions were calculated by using existing intersection and roadway traffic volumes.

4.15.4.1 Intersections

Existing peak hour intersection traffic operations were analyzed utilizing existing traffic volumes (shown on **Figure 4.15-3**) and existing intersection lane geometrics and control (shown on **Figure 4.15-2**). **Table 4.15-2, Existing Conditions: Intersection Levels of Service** provides a summary of the *Existing* peak hour intersection levels of service.

As shown in **Table 4.15-3, Existing Conditions: Freeway Segment Levels of Service**, all study intersections are found to be currently operating at acceptable LOS conditions except for the following intersection:

Grant Line Road/Altamont Pass Road: This unsignalized intersection is found to be currently operating at LOS "E" conditions during the Friday PM peak hour period. This unacceptable level of service is caused by the delay experienced by the eastbound vehicles on Altamont Pass Road that are trying to enter gaps in the uncontrolled traffic flow on Grant Line Road. This intersection is also found to meet the peak hour volume signal warrant under the Friday PM peak hour conditions. During the Sunday evening peak hour, the intersection is currently operating at LOS "A."

All remaining study intersections are operating at acceptable levels (LOS D or better) with existing traffic volumes.

4.15.4.2 Freeway Segments

Freeway segments in the project study area were analyzed based on existing Caltrans traffic volume records for the year 2006. Peak hour directional flows were obtained by taking the annual average daily traffic (AADT) volume for each freeway segment and then applying the peak hour directional flow percentage to obtain those volumes. Volume projections are only available for the weekday Friday PM peak hour.

As shown in **Table 4.15-3, Existing Conditions: Freeway Segment Levels of Service**, all freeway segments are calculated to be operating at LOS D or better during the PM peak hour. However, the studied freeway segments on I-580 and I-205 can experience slow progression and vehicle queuing during peak commute periods. This is particularly true for freeway segments in the eastbound commute direction and during

these time periods segments are likely operating at unacceptable conditions (LOS E-F) during the Friday PM peak hour.

Table 4.15-4
Existing Conditions: Intersection Levels-Of-Service

#	Intersection	Control Type	Friday PM Peak Hour			Sunday Evening Peak Hour		
			Delay	LOS	Vehicle Queuing	Delay	LOS	Vehicle Queuing
1	Grant Line Rd./I-580 EB Ramps	TWSC	16.8	C		9.3	A	
2	Grant Line Rd./I-580 WB Ramps	TWSC	10.2	B		9.3	A	
3	Grant Line Rd./Altamont Pass Rd.	TWSC	37.8	E	Yes	9.6	A	
4	Grant Line Rd./Midway Rd.	TWSC	15.2	C		9.5	A	
5	Midway Rd./AMP Driveway	TWSC	8.8	A		1.0	A	
6	Patterson Pass Rd./Midway Rd.	TWSC	11.4	B		7.2	A	
7	Patterson Pass Rd./I-580 SB Ramps	TWSC	31.3	D		9.8	A	
8	Mountain House Pkwy./I-580 NB Ramps	TWSC	17.2	C		10.0	B	
9	Mountain House Pkwy./I-205 EB Ramps	Signal	16.0	B		13.1	B	
10	Mountain House Pkwy./I-205 WB Ramps	Signal	9.3	A		9.1	A	
11	Mountain House Pkwy./Grant Line Rd.	Signal	23.2	C		15.5	B	

Intersection LOS based on the Transportation Research Board (TRB) Highway Capacity Manual (HCM) 2000 methodology. Synchro-Simtraffic software Version 6.0. Legend: TWSC = Two-Way-Stop Control.

Table 4.15-5
Existing Conditions: Freeway Segment Levels of Service

Intersection	# Of Lanes	Capacity	Friday PM Peak Hour PM Peak Volume	V/C	LOS
Interstate 580					
West of Grant Line Road					
Eastbound	4	8000	6630	0.83	D
Westbound	4	8000	3570	0.45	A
Between Grant Line Rd. & I-205					
Eastbound	4	8000	6630	0.83	D
Westbound	4	8000	3570	0.45	A
Between I-205 & Patterson Pass Rd.					
Eastbound	2	4000	2605	0.65	B
Westbound	2	4000	1345	0.34	A
South of Patterson Pass Rd.					
Eastbound	2	4000	2605	0.65	B
Westbound	2	4000	1345	0.34	A
Interstate 205					
Between I-580 & Mt. House Pkwy.					
Eastbound	3	6000	4580	0.76	C
Westbound	3	6000	3320	0.55	A
East of Mt. House Pkwy.					
Eastbound	3	6000	4580	0.76	C
Westbound	3	6000	3320	0.55	A

Level of Service based on the TRB, 2000 Highway Capacity Manual, Chapter 3, Table 3-1, LOS Criteria for Basic Freeway Segments. Assumes maximum service flow rate of 2,000 passenger cars per hour per lane (pcphpl) for freeway segments.

4.15.4.3 Baseline Conditions (No Project)

4.15.4.3.1 Methodology

The *Baseline No Project* condition investigates traffic operations following completion of approved and pending projects, but excluding development of the proposed project. The *Baseline plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project (i.e., the Altamont Motorsports Park development) are investigated in comparison to the *Baseline No Project* condition scenario.

For the purpose of this study, the baseline scenarios were evaluated on the assumption that the proposed increase in attendance for the Altamont Motorsports Park Rezoning of 1,850 spectators could occur immediately. For this reason, baseline conditions represent existing roadway and intersection conditions currently "in place" as of June, 2008. This would include all roadway and circulation improvements related to the Mountain House Specific Plans development that are already constructed in the project study area. Typically, baseline conditions would represent all existing plus pending/approved project development that would occur over the next two to four years (2012). However, it is understood that development of pending/approved projects may take much longer given current economic housing and building conditions. The Mountain House Specific Plan(s) development is the major baseline project in the area. Although approved, the Mountain House development and its required (significant) circulation improvements are proceeding at much slower rate than anticipated. (Planned circulation improvements for the Mountain House development are tied to neighborhood phasing and residential units constructed.) For this reason, all remaining approved development and circulation improvements related to the Mountain House Specific Plans have been analyzed under Cumulative Year 2030 (No Project) Conditions.

The *Existing* or *Baseline No Project* scenario traffic volumes were derived from the collection of actual project area roadway traffic volumes on days and times when there was no scheduled racing activity at the raceway. To that collected data an assumed volume of traffic was added that was equivalent to a temporary raceway population (drivers, crews, spectators, employees, and vendors) of 6, 150 people to establish an *Existing* or *Baseline No Project* scenario for analytical purposes.

4.15.4.3.2 Baseline Projects

Including existing traffic conditions, just one approved project component is assumed to be occurring as part of baseline project conditions. Specifically, a "baseline" condition has been assumed for existing motorsports activities occurring at the project site. Using attendance information provided by the project applicant (which was reviewed and approved by Alameda County staff), a baseline attendance figure of 6,150 persons was assumed for both a Friday PM peak hour and Sunday evening peak hour conditions. Detailed calculations for both daily and peak hour trip generation related to both "baseline" and "proposed

project" conditions relating to the Altamont Motorsports Park can be found in the **Project Impacts; Project Trip Generation**. Baseline peak hour vehicle trips related to project activities have been added in to both Friday PM peak hour and Sunday evening peak hour conditions.

Baseline traffic volumes (existing + approved) for the weekday Friday PM peak hour and weekend Sunday evening peak hour have been shown in **Figure 4.15-4, Baseline (No Project) Volumes Friday PM and Sunday PM Peak Hour.**

4.15.4.3.3 Baseline Improvements

4.15.4.3.3.1 Roadways

Currently, there are no specific circulation improvements planned for existing roadways and intersections located along Grant Line Road, Altamont Pass Road, Mountain House Parkway, Patterson Pass Road, and Midway Road. However, limited roadway and intersection improvements have occurred along Mountain House Parkway as part of the ongoing Mountain House Specific Plan(s) and are reflected in existing conditions as follows:

- Mountain House Parkway: Widened from two to four travel lanes starting north of Grant Line Road extending through the I-205 overcrossing;
- Grant Line Road: Minor widening from two lanes to four travel lanes east of Mountain House Parkway to accommodate intersection improvements at its intersection with Grant Line Road;
- I-205 Eastbound and Westbound Off-On Ramps: Widening and lane channelization to improve traffic flows at Mountain House Parkway.

4.15.4.3.3.2 Intersections

The following four intersections have been signalized in the study area:

- Mountain House Parkway/Grant Line Road
- Mountain House Parkway/Von Stotsen Road
- Mountain House Parkway/I-205 Westbound Ramps
- Mountain House Parkway/I-205 Eastbound Ramps

4.15.4.3.3.3 Freeways

Two approved transportation-related projects in the study area would likely affect traffic flows on both Interstate 205 and Interstate 580, but would not necessarily increase traffic volumes in the area. On the

contrary, both projects are currently under construction and are designed to reduce vehicle congestion and improve traffic flows and these projects are as follows:

- Interstate 205 Project: This project involves the widening of Interstate 205 between Hansen Road and Interstate 5 from a four-lane freeway to a six-lane freeway. The additional lanes are being constructed in the median. Within this 11 mile improvement corridor there would also be widening of existing structures, median barriers, and re-striping of I-5 prior to its connection with I-205. The project is being constructed in stages (1-5) and was begun in June 2006. It is projected that the project will be completed in May 2009 based on current Caltrans project status reports.

- Interstate 205/Interstate 580 Truck Bypass Project: This project involves the installation of a westbound truck bypass extending from the I-205 Mountain House Parkway interchange in San Joaquin County to a point west of the I-580 Grant Line Road interchange. The truck bypass will extend for approximately six miles and be two lanes wide. The goal is to allow truck traffic to bypass a sustained 3-4 percent grade with mixed flow traffic and the weave area on I-580 (prior to Grant Line Road). Currently under construction, the I-205/I-580 Truck Bypass project is projected to be completed in 2010 or 2011 based on current Caltrans project status reports.

Circulation improvements listed as part of *Baseline (No Project) Roadway Conditions* have been shown in **Figure 4.15-5, Baseline (No Project) Lane Configurations and Signal Controls**.

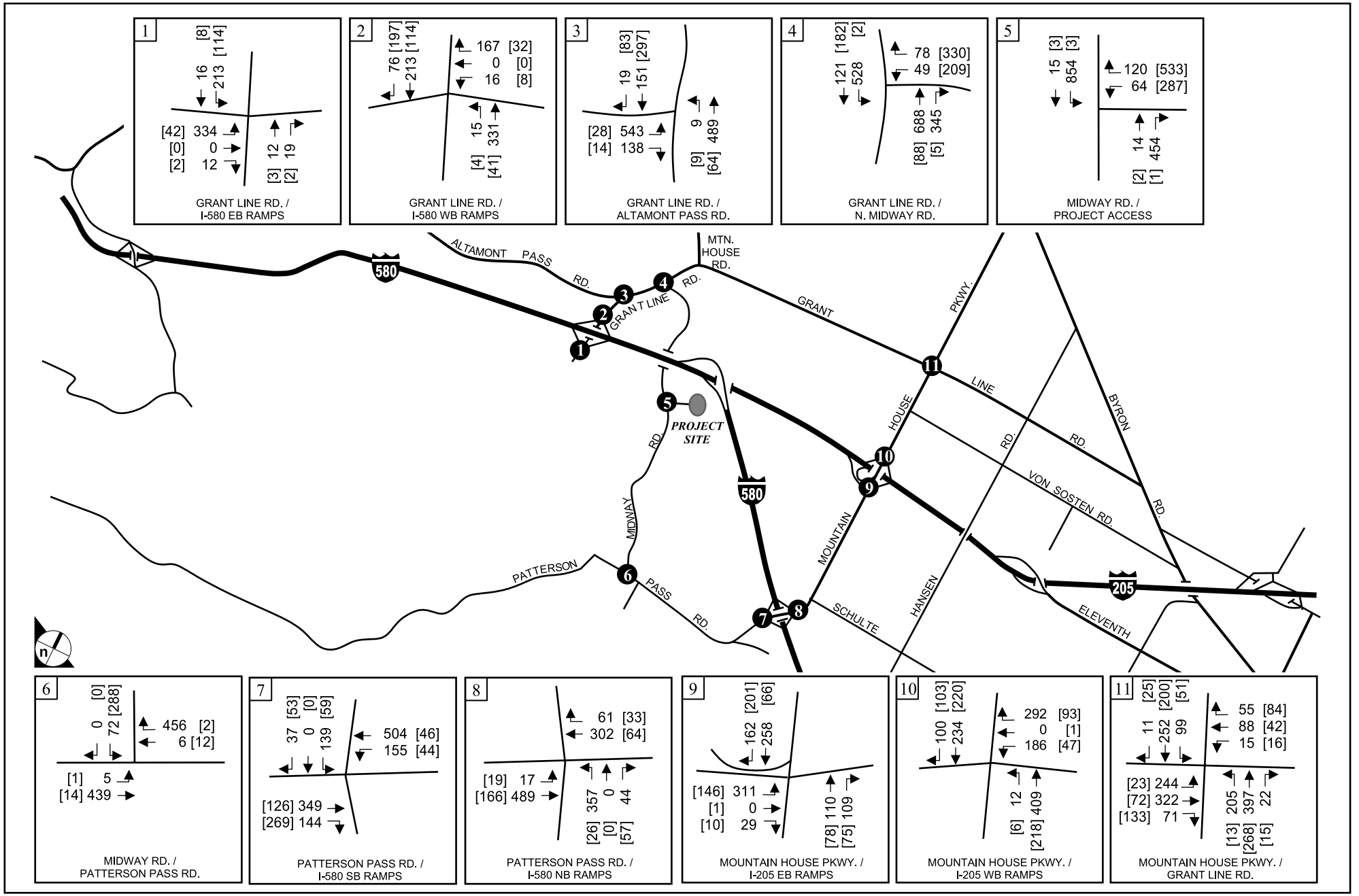
4.15.4.3.4 Baseline No Project Traffic Operations

4.15.4.3.4.1 Intersections

Friday PM peak and Sunday evening peak hour intersection traffic operations were analyzed utilizing lane geometrics and control assumed for *Baseline No Project Roadway* conditions. **Table 4.15-5, Baseline (No Project) Conditions: Intersection Levels of Service**, provides a summary of the *Baseline No Project* peak hour intersection levels of service.

As shown in **Table 4.15-5, Baseline (No Project) Conditions: Intersection Levels of Service**, six study intersections would be operating at unacceptable levels (LOS E-F) during the Friday PM peak hour with Baseline No Project traffic volumes. These would include the unsignalized locations of Grant Line Road/I-580 eastbound ramps, Grant Line Road/Altamont Pass Road, Grant Line Road/Midway Road, Midway Road/AMP Driveway, Patterson Pass Road/I-580 southbound ramps, and Mountain House Parkway/I-580 northbound ramps intersections. Projected operating conditions at these intersections can be described as follows:

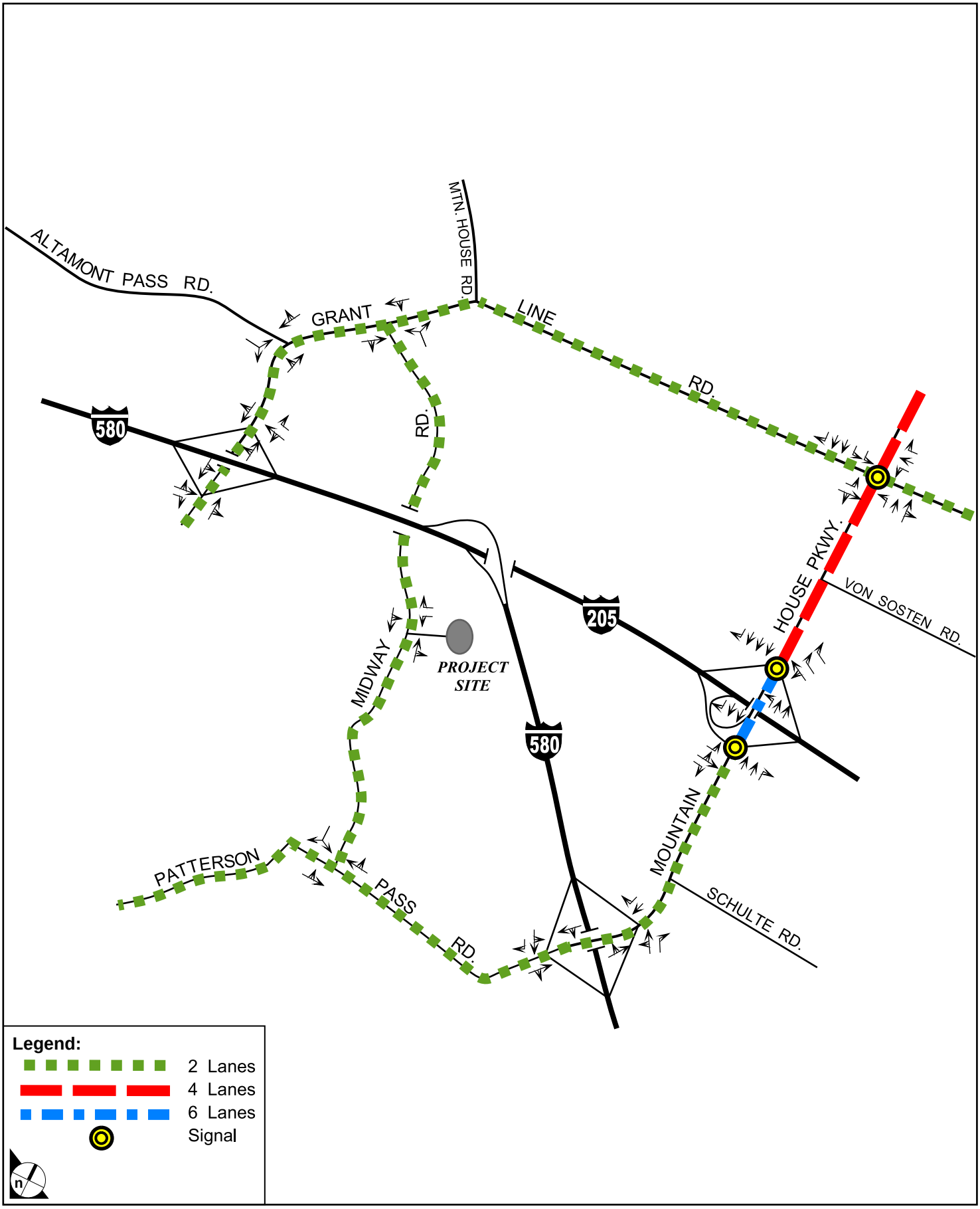
Grant Line Road/I-580 Eastbound Ramps: This unsignalized ramp intersection would experience vehicle delays (LOS E) for the stop-sign controlled I-580 eastbound off-ramp approach at Grant Line Road.



SOURCE: Omni-Means - June 2008

FIGURE **4.15-4**

Baseline (No Project) Volumes Friday PM and [Sunday PM] Peak Hour



SOURCE: Omni-Means - June 2008

FIGURE **4.15-5**

Baseline (No Project) Lane Configurations and Signal Control

The main factor adding to these delays would be the increase in eastbound left-turn movements from the I-580 off-ramp onto Grant Line Road resulting from baseline project attendance of 6,150 persons. Based on Caltrans peak hour signal warrants, the Grant Line Road/I-580 Eastbound ramp intersection would not qualify for signalization under Baseline (No Project) Conditions.

Table 4.15-6
Baseline (no project) Conditions: Intersection Levels of Service

			Friday PM Peak Hour			Sunday Evening Peak Hour		
#	Intersection	Control Type	Delay	LOS	Mitigate	Delay	LOS	Mitigate
1	Grant Line Rd./I-580 EB Ramps	TWSC	**46.7**	**E**	---	10.9	B	---
2	Grant Line Rd./I-580 WB Ramps	TWSC	16.1	C	---	10.5	B	---
3	Grant Line Rd./Altamont Pass Rd.	TWSC	**>50.0**	**F**	---	11.9	B	---
4	Grant Line Rd./Midway Rd.	TWSC	**> 50.0**	**F**	---	19.0	C	---
5	Midway Rd./AMP Driveway	TWSC	**> 50.0**	**F**	---	12.1	B	---
6	Patterson Pass Rd./Midway Rd.	TWSC	15.4	C	---	9.6	A	---
7	Patterson Pass Rd./I-580 SB Ramps	TWSC	**> 50.0**	**F**	---	11.1	B	---
8	Mountain House Pkwy./I-580 NB Ramps	TWSC	**> 50.0**	**F**	---	10.8	B	---
9	Mountain House Pkwy./I-205 EB Ramps	Signal	16.0	B	---	18.7	B	---
10	Mountain House Pkwy./I-205 WB Ramps	Signal	11.3	B	---	8.9	A	---
11	Mountain House Pkwy./Grant Line Rd.	Signal	31.2	C	---	18.0	B	---

Intersection LOS based on the Transportation Research Board (TRB) Highway Capacity Manual (HCM) 2000 methodology. Synchro-Simtraffic software Version 6.0. Legend: TWSC = Two-Way-Stop Control. Transportation Management Plan = TMP

Grant Line Road/Altamont Pass Road: The unsignalized intersection of Grant Line Road/Altamont Pass Road would be operating at LOS F for the stop-sign controlled eastbound Altamont Pass Road approach at Grant Line Road during the Friday PM peak hour. This intersection would meet the peak hour criteria for signalization as defined by Caltrans/MUTCD and baseline traffic would add proportionally to this warrant.

Grant Line Road/Midway Road: This unsignalized intersection would experience significant vehicle delays (LOS F) and vehicle queuing for the stop-sign controlled northbound Midway Road approach at Grant Line Road during the Friday PM peak hour. There would be two factors contributing towards these conditions:

1) Significant eastbound through-traffic on Grant Line Road (688 vehicles) and, 2) a large eastbound left-turn movement (528 vehicles) from Grant Line Road onto southbound Midway Road. The large increase in eastbound left-turn movements from Grant Line Road onto Midway Road is directly attributable to "baseline" assumptions for AMP racetrack operations using an attendance figure of 6,150 persons. The majority of vehicle trips generated by this attendance is inbound during a Friday PM peak hour. Based on Caltrans peak hour signal warrants, the Grant Line Road/Midway Road intersection would qualify for signalization under Baseline (No Project) Conditions.

Midway Road/Altamont Motorsports Park Driveway: Again, under Baseline (No Project) Conditions, this unsignalized intersection would be operating at LOS F for the outbound (westbound) left and right turning movements from the AMP driveway onto Midway Road. Due to "baseline" assumptions for racetrack operations and attendance, this main driveway entrance would qualify for signalization under Caltrans peak hour criteria during the Friday PM peak hour.

Patterson Pass Road/I-580 Southbound Ramps: This unsignalized intersection would be operating at LOS F during the Friday PM peak hour for the southbound off-ramp movements from I-580 onto Patterson Pass Road. This condition would primarily be related to an increase in westbound through-traffic related to AMP racetrack operations. On Patterson Pass Road, there is a large westbound through movement (504 vehicles) related to baseline project traffic as well as large eastbound commute movement (493 vehicles) traveling south to I-580 or east onto Mountain House Parkway. Based on Caltrans peak hour signal warrants, the Patterson Pass Road/I-580 southbound ramps intersection would qualify for signalization under Baseline (No Project) Conditions.

Mountain House Parkway/I-580 northbound ramps: This unsignalized intersection would be operating at LOS F during the Friday PM peak hour for the northbound left-turn off-ramp movement from I-580 onto Mountain House Parkway. Again, this condition would primarily be related to an increase in northbound left-turn movements related to AMP racetrack operations and through-traffic on Mountain House Parkway/Patterson Pass Road. Based on Caltrans peak hour signal warrants, the Mountain HouseParkway/I-580 southbound ramps intersection would qualify for signalization under Baseline (No Project) Conditions.

All remaining project study intersections would be operating at acceptable conditions (LOS D or better) with Baseline (No Project) traffic volumes during both the Friday PM peak hour and Sunday evening peak hour.

4.15.4.3.4.2 Freeway Segments

With Baseline (No Project) traffic volumes, specific freeway segments in the project study area would experience some congestion in the eastbound commute direction during a Friday PM peak hour. As shown in **Table 4.15-6, Existing and Baseline (No Project) Conditions: Freeway Segment Levels of Service Friday PM Peak Hour**, all freeway segments are calculated to be operating at LOS D or better during the PM peak hour. However, as with existing conditions, the studied freeway segments on I-580 and I-205 can experience slow progression and vehicle queuing during peak commute periods. This is particularly true for freeway segments in the eastbound commute direction and during these time periods segments are likely operating at unacceptable conditions (LOS E-F) during the Friday PM peak hour. Traffic volumes related to baseline project attendance of 6,150 would add proportionately to these vehicle congestion/delays.

It is noted that baseline freeway improvement projects currently under construction are expected to provide some relief for current and future freeway congestion along I-580 and I-205. Specifically, the I-205 widening project between Hansen Road and I-5 would provide an additional travel lane in each direction (4 travel lanes to 6 travel lanes) which would relieve some of the eastbound commute congestion.

Table 4.15-7
Existing and Baseline (No Project) Conditions – Freeway Segment Levels of Service
Friday PM Peak Hour

		Existing Conditions			Baseline (NP) Conditions		
Intersection	# Of Lanes	Existing Capacity	PM Peak Volume	LOS-V/C	Baseline Capacity	PM Peak Volume	LOS-V/C
INTERSTATE 580							
West of Grant Line Road							
Eastbound	4	8000	6630	D 0.83	8000	6825	D 0.85
Westbound	4	8000	3570	A 0.45	8000	3597	A 0.45
Between Grant Line Rd. & I-205							
Eastbound	4	8000	6630	D 0.83	8000	6648	D 0.83
Westbound	4	8000	3570	A 0.45	8000	3700	A 0.46
Between I-205 & Patterson Pass Rd.							
Eastbound	2	4000	2605	B 0.65	4000	2605	B 0.65
Westbound	2	4000	1345	A 0.34	4000	1345	A 0.34
South of Patterson Pass Rd.							
Eastbound	2	4000	2605	B 0.65	4000	2649	B 0.66
Westbound	2	4000	1345	A 0.34	4000	1669	A 0.42
INTERSTATE 205							
Between I-580 & Mt. House Pkwy.							
Eastbound	3	6000	4580	C 0.76	6000	4598	C 0.77
Westbound	3	6000	3320	A 0.55	6000	3450	A 0.58
East of Mt. House Pkwy.							

Intersection	# Of Lanes	Existing Conditions			Baseline (NP) Conditions		
		Existing Capacity	PM Peak Volume	LOS-V/C	Baseline Capacity	PM Peak Volume	LOS-V/C
Eastbound	3	6000	4580	C 0.76	6000	4634	C 0.77
Westbound	3	6000	3320	A 0.55	6000	3710	B 0.62

Level of Service based on the TRB, 2000 Highway Capacity Manual, Chapter 3, Table 3-1, LOS Criteria for Basic Freeway Segments. Assumes maximum service flow rate of 2,000 passenger cars per hour per lane (pcphpl) for freeway segments.

4.15.4.4 Project Trip Generation

Due to the unique characteristics associated with a racetrack operation, daily and peak hour trip generation was estimated from different sources for project components related to overall operations; attendance, parking, peak hour attendance factor, vehicle trip rates, and auto occupancy rates. Further, proposed project (racetrack) operations were evaluated for both a Friday PM peak hour and Sunday evening peak hour. Both of these time periods have different attributes when considering inbound/outbound flow from the project site, existing volumes on the street network, and overall impacts related to intersection and freeway operation. The three sources used to develop proposed project trip generation follows:

1. Vehicle trip generation and parking surveys conducted at the Altamont Motorsport Park. Both vehicle trip generation and vehicle parking surveys were conducted at the project site (Altamont Motorsports Park) during its largest yearly event (Grand Nationals West: Altamont 2006). Surveys were conducted on a weekend Sunday 9:00 AM to 9:15 PM;[6]

2. Riverside Motorsports Park Master Plan DEIR; Information contained within this document provided vehicle splits (inbound/outbound) and peak hour percentage (from the daily) for a weekday large event;[7]

3. Traffic Operations Analysis for the Proposed Tulare Motorsports Park; Information contained within this document provided corroboration of auto occupancy rates consistent with other racetrack operations and approved by Caltrans.[8]

Daily and peak hour proposed project trip generation for a Friday PM peak hour and a Sunday evening peak hour has been calculated in **Table 4.15-7, Proposed Project Trip Generation: Friday PM Peak and**

6 Omni-Means Engineers & Planners, Altamont Motorsports Park, Weekend (Sunday) large event survey, 9:00 AM to 9:15 PM Grand Nationals West Altamont 2006, Vehicle trip rate, auto occupancy, and parking surveys, October 15, 2006.

7 EDAW, Riverside Motorsports Park Master Plan Draft EIR, Table 4.8-7, Weekday event, daily, and peak hour trip generation splits, Merced County, 2005.

8 Omni-Means Engineers & Planners, Traffic Operations Analysis for the Proposed Tulare Motorsports Complex, Auto occupancy rates for racetrack operations, Tulare County, December, 2007.

Sunday Evening Peak Hour. Methodologies for the Friday PM peak hour and Sunday evening peak hour differ as follows:

4.15.4.4.1 Friday PM Peak Hour

Under Friday PM peak hour conditions, no available peak hour vehicle counts were available from the AMP facility since no "large events" currently occur on this day. Therefore, calculated trip generation for this time period is done on a theoretical basis. As with both trip generation scenarios, a total attendance of 8,000 persons has been assumed (6,150 for Baseline conditions and 1,850 persons for Proposed Project conditions). The surveyed auto occupancy of 2.75 persons per vehicle is based on actual surveys conducted at the AMP project site. This survey is likely conservative based on the number of large SUV's, motor homes, and trailers arriving at the site. Other studies have used five people per recreational vehicle and 3.2 people per vehicle. However, this occupancy rate of 2.75 persons per vehicle is consistent with ongoing studies conducted for the Tulare Motorsports Park. The directional split percentage is based on actual data collected at the AMP project site primarily for inbound traffic flows. Finally, the peak hour percentage factor of 66 percent (of the daily inbound trips) was derived from vehicle trip generation calculated for the Riverside Motorsports Park project based on a large weekday event. Using these factors and assumptions, the proposed project's Friday PM peak hour trip generation has been calculated in **Table 4.15-8, Proposed Project Trip Generation: Friday PM Peak and Sunday Evening Peak Hour**. As calculated, the proposed project would generate 1,476 trips related to "baseline" conditions already occurring at the site.

The proposed project is expected to generate an additional 444 trips during the same time period. Vehicle trips generated by the proposed project during the Friday PM peak hour would tend to be more compressed and arrive within a narrower time frame compared to Sunday racetrack operations.

4.15.4.4.2 Sunday Evening Peak Hour

Proposed project trip generation for the Sunday evening peak hour is based on actual vehicle count and attendance data collected at the AMP project site. The surveyed attendance for the Sunday large event was 3,450 persons. Using 8,000 persons as the maximum allowable attendance, this would equate to proportional demand ratio increase of 2.32 (8,000 persons / 3,450 persons). Based on a surveyed peak hour trip generation of 463 trips, this would result in a proportional increase to 1,074 trips (463 trips x 2.32 pdi = 1,074 trips). As shown in **Table 4.15-7**, this would equate to 824 Sunday evening peak hour "baseline" trips and 250 "proposed project" trips.

Table 4.15-8
Proposed Project Trip Generation
Friday PM Peak and Sunday Evening Peak Hour[1,2,3]

Friday PM Peak Hour	
Components	
Attendance	8,000 persons
Auto Occupancy	2.75 persons/vehicle
Directional Split (%)	88/12 inbound/outbound
Peak Hour Percentage	66%
Trip Generation	
8,000 attendees / 2.75 persons/vehicle	= 2,909 vehicles
2,909 vehicles x 2 (inbound/outbound)	= 5,818 daily vehicle trips
2,909 vehicles x 66% peak hour	= 1,920 Friday PM peak hour trips (1,690 in, 230 out)
Baseline Trips	1,476 (1299 in, 177 out)
Proposed Project Trips	444 (390 in, 54 out)
Sunday PM Evening Peak Hour	
Components:	
Attendance	8,000 persons
Actual AMP Peak Hour Trips	463 trips (2 in, 461 out)
Actual AMP Attendance	3,450 persons
Trip Generation	
8,000 attendees / 3,450 persons	= 2.32 proportional demand ratio
463 peak hour trips x 2.32 pdi	= 1,074 Sunday evening peak hour trips (5 in, 1,069 out)
Baseline Trips	824 (4 in, 820 out)
Proposed Project Trips	250 (5 in, 245 out)

[1] *Omni-Means Engineers & Planners, Altamont Motorsports Park, Weekend (Sunday) large event survey, 9:00 AM. to 9:15 PM, Grand Nationals West Altamont 200, Vehicle trip rate, auto occupancy, and parking surveys, October 15, 2006.*

[2] *EDAW, Riverside Motorsports Park Master Plan Draft EIR, Table 4.8-7, Weekday event, daily, and peak hour trip generation splits, Merced County, 2005.*

[3] *Omni-Means Engineers & Planners, Traffic Operations Analysis for the Proposed Tulare Motorsports Complex, Auto occupancy rates for racetrack operations, Tulare County, December, 2007.*

4.15.4.5 Project Trip Distribution and Assignment

The directional trip distribution and assignment of project-generated trips was estimated based on existing and projected future traffic flows and travel patterns within the vicinity of the project site, the demographics of likely fan bases in surrounding cities, and freeway access from both I-580 and I-205. Preliminary project trip distribution estimates were reviewed by the project applicant for accuracy with respect to current track attendance. The project trips have been distributed as follows:

- 15 percent to/from west on I-580

- 25 percent to/from east (south) on I-580
- 30 percent to/from east on I-205
- 20 percent to/from north on Mountain House Road
- 5 percent to/from east on Grant Line Road
- 5 percent to/from the southeast on Schulte Road

Proposed project distribution has been shown graphically in **Figure 4.15-6, Project Trips Distribution**. Proposed project trips for the Friday PM peak hour and Sunday evening peak hour have been added to Baseline (No Project) volumes and have been shown in **Figure 4.15-7, Baseline + Project Volumes Friday PM and Sunday PM Peak Hour**.

4.15.4.6 Impacts and Mitigation Measures

Potential Impact 4.15-1: Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?

4.15.4.7 Baseline Plus Project Intersection Operation

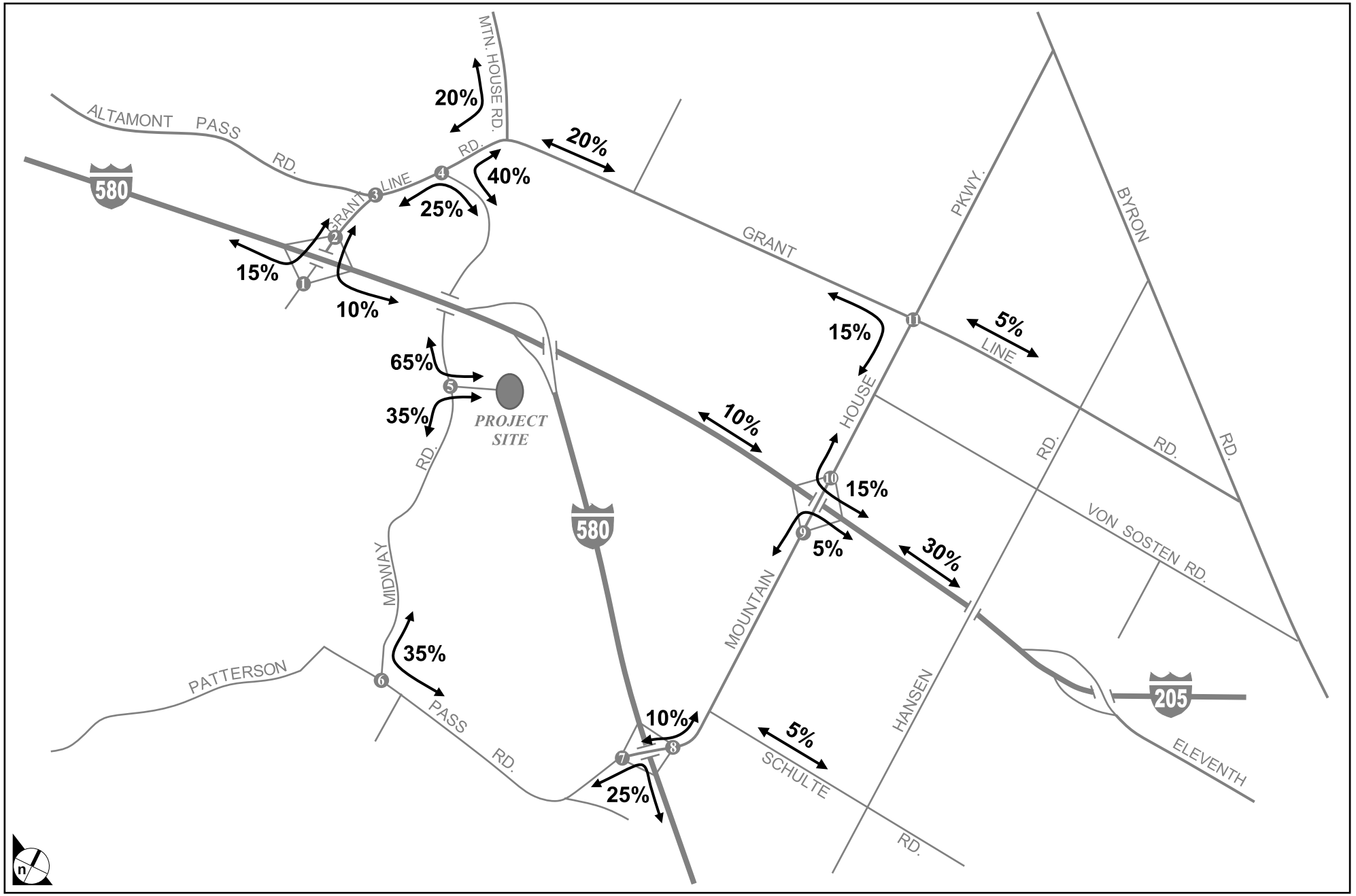
With proposed project traffic added to Baseline (No Project) traffic volumes, intersection LOS has been calculated and is shown in **Table 4.15-8, Baseline and Baseline Plus Project Conditions: Intersection Levels of Service**. As calculated, six (6) study intersections would be operating at unacceptable conditions (LOS E-F) during the Friday PM peak hour with project traffic added to Baseline conditions. These include the unsignalized intersections of Grant Line Road/I-580 Eastbound ramps, Grant Line Road/Altamont Pass Road, Grant Line Road/Midway Road, Midway Road/AMP Driveway, Patterson Pass Road/I-580 southbound ramps, and Mountain House Parkway/I-580 northbound ramps would operate at LOS F during the Friday PM peak hour.

Table 4.15-9
Baseline and Baseline Plus Project Conditions
Intersection Levels of Service

#	Intersection	Control Type	Friday PM Peak Hour			Sunday Evening Peak Hour		
			BL LOS/ Delay	BL+PRJ LOS/ Delay	Project Mit.	BL LOS/ Delay	BL+PRJ LOS/ Delay	Project Mit.
1	Grant Line Rd./I-580 EB Ramps	Signal	**E 46.7**	**F >50.0**	**A 9.6**	B 10.9	B 11.5	**B 10.2**
2	Grant Line Rd./I-580 WB Ramps	Signal	C 16.1	C 17.6	---	B 10.5	B 10.9	---
3	Grant Line Rd./Altamont Pass Rd.	Signal	**F > 50.0**	**F > 50.0**	**B 18.7**	B 11.9	B 12.6	**B 11.4**
4	Grant Line Rd./Midway Rd.	TWSC	**F > 50.0**	**F > 50.0**	**TMP**	C 19.0	**E 36.9**	**TMP**
5	Midway Rd./AMP Driveway	TWSC	**F > 50.0**	**F > 50.0**	**TMP**	B 12.1	C 15.6	**TMP**
6	Patterson Pass Rd./Midway Rd.	TWSC	C 15.4	C 20.4	**TMP**	A 9.6	B 11.0	**TMP**
7	Patterson Pass Rd./I-580 SB Ramps	TWSC	**F > 50.0**	**F > 50.0**	**C 27.5**	B 11.1	B 11.6	**C 20.7**
8	Mountain House Pkwy./I-580 NB Ramps	TWSC	**F > 50.0**	**F > 50.0**	**B 13.2**	B 10.8	B 11.0	**B 14.3**
9	Mountain House Pkwy./I-205 EB Ramps	Signal	B 16.0	B 16.1	---	B 18.7	B 19.1	---
10	Mountain House Pkwy./I-205 WB Ramps	Signal	B 11.3	B 11.7	---	A 8.9	A 8.9	---
11	Mountain House Pkwy./Grant Line Rd.	Signal	C 31.2	D 36.8	---	B 18.0	B 19.7	---

Intersection LOS based on the Transportation Research Board (TRB) Highway Capacity Manual (HCM) 2000 methodology. Synchro-Simtraffic software Version 6.0. Legend: TWSC = Two-Way-Stop Control, Baseline = BL, Project = Prj., Mitigated = Mit., Transportation Management Plan = TMP

Grant Line Road/I-580 Eastbound Ramps: This unsignalized ramp intersection would experience vehicle delays (LOS F) for the stop-sign controlled I-580 eastbound off-ramp approach at Grant Line Road. The main factor adding to these delays would be the increase in eastbound left-turn movements from the I-580 off-ramp onto Grant Line Road resulting from baseline project attendance of 1,850 persons. Based on Caltrans peak hour signal warrants, the Grant Line Road/I-580 Eastbound ramp intersection would not qualify for signalization under Baseline plus Project Conditions.

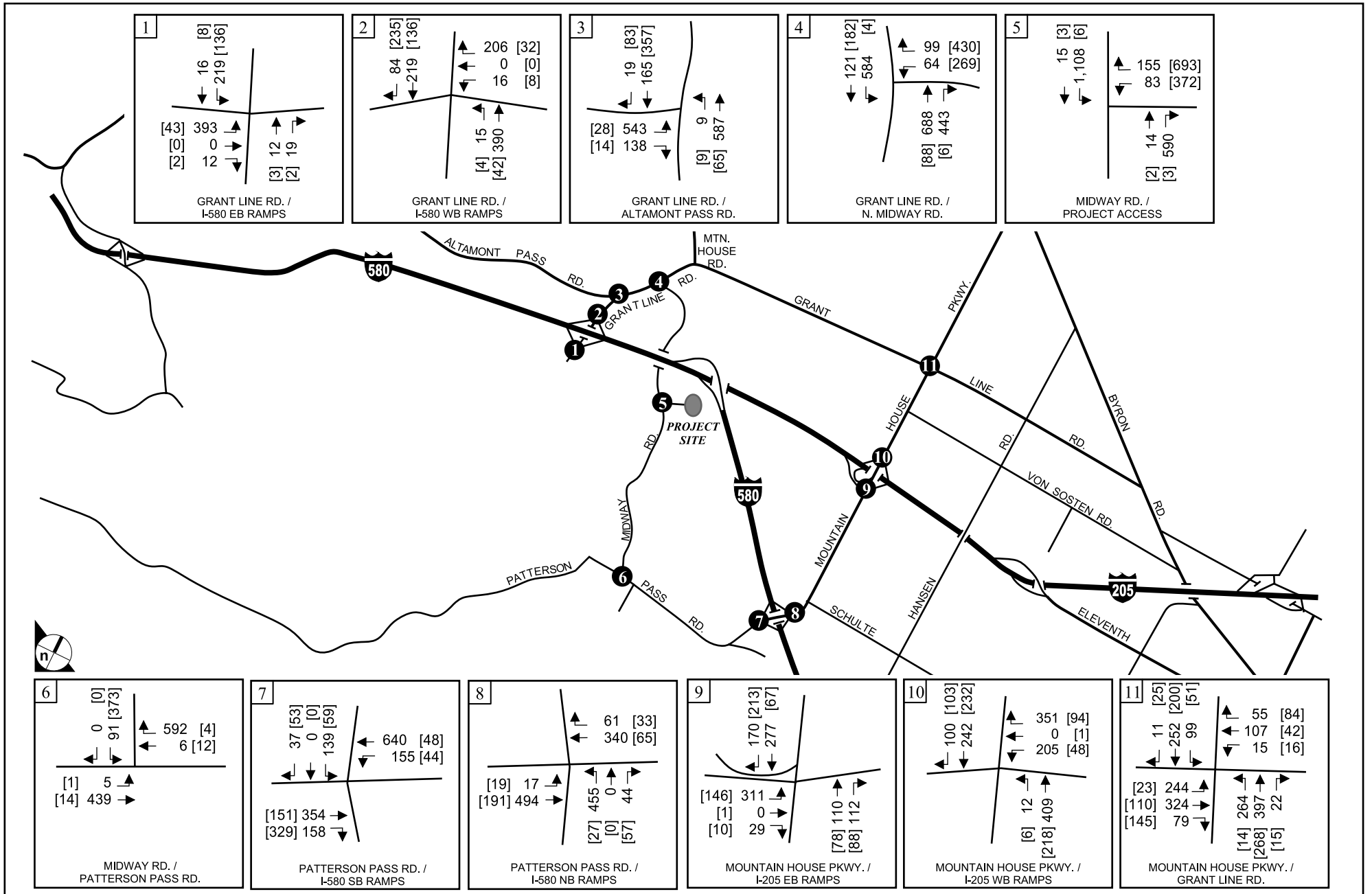


SOURCE: Omni-Means - June 2008

FIGURE **4.15-6**

Project Trips Distribution

931-002•06/08



SOURCE: Omni-Means - June 2008

FIGURE **4.15-7**

Baseline + Project Volumes Friday PM and [Sunday PM] Peak Hour

931-002•06/08

The operation of the Grant Line Road/I-580 Eastbound ramps intersection at LOS F during Friday PM peak hour this would be considered a significant impact based on Alameda County and San Joaquin County significance criteria. The Grant Line Road/I-580 Eastbound ramp intersection would be operating at LOS F for the stop-sign controlled eastbound left-turn from the off-ramp onto Grant Line Road. The intersection would not meet peak hour signal warrant criteria with proposed project traffic. However, the intersection is planned for signalization as part of the Mountain House Specific Plan phased development.

TRA-1 Prior to increasing operation levels to 8,000 people the project applicant shall contribute a proportional "fair share" toward the costs of signalization of the Grant Line Road/I-580 Eastbound ramps intersection to be determined by the County of Alameda.

Grant Line Road/Altamont Pass Road: The unsignalized intersection would continue to operate at LOS F during the Friday peak hour for the eastbound Altamont Pass Road stop-sign controlled approach. The intersection would qualify for signalization under existing conditions and both Baseline and Proposed Project traffic would add proportionately to these warrants.

The operation of the Grant Line Road/Altamont Pass Road intersection at LOS F during Friday PM peak hour would be considered a significant impact based on Alameda County and San Joaquin County significance criteria. The Grant Line Road/Altamont Pass Road intersection would be operating at LOS F for the stop-sign controlled eastbound left-turn from Altamont Pass onto Grant Line Road. The intersection would meet peak hour signal warrant criteria under existing conditions. Baseline and proposed project traffic would add proportionately to warrant satisfaction. The intersection is planned for signalization during the mid-phase portion of the Mountain House Specific Plan development.

TRA-2 Prior to increasing operation levels to 8,000 people the project applicant shall contribute a proportional "fair share" toward the costs of signalization of the Grant Line Road/Altamont Pass Road intersection ramps intersection to be determined by the County of Alameda.

Grant Line Road/Midway Road: This unsignalized intersection would experience significant vehicle delays (LOS F) and vehicle queuing for the stop-sign controlled northbound Midway Road approach at Grant Line Road during the Friday PM peak hour. As with Baseline (No Project) conditions, there would be two factors contributing towards these conditions: 1) Significant eastbound through-traffic on Grant Line Road (688 vehicles) and, 2) a large eastbound left-turn movement (584 vehicles) from Grant Line Road onto southbound Midway Road. The large increase in eastbound left-turn movements from Grant Line Road onto Midway Road is directly attributable to "Proposed Project" assumptions for AMP racetrack operations using an attendance figure of 1,850 persons. The majority of vehicle trips generated by this attendance is

inbound during a Friday PM peak hour. Based on Caltrans peak hour signal warrants, the Grant Line Road/Midway Road intersection would qualify for signalization under Baseline (No Project) Conditions.

The operation of the Grant Line Road/Midway Road intersection at LOS F during the Friday PM peak hour would be considered a significant impact based on Alameda County and San Joaquin County significance criteria.

TRA-3 Prior to increasing operation levels to 8,000 people the project applicant shall prepare a Traffic Management Plan (TMP) for the Grant Line Road/Midway Road intersection. The TMP shall be submitted to Alameda County for review and approval prior to implementation.

Midway Road/Altamont Motorsports Driveway: With Baseline plus Project conditions, this unsignalized intersection would be operating at LOS F for the outbound (westbound) left and right turning movements from the AMP driveway onto Midway Road. Due to "proposed project" assumptions for racetrack operations and attendance, this main driveway entrance would qualify for signalization under Caltrans peak hour criteria during the Friday PM peak hour.

The operation of the Midway Road/Altamont Motorsports Driveway intersection at LOS F during Friday PM peak hour would be considered a significant impact based on Alameda County and San Joaquin County significance criteria.

TRA-4a Prior to increasing operation levels to 8,000 people the project applicant shall prepare a Traffic Management Plan (TMP) for the Midway Road/AMP driveway. The TMP shall be submitted to Alameda County for review and approval prior to implementation.

TRA-4b Prior to increasing operation levels to 8,000 people the project applicant shall prepare a Traffic Management Plan (TMP) for the Patterson Pass Road/Midway Road intersection. The TMP shall be submitted to Alameda County for review and approval prior to implementation.

Patterson Pass Road/I-580 Southbound Ramps: The I-580 ramp intersection would be operating at LOS F for the southbound stop-sign controlled off-ramp at Patterson Pass Road. Based on Caltrans peak hour signal warrants, the Patterson Pass Road/I-580 southbound ramps intersection would qualify for signalization under Baseline plus Project Conditions.

The operation of the Patterson Pass Road/I-580 Southbound ramp intersection at LOS F during the Friday PM peak hour would be considered a significant impact based on Alameda County and San Joaquin County

significance criteria. The Patterson Pass Road/I-580 Southbound Ramp intersection would be operating at LOS F for the southbound off-ramp left-turn movement onto Patterson Pass Road-Mountain House Parkway with proposed project traffic. The I-580 over-crossing is planned to be widened as part of the Mountain House Specific Plan development (but not signalized).

TRA-5 Prior to increasing operation levels to 8,000 people the project applicant shall contribute a proportional "fair share" toward the costs of widening the I-580 overcrossing and install a traffic signal at the Patterson Pass Road/I-580 Southbound Ramp intersection.

Mountain House Parkway/I-580 northbound ramps: This unsignalized intersection would be operating at LOS F during the Friday PM peak hour for the northbound left-turn off-ramp movement from I-580 onto Mountain House Parkway. Again, this condition would primarily be related to an increase in northbound left-turn movements related to AMP racetrack operations and through-traffic on Mountain House Parkway/Patterson Pass Road. Based on Caltrans peak hour signal warrants, the Mountain HouseParkway/I-580 southbound ramps intersection would qualify for signalization under Baseline plus Project Conditions.

The operation of the Mountain House Parkway/I-580 Northbound ramp intersection at LOS F during the Friday PM peak hour would be considered a significant impact based on Alameda County and San Joaquin County significance criteria. The Mountain House Parkway/I-580 Northbound Ramp intersection would be operating at LOS F for the northbound off-ramp left-turn movement onto Patterson Pass Road-Mountain House Parkway with proposed project traffic. The I-580 over-crossing is planned to be widened as part of the Mountain House Specific Plan development (but not signalized).

TRA-6 Prior to increasing operation levels to 8,000 people the project applicant shall contribute a proportional "fair share" toward the costs of widening the I-580 overcrossing and install a traffic signal at the Mountain House Parkway/I-580 Northbound Ramp intersection.

The proposed project would contribute to existing service levels at project area intersections/roadways that would exceed established operational standards. This is considered a significant impact. Implementation of **Mitigation Measure TRA-7** would reduce impacts on the intersection LOS and roadway queuing on Midway Road to less-than-significant levels. However, there is no feasible mitigation that would completely mitigate this impact to a less than significant level.

Conclusion: Significant and Unavoidable.

TRA-7 Prior to increasing operation levels to 8,000 people the project applicant shall prepare a Transportation Management Plan (TMP) to be implemented during regionally significant events, utilizing the following language:

> "Transportation management combines trained and authorized personnel-based services, motorist and guest incentives, roadway and/or intersection modifications (permanent or temporary), and/or mechanical devices (e.g., portable information message signs) that disperse traffic and facilitate traffic flow to help relieve traffic congestion, and maximize utilization of existing transportation resources. The three basic goals of the Traffic and Circulation Management Plan include:
>
> - Traffic dispersement through alternative or designated routes, so as not to increase congestion on individual roadways;
> - Time-based traffic-dispersement, so as not to increase congestion during peak travel periods; and,
> - Converting automotive vehicular trips to alternative modes of transportation.
>
> The TMP includes as assessment of the existing transportation infrastructure in the region, potential road and intersection modifications, and potential operational requirements. Some of the operational requirements that would be applied to the site include:
>
> - Engineered road improvements within the immediate project area;
> - Advanced neighborhood, community, and regional public notice of anticipated events and traffic conditions, published and announced through a variety of mediums;
> - Local information systems, such as changeable message and fixed directional signage, printed materials, and local radio transmissions;
> - Temporary traffic control procedures involving the Sheriff's Department, California Highway Patrol, or other qualified traffic management personnel for intersection control, conversion of lanes and roadways to one-way travel, street closures, and other actions. Qualified traffic management personnel would be identified and/or authorized by the California Highway Patrol or other law enforcement agencies having legal jurisdiction.
> - Advance traffic directions to guests by means of printed collateral material, website maps and directions, printed directions on tickets, and other methods.

Review and approval of the TMP annually by the Alameda County Public Works Agency would be required as part of the annual review of any Conditional Use Permit that may be issued for featured or major feature events at the site."

It is recommended that the TMP be applied to all project study intersections on Midway Road including Grant Line Road/Midway Road, Midway Road/AMP Driveway, and Midway Road/Patterson Pass Road. At this time, implementation of the recommended TMP would be at Alameda County's discretion. However, specific (i.e. example) language/wording has been provided (please refer to Transportation Appendices) for this policy that would define the events, timing, duration, maximum capacity, etc. Typically, a TMP would be prepared by the project applicant and/or event sponsor and approved the County's Public Works Agency and reviewed by the California Highway Patrol.

Recommended Baseline plus Project intersection and roadway improvements have been shown in **Figure 4.15-8, Baseline + Project Lane Configurations and Signal Control**.

4.15.4.8 Baseline Plus Project Freeway Segment Operation

With proposed project traffic added to Baseline (No Project) conditions, freeway segment LOS would remain unchanged. As shown in **Table 4.15-9, Baseline (No Project) and Baseline Plus Project Conditions: Freeway Segment Levels of Service Friday PM Peak Hour**, eastbound freeway segment LOS would continue to operate at LOS D or better during the PM peak hour. However, as with Baseline (No Project) conditions, the studied freeway segments on I-580 and I-205 can experience slow progression and vehicle queuing during peak commute periods. This is particularly true for freeway segments in the eastbound commute direction and during these time periods segments are likely operating at unacceptable conditions (LOS E-F) during the Friday PM peak hour. Therefore, implementation of the project under baseline conditions would result in less-than-significant impacts to freeway segment operation.

Table 4.15-10
Baseline (NP) and Baseline Plus Project Conditions
Freeway Segment Levels of Service Friday PM Peak Hour

		Baseline (NP) Conditions			Baseline + Project Conditions		
Intersection	# Of Lanes	Existing Capacity	PM Peak Volume	LOS-V/C	Baseline Capacity	PM Peak Volume	LOS-V/C
Interstate 580							
West of Grant Line Road							
Eastbound	4	8000	6630	D 0.83	8000	6689	D 0.84
Westbound	4	8000	3570	A 0.45	8000	3578	A 0.45
Between Grant Line Rd. & I-205							

Intersection	# Of Lanes	Baseline (NP) Conditions Existing Capacity	Baseline (NP) Conditions PM Peak Volume	Baseline (NP) Conditions LOS-V/C	Baseline + Project Conditions Baseline Capacity	Baseline + Project Conditions PM Peak Volume	Baseline + Project Conditions LOS-V/C
Eastbound	4	8000	6630	D 0.83	8000	6636	D 0.83
Westbound	4	8000	3570	A 0.45	8000	3609	A 0.45
Between I-205 & Patterson Pass Rd.							
Eastbound	2	4000	2605	B 0.65	4000	2605	B 0.65
Westbound	2	4000	1345	A 0.34	4000	1345	A 0.34
South of Patterson Pass Rd.							
Eastbound	2	4000	2605	B 0.65	4000	2619	B 0.65
Westbound	2	4000	1345	A 0.34	4000	1443	A 0.36
Interstate 205							
Between I-580 & Mt. House Pkwy.							
Eastbound	3	6000	4580	C 0.76	6000	4586	C 0.76
Westbound	3	6000	3320	A 0.55	6000	3359	A 0.56
East of Mt. House Pkwy.							
Eastbound	3	6000	4580	C 0.76	6000	4597	C 0.76
Westbound	3	6000	3320	A 0.55	6000	3437	A 0.57

Level of Service based on the TRB, 2000 Highway Capacity Manual, Chapter 3, Table 3-1, LOS Criteria for Basic Freeway Segments. Assumes maximum service flow rate of 2,000 passenger cars per hour per lane (pcphpl) for freeway segments.

Potential Impact 4.15-2: Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

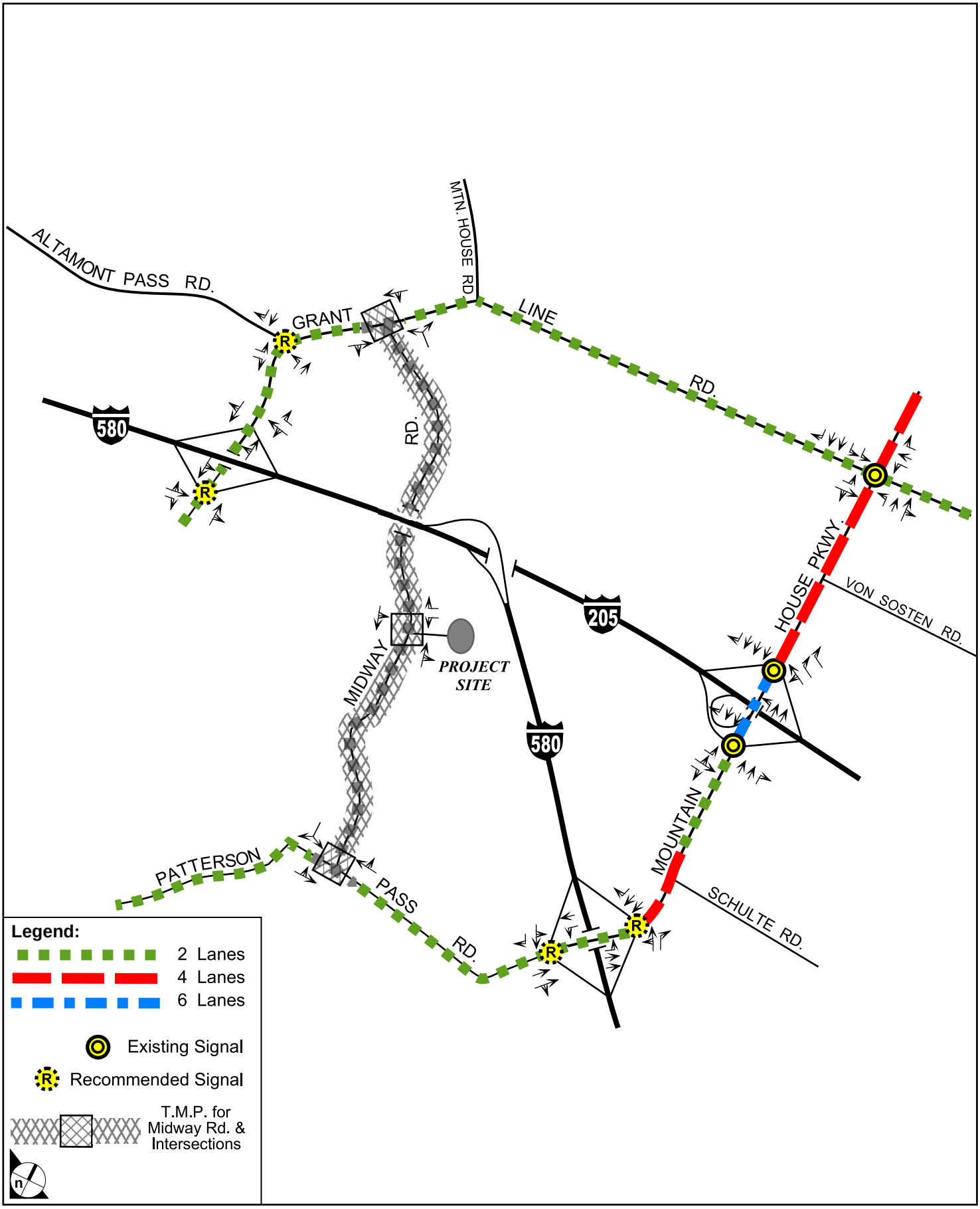
As described above, the proposed project, in various combinations with existing and future (cumulative) approved and planned future projects would exceed established operational standards. This is considered a significant impact. As also described above, there is no feasible mitigation for this impact.

Conclusion: Significant and Partially Unavoidable.

Potential Impact 4.15-3: Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The proposed project would have no effect on air traffic patterns due to increase vehicular traffic or due to project conditions that would generate risks to air traffic, and therefore, there would be no impact.

Conclusion: No Impact.



SOURCE: Omni-Means - June 2008

FIGURE **4.15-8**

Baseline + Project Lane Configurations and Signal Control (Recommended)

Mitigation: No Mitigation Required

Potential Impact 4.15-4: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project does not include any proposed off-site roadway or circulation system improvements. Therefore, the proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses. Therefore, it would be considered a less than significant impact.

Conclusion: Less than significant.

Mitigation: None required.

Potential Impact 4.15-5: Would the project result in inadequate emergency access?

Altamont Motorsports Park has one main access driveway to/from Midway Road to serve both event-related and employee traffic. During periods of peak traffic volumes as described above, the ability for emergency service providers to access and egress the site would be compromised, resulting in inadequate emergency access. This is considered a potentially significant impact that can be mitigated to less than significant levels with implementation of Mitigation Measure TRA-8.

Conclusion: Potentially significant.

TRA-9: The project applicant shall establish an emergency vehicle access with the lead Fire Emergency authority (Alameda County Fire Department, San Joaquin County, and/or the California Department of Forestry (CDF)) that oversees the Altamont area. The design and construction of the secondary access shall be review and approved by Alameda County.

Significance After Mitigation: Less than significant.

Potential Impact 4.15-6: Would the project result in inadequate parking capacity?

Proposed project parking demand has been based on parking surveys conducted at the Altamont Motorsports Park.[9] Currently, vehicle parking is provided in general paved areas located on the east side of the racetrack adjacent to the pit area. In addition, vehicle parking is also provided on the adjacent hillsides

9 Omni-Means Engineers & Planners, Altamont Motorsports Park parking surveys, 9:30 AM – 9:30 PM, October 15, 2006.

and general parking areas (unpaved) that surround the track. During the surveyed major featured event, parking demand varied throughout the day (Sunday) but peaked at 6:00 PM at 729 parked vehicles. Within this total, approximately 75 cars/trucks were parked in the paved area adjacent to the pits with the remainder in unpaved areas on the hillsides and west side of the track.

Using the recorded racetrack attendance of 3,450 persons for the same survey period and a peak parking demand of 729 spaces, the proposed project's estimated parking demand has been calculated below:

8,000 maximum attendance / 3,450 recorded attendance = 2.32 proportional demand increase (pdi)

729 space peak parking demand x 2.32 pdi = 1,691 space parking demand

As shown above, overall peak project parking demand is estimated to be 1,691 spaces during a Sunday major feature event. Given the general nature of the parking facilities (unpaved), the project applicant must demonstrate that these vehicles could be accommodated on-site without overflow onto Midway Road or adjacent neighbors' parcels. In addition, peak parking demand for a Friday would likely be more concentrated. A conservative estimate would include a 20 percent higher peak during a Friday feature event creating a peak parking demand of 2,029 parking spaces.

Based on an average of 400 square feet per parked vehicle, which allows for a 10-foot by 20-foot parking space with another 200 square feet allocated to drive aisles, 2,029 parking spaces would require approximately 18.6 acres of land. The project site utilizes up to 45 acres for parking during major events. As long as vehicles are parked with the assistance of on-site parking directors, which is an existing operational practice, to ensure an ordered parking payout, there should be adequate on-site parking. Therefore, the proposed project would not result in inadequate parking capacity

Conclusion: No impact.

Mitigation: None required.

Potential Impact 4.15-7: Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The proposed project would not result in the alteration or change in conditions of project area roadways that would foreclose their use by alternative forms of transportation, therefore result in no impact.

Conclusion: No impact.

Mitigation: None required.

4.15.5 CUMULATIVE IMPACTS

4.15.5.1 Year 2030 Cumulative (No project) Conditions

Year 2030 Cumulative (No Project) conditions have been based on the San Joaquin County Council of Governments (SJCOG) transportation model and the College Park at Mountain House Specific Plan III DEIR (San Joaquin County). With the project area straddling the Alameda County and San Joaquin County borders, County model projections are not as fluid as they transition (terminate) at County lines. Therefore, SJCOG transportation model projections were deemed to be more complete given that the approved Mountain House Specific Plan land uses were included in overall model development and are likely more up-to-date than Alameda County projections. In addition, cumulative projections from the College Park at Mountain House Specific Plan III were also reviewed and compared with SJCOG model projections. In all cases, the most conservative volume projections were used for intersection and freeway segment analysis.

4.15.5.2 Cumulative Projects

The major cumulative project expected to affect traffic flows in the area is the Mountain House Master Plan project located north of the project site (north of Grant Line Road) in San Joaquin County. The Mountain House Specific Plan(s) [1,2, and 3] have been approved by San Joaquin County. However, development of these Plans has slowed significantly due to economic/housing factors. For this reason, Alameda County has directed that development resulting from these Plans be evaluated under cumulative Year 2030 conditions. Based on discussions with both Alameda County and San Joaquin County Engineering and Planning staff, no other long-range development has been approved for the study area.[10] Using the College Park at Mountain House Specific Plan III Draft EIR, assumed development would occur in three specific plans and is described as follows:[11]

- Mountain House Specific Plan I: Approved in 1994, this project includes approximately 1,398 acres between Mascot Road and Byron Road. Development includes 3,953 dwelling units (not including 189 second units), 310 acres of commercial/industrial property, and three kindergarten through 8th grade schools;

- Mountain House Specific Plan II: Approved in 2005, this project includes 2,302 acres and is located generally north of Byron Road. However, one-third of this specific plan II is located between Grant Line Road and Mascot Road. Development includes 9,350 dwelling units and 450 seconds units (not including 382 acres of commercial/industrial property and five K-8 schools and one high school).

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10 Chandler Martin, Senior Planner, San Joaquin County, Personal communication on October 25, 2007.

11 EDAW, Draft Environmental Impact Report, College Park at Mountain House Specific Plan III (Volume I), San Joaquin County, March 14, 2005.

- Mountain House Specific Plan III (College Park): Approved in November 2005, this project includes 815 acres located between Grant Line Road and I-205 and a portion along Mountain House Parkway extending north of Grant Line Road to 500 feet south of Mascot Road. Development includes 2,302 residential units (not including 233 second units), 1,763,390 square feet of commercial, office and industrial uses, 42.3 acres of parks, two K-8 schools, a 108.8 acre community college, and 33 acres of open space.

4.15.5.3 Cumulative Project Trip Generation

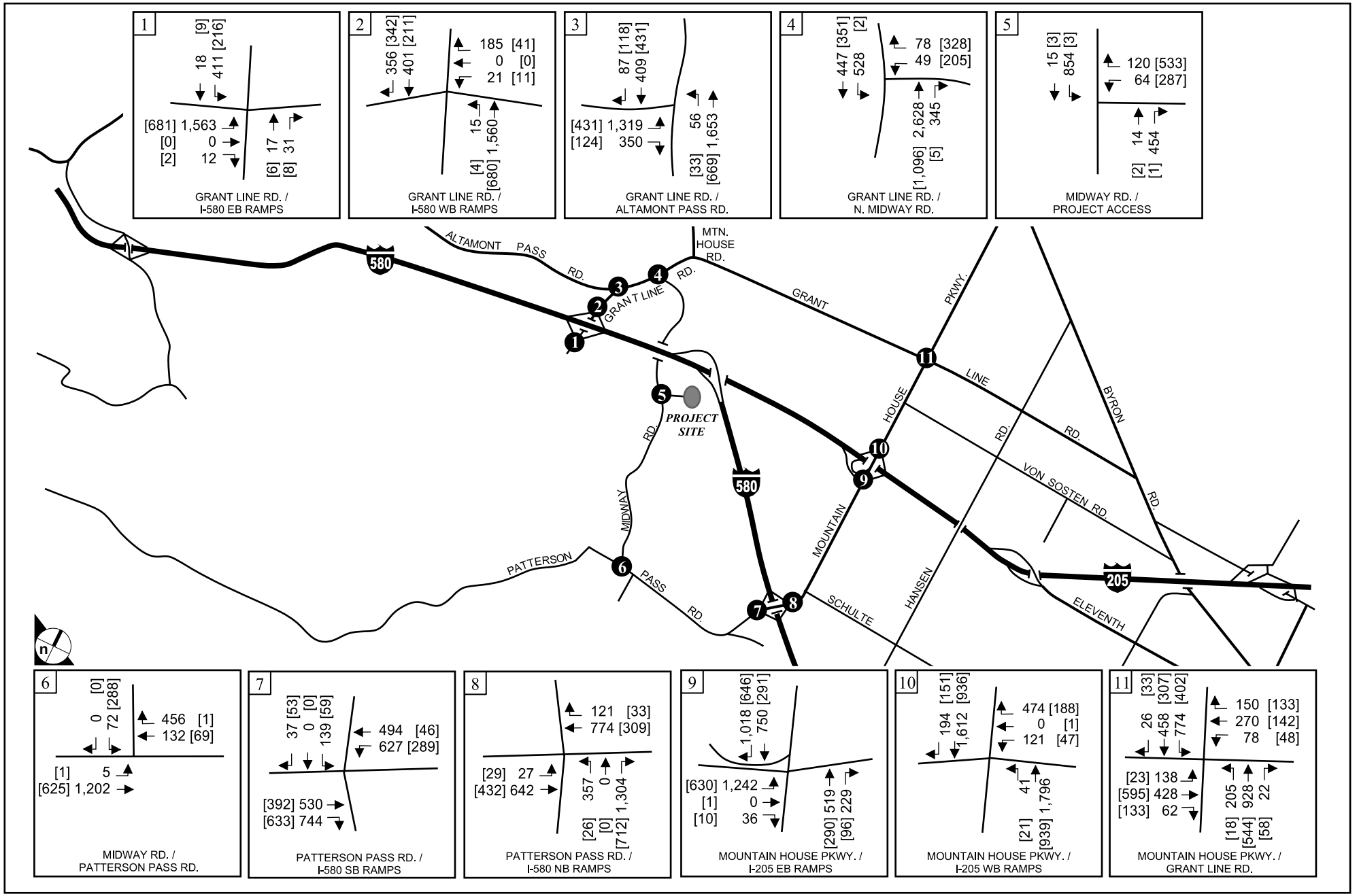
Buildout trip generation for all approved Mountain House specific plans is project at 19,789 weekday PM peak hour trips. From these trips, 9,100 would be internal to the site with the remaining 10,689 external to the site (4,578 inbound, 6,111 outbound).[12] To accurately reflect current building and economic conditions, San Joaquin County was contacted to determine how many residential building permits have been issued since the initial Specific Plan was approved in 1994. Based on the latest data available (September, 2007), 2,288 residential building permits have been finalized to date for approved residential development in the Mountain House. Other ancillary development has occurred within the Mountain House boundaries including two K-8 schools and small retail (7-Eleven Store). However, vehicle trips related to this ancillary development would be considered internal in nature.

Year 2030 Cumulative (No Project) Friday PM peak hour and Sunday evening peak hour volumes are shown in **Figure 4.15-9, Year 2030 Cumulative (No Project) Volumes Friday PM and Sunday PM Peak Hour**.

4.15.5.4 Weekday (Friday) Trip Methodology

With weekday PM peak hour intersection volume projections provided for buildout (Cumulative Year 2030 Conditions), a representative residential trip rate was calculated. Specifically, the Mountain House Specific Plan III (College Park) indicates a total development of 2,535 residential units (2,302 primary and 233 secondary units). These residential units are expected to generate 2,180 weekday PM peak hour vehicle trips. This would equate to a residential trip rate of 0.860 trips/unit (2,180 trips / 2,535 units). With 2,288 residential units built in the Mountain House Plan area to date, these units are generating approximately 1,970 PM peak hour vehicle trips (2,288 units x 0.860 trips/unit). Total weekday PM peak hour trip generation for the entire Mountain House Specific Plans (I, II, & III) is 19,789 vehicle trips. Therefore, just 10 percent (1,970 trips / 19,789 trips) of the development's peak hour vehicle trips are currently circulating on the street network in the Mountain House and/or proposed project study area. Consequently, 90 percent of

12 EDAW, DEIR, College Park at Mountain House Specific Plan III, Table 4.11.8, Mountain House Buildout Trip Generation, San Joaquin County, March 14, 2005.



SOURCE: Omni-Means - June 2008

FIGURE **4.15-9**

Year 2030 Cumulative (No Project) Volumes Friday PM and [Sunday PM] Peak Hour

the volume projections for the Mountain House Specific Plans would be added to existing volumes to simulate an approved Baseline (No Project) scenario.

4.15.5.5 Weekend (Sunday) Trip Methodology

No weekend Sunday evening peak hour intersection volume projections are available for the Mountain House Specific Plans. Therefore, weekday PM peak hour projections (calculated above) were adjusted to account for Sunday peak hour conditions. Specifically, using research conducted by the Institute of Transportation Engineers (ITE) and Caltrans on residential trip generation, the proportion Sunday peak hour trips was estimated.[13,14] ITE indicates that the Sunday daily trip rate is 8.78 trips per unit but has no research on peak evening generation. However, Caltrans research on Sunday peak hour residential trip rates indicates that it is 6 percent of the daily rate. This would equate to Sunday peak hour rate of 0.53 trips/unit (8.78 trips x 6 percent). Using the ITE average weekday PM peak hour residential rate of 1.01 trips/unit (single-family), this would provide a ratio of 52 percent for the Sunday peak hour (0.53 Sunday peak / 1.01 Weekday peak). This ratio was applied to weekday conditions to simulate a Sunday evening Baseline (No Project) scenario.

The counties of Alameda and San Joaquin have identified roadway, intersection, and freeway improvements in the study area. Most of the baseline roadway and intersection improvements are tied to the Mountain House Specific Plans I, II, and III that are already in place as of June, 2008 and those that would affect the project specific roadways and intersections are as follows:[15]

4.15.5.5.1 Roadways

Grant Line Road

- Widen to from two lanes to four (4) travel lanes from the I-580 Eastbound off-ramps through Altamont Pass Road, Midway Road, Mountain House Parkway, Hansen Road, and Byron Road.

Mountain House Parkway

- Widen from four lanes to six (6) travel lanes from Mascot Boulevard through Grant Line Road to Von Sosten Road;
- Widen from four lanes to eight (8) travel lanes between Von Sosten Road and the I-205 overcrossing;

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13 Institute of Transportation Engineers (ITE), Trip Generation, Residential trip rates (Weekday and Sunday Daily—Land Use #210), 2003.

14 Caltrans 8th and 10th Progress Reports, Residential Subdivisions, Sunday peak hour trip generation, 1973-1975,

15 EDAW, College Park Specific Plan III Draft EIR, Table 4.11-18 and Figure 4.11-13, Buildout with Project Lane Configuration and Signal Requirements, San Joaquin County,

- I-205 overcrossing will accommodate six (6) travel lanes;
- Widen to four (4) travel lanes between I-205 overcrossing and Patterson Pass Road (south of I-580).

4.15.5.5.2 Intersections

New traffic signals would be installed at the following locations:

- Grant Line Road/I-580 Eastbound Ramps
- Grant Line Road/I-580 Westbound Ramps
- Grant Line Road/Altamont Pass Road

4.15.5.6 Year 2030 Cumulative (No project) Intersection Operation

Year 2030 Cumulative (No Project) intersection LOS have been shown in **Table 4.15-10, Year 2030 Cumulative (No Project) and Year 2030 Cumulative Plus Project Conditions: Intersection Levels of Service**. As calculated, there would be three intersections operating at unacceptable conditions including Grant Line Road/Midway Road, Midway Road/AMP Driveway, and Patterson Pass Road/Midway Road during the Friday PM peak hour and/or Sunday evening peak hour. The study intersections along Midway Road are primarily affected by Baseline and Proposed Project traffic being generated by the AMP proposal in addition to cumulative traffic and this would be considered a **significant impact.** Therefore, similar mitigation measures have been recommended for intersections on Midway Road as under Baseline plus Project conditions.

The operation of the Grant Line Road/Midway Road, Midway Road/AMP Driveway, and Patterson Pass Road/Midway Road intersections at LOS F during a Friday PM peak hour and Sunday evening peak hour would be considered a **significant impact** based on Alameda County and San Joaquin County significance criteria.

A Traffic Management Plan (TMP) has been recommended for these intersections as part of **Mitigation Measures TRA-3, TRA-4** and **TRA-7** for Project Impacts which would reduce Cumulative (No Project) impacts to **less-than-significant** levels. Please refer to the Project Impacts; Baseline Plus Project Intersection Operation for complete recommendations.

All remaining project study intersections would be operating at LOS D or better with Year 2030 Cumulative (No Project) traffic volumes.

4.15.5.7 Year 2030 Cumulative (No project) freeway segment operation

Year 2030 cumulative (No Project) freeway segment volumes have been based on SJCOG transportation model projections. Based on these freeway volume projections, there would be significant regional traffic growth through the area which would further impact the I-580 and I-205 travel corridors. As shown in **Table 4.15-11, Year 2030 Cumulative (No Project) and Year 2030 Cumulative Plus Project Conditions: Freeway Levels of Service Friday PM Peak**, all eastbound freeway segments on I-580 and I-205 would be operating at LOS F during the Friday PM peak hour. Westbound freeway segments under analysis would be operating at LOS D or better with Year 2030 cumulative (no project) volumes. Eastbound freeway segment operation along I-580 and I-205 would continue to operate at LOS E-F under Year 2030 cumulative (no project) conditions and would considered a **significant and unavoidable** impact as identified in the Mountain House Specific Plan III DEIR.

4.15.5.8 Year 2030 Cumulative Plus Project Intersection Operation

With proposed project volumes, study intersection LOS would remain unchanged from Year 2030 (No Project) conditions. The same impact and mitigation measures (Impact T-7 and Mitigation TRA-11) would apply to proposed project development. Year 2030 Cumulative plus Project Friday PM peak hour and Sunday evening peak hour volumes have been shown in **Figure 4.15-10, Year 2030 Cumulative + Project Volumes Friday PM and Sunday PM Peak Hour**.

Recommended Year 2030 Cumulative plus Project intersection and roadway improvements have been shown in **Figure 4.15-11, Year 2030 Cumulative + Project Lane Configurations and Signal Control**.

4.15.5.9 Year 2030 Cumulative Plus Project Freeway Segment Operation

Due to significant growth along these freeway corridors, volume forecasts for these freeway segments are greater than available capacity. For this reason, many of the vehicle trips related to baseline development would be using alternative routes to I-580 and I-205 such as Altamont Pass Road, Grant Line Road, Mountain House Parkway, Byron Road, and Patterson Pass Road. Even with these diversions, specific freeway segment operation along I-580 and I-205 would continue to operate at LOS E-F under Year 2030 Cumulative plus Project conditions and would considered to be a significant and unavoidable impact as identified in the Mountain House Specific Plan III DEIR.

With proposed project volumes, freeway segment LOS would remain unchanged from Year 2030 (No Project) conditions. Eastbound freeway segment operation along I-580 and I-205 would continue to operate at LOS E-F under Year 2030 cumulative plus project conditions and would considered a significant and unavoidable impact as identified in the Mountain House Specific Plan III DEIR.

Table 4.15-11
Year 2030 Cumulative No Project and Year 2030 Cumulative Plus Project Conditions
Intersection Levels of Service

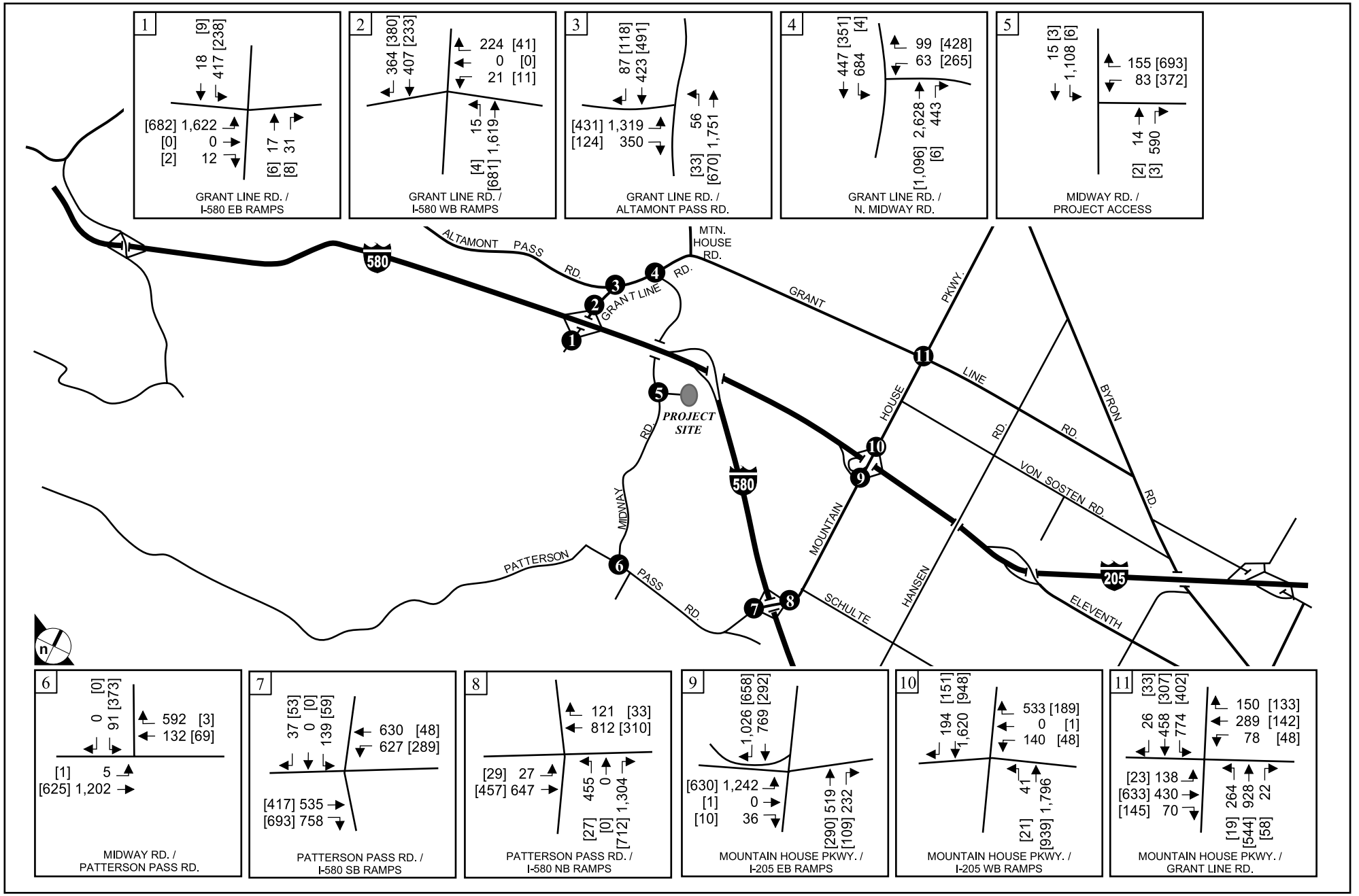
#	Intersection	Control Type	Friday PM Peak Hour			Sunday Evening Peak Hour		
			C (NP) LOS/ Delay	C+PRJ LOS/ Delay	Prj. Mit.	C (NP) LOS/ Delay	BL+PRJ LOS/ Delay	Prj. Mit.
1	Grant Line Rd./I-580 EB Ramps	Signal	D 37.1	D 41.6	---	B 17.0	B 18.6	---
2	Grant Line Rd./I-580 WB Ramps	Signal	B 11.3	B 12.1	---	A 9.3	A 9.4	---
3	Grant Line Rd./Altamont Pass Rd.	Signal	D 43.7	D 51.7	---	A 8.9	A 9.0	---
4	Grant Line Rd./Midway Rd.	TWSC	**F > 50.0**	**F >50.0**	**TMP**	**F > 50.0**	**F > 50.0**	**TMP**
5	Midway Rd./AMP Driveway	TWSC	**F > 50.0**	**F > 50.0**	**TMP**	B 12.1	C 15.6	**TMP**
6	Patterson Pass Rd./Midway Rd.	TWSC	**F >50.0**	**F > 50.0**	**TMP**	**E 48.1**	**F > 50.0**	**TMP**
7	Patterson Pass Rd./I-580 SB Ramps	TWSC	D 52.9	D 52.9	---	C 25.5	C 25.7	---
8	Mountain House Pkwy./I-580 NB Ramps	TWSC	D 38.8	D 38.8	---	A 8.8	A 8.8	---
9	Mountain House Pkwy./I-205 EB Ramps	Signal	B 18.7	B 19.9	---	B 11.4	B 11.4	---
10	Mountain House Pkwy./I-205 WB Ramps	Signal	A 13.3	B 13.8	---	A 9.6	A 9.6	---
11	Mountain House Pkwy./Grant Line Rd.	Signal	C 34.0	C 34.4	---	C 24.4	C 24.9	---

Intersection LOS based on the Transportation Research Board (TRB) Highway Capacity Manual (HCM) 2000 methodology. Synchro-Simtraffic software Version 6.0. Legend: TWSC = Two-Way-Stop Control, Baseline = BL, Project = Prj., Mitigated = Mit., Transportation Management Plan = TMP

Table 4.15-12
Year 2030 Cumulative (NP) and Year 2030 Cumulative Plus Project Conditions
Freeway Segment Levels of Service Friday PM Peak Hour

Intersection	# Of Lanes	Cumulative No Project Conditions			Cumulative Plus Project Conditions		
		Existing Capacity	PM Peak Volume	LOS-V/C	Baseline Capacity	PM Peak Volume	LOS-V/C
Interstate 580							
West of Grant Line Road							
Eastbound	4	8000	**18124**	**F 2.26**	8000	**18183**	**F 2.27**
Westbound	4	8000	5147	B 0.64	8000	5155	B 0.64
Between Grant Line Rd. & I-205							
Eastbound	4	8000	**17231**	**F 2.15**	8000	**17237**	**F 2.15**
Westbound	4	8000	4895	B 0.61	8000	4934	B 0.62
Between I-205 & Patterson Pass Rd.							
Eastbound	2	4000	**4521**	**F 1.13**	4000	**4521**	**F 1.13**
Westbound	2	4000	1343	A 0.34	4000	1343	A 0.34
South of Patterson Pass Rd.							
Eastbound	2	4000	**5375**	**F 1.34**	4000	**5389**	**F 1.34**
Westbound	2	4000	1469	A 0.37	4000	1567	A 0.39
Interstate 205							
Between I-580 & Mt. House Pkwy.							
Eastbound	3	6000	**14005**	**F 2.33**	6000	**14011**	**F 2.33**
Westbound	3	6000	4846	D 0.81	6000	4885	D 0.81
East of Mt. House Pkwy.							
Eastbound	3	6000	**14148**	**F 2.36**	6000	**14165**	**F 2.36**
Westbound	3	6000	4178	B 0.70	6000	4295	C 0.71

Level of Service based on the TRB, 2000 Highway Capacity Manual, Chapter 3, Table 3-1, LOS Criteria for Basic Freeway Segments. Assumes maximum service flow rate of 2,000 passenger cars per hour per lane (pcphpl) for freeway segments.



SOURCE: Omni-Means - June 2008

FIGURE **4.15-10**

Year 2030 Cumulative + Project Volumes Friday PM and [Sunday PM] Peak Hour

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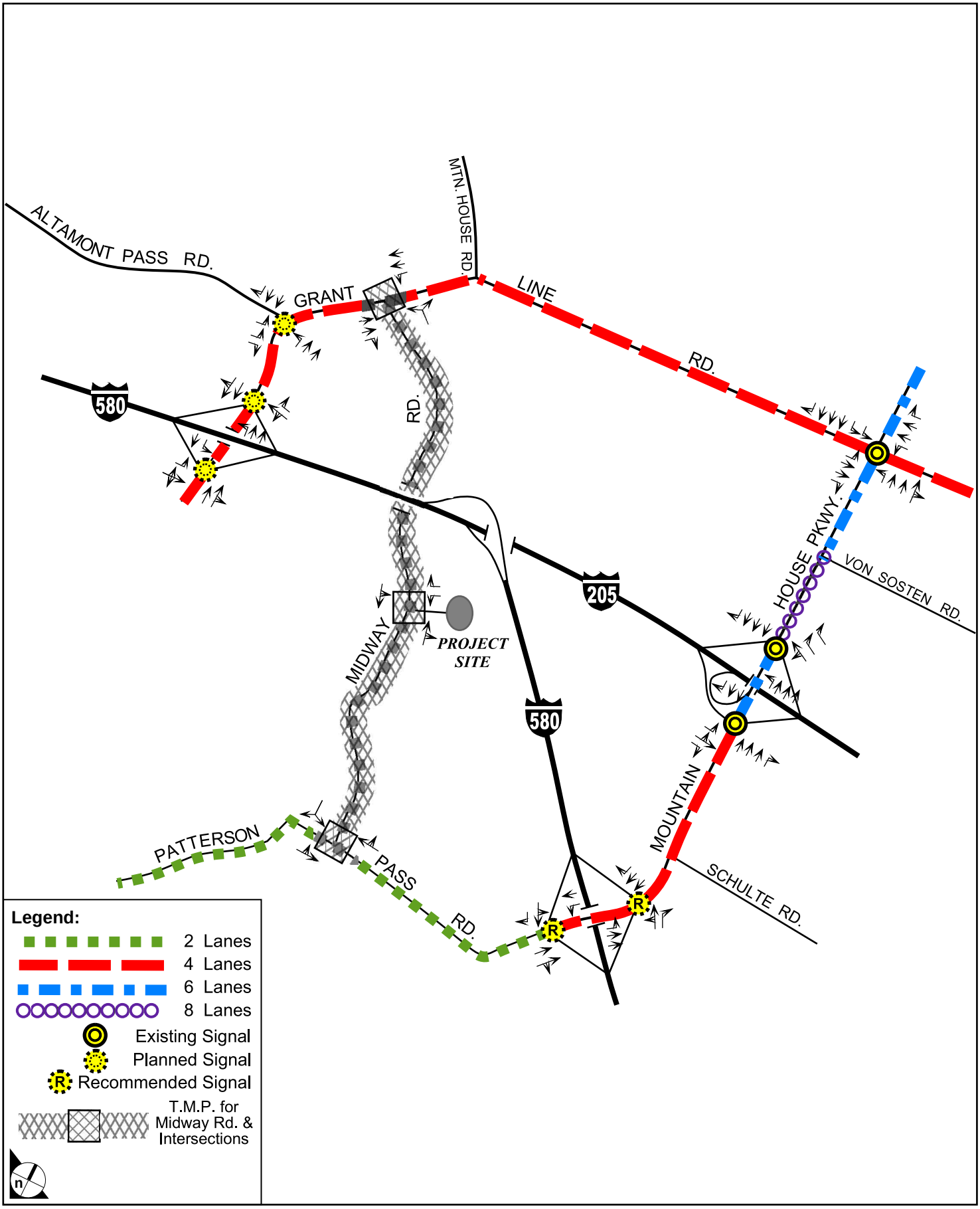

SOURCE: Omni-Means - June 2008

FIGURE **4.15-11**

Year 2030 Cumulative + Project Lane Configurations and Signal Control (Recommended)