

Existing Conditions

Roadway Network

The project site is located south of Patterson in Stanislaus County, as shown in Figure 1. Important roadways serving the project site are discussed below.

Interstate 5 (I-5) is a major north-south freeway that runs through the western portion of Stanislaus County. It is generally a four-lane freeway with two travel lanes in each direction through the Central Valley of California. The average daily traffic volume on I-5 through Merced and Stanislaus Counties varies between 37,500 to 39,500 vehicles per day (vpd). I-5 has existing interchanges with Fink Road in the vicinity of the project, with Sperry Avenue in the City of Patterson and with Stuhr Road near Newman.

The interchange of I-5/Sperry Avenue is a tight diamond interchange with a narrow, local road underpass and a steep drop in grade next to the northbound on-ramp. The ramps are one lane in all directions. The City of Patterson is considering improvements at this interchange at an unspecified time.

The interchange of I-5/Fink Road is a diamond interchange with a narrow, local road underpass. The Fink Road underpass is constrained by columns that support the I-5 Bridge.

The interchange of I-5/Stuhr Road is a diamond interchange with a two lane overpass. The ramps are one lane in all directions; the off-ramps are currently controlled by stop signs.

State Route 99 (SR 99) is a major north-south freeway that runs through the central portion of Stanislaus County. It is a four-lane freeway north of SR 120 with two travel lanes in each direction through the northern area of the Central Valley. It is a six-lane freeway south of SR 120 with three travel lanes in each direction through the southern area of the Central Valley. SR 99 carries approximately 85,000 to 119,000 vehicles per day.

State Route 33 (SR 33) is a north-south arterial roadway that runs parallel to the Southern Pacific Rail Road (SPRR) with an at-grade rail crossing. SR 33 is located on the western edge of the Project area, approximately three miles to the east of I-5. SR 33 provides access to Westley to the north and the City of Newman to the south. SR 33 carries approximately 3,800 vpd in the project area and 6,200 vpd in the City of Patterson.

State Route 152 (SR 152) is a four-lane, east-west arterial roadway that runs through Merced County. SR 152 carries approximately 29,000 vehicles per day. The Los Banos bypass, which will skirt the City on the north side, is currently being planned.

State Route 165 (SR 165) is a north-south arterial roadway that runs through the Central Valley. SR 165 consists of two lanes south of SR 99 and four lanes north of SR 99. SR 165 carries approximately 22,000 vehicles per day in the Turlock area.

Sperry Avenue is a two-lane, east-west arterial roadway that serves as the major route between I-5 to the west and the City of Patterson to the east. The segment of Sperry Road between Baldwin Road and Ward Avenue consists of four lanes. A three-mile segment of Sperry Avenue links I-5 to SR 33. Sperry Avenue carries approximately 12,200 vpd near the I-5 freeway.

Table V: Proposed Phase I Project Trip Generation

Land Use	Acres	Floor Area Ratio	Building Area, KSF ¹	Employees Per KSF	Employees	Trip Rate Per Employee ²	Daily Trips
General Industrial	205	0.35	3,125	0.7	2,188	3.34 (130)	7,307
Industrial -- Distribution	70	0.35	1,067	0.3	321	3.89 (150)	1,246
Airport Industrial	175	0.10	762	0.7	534	3.34 (130)	1,782
Agricultural Industrial	220	0.35	3,354	0.7	2,348	3.34 (130)	7,842
Inland Port Shipping	170	--	--	--	40	3.34 (130)	1,600 ³
Business Park	105	0.35	1,600	2.0	3,200	4.04 (770)	12,928
Law Enforcement Regional Facility	5	0.25	50	2.0	100	3.34 (130)	334
CDF Aviation Firefighting	50	0.10	200	--	50	3.34 (130)	167
Airfield	260	--	--	--	20	3.34 (130)	67
Medical Planning Area	0	--	--	--	--	--	--
Work Force Training	0	--	--	--	--	--	--
All Infrastructure-Related Uses	280	--	--	--	--	--	--
Total	1,540	--	10,158	--	8,800	--	33,273

Notes: ¹KSF = 1,000 square feet

²3.34 (130) = Rate based on ITE Trip Generation, 7th Edition, Land use category 130

Trips include 1,466 intermodal truck trips serving 3 trains per day plus 134 employee trips.

Source: Peter R. Vandermat, DMJM Harris.

Trip rate sources: ITE Trip Generation (2003) and San Diego Traffic Generators, SANDAG, April 2002

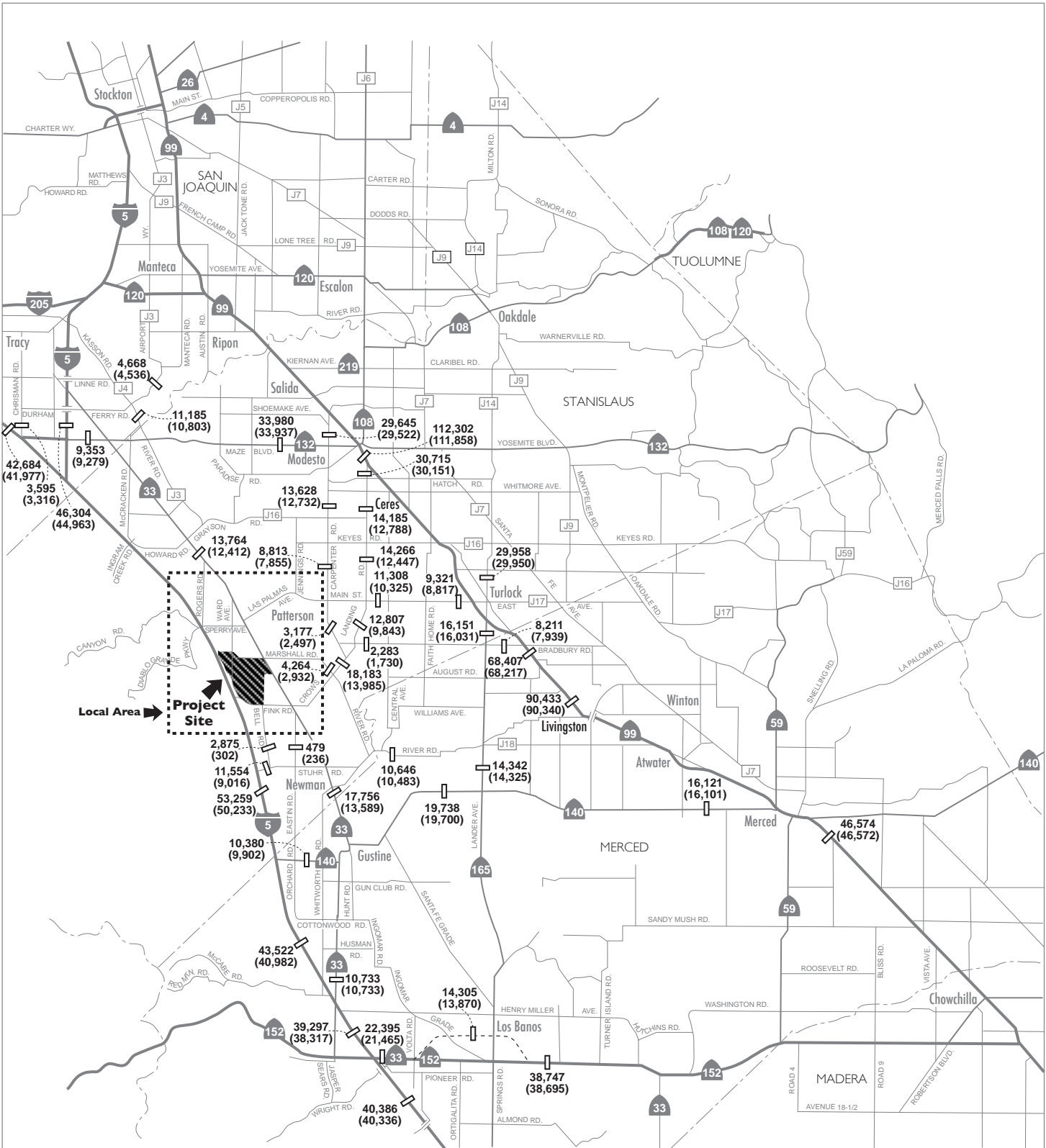
2016 Daily Traffic

Figures 6 and 7 compare regional and local daily traffic forecast volumes for 2016 both with and without Phase I of the project. Figure 6 shows that regional traffic volumes on study freeway and arterial segments within the Central Valley of California are expected to be similar in magnitude both with and without Project Phase I.

However, Figure 7 shows a significant difference in daily traffic between the 2016 Baseline and 2016 Plus Phase I Project Conditions on roadway segments within and adjacent to the project site. Therefore, traffic generated by Phase I is expected to have a noticeable influence on local roadway operations, with comparatively less regional traffic impacts.

Preliminary Traffic Circulation Master Plan 2016 Daily Traffic (ADT) Volumes – Regional Area

Figure
6

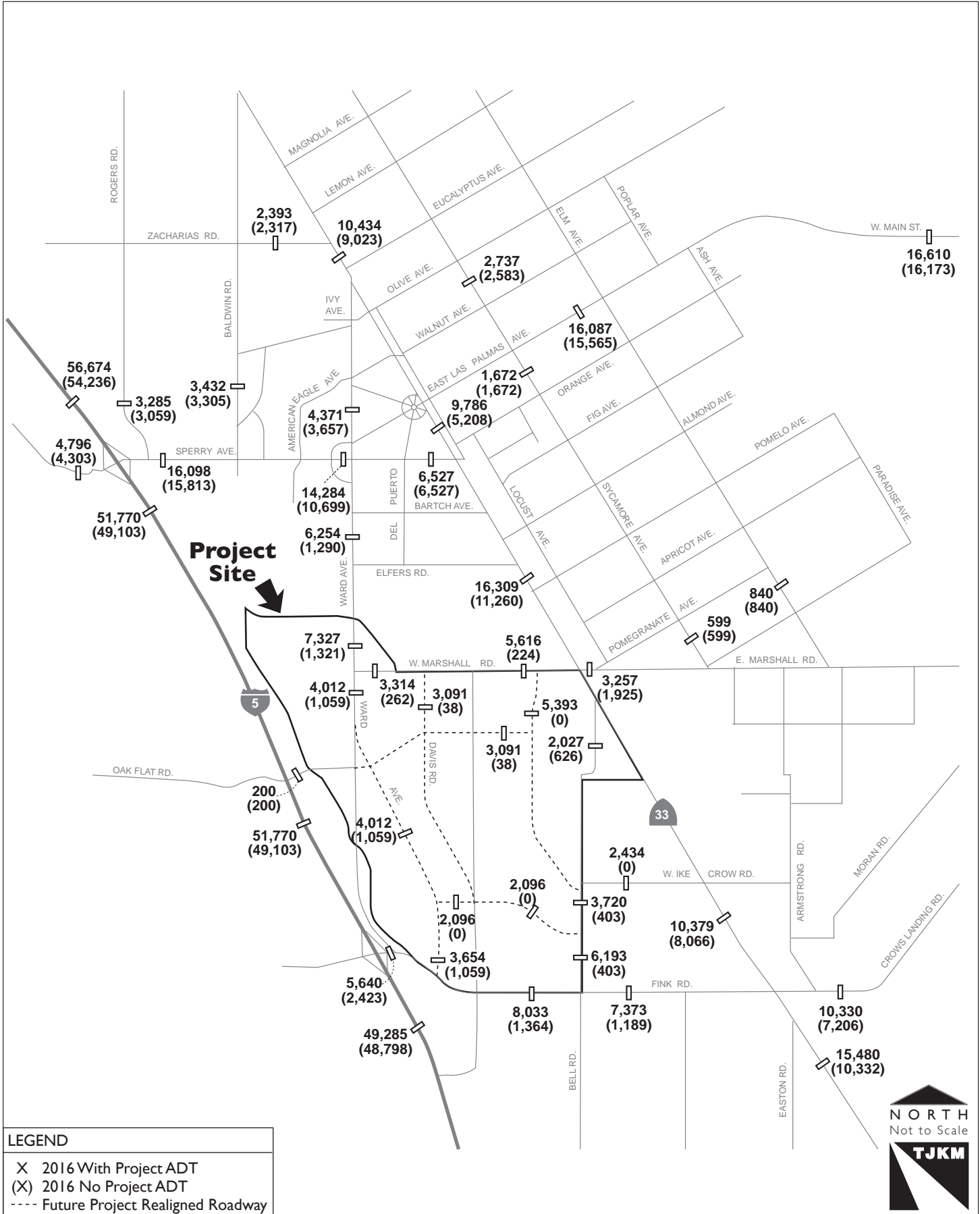


LEGEND	
X	2016 With Project ADT
(X)	2016 No Project ADT
---	Future Project Realigned Roadway



Preliminary Traffic Circulation Master Plan 2016 Daily Traffic Volumes – Local Area

Figure
7



Level of Service Analysis (2016 Conditions)

Under 2016 Conditions without Phase I Project, all roadway segments are expected to operate at acceptable levels of service except for the following roadway segments:

Patterson Area Facilities

- East Las Palmas Avenue (east of Sycamore Avenue) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between Sycamore Avenue and Ash Avenue from two lanes to four lanes to achieve acceptable operations.
- Sperry Avenue (west of Baldwin Road) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between the I-5/Sperry Avenue interchange and Baldwin Road from two lanes to four lanes to achieve acceptable operations.
- Crows Landing Road (north of W. Main Street/Highway 17) is expected to operate unacceptably at LOS D. It is recommended to widen the segment between E. Marshall Road and S. Carpenter Road from two lanes to four lanes to achieve acceptable operations.

Stanislaus County Facilities

- W. Main Street/Highway J17 (west of S. Carpenter Road) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between Ash Avenue and S. Carpenter Road from two lanes to four lanes to achieve acceptable operations.
- River Road (east of E. Marshall Road) is expected to operate unacceptably at LOS D. It is recommended to widen the segment between SR 33 and SR 165 from two lanes to four lanes to achieve acceptable operations.

Modesto Area Facilities

- Crows Landing Road (between Hatch Road and SR 99) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between Grayson Road/Highway J16 and SR 99 from four lanes to six lanes to achieve acceptable operations.

State Facilities

- Interstate 5 (north of Sperry Road) is expected to operate unacceptably at LOS D. It is recommended to widen the freeway segment between Sperry Road and Howard Road from four lanes to six lanes to achieve acceptable operations.
- State Route 33 (north of W. Sanches Road) is expected to operate unacceptably at LOS D. It is recommended to widen the roadway segment between SR 140 and River Road in the City of Newman from two lanes to four lanes to achieve acceptable operations.
- State Route 99 (south of W. Bradbury) is expected to operate unacceptably at LOS E. It is recommended to widen the freeway segment between W. Bradbury and August Road from four lanes to six lanes to achieve acceptable operations.
- State Route 99 (south of August Road) is expected to operate unacceptably at LOS F. It is recommended to widen the freeway segment between August Road and River Road/Highway J18 from four lanes to eight lanes to achieve acceptable operations.

- State Route 99 (between Crows Landing Road and SR 132) is expected to operate unacceptably at LOS F. It is recommended to widen this freeway segment from six lanes to eight lanes to achieve acceptable operations.
- State Route 132 (east of Paradise Road) is expected to operate unacceptably at LOS F. It is recommended to widen the segment between I-5 and Dakota Avenue in the City of Modesto from two lanes to six lanes to achieve acceptable operations.
- State Route 140 (west of State Route 99) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between SR 165 and SR 99 from two lanes to four lanes to achieve acceptable operations.
- State Route 140 (west of State Route 165) is expected to operate at LOS F. It is recommended to widen the segment between SR 33 (east of the City of Gustine) and SR 165 from two lanes to four lanes to achieve acceptable operations.
- State Route 152 (east of State Route 165) is expected to operate at LOS E. It is recommended to widen the segment between the City of Los Banos and SR 59 from four lanes to six lanes to achieve acceptable operations.
- State Route 165 (north of SR 140) is expected to operate unacceptably at LOS E. It is recommended to widen the segment between SR 140 and Main Street from two lanes to four lanes to achieve acceptable operations.

In addition to the freeway and arterial segments listed above, the following roadway segments are expected to operate at an unacceptable level of service under 2016 Plus Phase I Project Conditions.

Patterson Area Facilities

- Crows Landing Road (north of W. Main Street/Highway J17) is expected to operate unacceptably at LOS D. It is recommended to widen the segment between W. Main Street/Highway J17 and Grayson Road/Highway J16 from two lanes to four lanes to achieve acceptable operations.

Stanislaus County Facilities

- Crows Landing Road (north of E. Marshall Road) is expected to operate unacceptably at LOS D. It is recommended to widen the segment between E. Marshall Road and S. Carpenter Road from two lanes to four lanes to achieve acceptable operations.

State Facilities

- State Route 33 (south of Sperry Avenue) is expected to operate unacceptably at LOS F under 2016 with Phase I Project Conditions. It is recommended to widen the segment between Marshall Road and Elfers Avenue from two lanes to four lanes to achieve acceptable operations.
- Interstate 5 (south of W. Stuhr Road) is expected to operate unacceptably at LOS D under 2016 with Phase I Project Conditions. It is recommended to widen the segment between Stuhr Road and SR 140 from four lanes to six lanes to achieve acceptable operations.

- SR 33 (south of Howard Road) is expected to operate unacceptably at LOS D under 2016 with Phase I Project Conditions. It is recommended to widen the segment between Rogers Road and Howard Road from two lanes to four lanes to achieve acceptable operations.
- SR 33 (south of Elfers Road) is expected to operate unacceptably at LOS E under 2016 with Phase I Project Conditions. It is recommended to widen the segment between Elfers Road and W. Marshall Road from two lanes to four lanes to achieve acceptable operations.
- SR 33 (south of Fink Road) is expected to operate unacceptably at LOS E under 2016 with Phase I Project Conditions. It is recommended to widen the segment between Fink Road and Stuhr Road from two lanes to four lanes to achieve acceptable operations.

Table V summarizes the results of the roadway segment level of service analysis for 2016 Conditions with and without Phase I. The table shows both existing number of lanes and the expected number of lanes required for acceptable roadway operations under 2016 Conditions with and without Phase I.

Table VI: Roadway Segment Level of Service – 2016 Conditions

Roadway Segment	Existing number lanes	2016 no Project Conditions			2016 + Phase I Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
Patterson Area Facilities							
Zacharias Road (between Baldwin Road and SR 33)	2	2317	A		2393	A	
Sycamore Avenue (north of East Las Palmas Avenue)	2	2583	B		2737	B	
Sycamore Avenue (south of East Las Palmas Avenue)	2	1672	A		1672	A	
East Las Palmas Avenue (east of Sycamore Avenue)	2	15565	E	4	16087	E	4
Baldwin Road (north of Sperry Avenue)	2	3305	A		3432	A	
Ward Avenue (north of East Las Palmas Avenue)	2	3657	A		4371	A	
Sperry Avenue (west of SR 33)	2	6527	B		6527	B	
Sperry Avenue (west of Ward Avenue)	4	10699	B		14284	B	
Rogers Road (north of Sperry Road)	2	3059	B		3285	B	
Sperry Avenue (west of Baldwin Road)	2	15813	E	4	16908	F	4
Sperry Avenue (west of I-5)	2	4303	A		4796	B	
Ward Avenue (north of Elfers Avenue)	2	1290	A		6254	B	
Elm Avenue (south of Pomegranate Avenue)	2	840	A		840	A	
Sycamore Avenue (north of Marshall Road)	2	599	A		599	A	
S. Carpenter Road (between Crows Landing Road and Highway J17)	2	2497	A		3177	A	
S. Carpenter Road (north of W. Main Street/Highway J17)	2	7855	B		8813	C	
Crows Landing Road (north of W. Main Street/Highway J17)	2	12447	C		14266	D	4
W. Bradbury Road (between Crows Landing Road and Morgan Road)	2	1730	A		2283	A	
Turlock Area Facilities							
Highway J17 (west of SR 99)	2	8817	C		9321	C	
W. Bradbury Road (west of SR 99)	2	7939	C		8211	D	
Los Banos Area Facilities							
SR 152 Bypass	N/A	13870	B	4 lanes	14305	B	4 lanes

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Table VI (Continued): Roadway Segment Level of Service – 2016 Conditions

Roadway Segment	Existing number lanes	2016 no Project Conditions			2016 + Phase I Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
Stanislaus County Facilities							
Ward Avenue (north of Marshall Road)	2	1321	A		7327	B	
Marshall Road (east of Ward Avenue)	2	262	A		3314	A	
Ward Avenue (south of Marshall Road)	2	1059	A		4012	A	
Davis Road (north of Oak Flat Road)	2	38	A		3091	A	
W. Ike Crow Road (north of Oak Flat Road)	2	0	A		5393	C	
Marshall Road (west of SR 33)	2	224	A		5616	C	
Marshall Road (between SR 33 and Sycamore Avenue)	2	1925	A		3257	B	
Oak Flat Road (west of Ward Avenue)	2	200	A		200	A	
Oak Flat Road (east of Ward Avenue)	N/A	N/A			N/A		
Oak Flat Road (between David Road and W. Ike Crow Road)	N/A	38	A		3091	A	
Bell Road (west of SR 33)	2	626	A		2027	A	
Ward Avenue (south of Oak Flat Road)	2	1059	A		4012	A	
Davis Road (south of Oak Flat Road)	2	N/A			N/A		
Ward Avenue (north of Fink Road)	2	1059	A		3564	A	
Project Road A (between Ward Avenue and Davis Road)	N/A	0	A		2096	A	
Project Road A (east of Davis Road)	N/A	0	A		2096	A	
Bell Road (north of Project Road A)	2	403	A		3720	A	
Bell Road (north of Fink Road)	2	403	A		6193	B	
Fink Road (west of Bell Road)	2	1364	A		8033	B	
Fink Road (between Ward Avenue and I-5)	2	2423	A		5640	B	
Fink Road (east of Bell Road)	2	1189	A		7373	B	
W. Ike Crow Road (between Bell Road and SR 33)	2	0	A		2434	B	
Crows Landing Road (east of SR 33)	2	7206	B		10330	C	
E. Marshall Road (west of Crows Landing Road)	2	2932	B		4264	B	
Crows Landing Road (north of E. Marshall Road)	2	13985	D	4	18183	F	4
Crows Landing Road (between Harding Road and Clausen Road)	2	9843	C		12807	D	4
W. Main Street/Highway J17 (west of S. Carpenter Road)	2	16173	E	4	16610	F	4
Highway J17/W. Main Street (between Crows Landing Road and Bystrum Road)	2	10325	C		11308	C	

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Table VI (Continued): Roadway Segment Level of Service – 2016 Conditions

Roadway Segment	Existing number lanes	2016 no Project Conditions			2016 + Phase I Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
Bell Road (between W. Stuhr Road and Anderson Road)	2	302	A		2875	B	
Eastin Road (between W. Stuhr Road and Anderson Road)	2	236	A		479	A	
West Stuhr Road (east of I-5 between I-5 Interchange and Bell Road)	2	9016	C		11554	C	
River Road (East of E. Marshall Road)	2	10483	D	4	10646	D	4
Modesto Area Facilities							
Carpenter Road (between Highway J16 and Whitmore Avenue)	2	12732	D		13628	D	
Crows Landing Road (between Highway J16 and Whitmore Avenue)	2 to 4	12788	D		14185	D	
Crows Landing Road (between Hatch Road and SR 99)	4	30151	E	6	30715	E	6
Carpenter Road (between Shoemake Avenue and SR 132)	4	29522	D		29645	D	
San Joaquin County Facilities							
Kasson Road/Highway J 4 (south of Durham/ Ferry Road/Airport Way)	2	10803	C		11185	C	
Airport Way/Highway J 3 (east of Highway J 4)	2	4536	B		4668	B	
Tracy Area Facilities							
Chrisman Road (north of SR 132)	4	3316	A		3595	A	
State Facilities							
I-5 (north of Sperry Road)	4	54236	D	6	56674	D	6
I-5 (between Oak Flat Road and Sperry Road)	4	49103	C		51770	C	
I-5 (between Fink Road and Oak Flat Road)	4	49103	C		51770	C	
I-5 (south of Fink Road)	4	48798	C		49285	C	
I-5 (south of W. Stuhr Road)	4	50233	C		53259	D	6
I-5 (between SR 132 and Ferry Road)	4	44963	C		46304	C	
I-5 (south of SR 152)	4	40336	C		40386	C	
I-5 (between SR 152 and Henry Miller Avenue)	4	38317	B		39297	C	
I-5 (between Whitworth Road and SR 33)	4	40982	C		43522	C	
I-580 (east of Chrisman Road)	4	41977	C		42684	C	
SR 33 (south of Howard Road)	2	12412	C		13764	D	4
SR 33 (between Zacharias Road and Eucalyptus Avenue)	2	9023	C		10434	C	

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Table VI (Continued): Roadway Segment Level of Service – 2016 Conditions

Roadway Segment	Existing number lanes	2016 no Project Conditions			2016 + Phase I Conditions		
		ADT	LOS	# of lanes required	ADT	LOS	# of lanes required
SR 33 (north of Sperry Road)	2	5208	B		9786	C	
SR 33 (south of Elfers Road)	2	11260	C		16309	E	4
SR 33 (north of Fink Road)	2	8066	B		10379	C	
SR 33 (south of Fink Road)	2	10332	C		15480	E	4
SR 33 (north of W. Sanches Road)	2	13589	D	4	17756	F	4
SR 33 (between I-5 and Husman Road)	2	10733	C		10733	C	
SR 99 (south of W. Bradbury)	4	68217	E	6	68407	E	6
SR 99 (south of August Road)	4	90340	F	8	90433	F	8
SR 99 (south of SR 140)	4	46572	C		46574	C	
SR 99 (between Crows Landing Road and SR 132)	6	111858	F	8	112302	F	8
SR 132 (west of SR 33)	2	9279	C		9353	C	
SR 132 (east of Paradise Road)	2	33937	F	6	33980	F	6
SR 140 (west of SR 165)	2	19700	F	4	19738	F	4
SR 140 (between Eastin Road and Whitworth Road)	2	9902	C		10380	C	
SR 140 (west of SR 99)	2	16101	E	4	16121	E	4
SR 152 (east of SR 165)	4	38695	F	6	38747	F	6
SR 152 (between I-5 and Volta Road)	4	21465	C		22395	C	
SR 165 (north of W. Harding Road)	2	16031	E	4	16151	E	4
SR 165 (north of SR 99 interchange)	4	29950	D		29958	D	
SR 165 (north of SR 140)	2	14325	D	4	14342	D	4

Notes: Using Florida Capacity Method 2003
 LOS = Level of Service
 Bold values indicate unacceptable LOS conditions