

*Las Palmas Avenue* is a three-lane, east-west arterial roadway that includes a center two-way left-turn lane. West of SR 33, four major streets form a roundabout at Las Palmas Avenue. Traffic destined for Modesto currently uses either Las Palmas Avenue or SR 33. Las Palmas Avenue carries approximately 5,000 vpd.

*Sycamore Avenue* is a two-lane, north-south collector roadway in the City of Patterson. Sycamore Avenue links Locust Avenue to the north and East Marshall Road to the south, a distance of seven miles.

*Eucalyptus Avenue* is a two-lane collector roadway forming the northern border of the project area.

### **Existing Daily Traffic**

TJKM collected existing 48-hour daily classification tube counts for 13 Stanislaus County study roadway segments in June 2007. The ADT counts and truck percentages for seven State roadways were obtained from published Caltrans traffic volumes. The Caltrans counts were taken in 2005 and 2006. The classification counts show the composition of bicycles, autos, buses and trucks on roadway segments. TJKM has also collected 24-hour counts conducted by Stanislaus County for the past five years. These counts will be utilized in future studies of the West Park Inland Port.

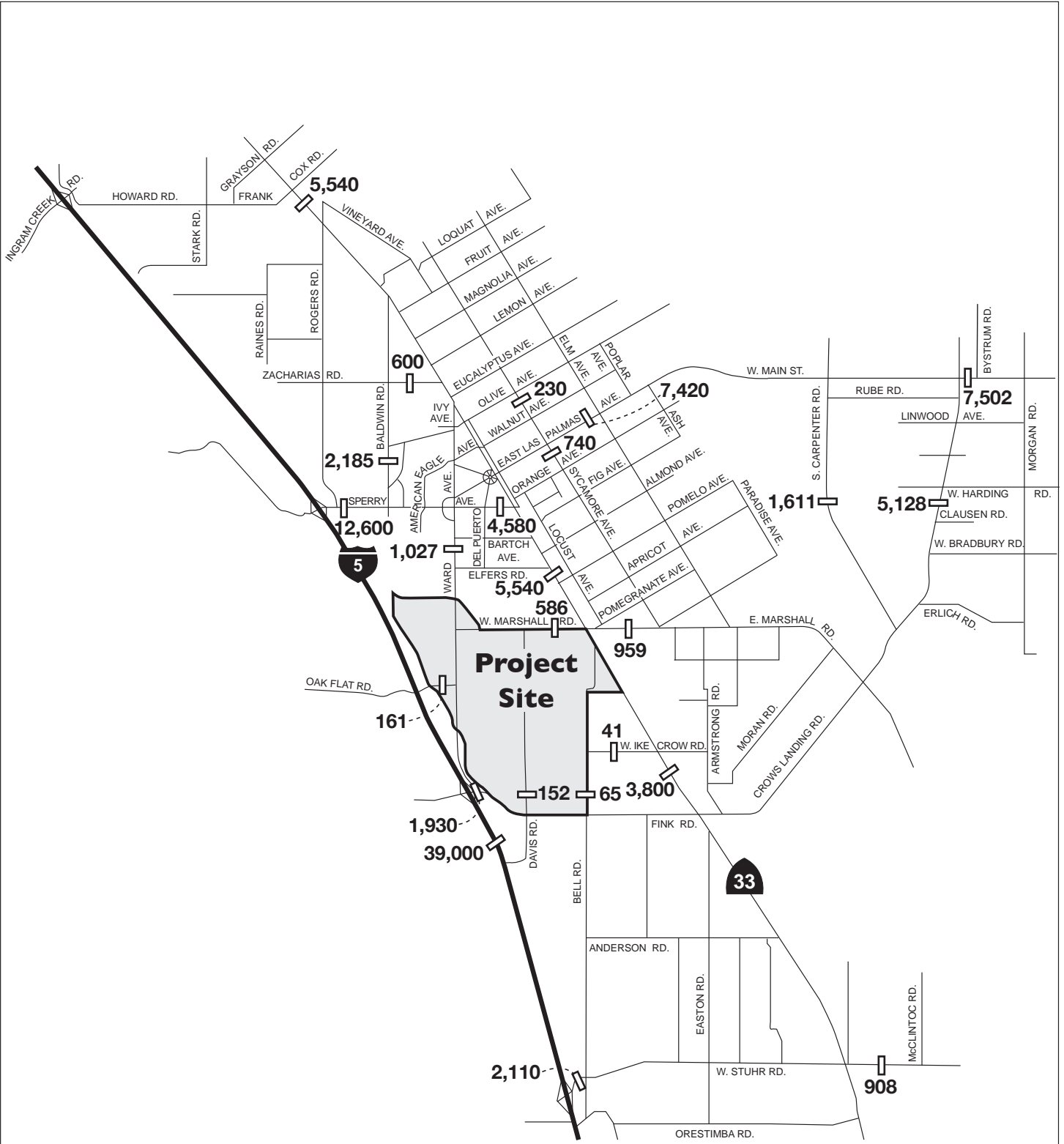
### **Existing Daily Truck Counts**

TJKM also collected existing daily truck counts. Field sheets are also contained in Appendix A. The truck counts are further classified in terms of axles. Figures 4 and 5 illustrate regional and local ADT counts and truck percentages for all study roadway segments in the vicinity of the Project site. The existing traffic counts show that average daily truck percentages range from 10 to 27 percent on I-5, SR 99 and other state routes in the Project area. The high truck traffic on the freeways and state routes is due to the use of trucks to transport goods between the Central Valley, San Francisco Bay Area, and the Port of Oakland.



Preliminary Traffic Circulation Master Plan  
 Existing Conditions Average Daily Traffic Volumes – Local Area

Figure  
 5



LEGEND
X ADT



**Level of Service Analysis -- Existing Conditions**

Currently, all existing study roadway segments operate at acceptable levels of service except for the following roadway segments:

State Facilities

- SR 99 (north of SR 132) currently operates at LOS F. SR 99 carries heavy traffic volumes, including high truck traffic volumes through the northern area of the Central Valley. Widening this segment from six lanes to eight lanes is expected to achieve acceptable operations of LOS D or better.
- SR 140 west of SR 99 currently operates at LOS F. Widening this segment from two lanes to four lanes between North Applegate Road and X Street in the City of Merced is expected to achieve acceptable operations of LOS B or better.
- SR 132 west of SR 99 currently operates at LOS E west of Modesto, requiring four lanes to operate satisfactorily.
- SR 152 in Los Banos currently operates at LOS D. The proposed Los Banos Bypass will correct this deficiency.

Table IV summarizes the results of the roadway segment level of service analysis for Existing Conditions. The table includes both the existing number of lanes and the number of lanes required for acceptable roadway facility operations.

**Table IV: Roadway Segment Levels of Service – Existing Conditions**

Roadway Segment	Existing number lanes	Existing Conditions		
		ADT	LOS	# of lanes required <sup>1</sup>
<b>County Facilities</b>				
Zacharias Road (between Baldwin Road and State Route 33)	2	600	A	2
Baldwin Road (north of Sperry Avenue)	2	2,185	A	2
East Las Palmas Avenue (east of Sycamore Avenue)	2	7,420	B	2
Sycamore Avenue (north of East Las Palmas Avenue)	2	230	A	2
Sycamore Avenue (South of East Las Palmas Avenue)	2	740	A	2
Sperry Avenue (west of Baldwin Road)	2	12,600	D	2
Sperry Avenue (west of State Route 33)	2	4,580	B	2
Crows Landing Road (between Harding Rd and Clausen Rd)	2	5,128	B	2
Fink Road (between Ward Avenue and I-5)	2	1,930	A	2
S. Carpenter Road (between Crows Landing Road and J17)	2	1,611	A	2
Davis Road (north of Fink Road)	2	152	A	2
Bell Road (north of Fink Road)	2	65	A	2
W. Ike Crow Road (between Bell Road and SR 33)	2	41	A	2

**Table continued next page.**

**Table IV (Continued): Roadway Segment Levels of Service – Existing Conditions**

Roadway Segment	Existing number lanes	Existing Conditions		
		ADT	LOS	# of lanes required <sup>1</sup>
Ward Avenue (north of Elfers Avenue)	2	1,027	A	2
Oak Flat Road (west of Ward Avenue)	2	161	A	2
W. Marshall Road (between Davis Street and SR 33)	2	586	A	2
W. Marshall Road (east of SR 33 between SR 33 and Sycamore Avenue)	2	959	A	2
Highway J17/West Main Street (between Crows Landing Road and Bystrum Road)	2	7,502	C	2
W. Stuhr Road (east of I-5 between I-5 Interchange and Bell Road)	2	2,110	A	2
Highway J18/E. Stuhr Road (east of SR 33 between SR 33 and McClintock Road)	2	908	A	2
<b>State Facilities</b>				
I-5 (north of Howard Road)	4	39,500	C	4
I-5 (north of Stuhr Road)	4	39,000	C	4
I-5 (south of SR 152)	4	30,500	B	4
SR 33 (south of Howard Road)	2	5,520	B	2
SR 33 (south of Sperry Avenue)	2	5,540	B	2
SR 33 (north of Fink Road)	2	3,800	A	2
SR 99 (north of SR 132)	6	119,000	<b>F</b>	8
SR 99 (north of Highway 17/W. Main Street)	6	85,000	<b>D</b>	6
SR 99 (south of SR 140)	4	43,000	C	4
SR 132 (west of SR 99)	2	15,400	<b>E</b>	2
SR 140 (west of SR 99)	2	17,000	<b>F</b>	4
SR 140 (west of SR 165)	2	3,500	A	2
SR 152 (east of SR 165)	4	29,000	D	4
SR 165 (north of SR 99 interchange)	4	22,300	C	4
SR 165 (north of SR 140)	2	6,100	B	2

**Notes:** Using Florida Capacity Method 2003  
LOS = Level of Service  
Bold values indicate unacceptable LOS conditions  
<sup>1</sup>Number of lanes required to operate the roadway at acceptable LOS D or better

## **Travel Demand Models**

### ***Description of Daily Study Model***

A project-specific (PS) model was developed for the travel demand forecasts for this study, since no existing regional model adequately covers the project area of influence. The PS model was built on a TP+/Viper platform. The model structure is similar to that of the Stanislaus Council of Governments (StanCOG) travel demand forecasting model.

The PS model integrates the network and land use information from the StanCOG model, the San Joaquin Council of Governments (SJCOG) travel demand forecasting model, and the Merced County travel demand forecasting model. The PS model provides very good coverage of the study area, extending from Tracy-Stockton to the north of and Los Banos to the south of the Project area. The PS model includes all of San Joaquin, Stanislaus, and Merced Counties.

The PS model includes 1,196 Traffic Analysis Zones (TAZs) and considers five trip purposes:

- Home-Based-Work (HBW): trips between a residence and a workplace;
- Home-Based-Shop (HBS): trips between a residence and a retail place;
- Home-Based-Other (HBO): trips between a residence and any other destination;
- Work-Based-Other (WBO): trips from a workplace to any other destination; and
- Other-Based-Other (OBO): trips between any other places.

The PS model used the trip rates of the StanCOG model. The StanCOG model trip rates are most relevant in this study because the West Park development is located within Stanislaus County. The PS model also used the master network concept to achieve consistency of networks among different modeling years.

In this study, the PS model was developed as a daily model and calibrated to the most recent ADT counts that TJKM collected for this project in 2007. The PS model implemented three modeling horizons:

- The 2007 Base Year Model
- The 2015 Model
- The 2030 Model

The 2007 PS network was developed from the 2007 networks of the StanCOG model, the SJCOG model and the Merced County model. The 2005 and the 2010 land use data for the three county models were factored to generate 2007 land use data for the PS model.

## 2016 Conditions

This section analyzes 2016 traffic conditions in the study area both with and without Phase I of the West Park project. This traffic scenario assumes construction of Phase I will be completed by 2016. A plot of the 2016 daily link volumes is contained in Appendix A.

### Modeling Network

The 2016 network for the PS model was developed using 2015 projections from the three regional County models described earlier. The 2016 networks for the PS model both with and without Phase I is essentially the same. These two networks reflect all programmed roadway segments improvements in San Joaquin, Stanislaus and Merced Counties. The future I-5/Oak Flat interchange was not assumed for the 2016 networks. Additionally, all proposed internal roadway segments serving the Phase I development were assumed.

### Proposed Phase I Project Description

Approximately one-third of the proposed 4,800-acre (i.e. 1,540 acres) West Park project site will be developed under Phase I. The first phase of the West Park project consists of approximately 105 acres of business park, 170 acres of inland port shipping facilities, 70 acres of industrial distribution sites, 205 acres of general industrial, 175 acres of airport industrial and 220 acres of agricultural industrial land uses. The site will also have 280 acres of infrastructure facilities including water and sewage treatment plants, storm water quality detention basins, circulatory roads, open spaces, drainage conduits, creeks, canals and aqueducts. Additionally, the site may have a 5-acre law enforcement regional facility and 50-acre CDF aviation firefighting facility. Figure 3 shows the West Park project site plan.

### Proposed Phase I Project Trip Generation

Table V shows trip generation estimates for the proposed West Park Phase I Project. Trip generation for the West Park Phase I Project was estimated based on rates provided in *Trip Generation* (7th Edition) published by the Institute of Transportation Engineers (ITE) and *San Diego Traffic Generators* published by the San Diego Association of Governments (SANDAG). The proposed West Park Phase I Project is expected to produce an estimated 8,800 employees that will generate a total of approximately 33,273 daily trips.