4.14 TRANSPORTATION AND TRAFFIC

A. Introduction and Methodology Overview

This chapter presents the existing conditions, regulatory setting, and impact analysis for the Project, related to transportation. The purpose of the transportation impact analysis is to identify the impacts of developing the Project on the surrounding transportation system and to identify feasible measures to mitigate significant impacts, as necessary. The following sections present an overview of existing transportation conditions in the transportation study area; a description of the agencies with jurisdiction over transportation in the study area, including relevant policies; and a description of the Project's impacts on transportation systems, including the methodologies used, thresholds of significance, impact identification, and mitigation measures.

As described more fully below, the analysis of the impacts relating to the construction and operation of Phase 1 of the Project (Phase 1 Project) is performed on an intersection level, and the analysis of the impacts relating to the construction and operation of the Project at full buildout (Project Buildout) is performed on a roadway segment level. This is because Phase 1 of the Project is expected to be fully developed by the horizon year of 2035, whereas full Project Buildout may take additional time beyond 2035 to develop. The longer horizon for Project Buildout makes intersection-level forecasting infeasible for several reasons including: (1) a longer-term travel demand model is not available; (2) there are many variables about how the rest of the region will develop both in terms of land use and infrastructure; and (3) detailed engineering design of roadways for the network under Project Buildout conditions for purposes of analyzing when intersection improvements beyond 2035 would be triggered is not currently available.

Unlike detailed intersection-level forecasts, roadway segment forecasts can be projected for the Project Buildout scenario. Based on the consultants' technical expertise and industry standards, the roadway segment forecasts are useful metrics of Project traffic impacts because, in urban conditions, when segment operations fail, intersection operations would also fail because intersections govern the roadway network capacity.

Based on the above considerations, the following scenarios are assessed in this EIR:

- Existing Plus Phase 1 Project: *Intersection analysis*
- Existing Plus Project Buildout: *Roadway segment analysis*
- 2035 Plus Phase 1 Project: *Intersection analysis*
- 2035 Plus Project Buildout: *Roadway segment analysis*

In addition, freeway segment analysis is provided for all the above cases.

B. Regulatory Framework

This section summarizes existing policies and regulations relevant to transportation and traffic in the Specific Plan area.

1. State Laws and Regulations

Caltrans has jurisdiction over state highway facilities, including I-205, I-580 and related ramps, of relevance here. Caltrans endeavors to maintain a target Level of service (LOS) at the transition between LOS C and LOS D on State highway facilities; however, the agency acknowledges that this may not always be feasible, particularly in urban environments where right-of-way is constrained. Where maintaining LOS C/D is not feasible, Caltrans attempts to maintain the existing LOS when assessing the impact of new development.

2. Regional Regulations

a. San Joaquin Council of Governments

i. Regional Transportation Plan

The San Joaquin Regional Transportation Plan (RTP), administered by the San Joaquin Council of Governments (SJCOG), was most recently updated in 2011. The RTP outlines transportation priorities along with associated goals, objectives, and performance indicators for the coming 25 years in the County. The 2011 RTP goals are listed below:

A) Enhance the Environment/Quality of Life/&Conserve Energy

B) Increase Regional Roadway System Performance

C) Increase Safety & Security

D) Preserve the Existing Regional Transportation System & Promote Efficient Roadway System Management & Operations

E) Support Economic Vitality

F) Promote Interagency Coordination & Public Participation for Transportation Decision-Making & Planning Efforts

G) Maximize Cost Effectiveness

The RTP rates proposed infrastructure projects with regional significance against these goals and associated performance indicators as part of the planning process. Project costs and potential financing sources are also estimated and tracked in the RTP. Planned projects of regional significance from the 2011 document in the study area include the construction of auxiliary lanes on I-205 between the Mountain House Parkway interchange and the Tracy Boulevard interchange; widening Lammers Road from two to four lanes between I-205 and Old Schulte Road; and extending Schulte Road as a four-lane roadway from Faith Lane to Lammers Road; and widening I-205 from 6 to 8 lanes between I-5 and I-580.

ii. Capital Improvement Program

The SJCOG Capital Improvement Program (CIP) is a seven-year list of transportation projects. These projects are developed as part of the Congestion Management Program and are intended to maintain or improve transportation system operational performance and safety.

CIP projects in the study area include the construction of eastbound and westbound auxiliary lanes on I-205 between Tracy Boulevard and Mountain House Parkway; and widening Lammers Road from two to four lanes between I-205 and Old Schulte Road. These projects are fully funded in the RTIP Tier 1 projects list and are scheduled for completion in 2013 and 2017, respectively.

iii. Travel Demand Management Plan

The San Joaquin County Travel Demand Management (TDM) Plan exists primarily for the purpose of establishing an institutional and planning framework between SJCOG and local agencies in San Joaquin County for coordination on issues of demand management and how to more efficiently make use of the existing transportation system.

The document also outlines several potential TDM strategies and their potential for effectiveness in different land use and new development contexts. Strategies include financial incentives, such as roadway pricing, parking cash-out, and employee transit subsidies; system incentives, such as expanding HOV lane, park and ride, and bicycle facilities; and demand incentives, such as expanding rideshare programs and telecommuting options for workers. All strategies are intended to reduce vehicle demand on the roadway system.

iv. San Joaquin Congestion Management Plan

The San Joaquin County Regional Congestion Management Plan (RCMP), most recently updated in October 2012, outlines a set of strategies and performance measures to reduce congestion within the County in compliance with federal guidance, state legislation, and the County's Measure K "Traffic Relief, Safety, Transit, and Road Maintenance Program" Ordinance. The list of County CIP projects is contained within the RCMP.

The RCMP also contains a list of roadways that are considered to be part of the CMP Network. This is the list of roadways to which the RCMP's performance measures are applied. For roadways, performance criteria are dependent on traffic volume and roadway classification. Study area roadways in the RCMP network are: I-205, I-580, and Lammers Road. The LOS standard adopted for the San Joaquin county RCMP is LOS D. The *SJCOG Regional Deficiency Plan*, prepared in 2010, did not identify any deficient facilities in Tracy.

v. Alameda County Congestion Management Plan

The Alameda County Congestion Management Plan most recently updated in 2009, requires a LOS E standard be maintained on all CMP routes in Alameda County, except those areas designated as infill opportunity zones or those segments that were already operating at LOS F in the 1991 CMP baseline year. I-580 is an Alameda County CMP designated route. The most recent monitoring, in 2010, indicated LOS F conditions for westbound I-580 between Greenville Road and Portola Avenue, in Livermore.

3. City of Tracy Regulations and Policies

a. City of Tracy General Plan

The Circulation Element of the City of Tracy General Plan establishes the following goals, policies, and objectives, which apply to the study area (Table 4.14-1).

b. Citywide Roadway and Transportation Master Plan

Over the past two years, the City of Tracy has prepared a comprehensive update to the citywide infrastructure master plans. The Citywide Roadway and Transportation Master Plan (TMP), adopted in December 2012, describes the transportation network and systems required to serve the City of Tracy. The TMP describes the citywide roadway network needed to serve local and regional trips, including anticipated intersection lane configurations at numerous intersections; bicycle and pedestrian facilities; truck routes; park and ride lot locations; and other related topics. The Project has been designed to be consistent with the TMP's roadway network.

c. Overview of City and Regional Transportation Funding

i. City of Tracy Finance and Implementation Plans

Within the City of Tracy, there are multiple specific financing plans, otherwise known as "Finance and Implementation Plans" (FIPs), to fund required Master Plan ("program") roadway improvements. The purpose of an FIP is to provide estimates of the funds required to mitigate each impact, calculate the development impact fees, and to update the City's Capital Improvement Program Construction Schedule for program infrastructure

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Circulation Element	
Objective CIR-1.1	*Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.*
Policy P1	The City should develop context-based street designs that allow for variations based on the expected function and location of the facility, and the surrounding land use context. These context-sensitive designs should have the following aims: ¨ Create aesthetically attractive streetscapes. ¨ Enhance multi-modal transportation by increasing mobility and improving safety for autos, trucks, transit, pedestrians, and bicyclists.
Policy P2	The City shall preserve rights-of way needed for future roadway and freeway interchange improvements through dedication or acquisition as adjacent properties develop or redevelop.
Policy P3	The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.
Policy P4	The City should continue to pursue regional, county, and State funding to fund roadway projects. These potential funding sources may include Measure K sales tax revenues, a regional or countywide transportation impact fee, and other existing and future revenue sources.
Policy P5	The City shall continue to participate in regional transportation funding decisions, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.
Policy P6	The Roadway Master Plan update shall identify necessary improvements to various intersections on I-205 and I-580 based on land use designations and with particular attention to Terminal Access Routes in accordance with Surface Transportation Assistance Act of 1982 (STAA).
Objective CIR-1.2	*Provide a high level of street connectivity.*

TABLE 4.14-1 **GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC**

Goal/ Policy No.	Goal/Policy Content
Policy P1	The City shall ensure that the street system results in a high level of connectivity, especially between residences and common local destinations, such as schools, Village Centers, retail areas, and parks. The standard for roadway (vehicular) connectivity is defined as appropriate spacing of arterials and collectors and local roads as detailed in Section of [the Circulation] Element "Roadway Classifications and Standards".
Policy P2	The City shall implement a connected street pattern with multiple route options of vehicles, bikes, and pedestrians.
Policy P3	New development shall be designed to provide vehicular, bicycle and pedestrian connections with adjacent developments.
Policy P4	The City should develop residential street alignments and designs that provide connectivity while discouraging high-speed cut-through traffic.
Policy P5	New development shall be designed with a grid or modified grid pattern to facility traffic flows and to provide multiple connections to arterial streets.
Policy P6	Street patterns in hillside areas may reflect existing topography and minimize grading impacts.
Objective CIR-1.3	*Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.*
Policy P1	To the extent feasible, the City shall strive for LOS D on all streets and intersections, with the LOS standard for each facility to be defined in the Transportation Master Plan in accordance with the opportunities and constraints identified through the traffic projections and analysis performed for that Plan. The following exceptions to the LOS D standard may be allowed: ¨ LOS E or lower shall be allowed on streets and at intersections within ¼-mile of any freeway. This lower standard is intended to discourage inter-regional traffic from using Tracy streets. ¨ LOS E or lower shall be allowed in the Downtown and Bowtie area of Tracy, in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling and walking.

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P2	The City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.
Policy P3	Intersections may be permitted to fall below their adopted LOS standard on a temporary basis when the improvements necessary to preserve the LOS standard are in the process of construction or have been designed and funded but not yet constructed.
Policy P4	Roadways and freeways that are subject to State and regional agency oversight and/or are candidates for State-funded or federally-funded improvements should conform to the operational service requirements of the applicable agency.
Policy P5	For long-range planning purposes, the LOS of major streets shall be determined based on an estimation of peak hour conditions using future average daily traffic forecasts and standard Tracy relationships between daily traffic and peak PM hour traffic.
Policy P6	For project-specific development approvals, the LOS at major street intersections shall be determined based on the direct estimation of peak hour conditions and should reflect the average conditions prevailing throughout the peak hour of a typical weekday for all traffic using the intersection.
Policy P7	Traffic studies for new developments within the City may be prepared if necessary and appropriate to determine the impacts of the project's traffic on the transportation system.
Policy P8	Access control and minimization of median openings shall be a key consideration in the design of expressways, boulevards, arterials, and major collectors.
Policy P9	The City shall encourage the use of right-turn-in/right-turn-out only turning movements where local and collector streets intersect arterial streets with medians. The purpose is to increase the safety of the roadway and to avoid traffic signals that are spaced too close together.

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P10	Exclusive right turn lanes in and out of major residential, commercial, industrial and office developments shall not reduce the width of public or private landscaping requirements.
Objective CIR-1.4	*Protect residential areas from commercial truck traffic.*
Policy P1	Significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways.
Policy P2	The City shall enforce designated truck routes based on the existing City ordinance.
Objective CIR-1.5	*Protect residential areas from through traffic and high travel speeds by facilitating free flow of traffic on major streets.*
Policy P1	Use of local residential streets by non-local and commercial traffic shall be discouraged. The City may consider techniques such as route signs and route maps. This policy should not restrict the ability of local vehicle and non-motorized transportation to utilize residential collectors as an effort to encourage higher levels of roadway connectivity.
Policy P2	The City shall coordinate the timing of traffic signals on arterials to facilitate traffic movement.
Objective CIR-1.6	*Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.*
Policy P1	The City shall design streets using context-sensitive design principles that enhance safety for all modes of travel.
Policy P2	New development shall implement traffic calming measures where necessary so long as connectivity is not diminished.
Objective CIR-1.7	*Minimize traffic-related impacts such as noise and emissions on adjacent land uses.*
Policy P1	Appropriate buffering and screening mechanisms shall be incorporated in development projects to limit the impacts associated with traffic. These buffering and screening mechanisms may include setbacks, landscaping, berms, soundwalls, or other methods as appropriate.
Policy P2	Soundwalls shall only be used next to major arterials, and other high-speed, high-volume facilities in accordance with the policies in the Community Character Element.
Objective CIR-1.8	*Minimize transportation-related energy use and impacts on the environment.*

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P1	Transportation projects shall avoid disrupting sensitive environmental resources.
Policy P2	When possible, road construction and repair project shall use sustainable materials.
Policy P3	The City shall encourage the use of non-motorized transportation and low-emission vehicles.
Objective CIR-2.1	*Support regional planning and implementation efforts to improve interregional highways and interregional travel efficiency.*
Policy P1	The city shall continue to cooperate with regional and State agencies, including Caltrans and San Joaquin Council of Governments (SJCOG) to study, plan and fund improvements to the regional transportation system. These regional transportation improvements may include freeway widening, the construction of regional roadways, regional passenger rail expansions, additions to the existing commuter bus system and provision of the park-and-ride lots near facilities heavily used by commuters.
Policy P2	The City should ensure that land needed for park-and-ride facilities is conserved in new development areas.
Policy P3	The City shall work with other local jurisdictions, SJCOG, and Caltrans to identify and develop alternative routes to allow locally-generated traffic to bypass congestion on I-205 and I-580 without impacting city streets.
Policy P4	The City shall work with the City of Lathrop and San Joaquin County to preserve a right-of-way along the existing alignment of Middle Road/Arbor Avenue north of I-205 (a.k.a. Golden Valley Parkway) for the future construction of a regional parallel to I-205. This process should determine appropriate funding mechanisms and the design of an interchange with I-205 at Chrisman Road.
Objective CIR-2.2	*Discourage interregional travel from diverting from freeways onto Tracy streets.*
Policy P1	The City shall consider techniques, such as freeway ramp metering or traffic signal timing changes, to discourage the diversion of inter-regional travel from the freeways onto Tracy streets.
Objective CIR-3.1	*Achieve a comprehensive system of citywide bikeways and pedestrian facilities.*

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P1	The City shall incorporate appropriate bicycle and pedestrian facilities on all roadways constructed by the City, Class I to the extent feasible.
Policy P2	To the extent possible, the city shall separate vehicular from bicycle and pedestrian traffic on higher-speed and higher-volume roadways through the use of off-street bicycle and pedestrian facilities.
Policy P3	The city may separate bicycle from pedestrian users on high usage bicycle and pedestrian paths
Policy P4	The City's bicycle and pedestrian system shall have a high level of connectivity, especially between residences and common local destinations, such as schools, shopping, and parks. A higher level of bicycle and pedestrian connectivity is defined as a shorter or similar distance to common destinations for bicycles and pedestrians compared to distances for vehicles.
Policy P5	The City shall establish a ½-mile walkability standard for residents to access goods, services, and recreational facilities.
Policy P6	New development shall include pedestrian and bicycle facilities internal to the development and that connect to city-wide facilities, such as parks, school, and recreational corridors, as well as adjacent development and other services.
Policy P7	New development sites for commercial, employment, educational, recreational, and park-and-ride land uses shall provide bicycle parking and/or storage facilities.
Objective CIR-4.1	*Promote public transit as an alternative to the automobile.*
Policy P1	The City shall promote efficient and affordable public transportation that serves all users.
Policy P2	The City shall continue to partner with SJCOG, SJRTD, and Caltrans in efforts to locate park-and-ride lots and other transit-related facilities in the City of Tracy.
Policy P3	The City shall continue to operate the Tracer fixed-route and paratransit transit service and expand service to new residential and non-residential areas if funding for additional service is available and is warranted by ridership demand.
Policy P4	The City shall seek funding from regional and State and federal agencies to fund additional transit service expansions and improvements.

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P5	The City shall require development to provide for transit and transit-related increased modal opportunities, such as adequate street widths and curb radii, bus turnouts, bus shelters, park-and-ride lots and multi-modal transit center through the development and environmental review processes, if appropriate.
Policy P6	The City shall encourage efforts for additional regional transit service, including expansion of the existing commuter bus service, and new commuter rail serve from Tracy to other areas in the region.
Objective CIR-421	*Work to achieve connectivity between all modes of transportation.*
Policy P1	The City shall complete the Multi Modal Transit Center at Central Avenue and 6th Street.
Policy P2	The City shall preserve the necessary rights-of-way by continuing the implementation of current arterial street standards and ensuring the preservation of existing rail corridors to facilitate the development of an expanded transit program in the future.
Policy P3	The City shall encourage the expansion of transit services through consultation and cooperation with the Bay Area Rapid Transit District (BART), San Joaquin Regional Rail Commission, San Joaquin Regional Transit District, the Altamont Commuter Express (ACE), on services that expand the mobility and accessibility of transporting people, goods and services in and through Tracy and the region.
Policy P4	The City shall develop a fully integrated multi-modal transportation system that takes into account access to employment, education, shops, medical services and that facilitates participation in social and recreational opportunities.
Policy P5	The City shall provide efficient, effective, and coordinated transit system that maximizes use of regional, state, and federal funds.
Policy P6	The City shall pursue economical, long term solutions to transportation problems by encouraging community designs which encourage transit use and walking, bicycling, and other non-motorized forms of transportation.

based on cash flow estimates generated from development impact fees. An FIP also identifies an estimated obligation for program roadway improvements. FIPs are periodically updated to keep pace with construction cost increases.

In order to ensure that the Project fully funds its fair share of required improvements, an FIP will be prepared for the Project. The Cordes Ranch FIP will calculate the Project's proportional share contribution to required improvements. Future traffic growth throughout the City will cumulatively fund the required improvements. As fees are collected, the City will use the fees to implement the improvements. If the City has not collected enough of the fees to fund an improvement at the time an impact is triggered, the Project applicant must construct or provide, in a manner acceptable to the City, for the funding to construct the required improvement upfront, subject to any applicable credit and/or reimbursement provisions, as determined by the City.

ii. San Joaquin COG Regional Transportation Impact Fee (RTIF)

The City is a member agency of the San Joaquin Council of Governments (SJCOG), a joint powers agency consisting of the County of San Joaquin and the seven cities situated in San Joaquin County. Acting in concert, the member agencies of SJCOG developed the RTIF Program whereby the shortfall in funds needed to expand the capacity of the Regional Transportation Network could be made up in part by a Regional Transportation Impact Fee (RTIF Program Fee) on future residential and non-residential development. The RTIF Program Fee will augment other funding sources and help ensure that needed improvements to the Regional Transportation Network are completed. The City adopted this fee on January 3, 2006. The latest RTIF update was completed in December 2011. In the study area, the I-580/Lammers Interchange and the Lammers Road widening from two to four lanes between I-205 and Old Schulte Road are RTIF projects.

d. Sustainability Action Plan

As part of the General Plan update, the City of Tracy prepared a Sustainability Action Plan to respond to recent state legislation on climate change and greenhouse gas reduction, and integration of transportation and land use planning. The SAP includes policies and programs designed to reduce greenhouse gas emissions generated by a range of activities, including transportation. The transportation targets include:

- Target #5a: 20 percent increase in the percentage of non-City employees who participate in travel demand management programs from 2006 baseline levels
- Target #5b: 20 percent increase in the percentage of City employees who participate in travel demand management programs from 2006 baseline levels
- Target #6a: 20 percent reduction in the community vehicle miles travelled (VMT) per capita from current (2006) levels
- Target #6b: 20 percent reduction in the municipal VMT from 2006 baseline levels

The SAP presents 21 sustainability measures within the Transportation and Land Use category, which have quantifiable effects, based on available research, on greenhouse gas production – mostly through VMT reduction, including the following measures:

Measure T-2: Reduced parking requirements.
Measure T-3: Support for bicycling.
Measure T-4: Support for transit.
Measure T-5: Smart growth, urban design, and planning.
Measure T-13: Reduce commute trips.
Measure T-14: Parking cash-out for employees.
Measure T-16: Transit passes for residents and employees of new developments.

C. Existing Conditions

1. Regional Location

The Specific Plan Area is located in southwest San Joaquin County, in western Tracy. The City of Tracy is located on the western edge of the Central Valley along Interstate 205 (I-205), just east of the Altamont Pass and the Interstate 580 (I-580)/I-205 interchange. The City of Tracy is situated approximately an hour and half east of San Francisco and 68 miles of south of Sacramento, as shown in Figure 4.14-1. Neighboring cities include Stockton, to the north, Manteca, to the east, Modesto, to the southeast, and Livermore to the west across the Altamont Pass.

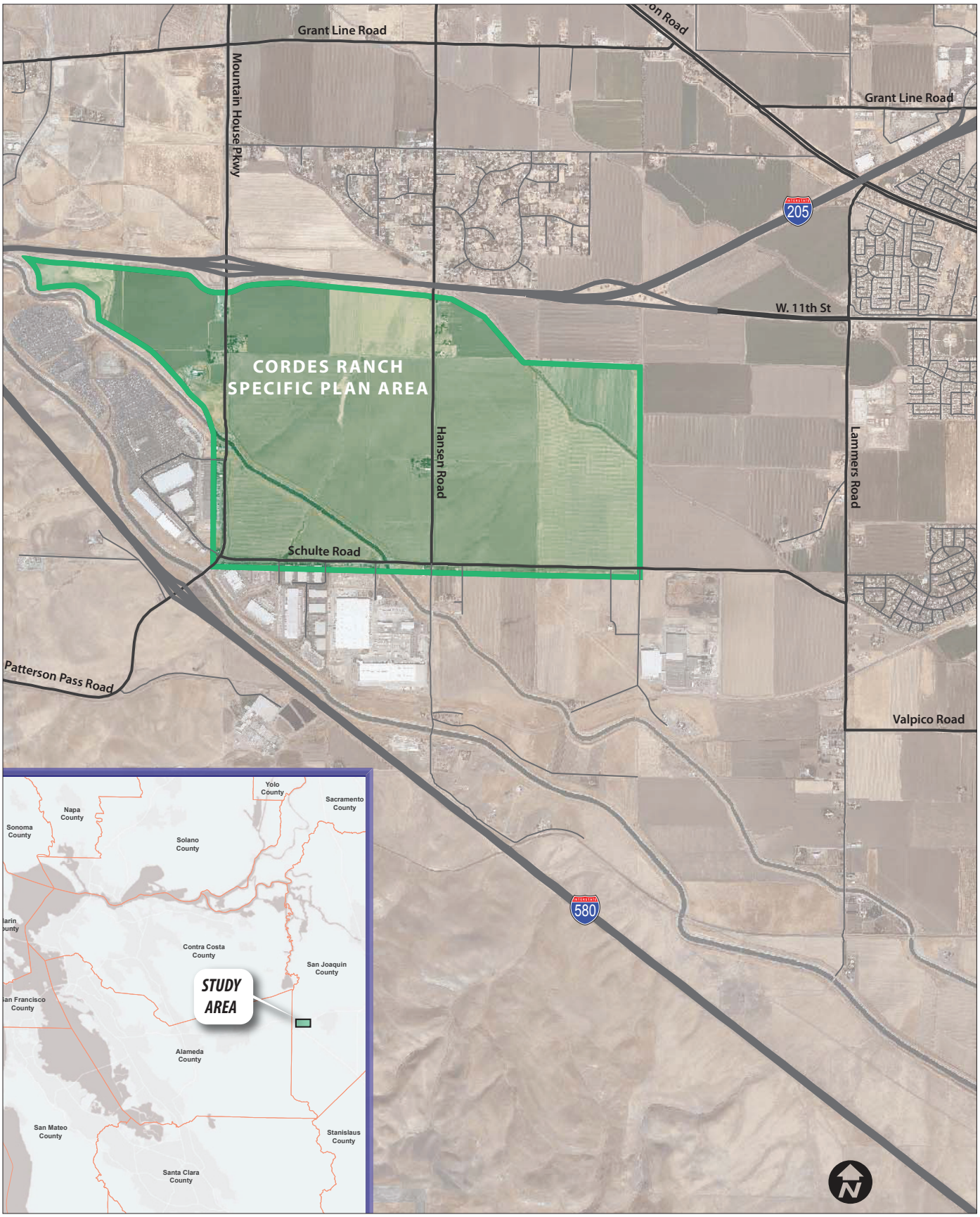
2. Specific Plan Area

The Specific Plan Area is located along the western edge of Tracy, adjacent to City limits and within the City's SOI. The Project limits to the north are I-205, the Delta-Mendota Canal, and Mountain House Parkway to the west, and Old Schulte Road to the south. Lammers Road meets the eastern border of the Project. The Project is designed to take advantage of its close proximity to I-205 and I-580.

There are a number of existing buildings and structures within the Specific Plan Area as follows: twelve existing residences and associated structures; a PG&E gas facility; two public roadways (Mountain House Parkway and Hansen Road); and a cell tower installation and related equipment building. The remainder of the Specific Plan Area consists primarily of agricultural land, currently utilized for irrigated crop production, dry farming, and periodic cattle grazing.

3. Transportation Impact Study Area

Following is a description of the methodology used to determine the appropriate study area for this analysis.



Source: Fehr and Peers, 2013.

FIGURE 4.14-1

EXISTING ROADWAY NETWORK

The transportation impact study area (study area) is the area in which circulation is most likely to be affected by the Project. This area extends north to I-205, south to I-580, east to Lammers Road, and west to west of the I-205/I-580 interchange. The area includes roadways and intersections under the jurisdictions of the City of Tracy and Caltrans.

For purposes of this analysis, the study area was defined as follows. The technical consultants utilized a screening methodology that takes the assumed Project distribution of traffic to the north, south, east, and west, and compares it to the estimated Project trip assignment to a threshold test of 5 percent or more of total 2035 Plus Phase 1 traffic volumes. In addition, the projected 2035 Plus Phase 1 traffic volumes were compared to those studied in the Tracy Roadway and Transportation Master Plan. After applying the screening methodology, for the intersections that satisfied the threshold test of 5 percent or more traffic being added, then the technical consultants considered other relevant criteria to determine whether the "qualifying" intersections should be scoped out in any event.

The study area boundaries are based in the screening analysis results and additional relevant criteria, and are described more fully below and in Appendix L.

- *Mountain House Parkway between the I-205 Interchange the I-580 Interchange.* Phase 1 of the Project is projected to add less than 5 percent of the cumulative traffic volume to this roadway north of I-205 and to Patterson Pass Road west of I-580.
- *Hansen Road between Capital Parks Drive and Lammers Road.* The traffic analysis assumes that 1 percent of Project traffic would travel north of Capital Parks Drive under cumulative conditions. Because traffic volumes on Hansen Road are very low, the projected volumes would remain very low (less than 300 peak hour trips), although the Project's contribution to cumulative traffic would be more than 5 percent. Based on the low volumes, no intersection or roadway operational problems are expected to the north of I-205, under cumulative conditions. However, this roadway serves as a residential collector and adjacent residences may be adversely

affected by increased traffic; therefore, the Specific Plan includes traffic calming measures to minimize Project traffic use of Hansen north of Capital Parks Drive. These measures may include, but are not limited to, the following, in addition to other traffic calming measures that may be imposed by the City on individual, site-specific developments:

- Peak hour turn restrictions on Capital Parks Drive at Hansen Road;
- Corner bulbs, raised crosswalks, and other intersection design features to slow traffic at this intersection;
- Speed humps on Hansen Road north of Capital Parks Drive;
- Speed feedback signs on Hansen Road north of Capital Parks Drive;
- Driver education signs (for example, "Respect our Neighborhood/ Drive 25")

Because the Specific Plan addresses the control of Hansen Road traffic in this way such that it is anticipated that few if any trips would use the section of Hansen Road north of I-205 and thus any traffic impacts here would be less than significant; accordingly, this section of Hansen Road is not included in the study area.

- *Pavilion Parkway between Capital Parks Drive and Hansen Road.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to Pavilion Parkway north of Capital Parks Drive. However, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movements. Therefore, this section of Pavilion Parkway is not included in the study area.

- *Lammers Extension between I-205 and Eleventh Street.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to the Lammers Extension north of I-205. While the forecasted volumes are somewhat higher than those in the Citywide Roadway and Transportation Master Plan due to the refined traffic assignment process for the study area in this EIR, it was not included in the detailed traffic analysis because (1)

the design (alignment, connection to other new roadways, etc.) of this future roadway will be defined as part of future development planning efforts for the properties in the vicinity of Lammers Extension; and (2) the Project will contribute to the ultimate improvements on Lammers Extension through payment of the TMP fee.

- *Eleventh Street between Lammers Road and I-205.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to Eleventh Street east of Lammers Road; however, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movement. Therefore, this section is not included in the study area.
- *New Schulte Road between Mountain House Parkway and Lammers Road.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to New Schulte Road east of Lammers Road; however, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movement. Therefore, this section is not included in the study area.
- *Valpico Road between Hansen Road and Lammers Road.* Phase 1 of the Project is projected to add more than 5 percent of 2035 Plus Phase 1 traffic to Valpico Road east of Lammers Road; however, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movement. Therefore, this section is not included in the study area.

4. Study Area Roadways

The following major roadways provide circulation within the study area. Figure 4.14-1 shows the existing roadway network in the study area.

- I-205 is a major east-west freeway in the northern portion of Tracy that connects I-580 and I-5. I-205 provides three mixed-flow lanes in each direction, with a posted speed limit of 65 mph to west of and within Tracy. The interchange at Mountain House Parkway provides direct access to the Project site.

- I-580 is a major east-west freeway originating that connects the San Francisco Bay Area to the Central Valley. It originates in Marin County and runs throughout Alameda County to San Joaquin County, eventually terminating at its intersection with I-5 to the southeast of Tracy. West of I-205, I-580 provides four mixed-flow lanes in each direction and a posted speed limit of 65 mph. Between I-205 and I-5, I-580 provides two mixed-flow lanes in each direction and a posted speed limit of 65 mph. The I-580/I-205 interchange provides connectors only between I-205 Westbound and I-580 Westbound, and between I-580 Eastbound and I-205 Eastbound. Ramps at Mountain House Parkway/S. Patterson-Pass Road provide the nearest access to the project site on I-580.

- Mountain House Parkway is a north-south arterial running from Byron Road in Mountain House to I-580, where it becomes Patterson Pass Road. North of I-205, Mountain House Parkway is a median-separated four-lane roadway with a posted speed limit of 45 mph, where it serves primarily residential and agricultural uses. From I-205 to Berkeley Road through the Plan Area, the road narrows to one-lane in each direction with a 45 mph speed limit with limited adjacent land uses. South of Berkeley Road, the road widens to 2 southbound lanes and 1 northbound lane with large-scale light-industrial uses and eventually widens to two lanes in each direction at its intersection with I-580. In the study area, the parkway currently has only two intersections: at Berkeley Road and Old Schulte Road.

- Lammers Road is a north-south collector originating at Byron Road and terminating at the canals south of Valpico Road. Lammers Road is a two-lane road with a posted speed limit of 40 mph that marks a portion of Tracy's western municipal boundary and serves agricultural uses as well as single-family housing developments. Lammers widens significantly at its intersection with West 11th Street to a seven-lane cross-section and narrows

back to two-through lanes with a striped median north of West 11th Street. The roadway has a northbound bike lane from Fabian Road to Byron Road.

- Old Schulte Road is an east-west roadway that runs from Stanford Road, just west of Mountain House Parkway, to Lammers Road. Old Schulte Road is a two-lane road east of the Delta Mendota Canal. To the west of the Delta Mendota Canal, it widens to five lanes, moving toward Mountain House Parkway.
- Schulte Road is currently an east-west arterial that runs from Barcelona Drive, just east of Corral Hollow Road, to Chrisman Road on the eastern edge of Tracy, serving continuous single-family housing developments and some agricultural land. West Schulte is a four-lane road with a separated median that widens to six lanes at Corral Hollow Road. Bike lanes present on Schulte from Barcelona Drive to South Central Avenue.
- 11th Street is an east-west arterial that runs parallel to I-205 through the center of Tracy. 11th Street is the I-205 Business Route and runs from I-205 on the western edge of the Tracy its intersection with I-5 to the east of Tracy. 11th Street is a four-lane divided arterial that supports agricultural uses in the vicinity of the study area and widens to 6-lanes at Lammers Road where it supports continuous residential development, narrowing to four lanes at Corral Hollow road, where it supports a mix of residential and commercial development through central Tracy. The roadway as a 45 mph posted speed limit, west of Corral Hollow Road. 11th Street has bike lanes from Coral Hollow Drive to the train tracks just west of Lincoln Boulevard.
- Hansen Road is a north-south two-lane collector that runs from Byron Road to the industrial area south of Schulte Road, supporting primarily agricultural uses with limited low-density residential and industrial developments.
- Valpico Road is an east-west arterial that runs from Lammers Roads to Chrisman Road. Under the TMP, Valpico is extended west to a new road that parallels the Delta-Mendota Canal. In the vicinity of the study area,

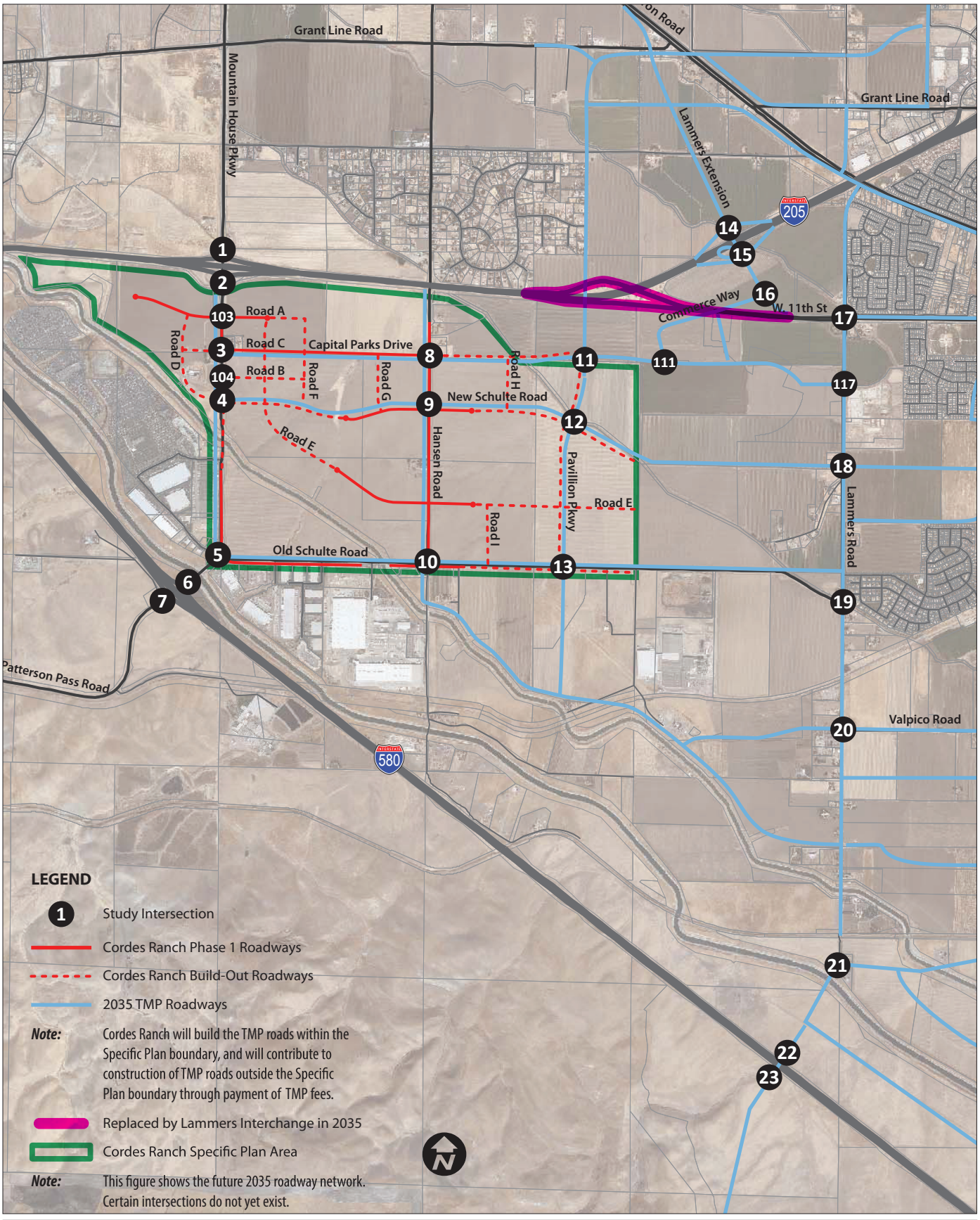
Valpico is a two-lane roadway, widening to four lanes at Cagney Way and narrowing back to two-lanes just east of MacArthur Drive. The posted speed limit ranges from 35 to 45 mph. Valpico has bike lanes in both directions from Cagney Way to just east of Tracy Boulevard and again from Pebblebrook Drive to MacArthur Drive.

5. Study Area Intersections

The study area is depicted in Figure 4.14-2, which shows both existing roadways and intersections, and planned future roadways and intersections.

As described at the beginning of this chapter, the Phase 1 Project traffic impact analysis focuses on the operations of key intersections on the roadway network serving the Specific Plan Area, while the Project buildout analysis uses a roadway segment capacity methodology for impact analysis. Intersections usually form the critical components of the roadway system capacity because of the delay introduced by traffic signals, stop signs, or other control devices. The study intersections assessed for the Phase 1 analysis are listed below and shown on Figure 4.14-2. Future intersections to be constructed as part of the Project or as part of the Tracy Roadway and Transportation Master Plan denoted with an asterisk below.

1. Mountain House Parkway / I-205 WB Ramps
2. Mountain House Parkway / I-205 EB Ramps
103. Mountain House Parkway / Road A (Project Road)*
3. Mountain House Parkway / Capital Parks Drive*
104 Mountain House Parkway/Road B*
4. Mountain House Parkway / New Schulte Road*
5. Mountain House Parkway / Old Schulte Road
6. Mountain House Parkway / I-580 WB Ramps
7. Mountain House Parkway / I-580 EB Ramps
8. Hansen Road / Capital Parks Drive*
9. Hansen Road / New Schulte Road*
10. Hansen Road / Old Schulte Road
11. Pavilion Parkway / Capital Parks Drive*
111. Commerce Way / Capital Parks Drive*



Source: Fehr and Peers, 2013.

FIGURE 4.14-2

STUDY AREA ROADWAY NETWORK AND INTERSECTIONS

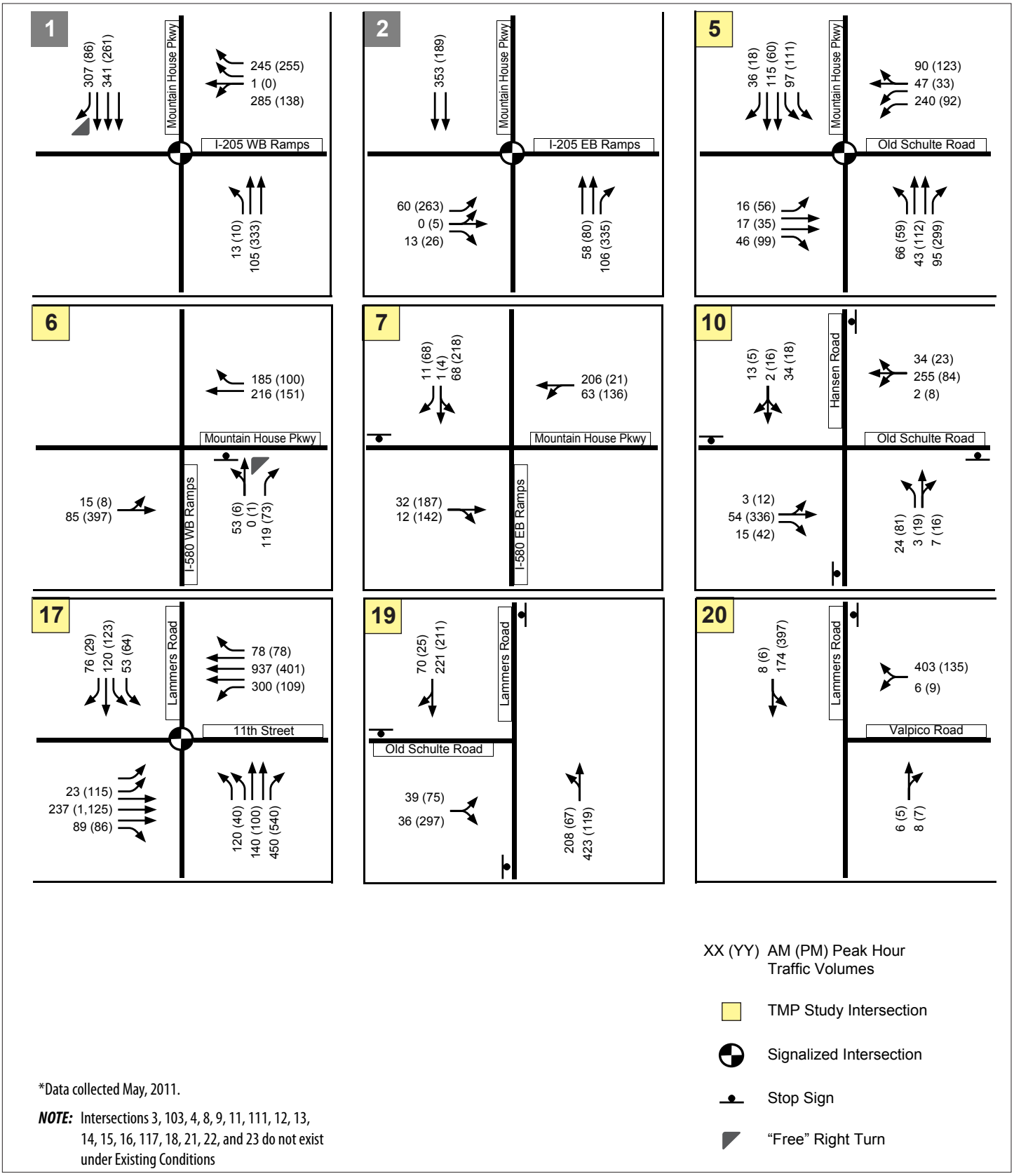
12. Pavilion Parkway / New Schulte Road*
13. Pavilion Parkway / Old Schulte Road*
14. Lammers Extension / I-205 WB Ramps*
15. Lammers Extension / I-205 EB Ramps*
16. Lammers Extension / Commerce Way*
17. Lammers Road / 11th Street
117. Lammers Road / Capital Parks Drive*
18. Lammers Road / New Schulte Road*
19. Lammers Road / Old Schulte Road
20. Lammers Road / Valpico Road
21. Lammers Road / Linne Road
22. Lammers Road / I-580 WB Ramps*
23. Lammers Road / I-580 EB Ramps*

6. Intersection Peak Hour Traffic Volumes

Intersection operations are evaluated for the weekday AM and PM peak hours. These conditions represent the regularly occurring peak time for the commercial, office, and business park industrial uses proposed under the Specific Plan. Counts of traffic, pedestrians, and bicyclists were taken in May 2011 at the study intersections, for the AM peak period (7:00 – 9:00 a.m.) and the PM peak period (4:00 to 6:00 p.m.). The AM and PM peak hour traffic volumes are shown in Figure 4.14-3.

7. Intersection Level of Service Methodology

The operational performance of a roadway network is commonly described with the term "level of service" (LOS). LOS is a qualitative description of operating conditions, ranging from LOS A (free flow traffic conditions with little or no delay) to LOS F (oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The LOS analysis methods outlined in the Highway Capacity Manual (Transportation Research Board 2000) were used in this study. The Highway Capacity Manual is considered the state of the art methodology for assessing intersection operations and defining impacts, and allows for the accurate



*Data collected May, 2011.

NOTE: Intersections 3, 103, 4, 8, 9, 11, 111, 12, 13, 14, 15, 16, 117, 18, 21, 22, and 23 do not exist under Existing Conditions

Source: Fehr and Peers, 2013.

FIGURE 4.14-3

EXISTING INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES

definition of mitigation measures, such as lengthening or adding turning lanes, modifying the signal phasing or timing, and other options. The 2000 HCM was used for this analysis rather than the recently released 2010 HCM, to provide consistency with the analysis in the recently adopted Tracy Roadway and Transportation Master Plan. It is noted that the 2010 and 2000 methodologies for intersection traffic operations are substantially the same; however, the 2010 HCM is not yet in wide use by jurisdictions.

The HCM methods for calculating LOS for signalized and unsignalized intersections are described below.

a. Signalized Intersections – Methodology

Traffic operations at signalized intersections are evaluated using the LOS method described in Chapter 16 of the 2000 Highway Capacity Manual. A signalized intersection's LOS is based on the weighted average control delay IS measured in seconds per vehicle. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Table 4.14-2 summarizes the relationship between the control delay and LOS for signalized intersections.

b. Unsignalized Intersections – Methodology

In Chapter 17 of the Transportation Research Board's 2000 Highway Capacity Manual, the LOS for unsignalized intersections (side-street or all-way stop controlled intersections) is also defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. For side-street stop-controlled intersections, delay is calculated for each stop-controlled movement and for the uncontrolled left turns, if any, from the main street. The delay and LOS for the intersection as a whole and for the worst movement are reported for side-street stop intersections. The intersection average delay is reported for all-way stop intersections. Table 4.14-3 summarizes the relationship between delay and LOS for unsignalized intersections. The delay ranges for unsignalized intersections are lower than

TABLE 4.14-2 SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

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

for signalized intersections as drivers expect less delay at unsignalized intersections.

8. Intersection Level of Service Standards

a. City of Tracy

As described in General Plan Objective CIR 1.3, Policy P1, the City of Tracy strives for an intersection level of service standard of LOS D to the extent feasible. LOS E or lower is allowed on streets and at intersections within

TABLE 4.14-3 **UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS**

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delays	< 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

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

¼-mile of a freeway and in the downtown and bowtie areas. Objective CIR 1.3, Policy P2 allows the City to allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.

b. Caltrans

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities; however, the agency acknowledges that this may not always be feasible, particularly in urban environments where right-of-way is constrained. Where maintaining LOS C/D is not feasible, Caltrans attempts to maintain the existing LOS when assessing the impact of new development.

c. San Joaquin County Congestion Management Agency

The San Joaquin County CMP LOS standard for I-205, I-580, and Lammers Road is LOS D.

d. Alameda County Congestion Management Agency

The Alameda County CMP standard for I-580 is LOS E.

9. Existing Intersection Levels of Service

Table 4.14-4 shows the existing weekday AM and PM peak hour service levels, based on the counts conducted at the existing study area intersections. Currently, all of the intersections operate at LDS C or better (with most operating at LOS A or B), except for one intersection – Lammers Road/Old Schulte Road (#19) – operates at LOS D. This all-way stop-controlled intersection operates at LOS D in the AM peak hour and LOS B in the PM peak hour. At one other intersection, I-580 Eastbound Ramps/Mountain House Parkway, the overall intersection LOS in the PM peak hour is B, but the side-street left turn operates at LOS D.

10. Existing Roadway Segment Volumes and Capacities

Table 4.14-5 shows the existing weekday AM and PM peak hour roadway segment volumes, derived from the 2011 intersection counts. The capacities shown are taken from the Tracy Travel Demand Model. As indicated in the table, the roadways in the study area currently operate well below capacity.

11. Existing Freeway Volumes

The LOS for a freeway section is based on measures of density (passenger cars/ lane/ mile). Freeway LOS is a qualitative description of traffic flow based on speed, travel time, delay, and freedom to maneuver. There are six levels, ranging from LOS A (i.e., the best operating conditions) to LOS F (i.e., the worst). LOS E represents “at-capacity” operation. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Caltrans’ policy is to maintain LOS D operations or better on State Route 99. Table 4.14-6 presents a summary of the relationship between LOS and density for freeway sections and ramp junctions

TABLE 4.14-4 **EXISTING (2011) INTERSECTION LEVELS OF SERVICE**

Intersection	Control	Peak Hour	Existing Delay	Existing LOS
1. I-205 Westbound Ramps/ Mountain House Parkway[b]	Signal	AM	8.2	A
		PM	7.6	A
2. I-205 Eastbound Ramps/ Mountain House Parkway[b]	Signal	AM	5.1	A
		PM	7.6	A
5. Old Schulte Road/ Mountain House Parkway [b]	Signal	AM	29.4	C
		PM	7.6	A
6. I-580 Westbound Ramps/ Mountain House Parkway[b]	SSSC[a]	AM	2.9 (NB 10.7)	A (B)
		PM	1.4 (NB 11.9)	A (B)
7. I-580 Eastbound Ramps/ Mountain House Parkway[b]	SSSC[a]	AM	4.4 (SB 14.1)	A (B)
		PM	12.6 (SB 29.6)	B (D)
10. Old Schulte Road/ Hansen Road	AWSC	AM	10.4	B
		PM	12.2	B
17. 11th Street/Lammers Road[b]	Signal	AM	25.6	C
		PM	28.6	C
19. Old Schulte Road/ Lammers Road	AWSC	AM	30.7	D
		PM	11.2	B
20. Valpico Road/ Lammers Road	SSSC[2]	AM	9.7 (WB 11.1)	A (B)
		PM	8.2 (WB 9.7)	A (A)

Notes: Signal = Signalized intersection; AWSC = All-way stop-controlled intersection; SSSC = Side-street stop-controlled intersection.

[a] For side-street stop-controlled intersections, average delay is listed first followed by the delay for the worst approach.

[b] LOS Criteria: Within ¼-mile of a freeway, LOS E shall be allowed.

Source: Fehr & Peers, January 2013.

Table 4.14-7 presents the existing AM and PM peak hour freeway volumes on I-580 and I-205 in the study area. The vehicle density, in passenger cars per hour per lane, as calculated with the 2000 HCM methodology, is also given along with the corresponding LOS. All segments currently operate at acceptable service levels (LOS D or better for the I-205 and I-580 segments in San Joaquin County, and LOS E or better for I-580 west of I-205 in Alameda County.

TABLE 4.14–5 **EXISTING (2011) ROADWAY VOLUMES, CAPACITIES, AND VOLUME-TO-CAPACITY RATIOS**

			Volume		V/C	
Street	Segment	Existing Capacity	AM Existing	PM Existing	AM Existing	PM Existing
MHP SB	N/O I-205	890	650	350	0.7	0.4
	I-205 to Road A	890	370	220	0.4	0.2
	Road A to Capital Parks Drive	890	370	220	0.4	0.2
	Capital Parks Drive to New Schulte Road	890	370	220	0.4	0.2
	New Schulte Road to Old Schulte Road	890	370	220	0.4	0.2
	Old Schulte Road to I-580	1,490	400	250	0.3	0.2
	S/O I-580	1,490	220	90	0.1	0.1
MHP NB	N/O I-205	890	350	590	0.4	0.7
	I-205 to Road A	890	160	420	0.2	0.5
	Road A to Capital Parks Drive	890	160	420	0.2	0.5
	Capital Parks Drive to New Schulte Road	890	160	420	0.2	0.5
	New Schulte Road to Old Schulte Road	890	160	420	0.2	0.5
	Old Schulte Road to I-580	1,490	200	470	0.1	0.3
	S/O I-580	1,490	40	330	0.0	0.2
Hansen SB	N/O Capital Parks Drive	890	50	40	0.1	0.0
	Capital Parks Drive to New Schulte Road	890	50	40	0.1	0.0
	New Schulte Road to Old Schulte Road	890	50	40	0.1	0.0
	S/O Old Schulte Road	890	20	70	0.0	0.1

TABLE 4.14–5 EXISTING (2011) ROADWAY VOLUMES, CAPACITIES, AND VOLUME-TO-CAPACITY RATIOS

			Volume		V/C	
Street	Segment	Existing Capacity	AM Existing	PM Existing	AM Existing	PM Existing
Hansen NB	N/O Capital Parks Drive	890	40	50	0.0	0.1
	Capital Parks Drive to New Schulte Road	890	40	50	0.0	0.1
	New Schulte Road to Old Schulte Road	890	40	50	0.0	0.1
	S/O Old Schulte Road	890	30	120	0.0	0.1
Lammers SB	N/O 11th Street	890	250	220	0.3	0.2
	11th Street to Capital Parks Drive	890	510	320	0.6	0.4
	Capital Parks Drive to New Schulte Road	890	510	320	0.6	0.4
	New Schulte Road to Old Schulte Road	890	290	240	0.3	0.3
	Old Schulte Road to Valpico Road	890	260	510	0.3	0.6
	S/O Valpico Road	890	10	20	0.0	0.0
Lammers NB	N/O 11th Street	890	240	290	0.3	0.3
	11th Street to Capital Parks Drive	890	630	340	0.7	0.4
	Capital Parks Drive to New Schulte Road	890	630	340	0.7	0.4
	New Schulte Road to Old Schulte Road	890	460	190	0.5	0.2
	Old Schulte Road to Valpico Road	890	630	190	0.7	0.2
	S/O Valpico Road	890	10	10	0.0	0.0

TABLE 4.14–5 **EXISTING (2011) ROADWAY VOLUMES, CAPACITIES, AND VOLUME-TO-CAPACITY RATIOS**

			Volume		V/C	
Street	Segment	Existing Capacity	AM Existing	PM Existing	AM Existing	PM Existing
Old Schulte Road EB	W/O MHP	1,490	80	190	0.1	0.1
	MHP to Hansen Road	1,490	210	450	0.1	0.3
	Hansen Road to Lammers Road	890	100	370	0.1	0.4
Old Schulte Road WB	W/O MHP	1,490	150	110	0.1	0.1
	MHP to Hansen Road	1,490	380	250	0.3	0.2
	Hansen Road to Lammers Road	890	290	120	0.3	0.1
Valpico EB	E/O Lammers Road	740	180	370	0.2	0.5
Valpico WB	E/O Lammers Road	740	410	140	0.6	0.2
11th EB	W/O Lammers Road	1,780	350	1,330	0.2	0.7
	E/O Lammers Road	2,230	660	1,390	0.3	0.6
11th WB	W/O Lammers Road	1,780	1,130	470	0.6	0.3
	E/O Lammers Road	2,230	1,320	590	0.6	0.3

Notes: Volumes derived from the 2011 intersection counts. Capacities derived from the City of Tracy 2035 Travel Demand Model.
V/C ratios are correlated with LOS as follows: < 0.60=LOS A; 0.60 – 0.69=LOS B; 0.70 – 0.79=LOS C; 0.80 – 0.89=LOS D; 0.90 – 0.99=LOS E; ≥ 1.00=LOS F.
Source: Fehr & Peers, February 2013.

TABLE 4.14-6 **FREEWAY LEVEL OF SERVICE DEFINITIONS**

Level of Service (LOS)	Freeway Maximum Density (Passenger cars/mile/lane)
A	11
B	18
C	26
D	35
E	45
F	> 45

Note: Freeway mainline LOS based on a 65 MPH free-flow speed.
Source: *Highway Capacity Manual*, Chapter 23 (Basic Freeway Sections) and Chapter 25 (Ramps and Ramp Junctions Methodology), Transportation Research Board, 2000.

12. Pedestrian Facilities

Existing roadways in the Specific Plan Area do not have sidewalks. However, most roadways have paved shoulders with a wide graded shoulder area adjacent to it, which can allow for pedestrian circulation in a rural context. Some roadways have wider paved shoulders—5 feet in width or more—such as Schulte Road and Mountain House Parkway. Intersections in the Specific Plan Area are 1 mile or more apart.

Where recent development has occurred in the vicinity of the Specific Plan Area, sidewalks have been built. In the Patterson Pass Business Park industrial area west of Mountain House Parkway and north of I-580, 6-foot-wide sidewalks exist on both sides of Schulte Road, Stanford Road, and Berkeley Road, as well as on the west side of Mountain House Parkway. At both the Mountain House Parkway/Old Schulte Road and Mountain House Parkway/Berkeley Road intersections, at least one leg of the intersection has a signalized pedestrian crossing. The wide cross-section of roadways in the area creates long crossing distances at both intersections—180 feet at Mountain House Parkway/Old Schulte Road and 80 feet at Mountain House Parkway/Berkeley Road.

TABLE 4.14-7 **EXISTING FREEWAY VOLUMES AND SERVICE LEVELS**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] Existing AM	Existing PM
I-205				
West of Mountain House Parkway	6,600	EB	2,300 (14) [B]	4,910 (31) [D]
	6,600	WB	4,180 (25) [C]	2,390 (14) [B]
Mountain House Parkway to Tracy Boulevard	8,140	EB	2,340 (14) [B]	4,980 (31) [D]
	8,140	WB	4,390 (27) [D]	2,690 (16) [B]
East of Tracy Boulevard	6,600	EB	2,620 (16) [B]	4,320 (26) [D]
	6,600	WB	3,750 (23) [C]	2,620 (16) [B]
I-580				
West of I-205 Interchange	8,800	EB	3,140 (15) [B]	6,960 (35) [D]
	11,000	WB	6,430 (25) [C]	3,140 (12) [B]
I-205 Interchange to Patterson Pass Road	4,400	EB	840 (8) [A]	2,050 (18) [C]
	4,400	WB	2,250 (22) [C]	750 (7) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	840 (8) [A]	2,040 (18) [C]
	4,400	WB	2,220 (21) [C]	720 (6) [A]
East of Corral Hollow Road	4,400	EB	840 (8) [A]	1,650 (15) [B]
	4,400	WB	1,670 (16) [B]	760 (7) [A]

Notes: I-205 volumes from Caltrans 2012 PeMS database.
I-580 volumes from Caltrans 2009 traffic volumes database (latest available complete set of data; matches more recent spot counts).
Analysis completed using HCM basic segment freeway operations method. Density is given in passenger cars/hour/lane.
Source: Fehr & Peers, February 2013.

13. Bicycle Facilities

The existing roadways in the study area do not have bicycle facilities. Wide shoulders, such as those on Old Schulte Road and Mountain House Parkway, can provide a place for bicyclists to ride outside of the travel lane; however, these are not designated bicycle routes. Bicycle facilities do exist in the developed areas to the east of the study area, most notably Class 1 bicycle paths on 11th Street between Lammers Road and Corral Hollow Road.

14. Transit Service

The City of Tracy operates fixed-route bus and paratransit services with the TRACER bus system. Additionally, San Joaquin Regional Transit District (SJRTD) operates several routes that pick up passengers in Tracy. The service is described below. The fixed routes all operate in central Tracy, and do not extend into the study area.

a. TRACER Fixed-Route Bus Service

As the study area is primarily agricultural in character in its present form, no service currently exists on the site. However, TRACER operates two fixed route service adjacent to the study area. All routes operate Monday through Friday from 7:00 a.m. to 7:00 p.m., and Saturday from 9:00 a.m. to 5:00 p.m. TRACER does not offer service on Sundays.

The one-way cash fare for the TRACER fixed route service is $1.25 for adults, discounted to $1.00 for students and $0.50 for seniors and the disabled. Additionally, day passes offering unlimited trips in a single day are available for $3.00 for adults ($2.50 for students, $1.25 for seniors and the disabled) as are 10-ride tickets and weekly passes for $12.50 ($10.00 for students, $5.00 for seniors and the disabled).

TRACER currently operates the following routes near to the study area:

- *Commuter Route*—runs both clockwise and counterclockwise throughout the City of Tracy, serving a variety of residential neighborhoods as well as the Tracy Transit Station and the Downtown Civic Center. To the east of the study area, the Commuter route travels along Schulte Road, heading

northwest through the residential areas south of 11th Street. The route then travels along 11th Street, north along Lammers Road, and makes a loop in the residential neighborhood to the east of Lammers.

- *Route B*—serves many of the commercial and institutional sites in central Tracy as well as major retailers north of I-205.

b. TRACER Paratransit Service

The Transit Service Area incorporates most of the City of Tracy and is generally bounded by Lammers Road to the west, Larch Road and Arbor Avenue to the north, and Chrisman Road to the east. Service is available during the fixed route TRACER service. One-way rides are $1.50 for seniors, disabled individuals, and those on medicare, and the cash fare increases to $1.75 for the general public living in unincorporated areas and guests and companions of paratransit users. The Paratransit Subsidized Taxi Service is available to TRACER Paratransit users during non-operating hours.

c. San Joaquin Regional Transit District (SJRTD)

SJRTD provides intercity fixed route service between Tracy and Stockton. As of January 1, 2012, a one-way fare on an RTD costs $1.50 ($0.75 discounted for seniors or Medicate card-holders). One-day passes are available for $4.00 ($2.00 discounted), and 31-day passes are available for $65.00 ($40.00 for students, $30.00 discounted). Additionally, the RTD-BART Commuter service costs $7.00 each way with monthly fares ranging from $132.00 to $144.00 depending on destination and origin. SJRTD operates the following three routes in Tracy:

- *Route 90*—runs from Stockton's Downtown Transit Center along 1-5 to Tracy, where it runs east-west along Grant Line Road, ending at the Wal-Mart just west of I-205. Route 90 operates on weekdays from 5:30AM to 11:00PM with 8 trips staggered with 1-3 hour headways.
- *RTD-BART Commuter*—runs from Stockton's Downtown Transit Center via the Naglee Park and Ride lot in Tracy to the Lawrence Livermore National Laboratories and Dublin BART. Another route runs from Manteca to the Naglee Park and Ride in Tracy. The route operates from

4:45 a.m. to 8:10 p.m., with three trips during the AM peak and three trips during the PM peak service.

d. Altamont Commuter Express (ACE)

Altamont Commuter Express (ACE) operates commuter trains from San Jose to Stockton, stopping in Lathrop/Manteca, Tracy, Livermore, Pleasanton, Fremont, and Santa Clara before researching San Jose. The ACE in Tracy is located on the northeast corner of the intersection of West Linne Road and Tracey Boulevard. In service Monday through Friday, ACE offers three trains in the AM peak period operating from 4:20 a.m. to 8:50 a.m. and three trains during the PM peak period, operating from 3:35 pm. to 7:45 p.m. ACE does not run on the weekends.

Monthly, weekly, 20-trip, and one-way passes are available and vary in price based on distance traveled. Adult fares range from $11.75 for a one-way trip ($300 monthly pass) from Stockton to San Jose to $3.50 for a one-way trip ($72.75) from Santa Clara to San Jose.

15. Park-and-Ride Facilities

Park-and-ride lots near major travel corridors facilitate accessibility to transit usage and encourage carpooling. No Park and Ride lots currently exist in the vicinity of the study area despite its close location to the I-205/I-580 interchange. The City of Tracy has three park and ride facilities. The nearest one is located at I-205/Grant Line Road/Naglee Road and has 180 parking spaces and four bike lockers. San Joaquin Regional Transit District (SJRTD) provides inter-regional bus service from this location along its 150, 166, 172, and 173 routes. The Factory Outlet Stores at I-205 and MacArthur Drive provide 25 parking spaces, and a lot at 6th Street and Central Avenue has 40 parking spaces.

According to the *SJCOG Park and Ride Lot Master Plan Study* (November 2007), a park and ride lot has been considered to the northwest of Mountain House Road as part of an interchange improvement project there.

Additionally, a park and ride is recommended as a condition of future new development along 11th Street, near to Lammers Road.

16. Truck Routes

As described in the TMP, the following are existing through truck routes in the study area:

- Eleventh Street from I-205 Ramps to Lammers Road (through)
- Lammers Road from Byron Road to Eleventh Street (through)
- I-205 north of project area (STAA)
- I-580 southwest of project area (STAA)

D. Impact Analysis Methodology

This section describes the key elements of the transportation impact analysis methodology, including:

- Project Description (Roadway Network, Pedestrian and Bicycle Facilities, Transit Network, and Truck Routes)
- Scenarios Analyzed and Analysis Methodology
- Forecasting Methodology
- Project Trip Generation, Distribution and Assignment
- Traffic Operations and Capacity Analysis
- Significance Criteria

1. Project Description

The Project Description and Land Use Chapters of the DEIR present a detailed description of the Project as a whole, including land uses and phasing. This section describes key transportation elements relevant to the transportation and traffic impact analysis.

2. Project Roadway Network

The Project's roadway network is consistent with the City's Transportation Master Plan roadway network and includes multiple connections to that network. TMP roadways that serve as primary east-west circulators on the Specific Plan Area include Capital Parks Drive, New Schulte Road, and Old

Schulte Road; the Project adds an additional on-site east-west roadway located between Old Schulte and New Schulte. TMP roadways that serve as primary north-south circulators on the site include Mountain House Parkway, Hansen Road, and Pavillion Parkway; the Project supplements these with additional north-south connectors within the Specific Plan Area. The Project roadway network will distribute traffic within the Specific Plan Area and to-from the freeways and downtown Tracy, and will also provide mobility for bicycles, pedestrians, and transit vehicles.

The Project will implement roadway improvements in phases. Figure 4.14-4 illustrates the planned roadway improvements for Phase I and Buildout.

a. Existing Plus Phase I Roadway Network Assumptions

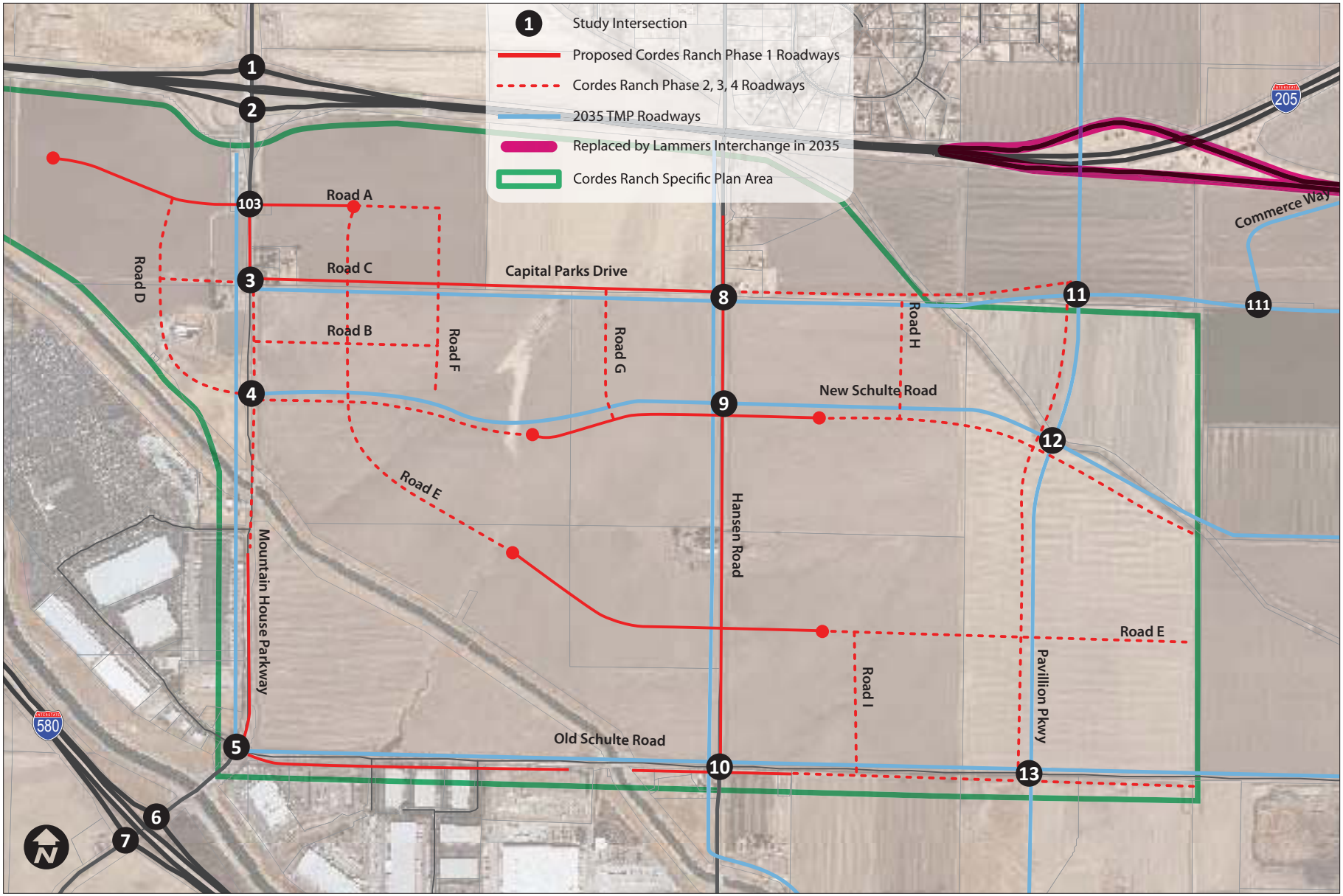
For the Existing Plus Phase 1 Project scenario, the Project Phase 1 network as shown in Figure 4.14-4 is assumed to be fully constructed and connected to the existing roadway network. All new Project streets are assumed to be constructed to the minimum width, including turn lanes at intersections, necessary to serve the projected traffic volume for the Existing Plus Phase 1 Project scenario. In some but not all cases, these configurations match the ultimate street widths in the Project; in others, the Existing Plus Phase 1 configurations are narrower/provide less capacity than the ultimate street widths in the Project. However, the existing streets themselves – Mountain House Parkway, Old Schulte Road and Hansen Road – are not assumed to be widened beyond their current configurations to ensure consistency in the methodology.

b. Existing Plus Buildout Roadway Network Assumptions

For this case, the Project Buildout roadway network is assumed to be fully constructed and connected to the existing roadway network.

c. Cumulative (2035) Plus Phase I Roadway Network Assumptions

For the purposes of the cumulative traffic analysis, Phase I of the Project is assumed to be built by 2035. The roadway network assumed in the 2035 cumulative analysis includes the following improvements in the TMP.



Source: Fehr and Peers, 2013.

FIGURE 4.14-4

ROADWAY NETWORK: CORDES RANCH SPECIFIC PLAN AND SURROUNDING TMP NETWORK

11th Street Interchange will be removed by 2035. Under existing conditions, the west leg of the 11th Street and Lammers intersection serves as the on- and off-ramps to Interstate 205. As planned in the TMP, the interchange will be removed and traffic accessing the 11th Street ramps will use the proposed Lammers interchange, just east of the existing ramps.

New Schulte Road will be completely constructed in 2035. As planned in the TMP, the roadway will provide a continuous east-west connection beginning in west Tracy at Mountain House Parkway and terminating east of downtown Tracy at Chrisman Road. New Schulte Road begins as a two-lane roadway at Mountain House Parkway and expands to four lanes east of Hansen Road.

Capital Parks Drive will be completely constructed in 2035. Like New Schulte Road, the roadway will provide an east-west connection beginning in west Tracy at Mountain House Parkway and terminating at Lammers Road. Capital Parks Drive starts as a four-lane roadway and expands to six-lanes east of Pavilion Parkway.

Hansen Road is currently planned to be widened from a two-lane roadway to a four-lane roadway, from just south of Old Schulte Road to south of the I-205 overpass. Per the TMP improvements, Hansen Road, south of Old Schulte Road, will continue as a two-lane roadway and is planned to extend south providing connections to Pavilion Parkway, Valpico Road and finally terminating at Lammers Road. No improvements are expected on Hansen Road, north of the I-205 overpass. Additional pedestrian and bicycle facilities should be provided with the roadway widening.

Pavillion Parkway will be completely constructed in 2035. As planned from the TMP, Pavillion Parkway will extend south-west of the Power Road and Pavillion Parkway intersection, just west of the Pavillion Parkway and I-205 interchange. From the existing roadway, Pavillion Parkway will widen to six- or eight-lanes until connecting to Grant Line Road, at which point Pavillion Parkway will become a four-lane road, terminating at Hansen Road.

Lammers Road will be extended to the proposed I-580 Lammers interchange and widened from two to four-lanes between the proposed I-580 interchange to New Schulte Road and six-lanes between New Schulte Road and 11th Street. Lammers Road will also be extended to a new interchange at I-205 which will replace the Eleventh Street Interchange.

Commerce Way will be completely constructed by 2035. The roadway will provide a north-south connection between Capital Parks Drive and Lammers Extension. The planned six-lane roadway will provide a direct connection to the propose Lammers interchange at I-205.

d. Cumulative Plus Buildout Roadway Network Assumptions

For this case, the Project Buildout roadway network is assumed to be fully constructed and connected to the 2035 TMP roadway network.

3. Pedestrian and Bicycle Facilities

The Specific Plan provides descriptions of the proposed bicycle and pedestrian facilities in the Infrastructure chapter. All major circulation streets will include a separated 5-foot sidewalk on one side, and a 10- to 12-foot Class I bike path on the opposite side to serve both pedestrians and bicyclists. Streets without the bicycle path have sidewalks on both sides.

The bicycle network exceeds the system envisioned in the TMP, providing Class 1 paths on New Schulte Road and along the PG&E Power Transmission Easement, in addition to Mountain House Parkway, Old Schulte Road, and Capital Parks Drive. On other streets without the bicycle path (Roads A, B, D, E, F, G, H, and I), bicycles are accommodated within 12- to 13-foot travel lanes or in 6- to 8-foot shoulders. The Specific Plan identifies the following roadways as having "Class 2 Bike Paths within the street," but in fact these are Class 3 bicycle routes, because striped bicycle lanes are not proposed:

- Road A
- Road B between Mountain House Parkway and Road F
- Road D

- Road E between Road A and New Schulte Road
- Road F

General Office Streets Road B and Road F between Capital Parks Drive and New Schulte Road have diagonal parking, with a 12-foot travel lane. On these streets, it is recommended that the diagonal parking be angled such that there is a 2-foot buffer between the backs of cars and the travel lane edge stripe, and that sharrows be used to designate the appropriate place for bicyclists to ride within the travel lane.

The Project roadway network and associated bicycle/pedestrian facilities are laid out in a grid to maximize connectivity and minimize trip lengths for bicyclists and pedestrians. The Specific Plan Design Guidelines chapter also contains guidance on maximizing development site and individual building access for pedestrians, particularly in Section 4.3.c describing Site Planning/Building Orientation for the I-205/BPI Overlay:

> Site Planning should promote pedestrian circulation by creating pathways, linkages, and visual connections between buildings; include multiple connections to public sidewalks and pathways between buildings and parcels to encourage pedestrian circulation between buildings and adjacent uses.

4. Transit Routes

The Specific Plan describes the current available transit service in Tracy, but does not lay out a planned transit network to serve the site at completion of Phase 1 or full buildout. Rather, the Specific Plan states:

> It is anticipated that the City of Tracy will take a phased approach to providing public transit to the project. The City will explore the needs based on construction phasing and will evaluate appropriate routes to serve multiple businesses. The businesses in Cordes Ranch will work cooperatively with the City to modify and expand routes as necessary and when feasible to efficiently accommodate demand. It is understood that in determining the final bus stop locations additional right-of-way

may be required to accommodate bus stops and shall be dedicated through the development review and/or mapping process."

Transit service will be extended westward along the east-west roadways connecting the Project site to central Tracy, as demand grows with development. Initially this may include a route along Old Schulte Road, followed by routes along New Schulte Road and Capital Parks Drive.

5. Truck Routes

The Specific Plan identifies truck routes in Figure 6.26. The routes are consistent with those identified in the Tracy Roadway and Transportation Master Plan, and include additional Project roadways within the Specific Plan. STAA[1] trucks are accommodated at all intersections of the truck routes, with the exception of the intersection of Capital Parks Drive and Road H. Truck routes include the following:

North-South Roadways
Mountain House Parkway
Hansen Road (south of Capital Parks Drive)
Pavillion Parkway (south of Capital Parks Drive)
Roads D, G, I, and H
Road F between Road A and Capital Parks Drive

East-West Roadways
Capital Parks Drive
New Schulte Road up to Hansen Road
Old Schulte Road up to Hansen Road
Roads A (except between Road D and Mountain House Parkway), C and E

The Project will generate a substantial volume of truck traffic, based on the proposed uses, which include warehousing, manufacturing, and light

[1] The Surface Transportation Assistance Act defines the legal dimensions for trucks allowed to use the STAA National Network and Terminal Access Routes.

industrial uses, in addition to retail and office uses. The truck volume assumptions are discussed in the trip generation section below.

6. Scenarios Analyzed and Analysis Methodologies

As stated at the beginning of this chapter, the analysis of the Phase 1 Project is performed on an intersection level, and the analysis of Project Buildout is performed on a roadway segment level. This is because Phase 1 of the Project is expected to be fully developed by the horizon year of 2035, whereas full Project Buildout may take additional time beyond 2035 to develop. The longer horizon for Project Buildout makes intersection-level forecasting infeasible for several reasons including: (1) a longer-term travel demand model is not available; (2) there are many variables about how the rest of the region will develop both in terms of land use and infrastructure; and (3) detailed engineering design of roadways for the network under Project Buildout conditions for purposes of analyzing when intersection improvements beyond 2035 would be triggered are not currently available.

Unlike detailed intersection-level forecasts, roadway segment forecasts can be projected for the Project Buildout scenario. Based on the consultants' technical expertise and industry standards, the roadway segment forecasts are useful metrics of Project traffic impacts because, in urban conditions, when segment operations fail, intersection operations would also fail because intersections govern the roadway network capacity.

Based on the above considerations, the following scenarios are assessed in this EIR:

- Existing Plus Phase 1 Project: *Intersection analysis*
- Existing Plus Project Buildout: *Roadway segment analysis*
- 2035 Plus Phase 1 Project: *Intersection analysis*
- 2035 Plus Project Buildout: *Roadway segment analysis*

In addition, freeway segment analysis is provided for all the above cases.

7. Traffic Forecasting

a. Existing Plus Project Phase 1 and Existing Plus Project Buildout

Existing Plus Phase 1 Project and Existing Plus Project Buildout traffic volumes were developed by adding the Project trips (for Phase 1 and full buildout) to the existing traffic counts. See the Project Trip Generation, Distribution, and Assignment, below, for a description of this process.

b. 2035 No Project, 2035 Plus Phase 1 Project, and 2035 Plus Project Buildout

The 2035 traffic forecasts were prepared using the 2035 Tracy Travel Demand Model, supplemented by a manual trip generation and assignment process for the Project traffic. The 2035 Tracy Travel Demand Model is consistent with the model used to prepare the Transportation Master Plan. The baseline model reflects Year 2010 conditions, and the future conditions model represents expected development throughout the City of Tracy Sphere of Influence, to the year 2035.

To obtain 2035 No Project peak hour traffic forecasts, the Cordes Ranch land uses were removed from the 2035 TMP model, and the baseline and 2035 models were run. Using the peak hour intersection turn movements from the baseline and future models, the difference method was applied, which calculates the growth between the baseline and future year for each intersection turning movement. The growth calculated using the difference method was added to existing volumes to obtain 2035 No Project traffic forecasts. Roadway segment volumes were derived from these intersection volumes, to form the baseline for the 2035 Plus Buildout analysis.

To obtain 2035 Plus Phase 1 Project peak-hour intersection forecasts, the following process was used:

- In the baseline and 2035 models, the Specific Plan Area was broken down into 17 traffic analysis zones (TAZs) to provide a more refined traffic assignment
- The peak hour trip generation calculated as described further below, in Project Trip Generation, Distribution, and Assignment, was entered into

the 17 zones in the baseline and future models. After the models were run, a select-zone process was used to remove the Project trips.

- Similar to the 2035 No Project forecasts, the difference method was applied to the resulting baseline and 2035 output, to establish 2035 with Project background forecasts.
- To obtain 2035 Plus Phase 1 Project forecasts, the Project trips described below in the Project Trip Generation, Distribution, and Assignment section were added to the background forecasts.

The 2035 Plus Buildout roadway segment volumes were derived similarly, but on a roadway segment basis as opposed to an intersection turning movement basis.

8. Project Trip Generation, Distribution and Assignment

a. Project Trip Generation

The Project's Land Use Plan as set forth in the Specific Plan includes land use estimates in three categories: commercial, office, and business park industrial. The Specific Plan quantifies the net building floor area allocated to each land use.

The trip generation rates used for the commercial and office uses are Uses #820 (Shopping Center) and #710 (General Office Building) in the Institute of Transportation Engineers *Trip Generation, Eighth Edition.* For the business park industrial use, the net area was allocated to five types of specific land use categories: general warehouse, high-cube warehouse, office, manufacturing, and light industrial. These allocations differed for Phase 1 and Phases 2-4, as shown below:[2]

Business Park Industrial, Phase 1:
Warehouse = 35%

[2] The assumptions on the mix of uses for the BPI use are based on discussions with the Project applicants and reflect anticipated market demand and absorption rates.

Hi-Cube Warehouse = 55%
Office = 5%
Manufacturing = 0%
Light Industrial = 5%

Business Park Industrial, Project excluding Phase 1:
Warehouse = 30%
Hi-Cube Warehouse = 30%
Office = 5%
Manufacturing = 19%
Light Industrial = 16%

The number of employees was estimated using the following densities, which are consistent with those in the Tracy Travel Demand Model and are commonly used in most travel demand models:

Commercial: 2 employees / 1,000 square feet
Office: 3 employees / 1,000 square feet
Business Park Industrial: 1 employee / 1,000 square feet

Tables 4.14-8 and 4.14-9 show the land uses converted into employees and broken down into TAZs for the Phase 1 and Full Buildout cases, respectively.

The TAZ map is shown in Figure 4.14-5. Phase 1 of the Project is expected to generate approximately 12,545 employees, primarily in the BPI category. Full buildout of the Project is expected to generate approximately 36,708 employees, with 77 percent in the BPI category.

Tables 4.14-10 and 4.14-11 present the trip generation for the Phase 1 of the Project and for full buildout of the Project, respectively. The Phase 1 Project generates an estimated 3,832 AM and 4,888 PM peak hour trips. Full buildout of the Project generates an estimated 15,215 AM and 16,865 PM peak hour trips.

TABLE 4.14-8 **PHASE 1 EMPLOYMENT**

Zone ID	Commercial Employees	Office Employees	Business Park Industrial Employees	Total Employees
829	220	0	1,093	1,313
830	444	0	731	1175
834	0	0	1,596	1,596
835	0	0	1607	1607
837	0	0	2614	2614
838	0	0	4,066	4,066
854	0	0	669	669
857	0	0	455	455
Total	664	0	11,881	12,545

Source: Cordes Ranch Specific Plan, Kier & Wright (November 2012); converted to employees and allocated to TAZs by Fehr & Peers.

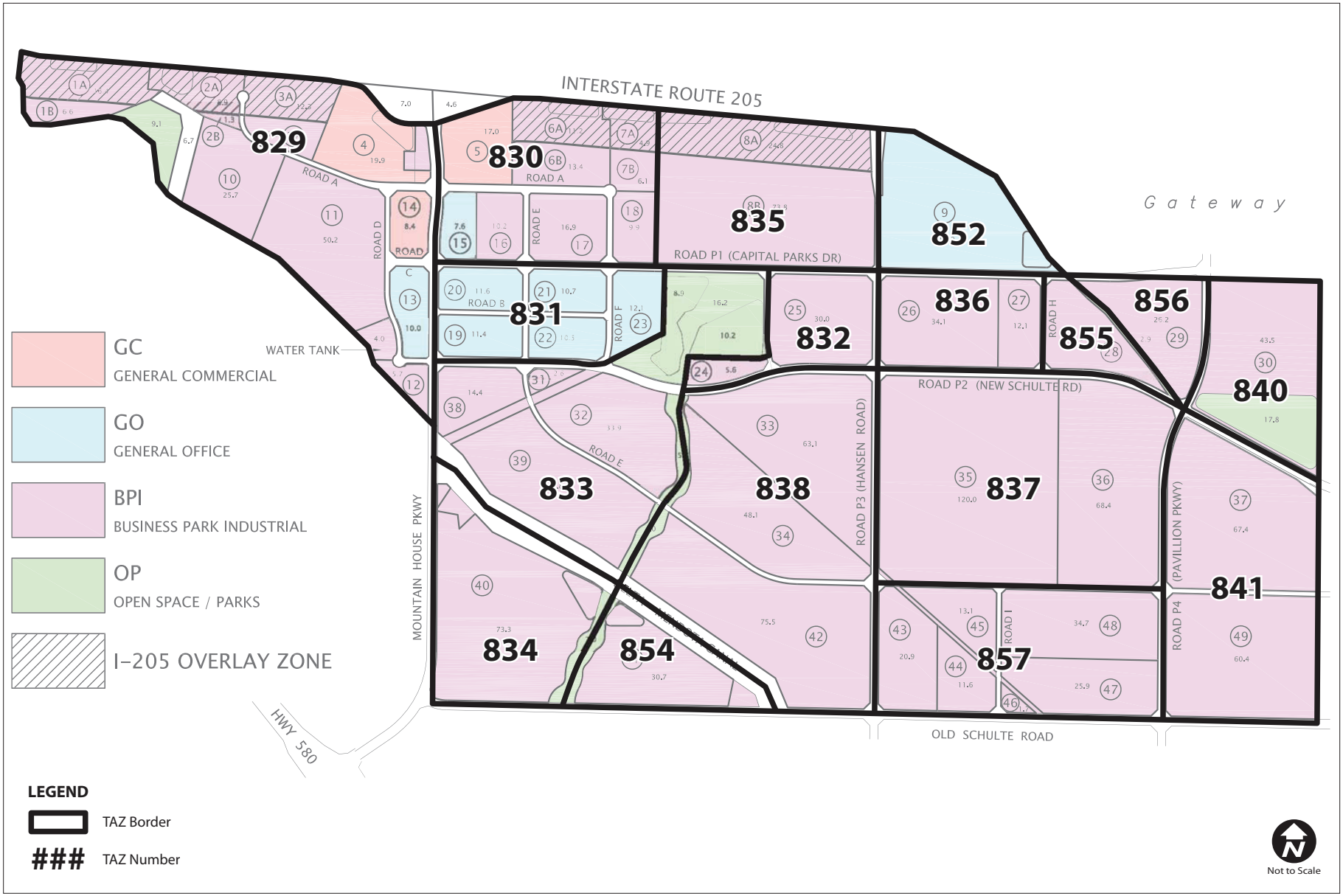
The trip generation in Tables 4.14-11a and 11b includes trips generated by trucks. Because the Project land uses – warehousing, manufacturing and light industrial uses – will generate relatively high truck trips, the intersection analysis assumes the following truck trip percentages, derived from existing counts of trucks as a proportion of total traffic at the industrial area near the I-580/Patterson Pass interchange, as well as from studies of similar industrial sites in Stockton and other San Joaquin Valley locations:

- For the With Project cases, generally 10 percent trucks was assumed, except:
  - On Old Schulte Road and the I-580/Patterson Pass Ramps, 15 percent trucks was assumed; and

TABLE 4.14-9 **BUILDOUT EMPLOYMENT**

Zone ID	Commercial Employees	Office Employees	Business Park Industrial Employees	Total Employees
829	740	588	3,580	4,908
830	444	447	1,862	2,753
831	0	3,311	0	3,311
832	0	0	775	775
833	0	0	2,150	2,150
834	0	0	1,597	1,597
835	0	3,052	2,580	5,632
836	0	0	1,006	1,006
837	0	0	4,104	4,104
838	0	0	4,735	4,735
840	0	0	1,974	1,974
841	0	0	5,134	5,134
852	0	3,052	0	3,052
854	0	0	669	669
855	0	0	457	457
856	0	0	571	571
857	0	0	2,350	2,350
Total	1,184	7,398	28,126	36,708

Source: Cordes Ranch Specific Plan, Kier & Wright (November 2012); converted to employees and allocated to TAZs by Fehr & Peers.



Source: Fehr and Peers, 2013.

FIGURE 4.14-5

TRAFFIC ANALYSIS ZONE MAP

TABLE 4.14-10A **PHASE 1 AM PEAK HOUR TRIP GENERATION**

Zone	Commercial		Office[a]		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
ID	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	67	43	75	10	91	24	35	19	44	6	0	0	312	102
830	136	87	33	5	40	11	16	8	20	3	0	0	245	113
834	0	0	109	15	132	35	51	28	65	9	0	0	357	87
835	0	0	110	15	133	35	52	28	65	9	0	0	360	87
837	0	0	178	24	217	58	84	45	106	14	0	0	585	142
838	0	0	277	38	337	90	131	70	165	22	0	0	910	220
854	0	0	46	6	55	15	22	12	27	4	0	0	150	36
857	0	0	31	4	38	10	15	8	18	3	0	0	102	25
Total	202	129	858	117	1,044	278	405	218	510	69	0	0	3,020	812

[a] The Office generated trips are part of the 'BPI' land use, which contains some office development potential.

Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

TABLE 4.14-10B **PHASE 1 PM PEAK HOUR TRIP GENERATION**

Zone	Commercial		Office[a]		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
ID	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	201	209	14	68	31	92	20	40	6	47	0	0	271	455
830	406	423	6	30	14	41	9	18	3	21	0	0	438	532
834	0	0	20	99	45	134	29	59	9	68	0	0	103	360
835	0	0	20	99	45	135	29	59	9	69	0	0	104	362
837	0	0	33	162	73	220	47	96	15	112	0	0	169	589
838	0	0	52	251	114	342	74	150	24	174	0	0	263	916
854	0	0	8	41	19	56	12	25	4	29	0	0	43	151
857	0	0	6	28	13	38	8	17	3	19	0	0	29	103
Total	607	631	159	778	352	1,057	228	464	73	537	0	0	1,420	3,468

[a] The Office generated trips are part of the 'BPI' land use, which contains some office development potential.

Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

TABLE 4.14-11A **BUILDOUT AM PEAK HOUR TRIP GENERATION**

Zone	Commercial		Office		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
ID	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	226	144	456	62	209	56	64	35	260	35	180	51	1,396	383
830	136	87	306	42	113	30	34	18	152	21	111	31	852	229
831	0	0	1,505	205	0	0	0	0	0	0	0	0	1,505	205
832	0	0	53	7	55	15	14	7	100	14	84	24	306	67
833	0	0	147	20	153	41	38	20	278	38	233	66	848	185
834	0	0	109	15	132	35	51	28	65	9	0	0	357	87
835	0	0	139	19	164	44	59	32	121	17	47	13	530	124
836	0	0	69	9	72	19	18	10	130	18	109	31	397	86
837	0	0	280	38	323	86	110	59	299	41	161	45	1,173	270
838	0	0	277	38	337	90	131	70	165	22	0	0	910	220
840	0	0	65	9	67	18	17	9	123	17	102	29	374	81
841	0	0	190	26	198	53	49	26	361	49	301	85	1,098	239
852	0	0	1,388	189	0	0	0	0	0	0	0	0	1,388	189
854	0	0	46	6	55	15	22	12	27	4	0	0	150	36
855	0	0	31	4	33	9	8	4	59	8	49	14	180	39
856	0	0	39	5	41	11	10	5	74	10	62	17	225	49
857	0	0	160	22	172	46	48	26	264	36	205	58	850	187
Total	361	231	5,259	717	2,125	565	672	362	2,478	338	1,644	464	12,539	2,676

Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

TABLE 4.14-11B **BUILDOUT PM PEAK HOUR TRIP GENERATION**

Zone ID	Commercial		Office		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	676	704	85	413	71	212	36	74	37	274	83	79	988	1,756
830	406	423	57	278	38	115	19	39	22	161	51	48	593	1,062
831	0	0	280	1,365	0	0	0	0	0	0	0	0	280	1,365
832	0	0	10	48	19	56	8	16	14	106	39	37	89	262
833	0	0	27	133	52	155	21	43	40	294	107	101	247	726
834	0	0	20	99	45	134	29	59	9	68	0	0	103	360
835	0	0	26	126	55	166	33	68	17	128	22	20	154	508
836	0	0	13	62	24	72	10	20	19	137	50	47	116	340
837	0	0	52	254	109	327	62	126	43	315	74	70	340	1,092
838	0	0	52	251	114	342	74	150	24	174	0	0	263	916
840	0	0	12	59	23	68	9	19	18	129	47	45	109	320
841	0	0	35	172	67	200	28	56	52	380	139	131	320	940
852	0	0	258	1,258	0	0	0	0	0	0	0	0	258	1,258
854	0	0	8	41	19	56	12	25	4	29	0	0	43	151
855	0	0	6	28	11	33	5	9	9	62	23	22	53	154
856	0	0	7	35	14	41	6	11	11	78	28	27	66	193
857	0	0	30	145	58	175	27	55	38	278	95	89	248	742
Total	1,082	1,126	977	4,768	717	2,152	379	769	356	2,613	759	717	4,270	12,145

Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

On Lammers Road between 11th Street and Old Schulte Road, 2 percent trucks was assumed, reflecting the TMP truck route plan which does not designate Lammers as a truck route, and the City's desire to minimize the impacts of heavy trucks on Lammers Road and adjacent residential and new development areas. Three percent trucks was assumed on Lammers Road between Old Schulte Road and I-580 (in the future case), to reflect some additional local truck traffic use with the provision of the new Lammers interchange in that case.

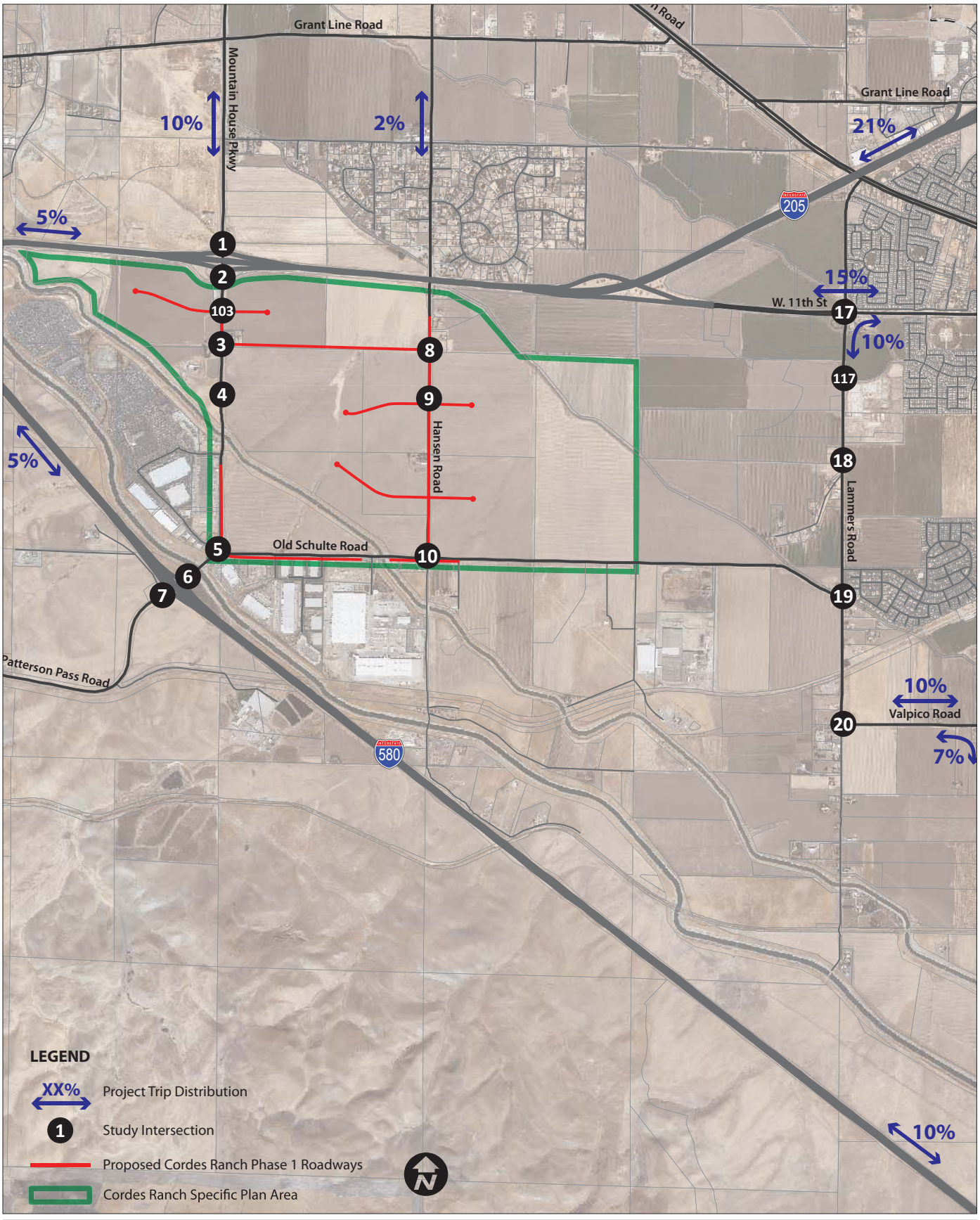
b. Project Trip Distribution and Assignment

Figure 4.14-6 and 4.14-7 show the estimated trip distribution for Project trips, for the Existing Plus Phase 1 Project / Existing Plus Buildout cases and the 2035 Plus Phase 1 Project / 2035 Plus Buildout cases, respectively. The distributions were derived from the Tracy Travel Demand Model. The difference in the distribution patterns reflects the network differences and the different levels of traffic on the various routes to the Specific Plan Area, for the two cases.

c. Traffic Operations and Capacity Evaluation

For the Existing Plus Phase 1 and 2035 Plus Phase 1 cases, intersection traffic operations are assessed using the HCM 2000 methodology and the Synchro software package. For the intersections along the northern section of Mountain House Parkway, including the I-205 interchange ramps intersections, the SimTraffic microsimulation software was used to more accurately evaluate operations and queuing, due to the closely-spaced configuration of those intersections. This information is included in the technical appendix.

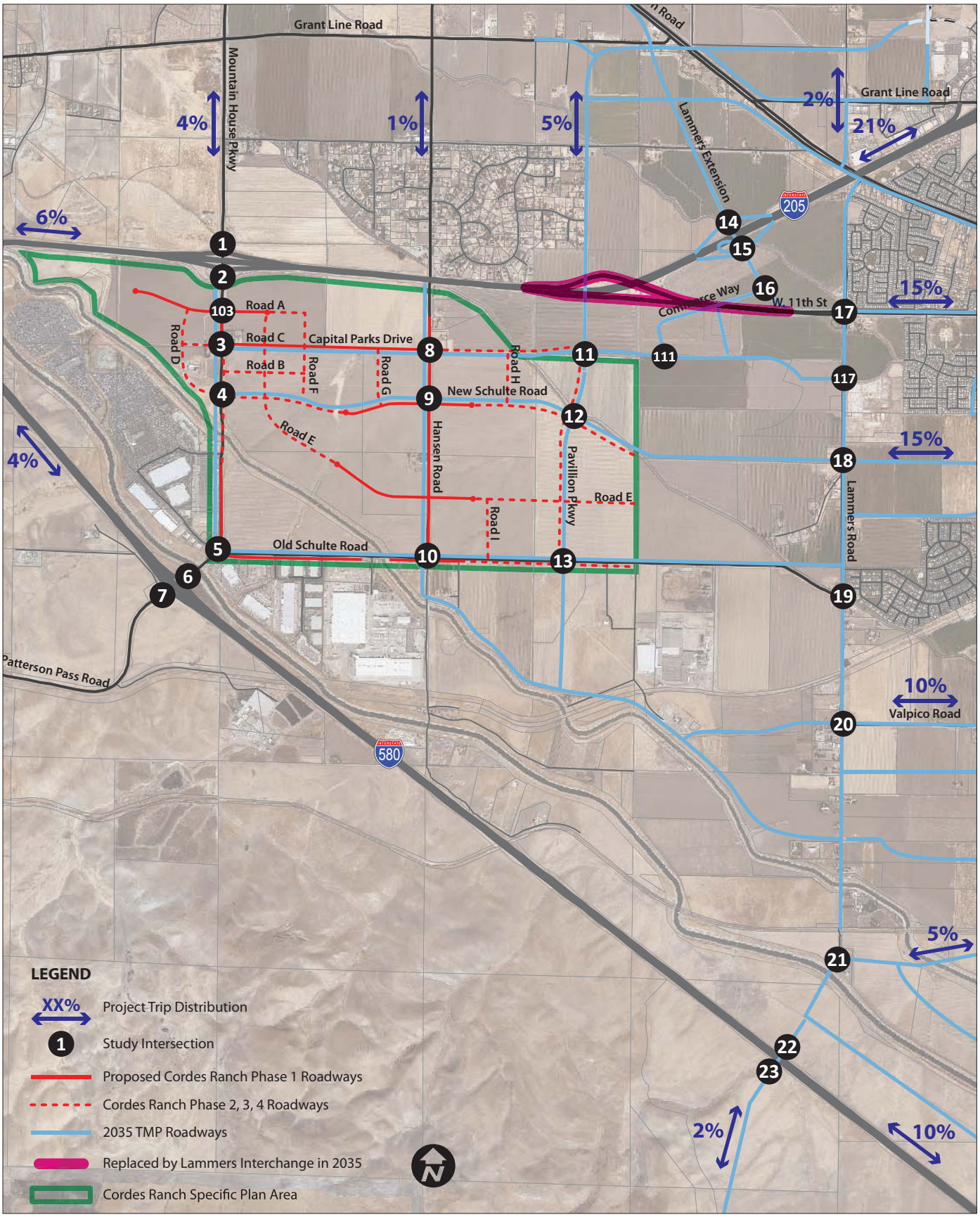
For the Existing Plus Buildout and 2035 Plus Buildout cases, roadway segment volumes and volume-to-capacity ratios are provided. See section C.6 for further discussion of the difference in analysis approaches for Phase 1 and Buildout.



Source: Fehr and Peers, 2013.

FIGURE 4.14-6

EXISTING + PHASE I PROJECT TRIP DISTRIBUTION



Source: Fehr and Peers, 2013.

FIGURE 4.14-7

2035 + PHASE I AND 2035 + FULL BUILD PROJECT TRIP DISTRIBUTION

Freeway operations are assessed using the HCM basic segment analysis methodology, which calculates vehicle density in passenger cars per hour per lane.

E. Significance Criteria

The proposed project would have a significant impact with regard to transportation and traffic if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and all relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. For the purposes of this EIR, the project will have a significant impact on traffic operations if it will:
  - Cause an intersection LOS at an intersection under the City of Tracy's jurisdiction to fall from acceptable (LOS D, or LOS E within ¼ mile of a freeway) to unacceptable;[3]
  - Cause an intersection under the City of Tracy's jurisdiction that is already operating at an unacceptable LOS in the Existing case (or in the Cumulative No Project case for the Cumulative impact assessment) to worsen by 5 seconds of delay due to Project traffic;
  - For roadways within Tracy's jurisdiction, cause a roadway segment volume to exceed the planning-level capacity (LOS D, V/C=0.89), for analyses conducted on a roadway segment basis.

[3] Note that for the purposes of this EIR, City's LOS criteria are applied to the I-205/Mountain House Parkway intersections. Caltrans does not provide LOS standards for these intersections.

- Conflict with an applicable congestion management program, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. For the purposes of this EIR, the following CMP network standards apply:
  - For I-205 and I-580 segments in San Joaquin County, an impact is significant if the Project causes a segment to fall from LOS D to LOS E or F, or if it adds 5 percent to the total future traffic volume on a segment already operating at LOS F;
  - For the analysis segment of I-580 in Alameda County, an impact is significant if the Project causes the segment to fall from LOS E to LOS F, or if it adds 5 percent to the segment already operating at LOS F without 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.
- 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.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

F. Impact Assessment

1. Traffic Forecasts and Intersection LOS/Roadway Segment Capacity Evaluation

a. Existing Plus Phase 1 Project

i. Intersection Volumes and Levels of Service

Figure 4.14-8 shows the intersection volumes for the Existing Plus Phase 1 Project case. Table 4.14-12 shows the corresponding intersection service levels.

TABLE 4.14-12 **INTERSECTION LEVELS OF SERVICE – EXISTING PLUS PHASE I PROJECT**

Intersection	Control[a]	Peak Hour	Existing Delay	Existing LOS	Existing Plus Phase I Delay	Existing Plus Phase I LOS	Existing Plus Phase 1 Mitigated Delay	Existing Plus Phase 1 Mitigated LOS	Project Mitigation	Is Mitigation Configured the same as the Cumulative Mitigated Configuration?
1. I-205 Westbound Ramps/ Mountain House Parkway[c]	Signal	AM PM	8.2 7.6	A A	117.2 30.1	F C	29.3 27.0	C C	Restripe WB approach to provide two left-turn lanes and one shared through right lane, and optimize signal timings	No
2. I-205 Eastbound Ramps/Mountain House Parkway[c]	Signal	AM PM	5.1 7.6	A A	19.0 > 120	B F	15.7 63.8	B E	Convert the NB right-turn lane to a free right with acceptance lane, and optimize signal timings	No
3. Road A/Mountain House Parkway[c]	Signal	AM PM	Intersection created as part of the project		23.9 60.2	C E	18.1 57.6	B E		
4. Capital Parks Drive/ Mountain House Park[c]	Signal	AM PM	Intersection created as part of the project		26.8 27.1	C C	29.7 31.3	C C		
5. Old Schulte Road/ Mountain House Parkway[c]	Signal	AM PM	29.4 7.6	C A	76.8 70.8	E E	57.5 53.9	E D		
6. I-580 Westbound Ramps/ Mountain House Parkway[c]	SSSC[b]	AM PM	2.9 (NB 10.7) 1.4 (NB 11.9)	A (B) A (B)	9.6 (NB 25.9) 2.7 (NB 16.4)	A (D) A (C)	22.4 25.9	C C	Signalize the intersection with EB-WB split phasing OR Convert to roundabout (Note: this improvement is recommended to allow the intersection to function acceptably with intersection 7 improvements, below).	Yes
7. I-580 Eastbound Ramps/ Mountain House Parkway[c]	SSSC[b]	AM PM	4.4 (SB 14.1) 12.6 (SB 29.6)	A (B) B (D)	33.9 (SB 77.7) > 120 (SB > 120)	D (F) F (F)	23.2 35.3	C D	Signalize the intersection with EB-WB split phasing OR Convert to roundabout	Yes
8. Capital Parks Drive/ Hansen Road	Signal	AM PM	Intersection created as part of the project		12.8 14.2	B B	15.2 22.9	B C		

TABLE 4.14-12 **INTERSECTION LEVELS OF SERVICE – EXISTING PLUS PHASE I PROJECT**

Intersection	Control[a]	Peak Hour	Existing Delay	Existing LOS	Existing Plus Phase I Delay	Existing Plus Phase I LOS	Existing Plus Phase 1 Mitigated Delay	Existing Plus Phase 1 Mitigated LOS	Project Mitigation	Is Mitigation Configured the same as the Cumulative Mitigated Configuration?
9. New Schulte Road/ Hansen Road	Signal	AM	Intersection created as part of the project		5.0	A	8.6	A		
		PM			8.6	A	15.5	B		
10. Old Schulte Road/ Hansen Road	AWSC	AM	10.4	B	> 120	F	51.9	D	Signalize intersection. Construct WB left, EB left and right, SB left	Yes
		PM	12.2	B	> 120	F	37.4	D		
17. 11th Street/ Lammers Road[c]	Signal	AM	25.6	C	42.8	D	44.3	D		
		PM	28.6	C	77.0	E	77.6	E		
18. New Schulte Road / Lammers Road	Signal	AM	Does Not Exist		Does Not Exist		9.7	A	Construct New Schulte Road between Hansen Road and Lammers Road; include right turn pocket for NB and SB approach and left turn pocket for EB approach. Signalize intersection.	Yes
		PM					12.4	B		
19. Old Schulte Road/ Lammers Road	AWSC	AM	30.7	D	> 120	F	20.5	C	Signalize intersection. Construct NB and SB right turn pockets, and EB left-turn pocket.	Yes
		PM	11.2	B	> 120	F	32.3	C		
20. Valpico Road/ Lammers Road	SSSC[b]	AM	9.7 (WB 11.1)	A (B)	35.6 (WB 46.5)	E (E)	18.2	B	Signalize the intersection Construct SB left pocket.	Yes
		PM	8.2 (WB 9.7)	A (A)	13.9 (WB 24.1)	B (C)	20.2	C		

Note: **Bold** = Intersection does not meet City of Tracy LOS standard.

[a] Signal = Signalized intersection; AWSC = All-way stop-controlled intersection; SSSC = Side-street stop-controlled intersection.

[b] For side-street stop-controlled intersections, average delay is listed first followed by the delay for the worst approach.

[c] LOS Criteria: Within ¼ of mile of a freeway, LOS E shall be allowed.

[d] The slight change in delay relative to Existing Plus Phase I is due to these intersections being in a coordinated system with intersections 1 and 2, which have mitigation measures.

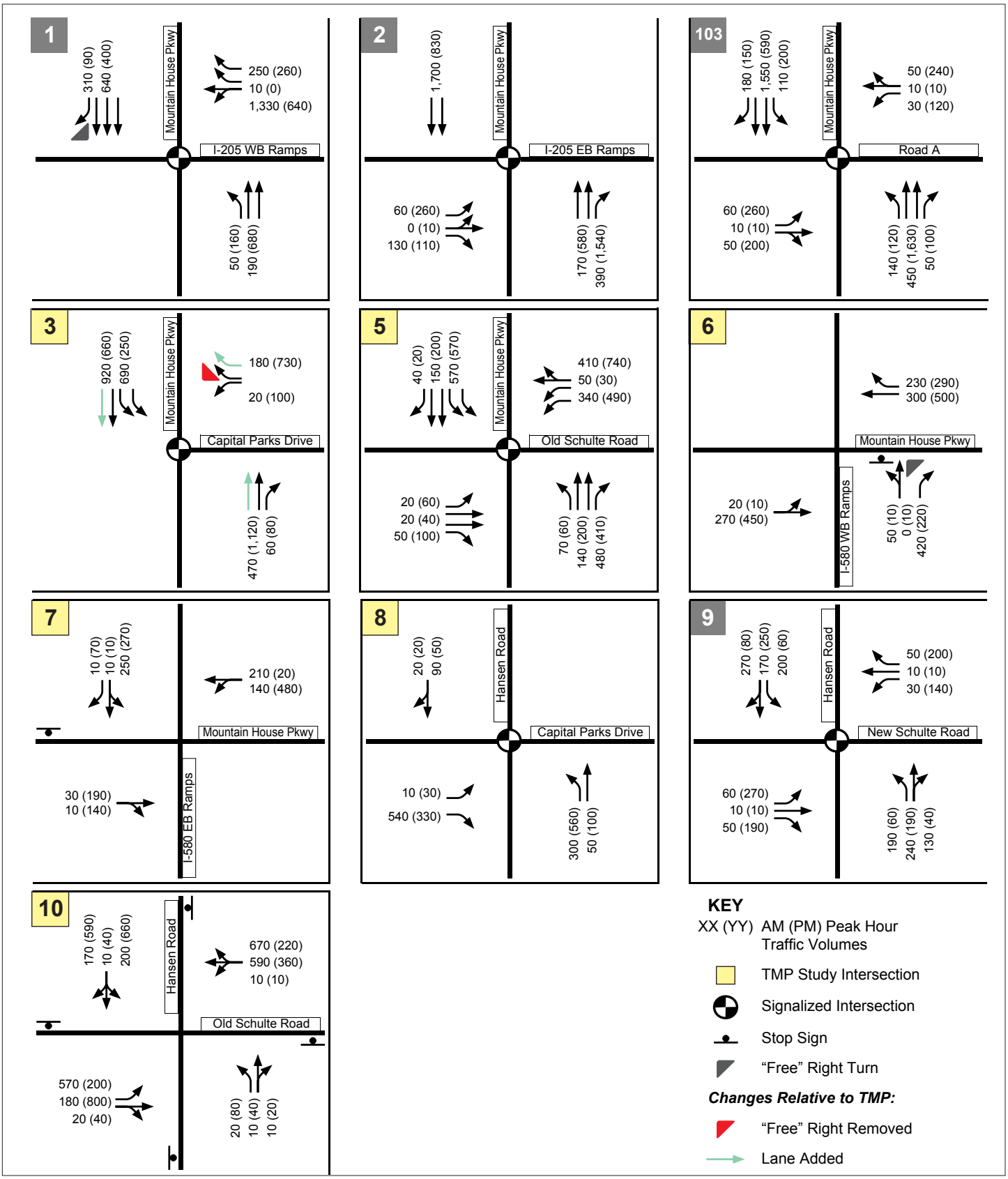
Source: Fehr & Peers, February 2013.

For purposes of this analysis, a two-step process was employed, due to the methodology utilized in defining the assumed background improvements. As described above, the new Phase 1 Project roadways would be constructed to the required widths but for purposes of the background network, it was assumed that existing roadways would not be widened.

Based on this methodology, an initial evaluation of the Project's impacts was completed. From that initial evaluation, it was determined that extensive improvements at several intersections would be necessary to mitigate impacts (see Appendix L). This is because the limited existing roadway network is serving all the Phase 1 Project trips; with the eventual construction of the TMP network, the Project trips will be distributed onto a more complete network. To mitigate such impacts (which would only be temporary, at most), extensive capacity improvements – which would well exceed the envisioned TMP improvements– would need to be constructed. Such extensive improvements, which would result in "over-building" of improvements at the identified locations, would be inconsistent with the infrastructure planning set forth in the TMP. Furthermore, such overbuilding may be determined by the City, after considering this analysis, to not be desirable or feasible for several reasons, among others, cost efficiency, preservation of the pedestrian and bicycle environment, desire to achieve other land use and planning goals rather than building extensive road improvements, etc.

Accordingly, the technical consultants performed an additional analysis, which evaluated the Project's impacts if a key TMP roadway– New Schulte Road between the eastern terminus of the Phase 1 Project network (just east of Hansen Road) and Lammers Road – were built by the Project as required mitigation. In other words, the analysis assumed the imposition of the "New Schulte extension," and then re-ran the model and conducted further analysis to determine what Project impacts would occur in Phase 1 if the New Schulte extension were built.

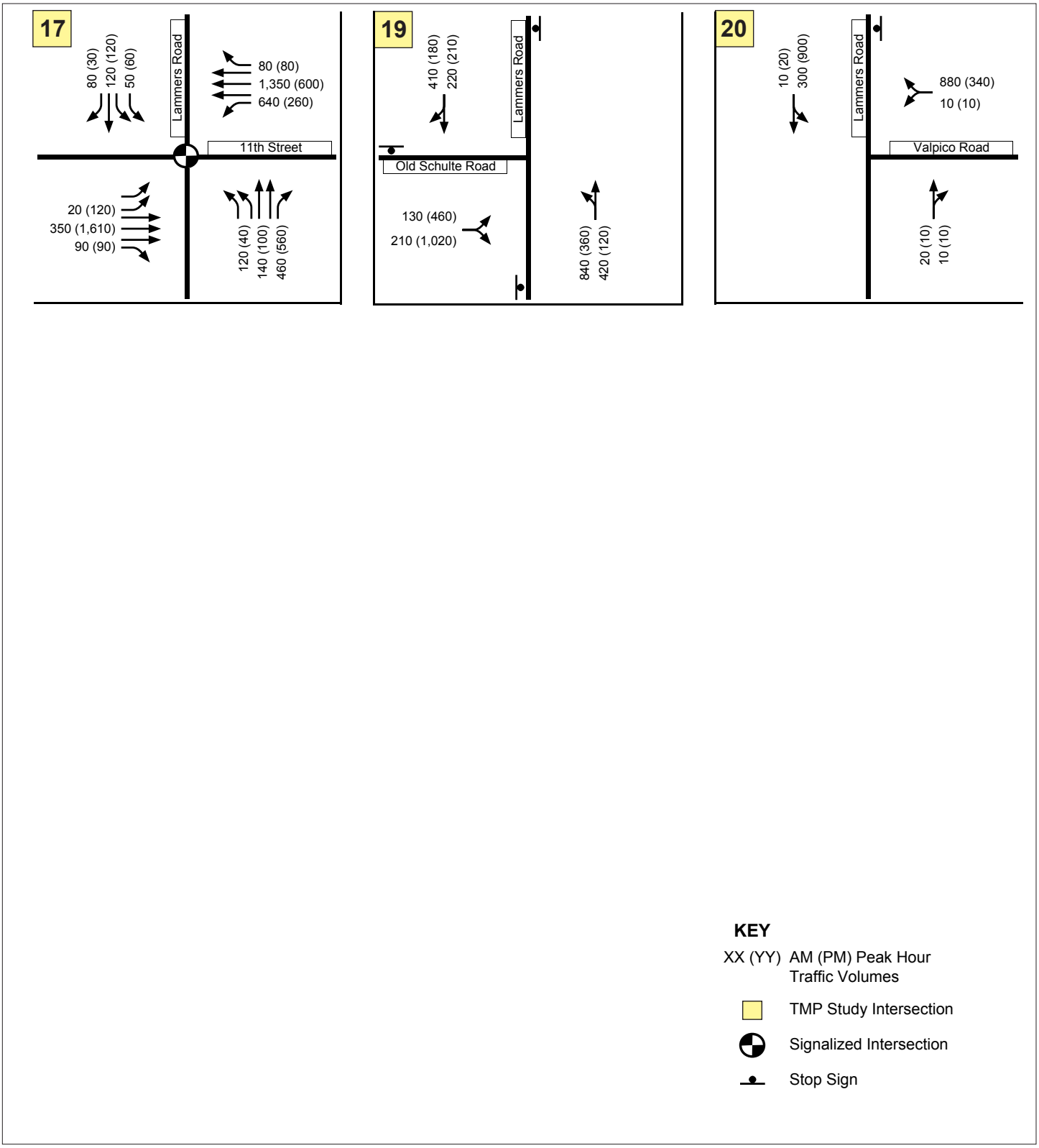
The results of this analysis are shown on Table 4.14-12 and discussed below.



Source: Fehr and Peers, 2013.

FIGURE 4.14-8A

EXISTING + PHASE 1 PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-8B

EXISTING + PHASE 1 PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES

With the construction of the New Schulte extension, the Project would trigger the need for improvements at seven additional intersections to mitigate the Existing Plus Phase 1 Project impacts. The mitigations and corresponding service levels are also shown in Table 4.14-12. A graphic showing the Existing Plus Phase 1 traffic volumes with the extension of New Schulte Road is included in the technical appendix.

In addition to identifying impacts and recommended improvements, additional analysis was performed for each of the mitigation measures shown in Table 4.14-12, to determine when such improvements would be triggered during Phase 1; i.e., what percentage of Phase 1 construction could be completed, and what corresponding number of trips could be generated, before the mitigation would be needed. This information is provided in Table 4.14-13.

ii. Freeway Volumes and Levels of Service

Table 4.14-14A and 14B present the Existing Plus Phase 1 Project peak hour freeway volumes on I-205 and I-580. All segments but one are projected to continue to operate at acceptable service levels (LOS D or better for the I-205 and I-580 segments in San Joaquin County, and LOS E or better for I-580 west of I-205 in Alameda County), with the addition of Phase 1 Project traffic. The one segment which falls below the LOS standard is:

- In the PM peak hour, I-205 eastbound between Mountain House Parkway and Tracy Boulevard falls from LOS D to LOS E with the addition of Phase 1 Project traffic.

b. Existing Plus Project Buildout

i. Roadway Segment Volumes and V/C Ratios

Table 4.14-15 shows the roadway volumes and volume-to capacity ratios for the Existing Plus Buildout case. The roadway capacities are derived from the Tracy Travel Demand Model. As indicated by the bold values in the table, the addition of Project Buildout traffic to the existing roadway system would cause significant overloading of many of the existing roadways serving travel

TABLE 4.14-13 **EXISTING PLUS PHASE 1 PROJECT – MITIGATION PHASING**

Intersection	Peak Period	Percent of Project	Total Project Trips
1. I-205 Westbound Ramps/ Mountain House Parkway	AM	90%	3,450
	PM		4,400
2. I-205 Eastbound Ramps/ Mountain House Parkway	AM	95%	3,640
	PM		4,640
7. I-580 Eastbound Ramps/ Mountain House Parkway	AM	30%	1,150
	PM		1,470
10. Old Schulte Road/ Hansen Road	AM	20%	770
	PM		980
19. Old Schulte Road/ Lammers Road	AM	5%	190
	PM		240
20. Valpico Road/Lammers Road	AM	100%	3,830
	PM		4,890
New Schulte Road extension to Lammers	AM	35%	1,340
	PM		1,710

Notes: Bold indicates the peak period which produces an unacceptable LOS at the lowest percent buildout of Phase 1.
Source: Fehr & Peers, February 2013.

to and from the Specific Plan Area, even if the full Buildout Project roadway network is constructed within the Specific Plan Area. This is not surprising, since the City of Tracy is planning many roadway network improvements to accommodate traffic growth generated by the Project and other development areas in the City and its sphere of influence.

TABLE 4.14-14A **FREEWAY VOLUMES AND LEVEL OF SERVICE – EXISTING PLUS PHASE 1 (AM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] Existing No Project	Existing Plus Phase I
I-205				
West of Mountain House Parkway	6,600	EB	2,300 (14) [B]	2,470 (15) [B]
	6,600	WB	4,180 (25) [C]	4,230 (26) [C]
Mountain House Parkway to Tracy Boulevard	8,140	EB	2,340 (14) [B]	2,470 (15) [B]
	8,140	WB	4,390 (27) [D]	4,850 (30) [D]
East of Tracy Boulevard	6,600	EB	2,620 (16) [B]	2,790 (17) [B]
	6,600	WB	3,750 (23) [C]	4,390 (27) [D]
I-580				
West of I-205 Interchange	8,800	EB	3,140 (15) [B]	3,450 (17) [B]
	11,000	WB	6,430 (25) [C]	6,510 (25) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	840 (8) [A]	980 (9) [A]
	4,400	WB	2,250 (22) [C]	2,280 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	840 (8) [A]	8,90 (9) [A]
	4,400	WB	2,220 (21) [C]	2,420 (23) [C]
East of Corral Hollow Road	4,400	EB	840 (8) [A]	920 (9) [A]
	4,400	WB	1,670 (16) [B]	1,970 (19) [C]

Notes: Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

TABLE 4.14-14B **FREEWAY VOLUMES AND LEVEL OF SERVICE – EXISTING PLUS PHASE 1 (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] Existing No Project	Existing Plus Phase I
I-205				
West of Mountain House Parkway	6,600	EB	4910 (31) [D]	5010 (32) [D]
	6,600	WB	2390 (14) [B]	2600 (16) [B]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4980 (31) [D]	**5540 (38) [E]**
	8,140	WB	2690 (16) [B]	2950 (18) [B]
East of Tracy Boulevard	6,600	EB	4320 (26) [D]	5040 (32) [D]
	6,600	WB	2620 (16) [B]	2920 (18) [B]
I-580				
West of I-205 Interchange	8,800	EB	6960 (35) [D]	7100 (36) [E]
	11,000	WB	3140 (12) [B]	3480 (13) [B]
I-205 Interchange to Patterson Pass Road	4,400	EB	2050 (18) [C]	2090 (19) [C]
	4,400	WB	750 (7) [A]	880 (8) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2040 (18) [C]	2280 (21) [C]
	4,400	WB	720 (6) [A]	830 (7) [A]
East of Corral Hollow Road	4,400	EB	1650 (15) [B]	2000 (18) [C]
	4,400	WB	760 (7) [A]	910 (8) [A]

Notes: **Bold** indicates a segment operating below the applicable standard. Shading indicates a significant impact based on the applicable standard. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

The shaded values in Table 4.14-15 indicate segments that would continue to exceed planning-level capacities (LOS D, V/C ≤ 0.89), even with provision of the Right-of-Way network as defined in the Roadway and Transportation Master Plan (TMP Figure 3.5). The Right-of-Way network is defined in the TMP for purposes of long-term right-of-way preservation, and exceeds the roadway widths (number of lanes and corresponding capacities) of the TMP roadway network on many (but not all) TMP roadways. The Right-of-Way network capacities, which are derived from the Tracy Travel Demand Model, are shown in Table 4.14-16 for reference. These are planning-level capacities; the actual capacities of the roadways, if ultimately widened to the Right-of-Way network width, may be higher or lower than these capacities, depending on the ultimate roadway design (intersection spacing, lane widths, etc.).

ii. Freeway Volumes and LOS

Tables 4.14-17A and 4.14-17B present the Existing Plus Project Buildout peak hour freeway volumes on I-205 and I-580. With the addition of Project Buildout traffic, the following significant impacts occur:

- In the AM peak hour, two segments of I-205 westbound would fall to an unacceptable LOS F: I-205 east of Tracy Boulevard, and I-205 between Tracy Boulevard and Mountain House Parkway;
- In the PM peak hour, two segments of I-205 eastbound would fall to an unacceptable LOS F: I-205 east of Tracy Boulevard, and I-205 between Tracy Boulevard and Mountain House Parkway.

c. 2035 Plus Phase 1

i. Intersection Volumes and Levels of Service

Figures 4.14-9 and 4.14-10 show the intersection volumes for the 2035 No Project and 2035 Plus Phase 1 Project case. Table 4.14-18 shows the corresponding intersection service levels.

TABLE 4.14-15 **ROADWAY VOLUMES – EXISTING PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Existing Capacity	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout
MHP SB	N/O I-205	1,780	650	1,930	350	780	0.4	1.1	0.2	0.4
	I-205 to Road A	890	370	6,580	220	2,380	0.4	7.4	0.2	2.7
	Road A to Capital Parks Drive	890	370	5,590	220	2,570	0.4	6.3	0.2	2.9
	Capital Parks Drive to New Schulte Road	890	370	2,270	220	2,380	0.4	2.5	0.2	2.7
	New Schulte Road to Old Schulte Road	890	370	1,870	220	2,410	0.4	2.1	0.2	2.7
	Old Schulte Road to I-580	1,490	400	810	250	2,060	0.3	0.5	0.2	1.4
	S/O I-580	1,490	220	220	90	90	0.1	0.1	0.1	0.1
MHP NB	N/O I-205	890	350	620	590	1,820	0.4	0.7	0.7	2.0
	I-205 to Road A	890	160	1,480	420	6,470	0.2	1.7	0.5	7.3
	Road A to Capital Parks Drive	890	160	1,990	420	5,530	0.2	2.2	0.5	6.2
	Capital Parks Drive to New Schulte Road	890	160	2,060	420	2,420	0.2	2.3	0.5	2.7
	New Schulte Road to Old Schulte Road	890	160	2,100	420	2,100	0.2	2.4	0.5	2.4
	Old Schulte Road to I-580	1,490	200	2,100	470	1,080	0.1	1.4	0.3	0.7
	S/O I-580	1,490	40	40	330	330	0.0	0.0	0.2	0.2

TABLE 4.14-15 **ROADWAY VOLUMES – EXISTING PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Existing Capacity	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout
Hansen SB	N/O Capital Parks Drive	890	50	420	40	1,090	0.1	0.5	0.0	1.2
	Capital Parks Drive to New Schulte Road	890	50	2,160	40	1,620	0.1	2.4	0.0	1.8
	New Schulte Road to Old Schulte Road	890	50	1,260	40	3,330	0.1	1.4	0.0	3.7
	S/O Old Schulte Road	890	20	40	70	150	0.0	0.0	0.1	0.2
Hansen NB	N/O Capital Parks Drive	890	40	1,160	50	470	0.0	1.3	0.1	0.5
	Capital Parks Drive to New Schulte Road	890	40	1,630	50	2,140	0.0	1.8	0.1	2.4
	New Schulte Road to Old Schulte Road	890	40	3,780	50	1,430	0.0	4.2	0.1	1.6
	S/O Old Schulte Road	890	30	110	120	150	0.0	0.1	0.1	0.2
Lammers SB	N/O 11th Street	890	250	250	220	220	0.3	0.3	0.2	0.2
	11th Street to Capital Parks Drive	890	510	2,120	320	850	0.6	2.4	0.4	1.0
	Capital Parks Drive to New Schulte Road	890	510	2,080	320	1,060	0.6	2.3	0.4	1.2
	New Schulte Road to Old Schulte Road	890	290	1,590	240	900	0.3	1.8	0.3	1.0
	Old Schulte Road to Valpico Road	890	260	830	510	3,120	0.3	0.9	0.6	3.5
	S/O Valpico Road	890	10	110	20	280	0.0	0.1	0.0	0.3

TABLE 4.14-15 **ROADWAY VOLUMES – EXISTING PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Existing Capacity	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout
Lammers NB	N/O 11th Street	890	240	240	290	290	0.3	0.3	0.3	0.3
	11th Street to Capital Parks Drive	890	630	970	340	1,860	0.7	1.1	0.4	2.1
	Capital Parks Drive to New Schulte Road	890	630	1,230	340	1,860	0.7	1.4	0.4	2.1
	New Schulte Road to Old Schulte Road	890	460	1,010	190	1,480	0.5	1.1	0.2	1.7
	Old Schulte Road to Valpico Road	890	630	3,350	190	1,100	0.7	3.8	0.2	1.2
	S/O Valpico Road	890	10	290	10	140	0.0	0.3	0.0	0.2
Old Schulte Road EB	W/O MHP	1,490	80	80	190	190	0.1	0.1	0.1	0.1
	MHP to Hansen Road	1,490	210	2,920	450	2,530	0.1	2.0	0.3	1.7
	Hansen Road to Lammers Road	890	100	1,830	370	4,180	0.1	2.1	0.4	4.7
Old Schulte Road WB	W/O MHP	1,490	150	150	110	110	0.1	0.1	0.1	0.1
	MHP to Hansen Road	1,490	380	2,130	250	2,910	0.3	1.4	0.2	2.0
	Hansen Road to Lammers Road	890	290	4,190	120	2,170	0.3	4.7	0.1	2.4
Valpico EB	E/O Lammers Road	740	180	590	370	2,200	0.2	0.8	0.5	3.0
Valpico WB	E/O Lammers Road	740	410	2,300	140	790	0.6	3.1	0.2	1.1
11th EB	W/O Lammers Road	1,780	350	690	1,330	2,890	0.2	0.4	0.7	1.6
	E/O Lammers Road	2,230	660	1,340	1,390	4,480	0.3	0.6	0.6	2.0

TABLE 4.14-15 **ROADWAY VOLUMES – EXISTING PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Existing Capacity	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout	Existing	Existing + Buildout
11th WB	W/O Lammers Road	1,780	1,130	2,720	470	1,020	0.6	1.5	0.3	0.6
	E/O Lammers Road	2,230	1,320	4,510	590	1,670	0.6	2.0	0.3	0.7

Notes: Capacities and Buildout volumes derived from the City of Tracy 2035 Travel Demand Model and the Project Buildout traffic assignment.
V/C ratios are correlated with LOS as follows: < 0.60=LOS A; 0.60 – 0.69=LOS B; 0.70 – 0.79=LOS C; 0.80 – 0.89=LOS D; 0.90 – 0.99=LOS E; ≥1.00=LOS F.
Bold values indicated volumes exceeding LOS D (i.e. V/C ratio of 0.90 or greater.)
Shaded values indicate segments in the Existing Plus Buildout case for which volumes would continue to exceed the LOS D capacity even with the higher TMP Right-of-Way Roadway Network capacities (see Table 4.14-16).
Source: Fehr & Peers, February 2013.

TABLE 4.14-16 **TMP RIGHT-OF-WAY ROADWAY CAPACITIES**

Roadway	Segment	Existing Capacity	TMP Right-of-Way Capacity
MHP SB	N/O I-205	1,780	1,780
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Drive to New Schulte Road	890	3,560
	New Schulte Road to Old Schulte Road	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
MHP NB	N/O I-205	890	890
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Drive to New Schulte Road	890	3,560
	New Schulte Road to Old Schulte Road	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
Hansen SB	N/O Capital Parks Drive	890	890
	Capital Parks Drive to New Schulte Road	890	1,780
	New Schulte Road to Old Schulte Road	890	1,780
	S/O Old Schulte Road	890	1,780

TABLE 4.14-16 **TMP RIGHT-OF-WAY ROADWAY CAPACITIES**

Roadway	Segment	Existing Capacity	TMP Right-of-Way Capacity
Hansen NB	N/O Capital Parks Drive	890	890
	Capital Parks Drive to New Schulte Road	890	1,780
	New Schulte Road to Old Schulte Road	890	1,780
	S/O Old Schulte Road	890	1,780
Lammers SB	N/O 11th Street	890	3,560
	11th Street to Capital Parks Drive	890	2,670
	Capital Parks Drive to New Schulte Road	890	2,670
	New Schulte Road to Old Schulte Road	890	2,670
	Old Schulte Road to Valpico Road	890	2,670
	S/O Valpico Road	890	2,670
Lammers NB	N/O 11th Street	890	3,560
	11th Street to Capital Parks Drive	890	2,670
	Capital Parks Drive to New Schulte Road	890	2,670
	New Schulte Road to Old Schulte Road	890	2,670
	Old Schulte Road to Valpico Road	890	2,670
	S/O Valpico Road	890	2,670
Old Schulte Road EB	W/O MHP	1,490	2,240
	MHP to Hansen Road	1,490	1,490
	Hansen Road to Lammers Road	890	1,780

TABLE 4.14-16 **TMP RIGHT-OF-WAY ROADWAY CAPACITIES**

Roadway	Segment	Existing Capacity	TMP Right-of-Way Capacity
Old Schulte Road WB	W/O MHP	1,490	2,240
	MHP to Hansen Road	1,490	1,490
	Hansen Road to Lammers Road	890	1,780
Valpico EB	E/O Lammers Road	740	1,480
Valpico WB	E/O Lammers Road	740	1,480
11th EB	W/O Lammers Road	1,780	3,560
	E/O Lammers Road	2,230	2,230
11th WB	W/O Lammers Road	1,780	3,560
	E/O Lammers Road	2,230	2,230

Note: Capacities derived from the City of Tracy Travel Demand Model.
Source: Fehr & Peers, February 2013.

a) Discussion of Intersection Impacts and Mitigation Measures: 2035 Plus Phase 1 Project

As noted in the preceding methodology section, the 2035 Plus Phase 1 Project analysis assumes intersection lane geometries consistent with the Project's Phase 1 roadway network and the 2035 TMP roadway network. Therefore, most intersections are projected to operate acceptably. However, two intersections are projected to operate below the applicable LOS standard: Intersection #1 (I-205 Westbound Ramps/Mountain House Parkway) and intersection #18 (New Schulte Road/Lammers Road). In addition, two intersections require improvements to function acceptably, even though the LOS meets the standard: #4 (New Schulte Road/Mountain House Parkway) and intersection #20 (Valpico Road/Lammers Road.)

TABLE 4.14-17A FREEWAY VOLUMES AND LEVEL OF SERVICE – EXISTING PLUS BUILDOUT (AM)

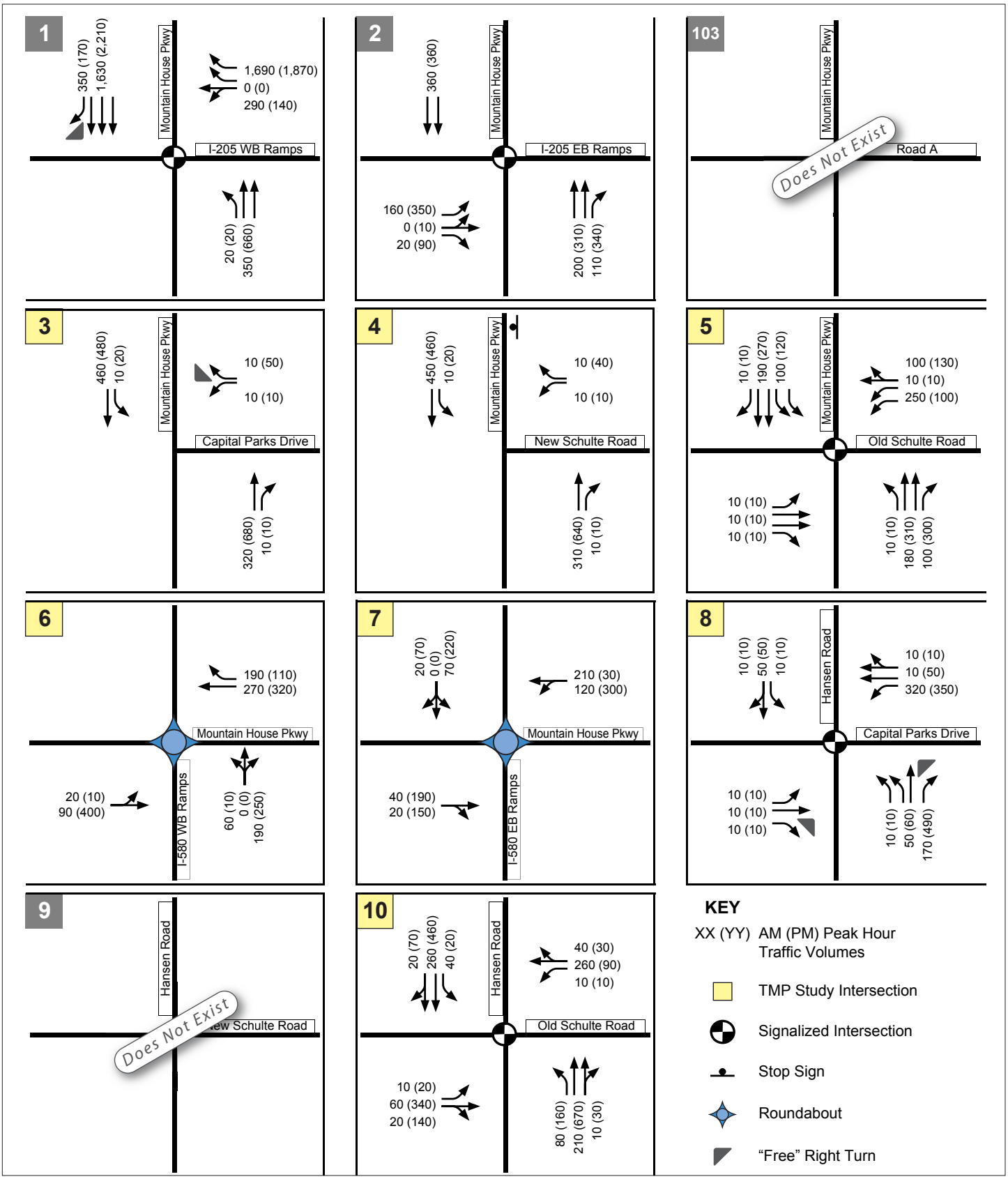
Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] Existing No Project	Existing Plus Buildout
I-205				
West of Mountain House Parkway	6,600	EB	2,300 (14) [B]	3,130 (19) [C]
	6,600	WB	4,180 (25) [C]	4,350 (27) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	2,340 (14) [B]	2,900 (18) [B]
	8,140	WB	4,390 (27) [D]	**6,370 (-) [F]**
East of Tracy Boulevard	6,600	EB	2,620 (16) [B]	3,180 (19) [C]
	6,600	WB	3,750 (23) [C]	**6,390 (-) [F]**
I-580				
West of I-205 Interchange	8,800	EB	3,140 (15) [B]	4,400 (21) [C]
	11,000	WB	6,430 (25) [C]	6,690 (26) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	840 (8) [A]	1,270 (12) [B]
	4,400	WB	2,250 (22) [C]	2,340 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	840 (8) [A]	1,020 (10) [A]
	4,400	WB	2,220 (21) [C]	3,090 (31) [D]
East of Corral Hollow Road	4,400	EB	840 (8) [A]	1,100 (11) [A]
	4,400	WB	1,670 (16) [B]	2,930 (29) [D]

Notes: **Bold** indicates a segment that falls below the applicable standard. Shading indicates a significant impact based on the applicable standard. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

TABLE 4.14-17B **FREEWAY VOLUMES AND LOS – EXISTING PLUS BUILDOUT (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] Existing No Project	Existing Plus Buildout
I-205				
West of Mountain House Parkway	6,600	EB	4,910 (31) [D]	5,220 (34) [D]
	6,600	WB	2,390 (14) [B]	3,210 (19) [C]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4,980 (31) [D]	**6,970 (-) [F]**
	8,140	WB	2,690 (16) [B]	3,520 (21) [C]
East of Tracy Boulevard	6,600	EB	4,320 (26) [D]	**6,870 (-) [F]**
	6,600	WB	2,620 (16) [B]	3,520 (21) [C]
I-580				
West of I-205 Interchange	8,800	EB	6,960 (35) [D]	7,390 (39) [E]
	11,000	WB	3,140 (12) [B]	4,350 (16) [B]
I-205 Interchange to Patterson Pass Road	4,400	EB	2,050 (18) [C]	2,170 (19) [C]
	4,400	WB	750 (7) [A]	1,140 (10) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2,040 (18) [C]	2,900 (26) [D]
	4,400	WB	720 (6) [A]	1,040 (9) [A]
East of Corral Hollow Road	4,400	EB	1,650 (15) [B]	2,860 (26) [D]
	4,400	WB	760 (7) [A]	1,190 (11) [A]

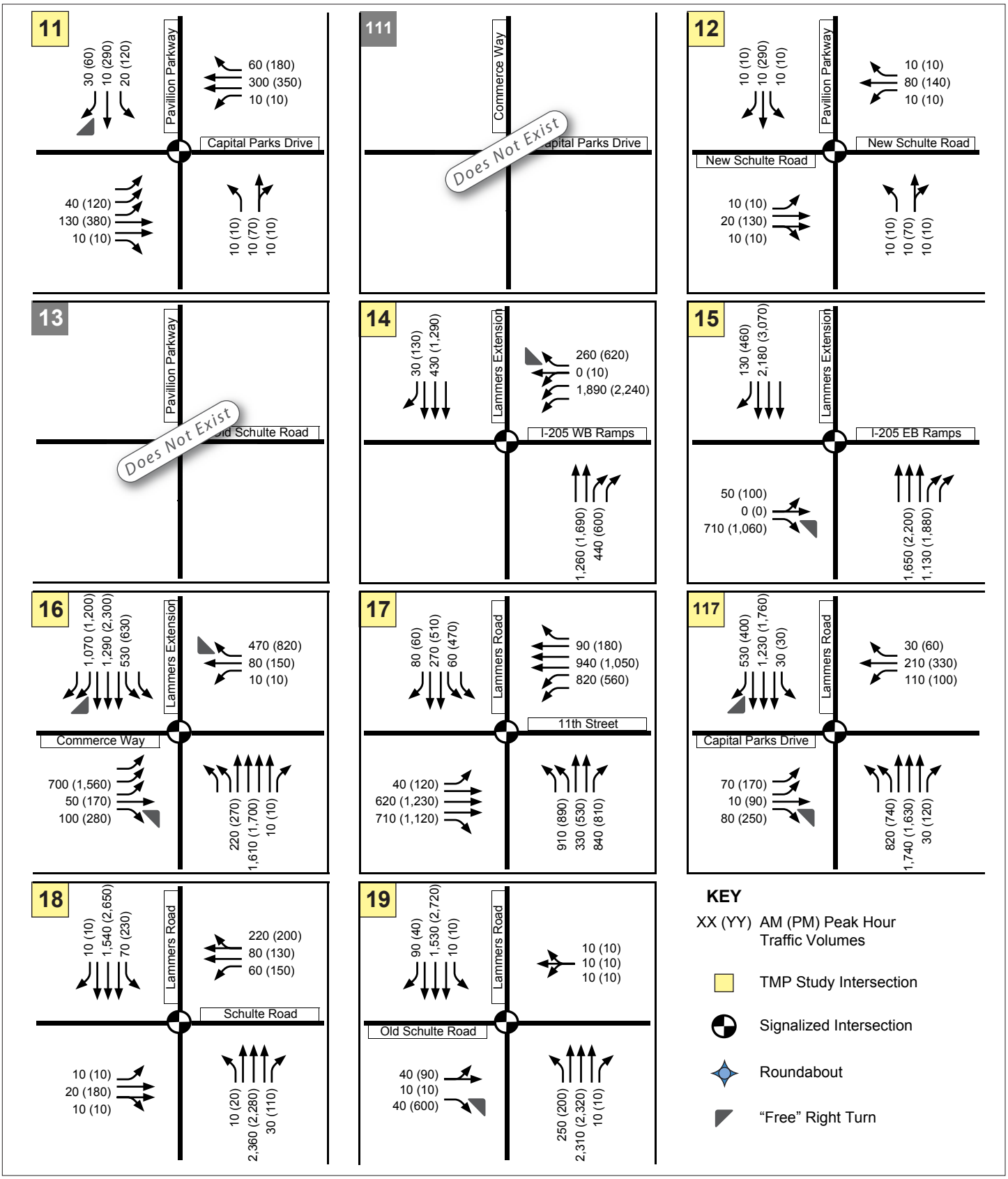
Notes: **Bold** indicates a segment that falls below the applicable standard. Shading indicates a significant impact based on the applicable standard. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.



Source: Fehr and Peers, 2013.

FIGURE 4.14-9A

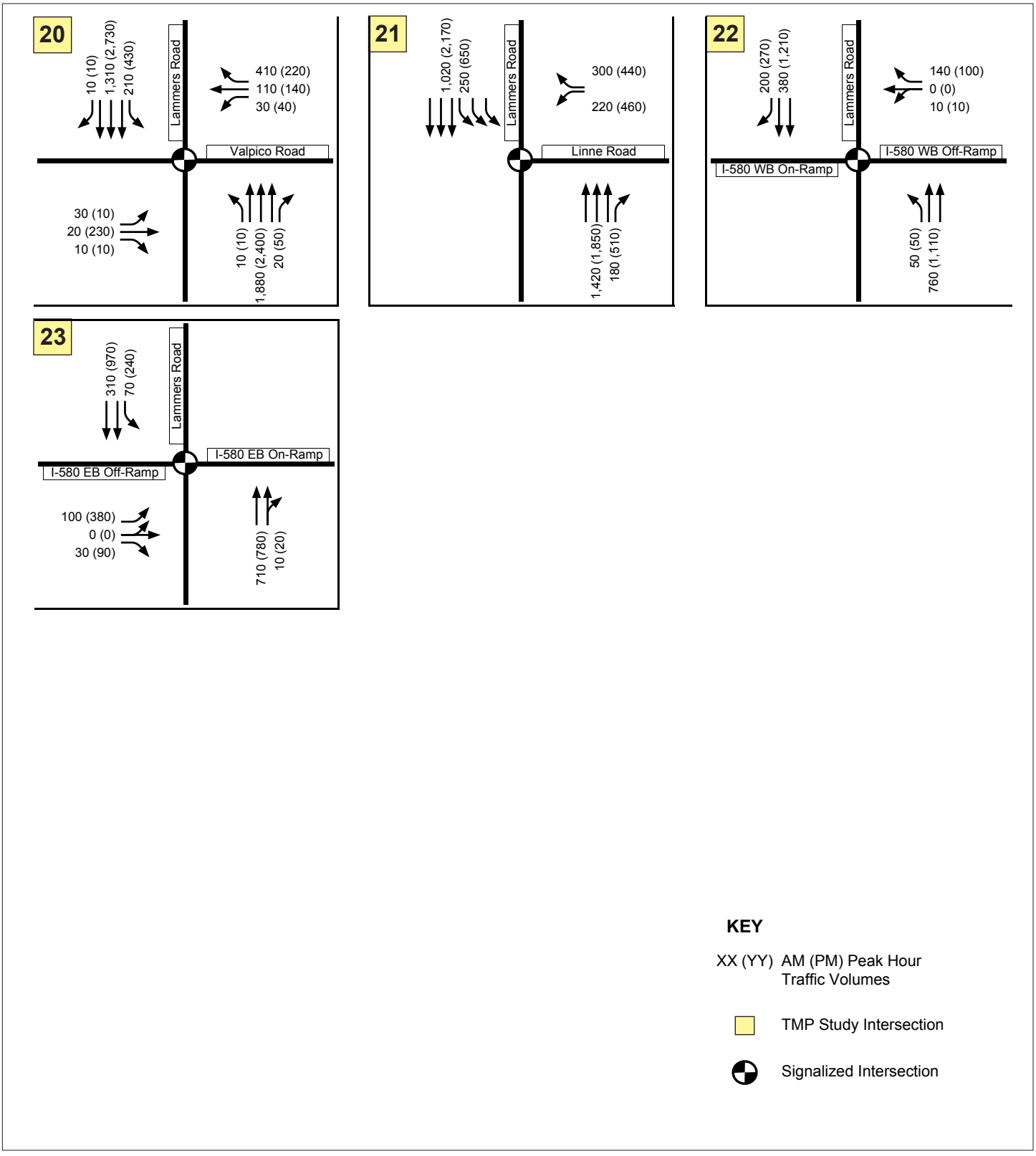
2035 NO PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-9B

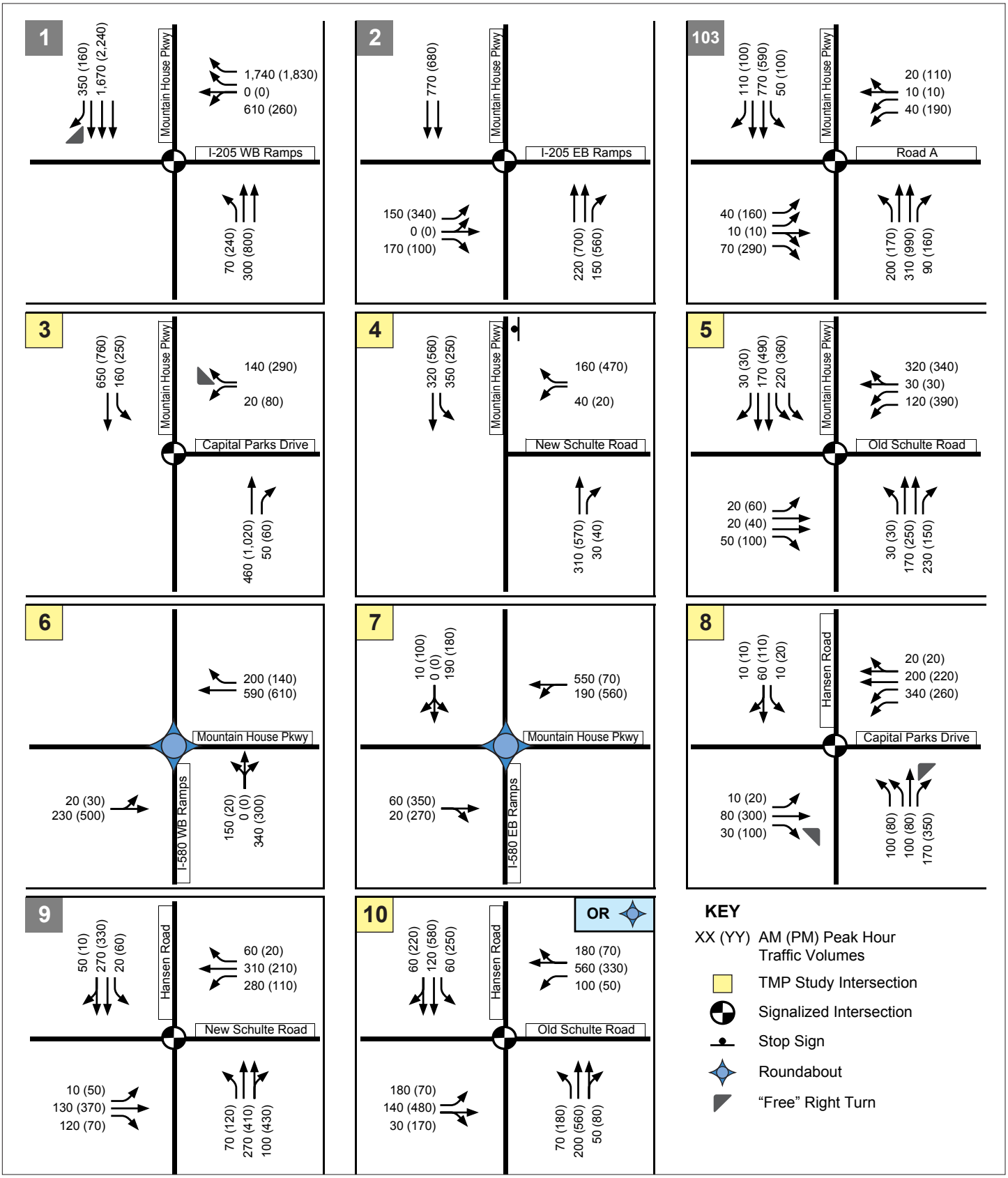
2035 NO PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-9C

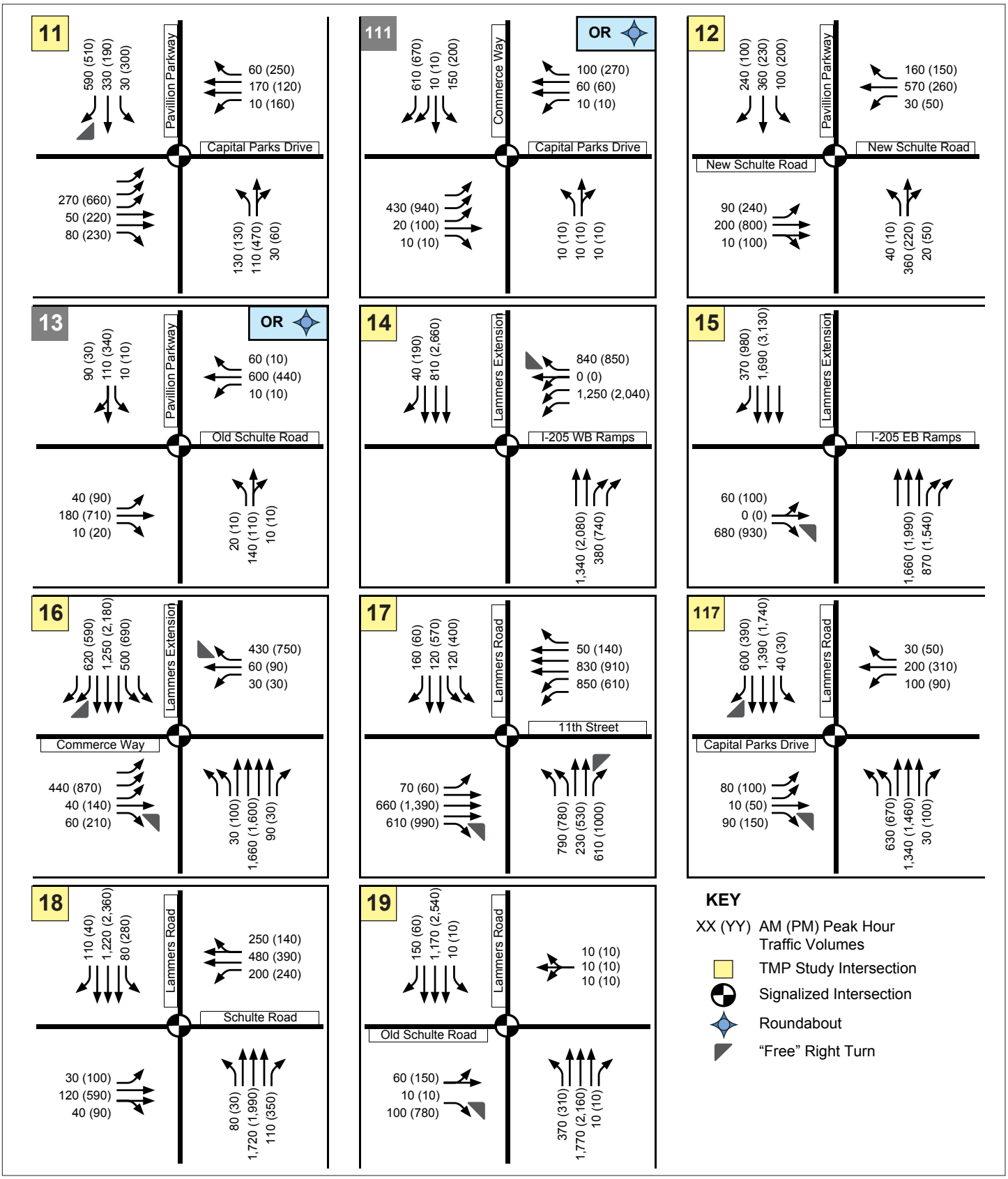
2035 NO PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-10A

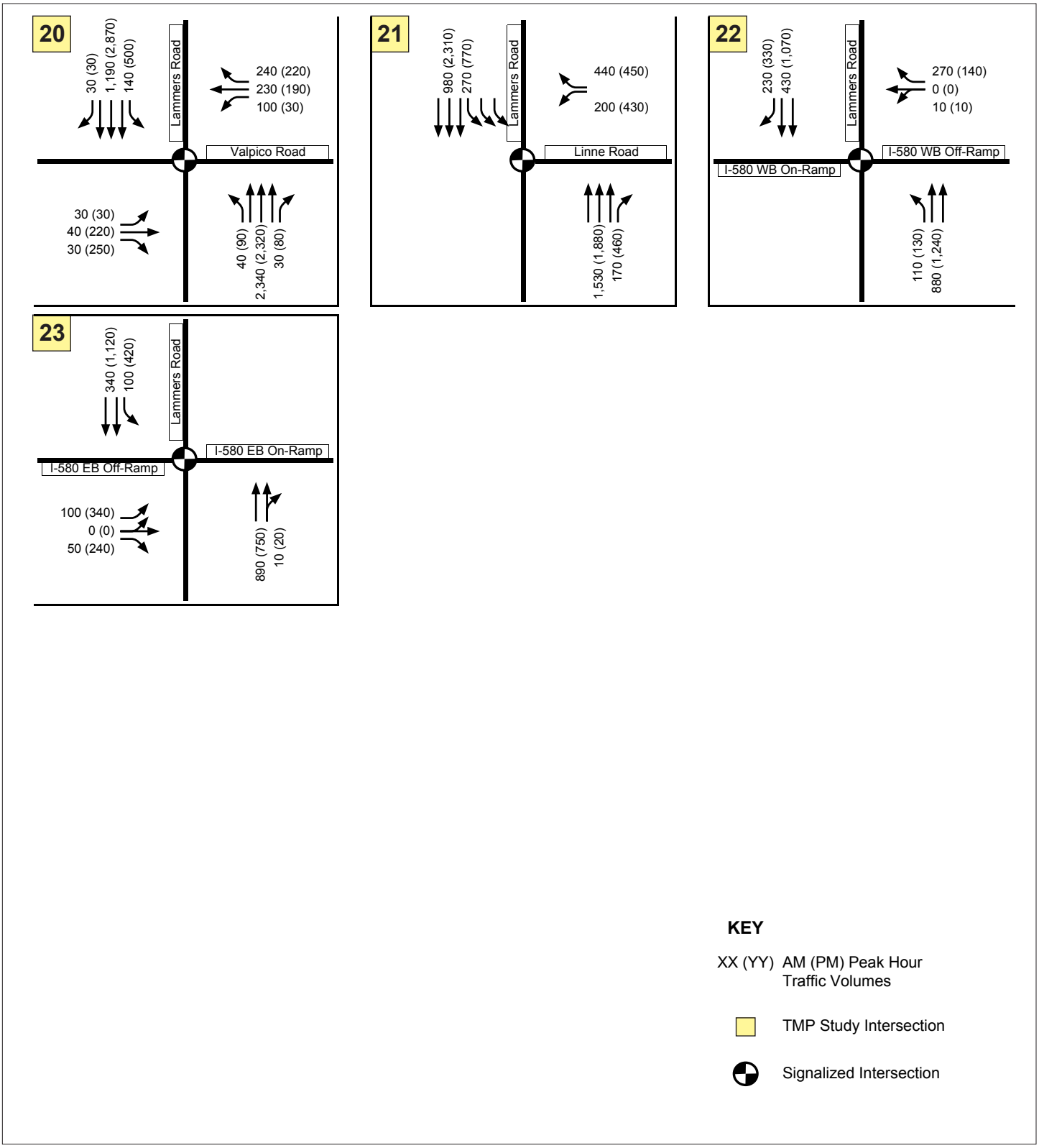
2035 + PHASE I PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-10B

2035 + PHASE I PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-10C

2035 + PHASE I PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES

TABLE 4.14-18 INTERSECTION LEVELS OF SERVICE – CUMULATIVE (2035) NO PROJECT AND (2035) PLUS PHASE I

Intersection	Control[a]	Peak Hour	2035 No Project Delay	2035 No Project LOS[b,c]	2035 Plus Phase I Delay	2035 Plus Phase I LOS[b,c]	2035 Plus Phase I Mitigated Delay	2035 Plus Phase I Mitigated LOS[b,c]	Project Mitigation
1. I-205 Westbound Ramps/ Mountain House Parkway[d]	Signal	AM	54.4	D	58.0	E			None identified (see text)
		PM	> 120.0	F	> 120.0	F[e]			
2. I-205 Eastbound Ramps/ Mountain House Parkway[d]	Signal	AM	7.9	A	9.1	A			
		PM	12.0	B	12.3	B			
3. Road A/Mountain House Parkway[d]	Signal	AM	Intersection created as part of the project		20.9	C			
		PM			33.0	C			
4. Capital Parks Drive/ Mountain House Parkway[d]	Signal	AM	1.7	A	4.0	A			
		PM	1.9	A	14.1	B			
5. New Schulte Road/ Mountain House Parkway	SSSC	AM	0.4 (WB 13.1)	A (B)	6.1 (WB 20.3)	A	19.6	B	Signalize the intersection
		PM	0.8 (WB 15.9)	A (C)	16.4 (WB 58.7)	C	17.7	C	
6. Old Schulte Road/ Mountain House Parkway[d]	Signal	AM	26.7	C	30.5	C			
		PM	24.3	C	35.6	D			
7. I-580 Westbound Ramps/ Mountain House Parkway[d]	Roundabout	AM	9.2	A	12.9	B			
		PM	8.4	A	9.1	A			
8. I-580 Eastbound Ramps/ Mountain House Parkway[d]	Roundabout	AM	10.4	B	13.9	B			
		PM	13.1	B	47.3	E			
9. Capital Parks Drive/ Hansen Road	Signal	AM	3.7	A	4.4	A			
		PM	2.9	A	3.9	A			
10. New Schulte Road/ Hansen Road	Signal	AM	Intersection created as part of the project		23.5	C			
		PM			27.4	C			
11. Old Schulte Road/ Hansen Road	Signal	AM	6.8	A	12.0	B			
		PM	10.1	B	26.1	C			
12. Capital Parks Drive/ Pavilion Parkway	Signal	AM	2.8	A	5.1	A			
		PM	6.6	A	12.5	B			
13. Capital Parks Drive/ Commerce Way	Signal	AM	Intersection created as part of the project		14.2	B			
		PM			18.9	B			
14. New Schulte Road/ Pavilion Parkway	Signal	AM	5.1	A	12.0	B			
		PM	6.5	A	9.5	A			

TABLE 4.14-18 INTERSECTION LEVELS OF SERVICE – CUMULATIVE (2035) NO PROJECT AND (2035) PLUS PHASE I

Intersection	Control[a]	Peak Hour	2035 No Project Delay	2035 No Project LOS[b,c]	2035 Plus Phase I Delay	2035 Plus Phase I LOS[b,c]	2035 Plus Phase I Mitigated Delay	2035 Plus Phase I Mitigated LOS[b,c]	Project Mitigation
15. Old Schulte Road/ Pavilion Parkway	Signal	AM	Intersection created as part of the project		21.8	C			
		PM			30.2	C			
16. I-205 Westbound Ramps/ Lammers Extension[d]	Signal	AM	19.5	B	20.3	C			
		PM	51.4	D	57.9	E			
17. I-205 Eastbound Ramps/ Lammers Extension[d]	Signal	AM	1.6	A	3.4	A			
		PM	17.6	A	20.6	C			
18. Commerce Way/ Lammers Extension[d]	Signal	AM	32.8	C	37.5	D			
		PM	107.3	F	39.0	D			
19. 11th Street/Lammers Road[d]	Signal	AM	44.8	D	56.9	E			
		PM	60.5	E	48.4	D			
20. Capital Parks Drive/Lammers Road	Signal	AM	25.0	C	38.6	D			
		PM	45.2	D	47.0	D			
21. New Schulte Road/ Lammers Road	Signal	AM	15.0	B	29.5	C	29.5	C	Add a right-turn lane to the eastbound approach, for a mitigated configuration of one left turn lane, two through lanes and one right-turn lane
		PM	33.6	C	61.3	E	52.8	D	
22. Old Schulte Road/ Lammers Road	Signal	AM	9.3	A	12.5	B			
		PM	16.4	B	22.7	C			
23. Valpico Road/ Lammers Road	Signal	AM	20.1	C	22.4	C	21.0	C	Add a second southbound left turn lane to reduce queue length, mitigated configuration is two left-turn lanes, three through lanes, and one right-turn lane
		PM	36.2	D	45.0	D	30.5	C	
24. Linne Road/ Lammers Road	Signal	AM	13.5	B	15.6	B			
		PM	31.6	C	32.8	C			

TABLE 4.14-18 INTERSECTION LEVELS OF SERVICE – CUMULATIVE (2035) NO PROJECT AND (2035) PLUS PHASE I

Intersection	Control[a]	Peak Hour	2035 No Project		2035 Plus Phase I		2035 Plus Phase I Mitigated		Project Mitigation
			Delay	LOS[b,c]	Delay	LOS[b,c]	Delay	LOS[b,c]	
25. I-580 Eastbound Ramps/ Lammers Road[d]	Signal	AM	6.6	A	10.0	B			
		PM	6.3	A	8.5	A			
19. I-580 Eastbound Ramps/ Lammers Road[d]	Signal	AM	7.9	A	9.3	A			
		PM	15.1	B	16.2	B			

Note: Bold: Intersection does not meet City of Tracy LOS standard.
[a] Signal = Signalized intersection; SSSC = Side-street stop-controlled intersection; Roundabout = Roundabout control.
[b] Signalized level of service based on average intersection control delay according to the *Highway Capacity Manual*, Transportation Research Board, 2000.
[c] Roundabout level of service based on SIDRA analysis.
[d] City of Tracy LOS standard: Within ¼- mile of a freeway, LOS E shall be allowed.
[e] LOS F due primarily to high westbound off-ramp movement toward Mountain House (1,830 vehicles in the PM peak hour).
Source: Fehr & Peers, February 2013.

In the case of intersection #1, I-205 Westbound Ramps/Mountain House Parkway, the poor PM peak hour service level is projected to occur with or without the Project, and is primarily related to a very large projected increase in the right turn volume from the westbound off-ramp to northbound Mountain House Parkway. This increase is related primarily to the anticipated completion of the development of the Mountain House community in the 2035 Tracy Travel Demand Model. The projected increase for this movement (1,600 trips) is over three times the Phase 1 Project's PM peak hour volume contribution to the intersection (510 total trips). The very high right turn volume renders it one of the "critical movements" for the intersection, thereby controlling the intersection delay and service level. It is noted that this high right turn volume was not forecast in the traffic study performed in 2002 for the I-205/Mountain House Parkway interchange project. That study was performed in 2002 with a different travel demand model and different regional land use and roadway network assumptions. In more recent studies performed by the City for the General Plan Update EIR and the Roadway and Transportation Master Plan environmental review, operations of the Mountain House Parkway interchange intersections were not assessed

Because this cumulative impact is created by a turn movement volume – the westbound right turn – to which the Project contributes no traffic, the Project has no feasible way to meaningfully mitigate this impact. The City will monitor traffic conditions at this intersection as part of its ongoing roadway maintenance programs, and, if actual volume increases over time indicate the need to plan for capacity improvements, the City will work with Caltrans and San Joaquin County to develop and implement improvements.

In the second case, intersection 18 (New Schulte Road/Lammers Road), the impact is primarily due to the different amount and distribution of land use in Phase 1 of the Project, relative to that assumed in the TMP analysis, and also due to a more detailed and refined trip distribution and assignment process, relative to the TMP which provided a citywide traffic assessment. For this intersection, a relatively minor change in the lane configuration on

the eastbound approach will mitigate the impact: re-stripe the approach to provide a left-turn lane, two through lanes and one right turn lane. This mitigation, and the resulting improved service levels, are shown in the far-right columns of Table 4.14-18.

Additional, non-LOS based, mitigations are identified for intersection 4 (New Schulte Road/Mountain House Parkway) and intersection 20 (Valpico Road/Lammers Road). In the case of intersection 4, a signal is warranted with the Project, based on the California MUTCD Peak Hour Signal Warrant. In the case of intersection 20, an additional southbound left turn is needed to reduce excessive queue lengths. These mitigations are noted in the right-hand column of Table 4.14-18, along with the mitigated LOS.

b) Roundabout Option

Table 4.14-19 shows the LOS results for roundabout designs at intersections 10, 13, and 111, as roundabouts have been proposed as alternate intersection designs for these three intersections in the TMP. This information is presented for informational purposes only.

a) Signal Option at Intersections 5 and 6 (I-580/Mountain House Parkway Interchange)

An additional analysis was completed for the Mountain House Parkway/I-580 Ramp intersections, which assumed that signals would be constructed as opposed to potential roundabouts. The levels of service are summarized in Table 4.14-20. All of the intersections perform at LOS D or higher during the AM and PM peak hours, with the lane configurations indicated in Figure 4.14-11, which assume a widening of the Mountain House Parkway bridge over I-580 to four lanes. A micro-simulation model analyzed the estimated queues for the AM and PM peak hour with the signal alternative. AM and PM peak hour queues are summarized in Tables 4.14-21A and 4.14-21B, respectively. All of the average queues are contained in within the storage capacity, with the exception of the I-580 westbound off-ramp left-turn lane during the AM peak hour, which exceeds its storage capacity. However, there is sufficient capacity on the off-ramp to contain any

TABLE 4.14-19 **2035 + PHASE I LEVELS OF SERVICE: SIGNALS VS. ROUNDABOUTS**

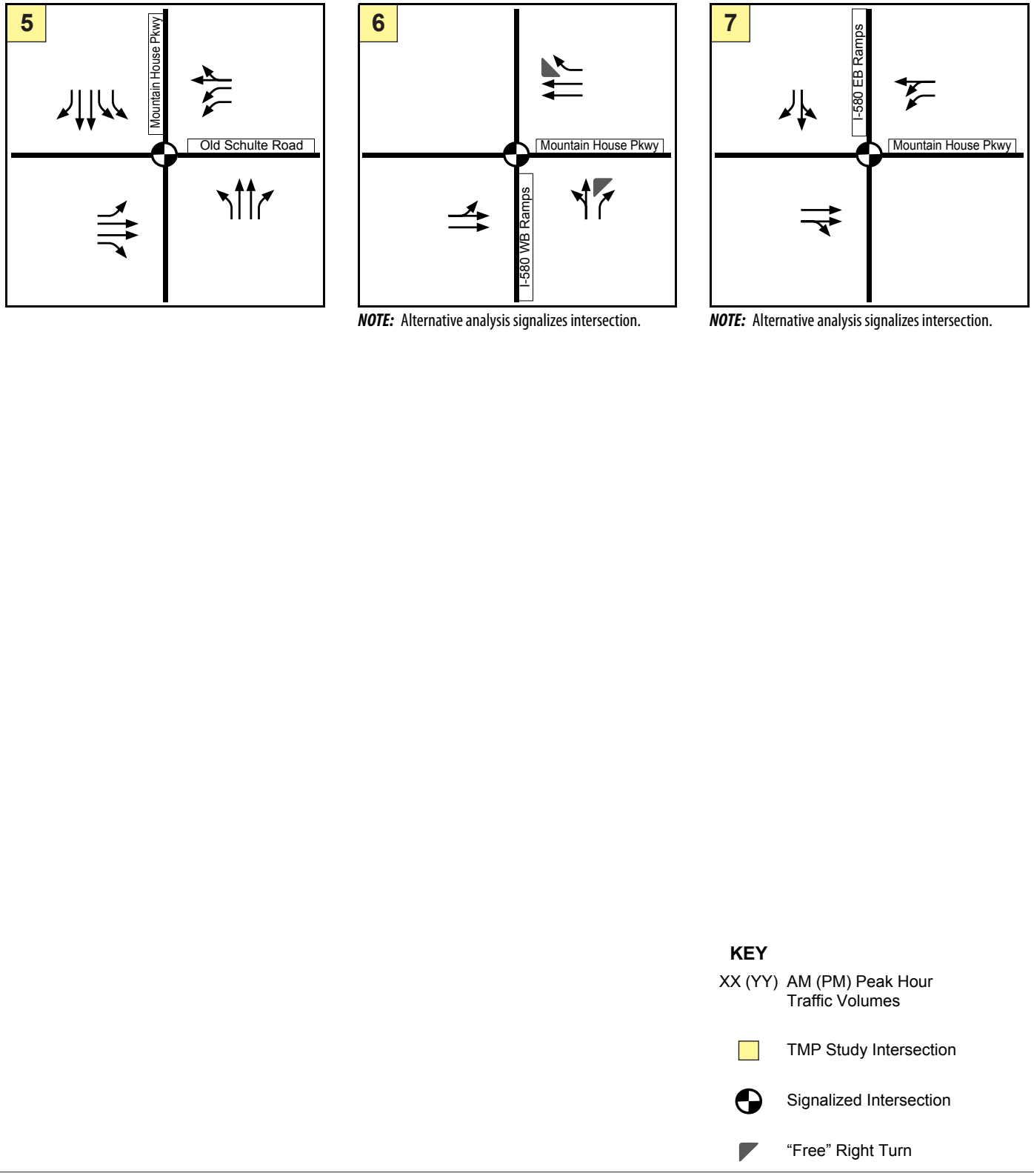
		Signal		Roundabout	
Intersection	Peak Hour	Delay	LOS[a]	Delay	LOS[b]
1. Old Schulte Road/	AM	32.0	C	13.5	B
Hansen Road	PM	35.1	C	24.8	C
2. Capital Parks Drive/	AM	14.2	B	3.8	A
Commerce Way	PM	18.9	B	8.8	A
3. Old Schulte Road/	AM	21.8	B	9.0	A
Pavilion Parkway	PM	30.2	C	10.7	B

[a] Signalized level of service based on average intersection control delay according to the *Highway Capacity Manual*, Transportation Research Board, 2000.
[b] Roundabout level of service based on SIDRA analysis.
Source: Fehr & Peers, December 2012.

TABLE 4.14-20 **INTERSECTION LEVELS OF SERVICE – 2035 PLUS PHASE I WITH OPTION**

			2035 No Project		2035 Plus Phase I		2035 Plus Phase I with Option[c]	
Intersection	Control[a]	Peak Hour	Delay	LOS	Delay	LOS	Delay	LOS
1. Old Schulte Rd/Mtn House Pkwy[c]	Signal	AM	26.7	C	32.0	C	38.5	D
		PM	24.3	C	34.2	C	39.9	D
2. I-580 WB Ramps/Mtn House Pkwy[c]	Round-about/ Signal[b]	AM	9.2	A	10.4	B	31.0	C
		PM	8.4	A	8.8	A	19.5	B
3. I-580 EB Ramps/Mtn House Pkwy[c]	Round-about/ Signal[b]	AM	10.4	B	11.4	B	25.4	C
		PM	13.1	B	33.8	D	32.0	C

Note: Bold: Intersection does not meet City of Tracy LOS standard.
[a] Signal = Signalized intersection; AWSC = All-way stop-controlled intersection; SSSC = Side-street stop-controlled intersection.
[b] Alternative analysis signalizes the I-580 Westbound Ramps/Mountain House Parkway and I-580 Eastbound Ramps/Mountain House Parkway intersections.
[c] Intersections analyzed using SimTraffic software.
Source: Fehr & Peers, February 2013



NOTE: Alternative analysis signalizes intersection.

NOTE: Alternative analysis signalizes intersection.

Source: Fehr and Peers, 2013.

FIGURE 4.14-11

2035 + PHASE I PROJECT MOUNTAIN HOUSE PARKWAY/I-580 SIGNAL ALTERNATIVE INTERSECTION LANE GEOMETRY

TABLE 4.14-21A **ESTIMATED QUEUES – 2035 PLUS PHASE I WITH OPTION AM PEAK HOUR**

			2035 Plus Phase I Queues		
Intersection	Approach	Storage (Feet)	Average Queue (Feet)	95th Percentile Queue (Feet)	Maximum Queue (Feet)
Old Schulte Road/ Mountain House Parkway	EBL	120	21	62	83
	EBT	850	46	178	250
	EBR	850	99	183	160
	WBL	1,600	146	255	307
	WBTR	1,600	172	363	451
	NBL	250	49	114	150
	NBT	1,090	241	583	637
	NBR	250	**252**	**373**	**310**
	SBL	500	117	195	215
	SBT	1,140	121	213	228
	SBR	210	13	40	55
I-580 Westbound Ramps/ Mountain House Parkway	EBLT	380	117	219	257
	EBT	380	177	305	352
	WBT	1,090	325	801	802
	WBR	150	49	**194**	**210**
	NBL	100	**108**	**172**	**159**
	NBR	660	83	318	561
I-580 Eastbound Ramps/ Mountain House Parkway	EBT	650	22	65	95
	EBTR	650	54	125	155
	WBL	380	55	170	258
	WBLT	380	268	476	402
	SBLT	770	214	347	405
	SBR	60	7	51	120

Note: **Bold**: Intersection queues exceed available storage.
Source: Fehr & Peers, February 2013

TABLE 4.14-21B **ESTIMATED QUEUES – 2035 PLUS PHASE I WITH OPTION PM PEAK HOUR**

			2035 Plus Phase I Queues		
Intersection	Approach	Storage (Feet)	Average Queue (Feet)	95th Percentile Queue (Feet)	Maximum Queue (Feet)
Old Schulte Road/ Mountain House Parkway	EBL	120	64	135	158
	EBT	850	25	120	110
	EBR	850	53	132	143
	WBL	1,600	174	274	303
	WBTR	1,600	186	374	470
	NBL	250	40	91	118
	NBT	1,090	176	313	408
	NBR	250	184	321	310
	SBL	500	175	258	289
	SBT	1,140	141	235	271
	SBR	210	19	76	144
I-580 Westbound Ramps/ Mountain House Parkway	EBLT	380	130	191	203
	EBT	380	145	202	238
	WBT	1,090	90	179	206
	WBR	150	10	79	166
	NBL	100	18	53	73
	NBR	660	26	92	127
I-580 Eastbound Ramps/ Mountain House Parkway	EBT	650	113	227	312
	EBTR	650	286	500	598
	WBL	380	164	324	353
	WBLT	380	186	355	358
	SBLT	770	136	249	283
	SBR	60	34	121	120

Note: Bold: Intersection queues exceed available storage.
Source: Fehr & Peers, February 2013

spillback from the left turn movement; therefore signal operations on Mountain House Parkway are not expected to generate queues to the I-580 mainline. On occasion the maximum queue on Mountain House Parkway may extend to the upstream intersection; however, the queue would clear before the end of the peak hour.

ii. Freeway Peak Hour Volumes and LOS

Tables 4.14-22A and 4.14-22B show the peak hour freeway volumes for the 2035 Plus Phase 1 Project case. In 2035, several segments of I-205 and I-580 are projected to operate unacceptably in either the AM or PM peak hours, with or without the Project. The addition of Phase 1 Project traffic to the 2035 No Project volumes causes the following significant impacts:

In the AM peak hour, the Project adds more than 5 percent to the total 2035 Plus Phase 1 Project volume on I-205 westbound east of Tracy Boulevard, which is projected to operate at LOS E without the Project.

- In the PM peak hour, the LOS falls from D (2035 No Project) to E (2035 Plus Phase 1 Project) on I-205 eastbound between I-580 and Mountain House Parkway.

d. 2035 Plus Buildout

i. Roadway Segment Volumes and V/C Ratios

Table 4.14-23 shows the peak hour roadway segment volumes forecast for the Buildout case, in which the Project is completely developed along with all other development potential through 2035 in Tracy, consistent with the forecasts in the TMP. As noted in the preceding methodology section, the Project Buildout is expected to occur sometime beyond 2035. Over the Buildout planning horizon, many changes in land use plans and roadway network plans (in the City of Tracy, the San Joaquin Valley and the Bay Area) are likely to occur, making detailed analysis and infrastructure planning (i.e. intersection-level analysis) infeasible at this time. The information in Table 4.14-23 is therefore presented to give a high-level view of roadway volumes at Project Buildout, assuming that the Tracy TMP roadway network (sized to serve 2035 forecasts only) is in place.

TABLE 4.14-22A **FREEWAY VOLUMES AND LOS – 2035 PLUS PHASE 1 (AM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] 2035 No Project	2035 Plus Phase I
I-205				
West of Mountain House Parkway	6,600	EB	3,330 (19) [C]	3,430 (20) [C]
	6,600	WB	4,590 (26) [D]	4,640 (27) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4,480 (26) [C]	4,610 (27) [D]
	8,140	WB	4,820 (28) [D]	5,290 (32) [D]
East of Tracy Boulevard	6,600	EB	**6,070 (40) [E]**	**6,240 (43) [E]**
	6,600	WB	**6,800 (-) [F]**	**7,540 (-) [F]**
I-580				
West of I-205 Interchange	8,800	EB	4,260 (19) [C]	4,490 (20) [C]
	11,000	WB	7,070 (25) [C]	7,150 (25) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	930 (8) [A]	1,060 (9) [A]
	4,400	WB	2,480 (21) [C]	2,510 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	920 (8) [A]	970 (8) [A]
	4,400	WB	2,450 (21) [C]	2,640 (23) [C]
East of Corral Hollow Road	4,400	EB	920 (8) [A]	1,000 (9) [A]
	4,400	WB	1,840 (16) [B]	2,140 (19) [C]

Notes: **Bold** indicates segments operating below the applicable standard. Shading indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

TABLE 4.14-22B **FREEWAY VOLUMES AND LOS – 2035 PLUS PHASE 1 (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] 2035 No Project	2035 Plus Phase I
I-205				
West of Mountain House Parkway	6,600	EB	5,530 (34) [D]	**5,640 (35) [E]**
	6,600	WB	4,990 (29) [D]	5,170 (31) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	**6,980 (-) [F]**	**7,050 (-) [F]**
	8,140	WB	**6,780 (-) [F]**	**6,970 (-) [F]**
East of Tracy Boulevard	6,600	EB	**9,900 (-) [F]**	**10,280 (-) [F]**
	6,600	WB	**8,640 (-) [F]**	**8,760 (-) [F]**
I-580				
West of I-205 Interchange	8,800	EB	8,000 (42) [E]	8,150 (44) [E]
	11,000	WB	5,950 (21) [C]	6,290 (22) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	2,470 (21) [C]	2,510 (22) [C]
	4,400	WB	960 (8) [A]	1,120 (10) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2,700 (24) [C]	2,880 (25) [C]
	4,400	WB	1,260 (11) [A]	1,360 (12) [B]
East of Corral Hollow Road	4,400	EB	2,430 (21) [C]	2,830 (25) [C]
	4,400	WB	1,030 (9) [A]	1,160 (10) [A]

Notes: **Bold** indicates segments operating below the applicable standard. Shading indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

TABLE 4.14-23 **ROADWAY VOLUMES – 2035 PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Capacity	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout
MHP SB	N/O I-205	1,780	1,980	2,320	2,380	2,510	1.1	1.3	1.3	1.4
	I-205 to Road A	890	380	3,330	400	1,520	0.4	3.7	0.5	1.7
	Road A to Capital Parks Drive	890	470	3,040	500	1,550	0.5	3.4	0.6	1.7
	Capital Parks Drive to New Schulte Road	890	470	1,960	490	1,880	0.5	2.2	0.6	2.1
	New Schulte Road to Old Schulte Road	890	460	670	470	1,690	0.5	0.8	0.5	1.9
	Old Schulte Road to I-580	1,490	460	980	430	1,770	0.3	0.7	0.3	1.2
	S/O I-580	1,490	230	230	170	170	0.2	0.2	0.1	0.1
MHP NB	N/O I-205	1,780	2,040	2,040	2,530	2,980	1.2	1.2	1.4	1.7
	I-205 to Road A	890	310	830	650	3,480	0.4	0.9	0.7	3.9
	Road A to Capital Parks Drive	890	330	950	730	3,200	0.4	1.1	0.8	3.6
	Capital Parks Drive to New Schulte Road	890	330	1,420	690	2,400	0.4	1.6	0.8	2.7
	New Schulte Road to Old Schulte Road	890	320	1,350	650	990	0.4	1.5	0.7	1.1
	Old Schulte Road to I-580	1,490	290	1,540	650	1,090	0.2	1.0	0.4	0.7
	S/O I-580	1,490	60	80	340	620	0.04	0.05	0.2	0.4

TABLE 4.14-23 **ROADWAY VOLUMES – 2035 PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Capacity	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout
Hansen SB	N/O Capital Parks Drive	890	70	300	70	1,150	0.1	0.3	0.1	1.3
	Capital Parks Drive to New Schulte Road	1,780	400	960	460	1,120	0.2	0.5	0.3	0.6
	New Schulte Road to Old Schulte Road	1,780	470	1,230	590	1,810	0.3	0.7	0.3	1.0
	S/O New Schulte Road	890	420	420	610	1,250	0.5	0.5	0.7	1.4
Hansen NB	N/O Capital Parks Drive	890	70	1,240	80	380	0.1	1.4	0.1	0.4
	Capital Parks Drive to New Schulte Road	1,780	230	1,100	580	1,010	0.1	0.6	0.3	0.6
	New Schulte Road to Old Schulte Road	1,780	260	1,410	720	1,510	0.2	0.8	0.4	0.9
	S/O Old Schulte Road	890	300	810	860	970	0.3	0.9	1.0	1.1
Pavilion SB	N/O Capital Parks Drive	1,490	60	1,140	470	1,030	0.0	0.8	0.3	0.7
	Capital Parks Drive to New Schulte Road	1,490	30	1,450	310	920	0.0	1.0	0.2	0.6
	New Schulte Road to Old Schulte Road	1,490	30	1,250	310	890	0.0	0.8	0.2	0.6
	S/O Old Schulte Road	1,490	30	170	290	560	0.0	0.1	0.2	0.4
Pavilion NB	N/O Capital Parks Drive	1,490	110	460	370	1,500	0.1	0.3	0.2	1.0
	Capital Parks Drive to New Schulte Road	1,490	30	980	90	1,450	0.0	0.7	0.1	1.0
	New Schulte Road to Old Schulte Road	1,490	30	870	90	980	0.0	0.6	0.1	0.7
	S/O New Schulte Road	1,490	30	390	30	190	0.0	0.3	0.0	0.1

TABLE 4.14-23 **ROADWAY VOLUMES – 2035 PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Capacity	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout
Lammers SB	N/O 11th Street	1,490	410	410	1,040	1,040	0.3	0.3	0.7	0.7
	11th Street to Capital Parks Drive	2,670	1,800	2,430	2,190	2,450	0.7	0.9	0.8	0.9
	Capital Parks Drive to New Schulte Road	2,670	1,620	1,750	2,890	3,090	0.6	0.7	1.1	1.2
	New Schulte Road to Old Schulte Road	1,780	1,630	1,630	2,810	3,150	0.9	0.9	1.6	1.8
	Old Schulte Road to Valpico Road	1,780	1,580	1,580	3,330	4,470	0.9	0.9	1.9	2.5
	Valpico Road to Linne Road	1,780	1,350	1,440	2,820	3,930	0.8	0.8	1.6	2.2
	Linne Road to I-580	1,780	1,240	1,280	2,630	3,150	0.7	0.7	1.5	1.8
	S/O I-580	1,780	340	420	1,060	1,530	0.2	0.2	0.6	0.9
Lammers NB	N/O 11th Street	1,490	460	460	830	830	0.3	0.3	0.6	0.6
	11th Street to Capital Parks Drive	2,670	2,080	2,080	2,230	3,110	0.8	0.8	0.8	1.2
	Capital Parks Drive to New Schulte Road	2,670	2,590	2,590	2,490	2,490	1.0	1.0	0.9	0.9
	New Schulte Road to Old Schulte Road	1,780	2,400	2,430	2,420	2,500	1.3	1.4	1.4	1.4
	Old Schulte Road to Valpico Road	1,780	2,570	3,400	2,630	2,920	1.4	1.9	1.5	1.6
	Valpico Road to Linne Road	1,780	1,910	2,920	2,460	2,630	1.1	1.6	1.4	1.5
	Linne Road to I-580	1,780	1,600	2,170	2,360	2,470	0.9	1.2	1.3	1.4
	S/O I-580	1,780	720	1,090	800	830	0.4	0.6	0.4	0.5

TABLE 4.14-23 **ROADWAY VOLUMES – 2035 PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Capacity	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout
Lammers Extension SB / 11th EB	N/O I-205	2,230	460	990	1,420	1,860	0.2	0.4	0.6	0.8
	I-205 to Commerce Way	2,970	2,890	3,360	4,130	4,130	1.0	1.1	1.4	1.4
	Commerce Way to Lammers Road	2,970	1,400	1,440	2,590	2,920	0.5	0.5	0.9	1.0
	E/O Lammers Road	2,230	1,520	1,660	2,510	4,080	0.7	0.7	1.1	1.8
Lammers Extension NB / 11th WB	N/O I-205	2,230	1,520	1,930	1,950	2,250	0.7	0.9	0.9	1.0
	I-205 to Commerce Way	2,970	2,780	2,780	4,080	4,080	0.9	0.9	1.4	1.4
	Commerce Way to Lammers Road	2,970	1,930	2,340	2,000	1,880	0.6	0.8	0.7	0.6
	E/O Lammers Road	2,230	1,850	3,150	1,790	2,080	0.8	1.4	0.8	0.9
Capital Parks Drive EB	MHP to Hansen Road	1,490	30	1,240	30	1,620	0.0	0.8	0.0	1.1
	Hansen Road to Pavillion Parkway	1,490	190	880	510	3,060	0.1	0.6	0.3	2.1
	Pavillion Parkway to Commerce Way	2,230	160	1,030	510	3,670	0.1	0.5	0.2	1.6
	Commerce Way to Lammers Road	2,230	160	390	510	1,360	0.1	0.2	0.2	0.6
Capital Parks Drive WB	MHP to Hansen Road	1,490	30	1,490	70	1,360	0.0	1.0	0.0	0.9
	Hansen Road to Pavillion Parkway	1,490	340	2,960	420	1,430	0.2	2.0	0.3	1.0
	Pavillion Parkway to Commerce Way	2,230	370	3,520	540	1,590	0.2	1.6	0.2	0.7
	Commerce Way to Lammers Road	2,230	1560	1,560	1,470	1,470	0.7	0.7	0.7	0.7

TABLE 4.14-23 **ROADWAY VOLUMES – 2035 PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Capacity	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout
New Schulte Road EB	MHP to Hansen Road	1,490	30	1,370	40	1,340	0.0	0.9	0.0	0.9
	Hansen Road to Pavillion Parkway	1,490	40	740	150	2,170	0.0	0.5	0.1	1.5
	Pavillion Parkway to Lammers Road	1,490	40	790	200	2,420	0.0	0.5	0.1	1.6
	E/O Lammers Road	1,490	120	590	520	2,510	0.1	0.4	0.4	1.7
New Schulte Road WB	MHP to Hansen Road	1,490	30	1,330	50	1,420	0.0	0.9	0.0	1.0
	Hansen Road to Pavillion Parkway	1,490	100	2,010	160	900	0.1	1.4	0.1	0.6
	Pavillion Parkway to Lammers Road	1,490	100	2,340	160	1,100	0.1	1.6	0.1	0.7
	E/O Lammers Road	1,490	360	2,350	480	1,200	0.2	1.6	0.3	0.8
Old Schulte Road EB	MHP to Hansen Road	1,490	210	1,020	500	1,130	0.1	0.7	0.3	0.8
	Hansen Road to Pavillion Parkway	890	120	730	410	1,360	0.1	0.8	0.5	1.5
	Pavillion Parkway to Lammers Road	890	120	320	700	1,550	0.1	0.4	0.8	1.7
Old Schulte Road WB	MHP to Hansen Road	1,490	360	1,050	320	1,300	0.2	0.7	0.2	0.9
	Hansen Road to Pavillion Parkway	890	330	1,280	150	930	0.4	1.4	0.2	1.0
	Pavillion Parkway to Lammers Road	890	350	1,340	250	670	0.4	1.5	0.3	0.8
Valpico EB	W/O Lammers Road	890	40	160	250	760	0.04	0.2	0.3	0.9
	E/O Lammers Road	1,490	250	380	710	1,670	0.2	0.3	0.5	1.1
Valpico WB	W/O Lammers Road	890	130	560	160	390	0.2	0.6	0.2	0.4
	E/O Lammers Road	1,490	550	1,480	400	730	0.4	1.0	0.3	0.5

TABLE 4.14-23 **ROADWAY VOLUMES – 2035 PLUS BUILDOUT**

			Volume				V/C			
			AM		PM		AM		PM	
Street	Segment	Capacity	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout	2035	2035 + Buildout
Commerce Way EB	Capital Parks Dr. to Lammers Extension	2,230	850	890	2,010	2,780	0.4	0.4	0.9	1.2
Commerce Way WB	Capital Parks Dr. to Lammers Extension	2,230	1,370	2,490	1,620	1,620	0.6	1.1	0.7	0.7

Notes: V/C ratios are correlated with LOS as follows: < 0.60=LOS A; 0.60 – 0.69=LOS B; 0.70 – 0.79=LOS C; 0.80 – 0.89=LOS D; 0.90 – 0.99=LOS E; ≥1.00=LOS F. **Bold** values indicated volumes exceeding LOS D (i.e. V/C ratio of 0.90 or greater.) Shaded values indicate segments in the 2035 Plus Buildout case for which volumes would continue to exceed the LOS D capacity even with the higher TMP Right-of-Way Roadway Network capacities (see Table 4.14-24).

Source: Fehr & Peers, February 2013.

The shaded values in Table 4.14-23 indicate segments that would continue to exceed planning-level capacities (LOS D, V/C≤0.89), even with provision of the Right-of-Way network as defined in the Roadway and Transportation Master Plan (TMP Figure 3.5). The Right-of-Way network is defined in the TMP for purposes of long-term right-of-way preservation, and exceeds the roadway widths (number of lanes and corresponding capacities) of the TMP roadway network on many (but not all) TMP roadways. The Right-of-Way network capacities, which are derived from the Tracy Travel Demand Model, are shown in Table 4.14-24 for reference, alongside the 2035 TMP network capacities. These are planning-level capacities; the actual capacities of the roadways, if ultimately widened to the Right-of-Way network width, may be higher or lower than these capacities, depending on the ultimate roadway design (intersection spacing, lane widths, etc.).

As indicated in the Table 4.14-23, many roadways would require additional lanes to provide the capacity needed to serve Project Buildout, if all other development potential included in the 2035 TMP forecasting is also realized, even with the provision of the full Right-of-Way network.

ii. Freeway Volumes and LOS

Tables 4.14-25A and 4.14-25B show the peak hour freeway volumes for the 2035 Plus Project Buildout case. In 2035, several segments of I-205 and I-580 are projected to operate unacceptably in either the AM or PM peak hours, with or without the addition of Project Buildout traffic.

The addition of Project Buildout traffic to the 2035 No Project volumes causes the following significant impacts:

In the AM peak hour:

- I-205 westbound between Tracy Boulevard and Mountain House Parkway falls from LOS D to LOS F;
- The Project adds more than 5 percent to the total 2035 Plus Project Build Out traffic on I-205 westbound, which is projected to operate at LOS F without Project traffic; and

TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
MHP SB	N/O I-205	1,780	1,780
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Dr to New Schulte Rd	890	3,560
	New Schulte Rd to Old Schulte Rd	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
MHP NB	N/O I-205	1,780	1,780
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Dr to New Schulte Rd	890	3,560
	New Schulte Rd to Old Schulte Rd	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
Hansen SB	N/O Capital Parks Drive	890	890
	Capital Parks Dr to New Schulte Rd	1,780	1,780
	New Schulte Rd to Old Schulte Rd	1,780	1,780
	S/O Old Schulte Road	890	1,780
Hansen NB	N/O Capital Parks Drive	890	890
	Capital Parks Dr to New Schulte Rd	1,780	1,780
	New Schulte Rd to Old Schulte Rd	1,780	1,780
	S/O Old Schulte Road	890	1,780

TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
Pavilion SB	N/O Capital Parks Drive	1,490	1,490
	Capital Parks Dr to New Schulte Rd	1,490	1,490
	New Schulte Rd to Old Schulte Rd	1,490	1,490
	S/O New Schulte Road	1,490	1,490
Pavilion NB	N/O Capital Parks Drive	1,490	1,490
	Capital Parks Dr to New Schulte Rd	1,490	1,490
	New Schulte Rd to Old Schulte Rd	1,490	1,490
	S/O New Schulte Road	1,490	1,490
Lammers SB	N/O 11th Street	1,490	1,490
	11th Street to Capital Parks Drive	2,670	2,670
	Capital Parks Dr to New Schulte Rd	2,670	2,670
	New Schulte Rd to Old Schulte Rd	1,780	2,670
	Old Schulte Road to Valpico Road	1,780	2,670
	Valpico Road to Linne Road	1,780	2,670
	Linne Road to I-580	1,780	2,670
	S/O I-580	1,780	2,670
Lammers NB	N/O 11th Street	1,490	3,560
	11th Street to Capital Parks Drive	2,670	2,670
	Capital Parks Dr to New Schulte Rd	2,670	2,670
	New Schulte Rd to Old Schulte Rd	1,780	2,670
	Old Schulte Road to Valpico Road	1,780	2,670
	Valpico Road to Linne Road	1,780	2,670

TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
Lammers NB *cont'd*	Linne Road to 580	1,780	2,670
	S/O I-580	1,780	2,670
Lammers Extension SB/11th EB	N/O I-205	2,230	2,230
	I-205 to Commerce Way	2,970	2,970
	Commerce Way to Lammers Road	2,970	2,970
	E/O Lammers Road	2,230	2,230
Lammers Extension NB/11th WB	N/O I-205	2,230	2,230
	I-205 to Commerce Way	2,970	2,970
	Commerce Way to Lammers Road	2,970	2,970
	E/O Lammers Road	2,230	2,230
Capital Parks Drive EB	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	1,490	1,490
	Pavillion Parkway to Commerce Way	2,230	2,230
	Commerce Way to Lammers Road	2,230	2,230
Capital Parks Drive WB	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	1,490	1,490
	Pavillion Parkway to Commerce Way	2,230	2,230
	Commerce Way to Lammers Road	2,230	2,230
New Schulte Road EB	MHP to Hansen Road	1,490	2,240
	Hansen Road to Pavillion Parkway	1,490	2,240
	Pavillion Parkway to Lammers Road	1,490	2,240
	E/O Lammers Road	1,490	1,490

TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
New Schulte Road WB	MHP to Hansen Road	1,490	2,240
	Hansen Road to Pavillion Parkway	1,490	2,240
	Pavillion Parkway to Lammers Road	1,490	2,240
	E/O Lammers Road	1,490	1,490
Old Schulte Road EB	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	890	1,780
	Pavillion Parkway to Lammers Road	890	1,780
	E/O Lammers Road	1,780	1,780
Old Schulte Road WB	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	890	1,780
	Pavillion Parkway to Lammers Road	890	1,780
	E/O Lammers Road	1,780	1,780
Valpico EB	E/O Lammers Road	1,490	1,490
	W/O Lammers Road	890	2,240
Valpico WB	E/O Lammers Road	1,490	1,490
	W/O Lammers Road	890	2,240
Commerce Way EB	Capital Parks Drive to Lammers Extension	2,230	2,230
Commerce Way WB	Capital Parks Drive to Lammers Extension	2,230	2,230

Note: Capacities derived from the City of Tracy Travel Demand Model
Source: Fehr & Peers, February 2013.

TABLE 4.14-25A **FREEWAY VOLUMES AND LOS – 2035 PLUS BUILDOUT (AM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] 2035 No Project	2035 Plus Buildout
I-205				
West of Mountain House Parkway	6,600	EB	3,330 (19) [C]	4,080 (23) [C]
	6,600	WB	4,590 (26) [D]	4,770 (28) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4,480 (26) [C]	4,870 (28) [D]
	8,140	WB	4,820 (28) [D]	**6,810 (-) [F]**
East of Tracy Boulevard	6,600	EB	**6,070 (40) [E]**	**6,430 (-) [F]**
	6,600	WB	**6,800 (-) [F]**	**9,540 (-) [F]**
I-580				
West of I-205 Interchange	8,800	EB	4,260 (19) [C]	5,430 (24) [C]
	11,000	WB	7,070 (25) [C]	7,340 (26) [D]
I-205 Interchange to Patterson Pass Road	4,400	EB	930 (8) [A]	1,350 (12) [B]
	4,400	WB	2,480 (21) [C]	2,570 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	920 (8) [A]	1,110 (10) [A]
	4,400	WB	2,450 (21) [C]	3,310 (30) [D]
East of Corral Hollow Road	4,400	EB	9,20 (8) [A]	1,190 (10) [A]
	4,400	WB	1,840 (16) [B]	3,090 (28) [D]

Notes: **Bold** indicates segments operating below the applicable standard. Shading indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

TABLE 4.14-25B **FREEWAY VOLUMES AND LOS – 2035 PLUS BUILDOUT (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service] 2035 No Project	Volume (Density) [Level of Service] 2035 Plus Buildout
I-205				
West of Mountain House Parkway	6,600	EB	5,530 (34) [D]	**5,840 (38) [E]**
	6,600	WB	4,990 (29) [D]	**5,780 (37) [E]**
Mountain House Parkway to Tracy Boulevard	8,140	EB	**6,980 (-) [F]**	**8,480 (-) [F]**
	8,140	WB	**6,780 (-) [F]**	**7,540 (-) [F]**
East of Tracy Boulevard	6,600	EB	**9,900 (-) [F]**	**12,100 (-) [F]**
	6,600	WB	**8,640 (-) [F]**	**9,360 (-) [F]**
I-580				
West of I-205 Interchange	8,800	EB	8,000 (42) [E]	**8,340 (-) [F]**
	11,000	WB	5,950 (21) [C]	7,160 (25) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	2,470 (21) [C]	2,500 (22) [C]
	4,400	WB	960 (8) [A]	1,380 (12) [B]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2,700 (24) [C]	3,510 (32) [D]
	4,400	WB	1,260 (11) [A]	1,570 (14) [B]
East of Corral Hollow Road	4,400	EB	2,430 (21) [C]	**3,690 (36) [E]**
	4,400	WB	1,030 (9) [A]	1,450 (13) [B]

Notes: **Bold** indicates segments operating below the applicable standard. Shading indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.
Source: Fehr & Peers, February 2013.

The Project adds more than 5 percent to the total 2035 Plus Project Buildout traffic on I-205 eastbound, which is projected to operate at LOS E without the Project, and which falls to LOS F with the addition of Project traffic.

In the PM peak hour:

- On I-580 eastbound west of the I-205 interchange, in Alameda County, the LOS falls from E (acceptable) to F (unacceptable);
- On I-205 eastbound and westbound between the I-580 interchange and Mountain House Parkway, the LOS falls from D (acceptable) to E unacceptable);
- On I-205 eastbound and westbound between Mountain House Parkway and Tracy Boulevard, which are projected to operate at LOS F without Project Buildout, the Project adds more than 5 percent to the total 2035 Plus Project Buildout traffic;
- On I-580 eastbound east of Corral Hollow Road, the LOS is projected to fall from C to E.

G. Impacts and Mitigation Measures

The impacts identified based on the above analysis, and associated mitigation measures, are presented below. Project impacts are presented first, followed by Cumulative Impacts. Within each of these two sections, Phase 1 Project impacts are presented first, followed by Project Buildout impacts.

1. Project Impacts and Mitigation Measures

a. Existing Plus Phase 1 Project

Impact TRANS-1: Construction of Phase 1 of the Project would cause a significant impact at intersections 1, 2, 6, 7, 10, 18, 19, and 20, under Existing Plus Project Phase 1 conditions. This is a *significant* impact.

This impact and the identified mitigation measures are described in Section E.1.a.i and summarized in Table 4.14-12. The mitigations are listed below.

Mitigation Measure TRANS-1: The Project will construct the following improvements, in accordance with then-applicable engineering standards and requirements, and as determined by the City Engineer:

- *Intersection #1 (Mountain House Parkway/I-205 Westbound Ramps):* Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane, and optimize signal timings.
- *Intersection #2 (Mountain House Parkway/I-205 Eastbound Ramps):* Convert the northbound right-turn lane to a free right with an acceptance lane on the eastbound on-ramp, and optimize signal timings.
- *Intersection #6 (Mountain House Parkway/I-580 Westbound Ramps):* Signalize the intersection with eastbound/westbound split phasing, or install a roundabout.
- *Intersection #7 (Mountain House Parkway/I-580 Eastbound Ramps):* Signalize the intersection with eastbound/westbound split phasing, or install a roundabout.
- *Intersection #10 (Old Schulte Road/Hansen Road):* Signalize the intersection, and construct an additional westbound left turn lane, eastbound left-turn and right-turn lanes, and a southbound left-turn lane.
- *New Schulte Road:* Construct New Schulte Road from the eastern terminus of the Project Phase 1 network (east of Hansen Road) east to Lammers Road, as a two-lane road. At Intersection #18, New Schulte Road/Lammers Road, signalize the intersection and construct a left-turn lane on the eastbound approach, and right-turn lanes on the northbound and southbound approaches.
- *New Schulte Road:* Construct New Schulte Road between Hansen Road (the end of the Phase 1 proposed network) and Lammers Road as a two-lane road.

- *Intersection #18 (New Schulte Road/Lammers Road):* Install a signal and construct a left-turn lane on the eastbound approach, and right-turn lanes on the northbound and southbound approaches.
- *Intersection #19 (Old Schulte Road/Lammers Road):* Install a signal and construct a left-turn lane on the eastbound approach, and right-turn lanes on the northbound and eastbound approaches.
- *Intersection #20 (Valpico Road/Lammers Road):* Signalize the intersection and construct a left-turn lane on the southbound approach.

A "trigger" analysis, provided in Table 4.14-13 in Section E.1.a.i, provides the estimated timing for provision of each of the above mitigations, based on Project AM and PM peak hour trip generation. In terms of when the above improvements would need to be constructed, as part of the application process for each individual, site-specific development under the Specific Plan, the applicant will submit a trip generation study for the development at issue or will fund the preparation of this study by the City's consultants. This information will be utilized by the City to determine whether the relevant trip generation thresholds are met, taking into account past Project trip generation studies and the running cumulative total. The City may also take actual traffic counts and operations at the mitigation locations into account (funded by the applicant), in determining when specific improvements need to be constructed. With construction of the required improvements at intersections 10, 18, 19, and 20, impacts to these identified intersections would be less than significant.

Because the improvements to the freeway interchange intersections require the approval of Caltrans, the impacts at intersections 1, 2, 6 and 7 remain significant and unavoidable.

Significance After Mitigation: Intersections 1, 2, 6, and 7: Significant and Unavoidable. Intersections 10, 18, 19 and 20: Less Than Significant.

Impact TRANS-2: Construction of Phase 1 of the Project would cause a significant impact on one freeway segment – I-205 Eastbound between Mountain House Parkway and Tracy Boulevard, which would fall from LOS D to LOS E in the PM peak hour (refer to Table 4.14-14). This is a *significant* impact.

Auxiliary lanes are currently being constructed on this section of I-205, and were therefore assumed in the Existing Plus Phase 1 Project analysis. However, the Existing Plus Phase 1 Project volume will still result in LOS E conditions on one segment in the PM peak hour, as noted above. The SJCOG Regional Transportation Plan includes a Tier 1 project to expand I-205 from 6 to 8 lanes. This project is scheduled for environmental clearance by 2025 and construction by 2030. However, it is not currently funded, and this improvement project is not included in the Regional Transportation Improvement Fee. Therefore, there is currently no mechanism for the Project to contribute to this I-205 capacity project. If the capacity project is added to the RTIF in the future, individual development projects in the Specific Plan will contribute to the capacity project through payment of the RTIF, as may be required under applicable laws and regulations.

Mitigation Measure TRANS-2: The Project will contribute to capacity improvements in San Joaquin County through payment of the RTIF in accordance with applicable laws and regulations. However, because the I-205 capacity project is not currently included in the RTIF, payment of the RTIF will not mitigate this impact.

Significance After Mitigation: Significant and unavoidable.

Impact TRANS-3: The Project does not conflict with the City of Tracy's adopted policies, plans and programs regarding bicycle facilities and does not degrade the performance or safety of bicycle facilities. This impact applies to both the Phase 1 Project and the Buildout Project. This is a *less-than-significant* impact.

As described above in the Project Description section of this chapter, the Project's roadway network includes a comprehensive set of bicycle routes, composed of bicycle/pedestrian paths on many streets and bicycle routes on most other streets. Bicycle/pedestrian paths are buffered from the automobile travel lanes by landscaped strips, include street canopies of trees, street furniture and other amenities to encourage use of alternative modes of transportation and enhance connectivity. As such, the Project facilitates achievement of the City's policies that are designed to foster bicycle use and safety. Furthermore, the Project would be subject to all applicable local policies and programs to further support bicycle use and safety, including, among others, those measures reflected in the City's SAP. Therefore, the Project's impacts, in this regard would be less than significant.

Mitigation Measure TRANS-3: None required.

Significance After Mitigation: Less than Significant.

Impact TRANS-4: The Project does not conflict with the City of Tracy's adopted policies, plans and programs regarding pedestrian facilities and does not degrade the performance or safety of pedestrian facilities. This is a *less-than-significant* impact.

As described above in the Project Description section of this chapter, the Project's roadway network accommodates pedestrians on all streets, with a combination of 5-foot sidewalks and 10-foot and 12-foot shared bicycle/pedestrian paths. In addition, the design guidelines refer to site design elements to promote pedestrian circulation by creating pathways, linkages, and visual connections between buildings; and by including multiple connections to public sidewalks and pathways between buildings and areas throughout the Specific Plan Area to foster connectivity.

Mitigation Measure TRANS-4: None required.

Significance After Mitigation: Less than Significant.

Impact TRANS-5: The Project does not conflict with the City of Tracy's adopted policies, plans and programs regarding public transit service and does not degrade the performance or safety of transit facilities. This is a *less-than-significant* impact.

As described above in section C.1, Project Description, of this chapter, the Project developers/businesses within the Specific Plan Area will be required to work cooperatively with the City to modify and expand routes as necessary and when feasible to efficiently accommodate demand. Projected transit route extensions are not identified at this time; rather transit routes would be identified in response to actual development patterns and resulting transit demand based on the pace and ultimate geographic locations of developments within the Specific Plan Area, in consultation with the City and transit providers. As part of this development of transit routes, the Specific Plan confirms that "in determining the final bus stop locations additional right-of-way may be required to accommodate bus stops and shall be dedicated through the mapping process."

The SAP's Measure T-4, Support for Transit, outlines an array of directives aimed primarily at residential service and service near transit centers. However, in any event, the Project is consistent with the spirit of Measure T-4, which is to serve transit demand in the City. The Project's commitment to its businesses working with the City to extend transit service when warranted demonstrates a basic consistency with SAP measure T-4.

Mitigation Measure TRANS-5: None required.

Significance After Mitigation: Less than Significant.

Impact TRANS-6: The Project does not conflict with the City of Tracy Sustainability Action Plan (SAP) and the San Joaquin County Travel Demand Management Plan, with respect to key goals that are designed to reduce vehicle trips, congestion, VMT, and greenhouse gas emissions. This is a *less-than-significant* impact.

As discussed more fully in Chapter 4.7, Greenhouse Gas Emissions, the Project has been designed to facilitate achievement of key goals relating to reduction in VMT, congestion, and GHG emissions. For example, Specific Plan Chapter 7, Natural Resources and Sustainability, lists the transportation sustainability elements that would apply to the Project that would contribute to promotion of alternative mode use and minimization of vehicle miles travelled. These elements include, among other things, the roadway network grid layout, bicycle and pedestrian infrastructure (sidewalks and paths, and pedestrian-friendly intersection design), cooperation with the City on transit route extensions, carpool parking supply requirements, and bicycle parking requirements including covered/indoor storage. These are all important components of a sustainable development plan, and they align with relevant SAP Transportation Measures. In addition, the Project's developers and businesses would be required to encourage carpooling, ridesharing, transit use, and other travel demand measures (see SAP measures T-3, T-4, and T-16) to further foster a reduction in VMTs. The Project would also have opportunities to provide incentives or credits within the Project for reduced parking ratios (consistent with Tracy Mun. Code § 10.08.3440 – 10.08.3590), and would be required to adhere to all applicable SJVUAPCD rules, including Rule 9410 (addressing trip reduction plans).

Mitigation Measure TRANS-6: None required.

Significance After Mitigation: Less than Significant.

b. Existing Plus Project Buildout

Impact TRANS-7: Project Buildout would cause over-capacity conditions on the existing roadway and freeway network. This is a *significant* impact.

As shown in Tables 4.14-15 and 4.14-17, the addition of Project Buildout traffic to the existing roadway and freeway system would cause significant overloading on many segments of the existing City roadway system, and cause significant impacts on two segments of I-205 in the AM and PM peak hours. This is not surprising, since Project Buildout will take many years; the

City of Tracy is planning many roadway network improvements to accommodate traffic growth generated by the Project and other development areas in the city, and the San Joaquin Council of Governments is also planning capacity improvements on I-205 to handle regional growth over the coming decades. Each Project applicant's payment of the TMP Program fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan, would partially mitigate this impact. However, the impact would remain significant and unavoidable after mitigation because the timing of when the construction of such improvements would take place is uncertain (since they are program improvements dependent on funding from development throughout Tracy).

> Mitigation Measure TRANS-7: Each Project applicant will pay the applicable TMP Program Fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan in accordance with applicable laws and regulations.
>
> Significance After Mitigation: Significant and Unavoidable.

2. Cumulative Impacts and Mitigation Measures

a. 2035 Plus Phase 1 Project

Impact TRANS-8: Construction of Phase 1 of the Project results in significant impacts at four intersections (#1, #4, #18, and #20), based on 2035 conditions with the Tracy Roadway and Transportation Master Plan roadway network in place. This is a *significant* impact.

This impact and the identified mitigation measures are described in Section E.1c.i and summarized in Table 4.14-18. The mitigations are listed in Mitigation Measure TRANS-8, below. As described in Section E.1.c.i, in the case of intersection #1, I-205 Westbound Ramps/Mountain House Parkway, the poor PM peak hour service level is projected to occur with or without the Project, and is primarily related to a very large projected increase in the right turn volume from the westbound off-ramp to northbound Mountain House

Parkway. This increase is related primarily to the anticipated completion of the development of the Mountain House community in the 2035 Tracy Travel Demand Model. The projected increase for this movement (1,600 trips) is over three times the Phase 1 Project's PM peak hour volume contribution to the intersection (510 total trips). The very high right turn volume renders it one of the "critical movements" for the intersection, thereby controlling the intersection delay and service level. It is noted that this high right turn volume was not forecast in the traffic study performed in 2002 for the I-205/Mountain House Parkway interchange project. That study was performed in 2002 with a different travel demand model and different regional land use and roadway network assumptions. In more recent studies performed by the City for the General Plan Update EIR and the Roadway and Transportation Master Plan environmental review, operations of the Mountain House Parkway interchange intersections were not assessed

Because this cumulative impact is created by a turn movement volume – the westbound right turn – to which the Project contributes no traffic, the Project has no feasible way to meaningfully mitigate this impact. The City will monitor traffic conditions at this intersection as part of its ongoing roadway maintenance programs, and, if actual volume increases over time indicate the need to plan for capacity improvements, the City will work with Caltrans and San Joaquin County to develop and implement improvements.

Mitigation Measure TRANS-8: The Project will construct the following improvements, in accordance with then-applicable engineering standards and requirements and as determined by the City Engineer:

- *Intersection #4 (New Schulte Road/Mountain House Parkway):* Signalize the intersection.
- *Intersection #18 (New Schulte Road/Lammers Road):* Add a right-turn lane to the eastbound approach, for a mitigated configuration of one left turn lane, two through lanes, and one right-turn lane.

- *Intersection #20 (Valpico Road/Lammers Road):* Add a second southbound left-turn lane, for a mitigated configuration of two left-turn lanes, three through lanes, and one right-turn lane.

Significance After Mitigation: Less than significant for intersections #4, #18 and #20; significant and unavoidable (for the reasons stated above) for intersection #1.

Impact TRANS-9: In 2035, the addition of Phase 1 Project traffic to the 2035 No Project volumes causes the following significant freeway impacts:

- In the AM peak hour, the Project adds more than 5 percent to the total 2035 Plus Phase 1 Project volume on I-205 westbound east of Tracy Boulevard, which is projected to operate at LOS E without the Project.
- In the PM peak hour, the LOS falls from D (2035 No Project) to E (2035 Plus Phase 1 Project) on I-205 eastbound between I-580 and Mountain House Parkway.

This is a *significant* impact.

The SJCOG Regional Transportation Plan includes a Tier 1 project to expand I-205 from 6 to 8 lanes. This project is scheduled for environmental clearance by 2025 and construction by 2030. However, it is not currently funded, and this improvement project is not included in the Regional Transportation Improvement Fee. Therefore, there is currently no mechanism for the Project to contribute to this I-205 capacity project. If the capacity project is added to the RTIF in the future, individual development projects in the Specific Plan will contribute to the capacity project through payment of the RTIF, as may be required under applicable laws and regulations.

Mitigation Measure TRANS-9: The Project will contribute to capacity improvements in San Joaquin County through payment of the RTIF in accordance with applicable laws and regulations. However, because the I-205 capacity project is not currently included in the RTIF, payment of

the RTIF will not mitigate this impact. (Note: Mitigation TRANS-9 is the same as Mitigation TRANS-2).

Significance After Mitigation: Significant and Unavoidable.

b. 2035 Plus Project Buildout

Impact TRANS-10: Project Buildout would cause over-capacity conditions on the 2035 roadway and freeway network. This is a *significant* impact.

Tables 4.14-23 and 4.14-25 show the peak hour roadway and freeway segment volumes forecast for the Buildout case, in which the Project is completely developed along with all other development potential through 2035 in Tracy, consistent with the forecasts in the TMP. Many of the roadway segments and freeway segments are projected to be over-capacity in this scenario. Project Buildout is expected to occur many years beyond 2035. Over the Buildout planning horizon, many changes in land use plans and roadway network plans (in the City of Tracy, the San Joaquin Valley and the Bay Area) are likely to occur, reducing the reliability of forecasts and making detailed analysis and infrastructure planning (i.e. intersection-level analysis) infeasible at this time. The information in Tables 4.14-23 and 4.14-25 is therefore presented to give a high-level view of roadway and freeway volumes at Project Buildout, assuming that the Tracy TMP roadway network (sized to serve 2035 forecasts only) is in place.

As indicated in the table, many roadways would require additional lanes to provide the capacity needed to serve Project Buildout, if all other development potential included in the 2035 TMP forecasting is also realized.

Payment of the applicable fees under the TMP Program fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan, would partially mitigate this impact. However, the impact would remain significant and unavoidable after mitigation given that the timing for construction of said improvements is not certain.

Mitigation Measure TRANS-10: Each Project applicant will pay the applicable TMP Program Fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan in accordance with applicable laws and regulations.

Significance After Mitigation: Significant and Unavoidable.

Impact TRANS-11: The Project (Phase 1 and Buildout) will not cause a change in air traffic patterns in Tracy area, either in terms of an increase in traffic levels or a change in location, that results in substantial safety risks. This is a less-than-significant impact.

Based on the Project description, no substantial new air traffic will be generated at the local airports in San Joaquin County. The industrial uses allowed for in the Project will rely primarily on trucking for goods movement, which in turn will utilize the services of the Port of Oakland, the Port of Stockton, and major airports including Oakland International Airport, San Francisco International Airport, and San Jose International Airport. While projections of increased air traffic at these airports have not been prepared for the Project, it is assumed that any increased demand for goods movement by air would be within the airport's capacities.

Mitigation Measure TRANS-11: None required.

Impact TRANS-12: The Project (Phase 1 and Buildout) will not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). This is a *less-than-significant* impact.

The Project roadway system, including facilities for vehicles (autos, trucks and buses), bicyclists and pedestrians, will be designed in conformance with the City of Tracy Transportation Master Plan, including all design guidelines contained therein, as well as in conformance with the City's standard plans. As the City reviews each development project, it will require conformance

with City standards in terms of driveway design and location, traffic controls, and other traffic engineering requirements.

Mitigation Measure TRANS-12: None required.

Impact TRANS-13: The Phase 1 Project will not result in inadequate emergency access. This is a *less-than-significant* impact.

As demonstrated in the Existing Plus Phase 1 and 2035 Plus Phase 1 traffic analyses, acceptable operation on City of Tracy roadways will be provided with the mitigation identified. Therefore, adequate emergency vehicle access to the various building sites to be constructed within the Project site will be provided with the roadway network proposed. As the Phase 1 project builds out, the Tracy Fire Department may determine that a new or relocated fire station is warranted to better serve the expanded service area. However, such a decision will be based on many variables including other growth over time in the City, changes in the service model, joint-defense agreements, and other factors.

Mitigation Measure TRANS-13: None required.

Impact TRANS-14: Full Buildout of the Project may result in inadequate emergency access. This is a *significant* impact.

As described in the Existing Plus Full Buildout and 2035 Plus Full Buildout traffic analyses, the existing and 2035 roadway networks would be substantially overloaded by traffic from full Buildout of the Project. For the Existing Plus Full Buildout case, this results primarily from the fact that the Project will take many years to buildout, and many future roadways that are planned to be constructed over that time period are not included in the analysis. For the 2035 Plus Full Buildout case, the overloading results from the addition of the Full Project Buildout traffic to 2035 forecasted traffic growth, which exceeds in some places the 2035 TMP roadway network capacity.

As discussed under Impacts TRANS-7 (Existing Plus Full Buildout) and TRANS-10 (2035 Plus Full Buildout), the traffic impacts of Full Project Buildout are significant and unavoidable after mitigation. Therefore, this impact remains significant and unavoidable.

Mitigation Measure TRANS-14: Implement Mitigation Measures TRANS-7 and TRANS-10.

Significance After Mitigation: Significant and Unavoidable.