YOLO COUNTY DEPARTMENT OF COMMUNITY SERVICES

Addendum to the Environmental Impact Report for ZF#2005-0013 Orciuoli Subdivision Amendment (SCH #2004122100)

ZF 2019-0025

February 2020

ADDENDUM TO AN ENVIRONMENTAL IMPACT REPORT

CEQA REQUIREMENTS

This document has been prepared as an Addendum to the Environmental Impact Report ("EIR") (SCH #2004122100) in accordance with the CEQA Guidelines, Section 15164. The EIR was certified by the Yolo County Board of Supervisors on September 25, 2007, for the Orciuoli Property Residential Development Project ("Project"), which consisted of a General Plan Amendment, Rezoning, Tentative Subdivision Map, and a Development Agreement for a 180-unit subdivision in the unincorporated town of Esparto, California. This Addendum analyzes the proposal to amend the Tentative Subdivision Map and Development Agreement, and Rezone the Project to remove the Planned Development Overlay zone.

CEQA Guidelines Section 15164 provides that "an addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred." The conditions in Section 15162 include substantial changes in the project or the circumstances under which the project is undertaken that result in new significant environmental effects, or new significant information showing new significant environmental effects, among others. Pursuant to Section 15164(e), a brief explanation is provided herein documenting the County's decision that preparation of a subsequent EIR is not required.

The Guidelines go on to state that: (1) the addendum need not be circulated, but can be included in or attached to the final EIR (Section 15164(c)), and (2) the County must consider the addendum with the final EIR prior to making a decision on the project (Section 15164(d)).

The analysis provided in this document demonstrates that the circumstances and impacts identified in the EIR remain substantively unchanged by the situation described herein, and supports the finding that the proposed modifications do not raise any new issues and do not cause the level of impacts identified in the previous EIR to be exceeded.

BACKGROUND

On September 25, 2007, the Yolo County Board of Supervisors certified the Final EIR (SCH #2004122100) through the adoption of Resolution 07-131, and accompanying Resolutions 07-132, 07-133, as well as Zoning Ordinance 681.214, Ordinance No. 1361, and Development Agreement No. 07-252, and approved Tentative Subdivision Map (TSM) #4655, which collectively entitled the Orciuoli Subdivision Map (ZF2005-0013). TSM #4655 consisted of 180 single-family residential lots, parks, multi-use paths, a stormwater detention basin, extension of utilities, increased water supply, and dedication of right-of-way and public land. The project approval was subject to 104 Conditions of Approval and a Mitigation Monitoring and Reporting Plan.

The Board of Supervisors approved amendments to the Development Agreement in 2017 to extend the expiration date and again in 2019 to extend the term and transfer the requirement for construction of a gas station and retail/office building to a previously approved housing

development in Esparto, pursued by Yocha Dehe Wintun Nation, that has not yet been constructed.

The applicant returned to amend the tentative subdivision map and development agreement, and rezone the parcel to remove the Planned Development Overlay (PD-59) Zone. The proposal revises the tentative subdivision map to 120 residential lots and identifies a 2.57-acre parcel for 60 apartment units. The location of the apartment parcel formerly consisted of a cul-de-sac and approximately a dozen single-family lots. Two small parks, originally located along Cowell Street, have been combined and are now proposed at the south end of the apartment parcel. The streets have been reconfigured to improve circulation within the project. Everything else, including the large 3-acre park, 3.5-acre detention basin, multi-use paths, provision of utilities, and dedication of land, will remain the same.

The adopted EIR for ZF2005-0013 assessed the potential environmental impacts attributable to the Project. It identified and provided mitigation measures to address potentially significant environmental impacts associated with Land Use, Transportation/Circulation, Agriculture, Biological Resources, Cultural Resources, Hazardous Substances, Hydrology, Noise, Air Quality, Public Services and Utilities and Service Systems, Recreation, and Aesthetics.

DETERMINATION

The proposed Project, which consists of amending the Development Agreement and Tentative Subdivision Map and removing the Planned Development Overlay Zone, does not represent a substantive change to the approved Orciuoli Subdivision Map (ZF2005-0013) as analyzed under the adopted EIR.

In order to assess whether additional CEQA review is required for the additional operations, an analysis of the applicability of Section 15162 of the CEQA Guidelines has been prepared. The table on the following page provides verbatim wording from the Guidelines and a corresponding analysis of the applicability of each section to the proposed project.

TABLE 1: Comparison of CEQA Requirements and Request

CEQA Requirement Section 15162(a)	Relationship to Proposed Project
When an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:	The Orciuoli Residential Development General Plan Amendment, Rezoning, Tentative Subdivision Map, and Development Agreement EIR was adopted by the Yolo County Board of Supervisors on September 25, 2007. The information below summarizes the substantial evidence in support of the County's determination that the preparation of a subsequent EIR is not required.
(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;	There are no changes in the proposed project that would require major revision of the adopted EIR that analyzed and mitigated the potential significant impacts of the Project. The proposed area of the project remains the same and the total number of residential units remains the same though a third of the residences would now take the form of apartments rather than single-family residences. The applicant has satisfied some of the mitigation measures included in the EIR related to agriculture and public services and utilities. Most of the other mitigation measures relate to site development that has not changed substantially; therefore, no new significant environmental effects would occur as a result of the amended Project.
(2) Substantial changes will occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or	The Orciuoli residential development was approved in 2007 and the Development Agreement for the project has been extended and modified in recent years. No substantial changes have occurred with respect to the circumstances under which the development is or will be undertaken that would warrant major revisions to the previous CEQA review. As described above, the proposed project is substantially the same and would not create new significant environmental effects or increase previously identified effects. Therefore, the County has concluded that the proposed amendment is not a substantial change in circumstances.
(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:	There has been no new information of substantial importance that has become known since the EIR was adopted in 2007. The proposed Project remains substantially the same and will not cause any new significant effects that were not discussed in the EIR.

CEQA Requirement Section 15162(a)	Relationship to Proposed Project
(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;	The proposed Project remains substantially the same and will not have any significant effects that were not discussed in the adopted EIR as there is no additional development included in the project proposal.
(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;	No significant effects previously examined and mitigated in the EIR will be made more severe by the proposed amendments to the approved Project. In fact, previously identified potential impacts to Land Use and Traffic/Circulation have become less severe to the point of being less than significant, as described below. Land Use Mitigation Measure 4.1.2 limits annual residential development to no more than 65 units per year based on a 2007 Esparto Community Plan policy. In 2019, the Esparto Community Plan was updated which removed limits to the amount of residential development that could occur in Esparto to more effectively address the current housing crisis facing California. Therefore, the Project no longer conflicts with the Esparto Community Plan's residential growth policies. Land Use Mitigation Measure 4.1.2. is no longer applicable nor does it cause a potential obstruction to current County goals, which include provisions for accommodating additional housing development, including construction of affordable housing. Likewise, Traffic/Circulation Mitigation Measure 4.2.5 requires a "fair share" payment toward future road projects that were specified in the Tentative Subdivision Map Conditions of Approval and in the Development Agreement as payment toward an extension and bridge for Alpha Street based on a projected significant impact to Level of Service (LOS) for traffic through the community. The EIR referred to a previous 1983 General Plan Policy CIR 7 that required a minimum LOS C for all County roads. The 2030 Countywide General Plan lowered this standard in Policy CI-3.2 to a minimum LOS E through the community of Esparto. An April 2018 update of the traffic study from the EIR (See Appendix A) has found that the cumulative impacts projected for 2025 in the 2005 EIR would be alleviated by the Caltrans SR 16 Safety Improvement Project which is currently being completed. The 2018 study projected that the traffic signal recently installed at SR 16 and CR 21A would increase the Level Of Service to an acceptable LOS C and D. Mitigation Measure 4.2.5 is no longer necessary nor the Alpha Street bridge specified in the Tentative Subdivision Map Conditions of Approval and Development Agreement desired.
(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or	The EIR adopted for this project considered 4 alternatives including a reduced footprint, offsite development, no canal crossing, and no project. None of these alternatives were previously found not to be feasible; they were eliminated for other reasons that have not changed. The adopted EIR included 20 Mitigation Measures. None of these mitigation measures were found to be infeasible or have been declined by the project proponents.

CEQA Requirement Section 15162(a)	Relationship to Proposed Project
(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.	The proposed project to amend the Tentative Subdivision Map and Development Agreement and remove the Planned Development Overlay Zone proposed no substantial changes to the number of residences or amenities provided. No new alternatives or mitigations are proposed for the Project though as identified in the preceeding discussion, existing mitigations for Land Use and Traffic/Circulation are no longer necessary or desired and will be removed.

CONCLUSION

Based on the analysis provided above, the proposed Project, which would amend the approved Tentative Subdivision Map and Development Agreement for the Orciuoli Residential Development Project and remove the Planned Development Overlay Zone, would not result in new or more severe environmental impacts and no additional CEQA review is required. Additionally, two mitigation measures required in the EIR address potential impacts that no longer exist or have been found to be less than significant and are counterproductive to County and State needs. These include limits to housing production and a road extension and bridge that would increase traffic through residential areas. Though the proposed amendments to the Project Tentative Subdivision Map and Development Agreement do not substantially change the approved Orciuoli Residential Subdivision, the discussed mitigation measures to Land Use and Traffic/Circulation are no longer necessary to reduce impacts and will be removed so as not to conflict with current goals. This addendum shall be attached to the existing Environmental Impact Report (SCH #2004122100).

APPENDIX A
Eastern Esparto Circulation Study Update

Final Draft Report

Eastern Esparto Circulation Study Update

Esparto, Yolo County, California

April 4, 2018

TJKM

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INTRODUCTION

Background and Setting

Esparto is an unincorporated census-designated place in Yolo County, California, with a population of about 3,620 (*2016 American Community Survey 5-Year Population Estimate*). State Route 16 (SR 16), also known as Yolo Avenue, travels north/south through the center of Esparto, forming the town's "Main Street". Esparto is located about 12 miles west of Woodland, 12 miles north of Winters, and 22 miles north of Vacaville in neighboring Solano County. Less than 8 miles east of Esparto is the Cache Creek Casino Resort, which draws significant regional visitor traffic through town on a daily basis and hosts special and regular events including major regional draws such as concerts and sports events. Casino visitor traffic is heavier during the evenings, and in particular on Friday and Saturday evenings.

The population of Esparto has approximately doubled over the last 16 years, from 1,858 to 3,618, spurred by constructing of several subdivisions on the western end of Esparto, completed before the economic recession of 2008. During this time, in order to help plan for additional anticipated growth on the eastern end of Esparto, Yolo County contracted Fehr & Peers in 2006 to conduct the Eastern Esparto Circulation Study (December 2006, Fehr & Peers) to identify the necessary circulation system necessary to support future growth.

Study Purpose

As the economy and housing demand continue to recovery and grow, the County has contracted TJKM to update the 2006 Eastern Esparto Circulation Study to reflect current baseline conditions, revised development plans in Esparto, and recent changes to anticipated near term and cumulative regional growth forecasts. Notably, the Cache Creek Casino Resort, which opened in its current form in 2004, broke ground in May 2017 on a major hotel expansion for an additional 459 rooms, and additional supporting facilities, that is anticipated to be complete in December 2018. This project was analyzed in the *Cache Creek Hotel Expansion Project: Final Traffic Impact Study* (November 2016, Kimley Horn) included in the Tribal Environmental Impact Report.

The purpose of this study is twofold. One goal will be to quantify potential near-term transportation impacts of proposed development projects in Esparto. This study analyzes the impacts of three residential projects, the Cottage Series at Esparto, the E. Parker Subdivision, and the Story Subdivision, and one gas station project that includes a fast food restaurant, convenience market, and drive-through car wash. **Figure 1** presents the Project Study Area & Vicinity Map, including the locations and boundaries of these proposed development projects. The second purpose of the study is to revisit the identified long-term circulation system needed to support buildout of Esparto, as identified previously in the 2006 study. TJKM has also updated this study with the latest technical analysis methodologies to reflect current industry standards and to be consistent with Yolo County's *Transportation Impact Study Guidelines*.

Project Study Area & Vicinity Map

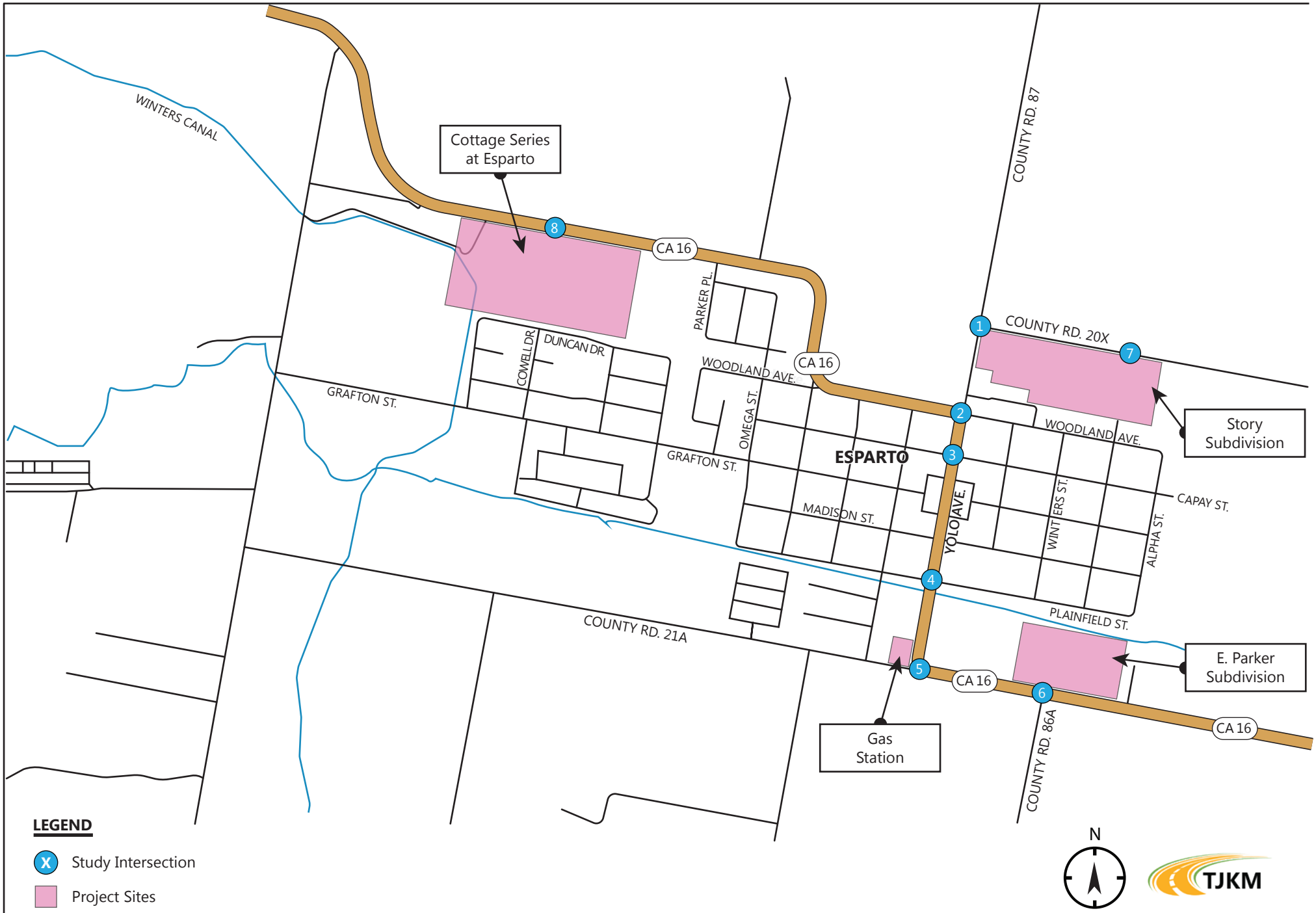

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Figure 1

EXISTING CONDITIONS

Existing transportation conditions, including roadway and intersection geometry, pedestrian, bicycle, and transit facilities were observed through field observations, review of current and historical aerial imagery, and review of available recent transportation studies. Within the study area, all roadways are two-lane undivided rural roads, with speed limits between 25 and 35 miles per hour (mph). None of the study intersections are currently signalized and are either two-way (side-street) stop controlled (TWSC), all-way stop-controlled (AWSC), or in the case of Yolo Avenue at Woodland Avenue, three-way stop controlled.

State Route 16 (SR 16) follows several alignments throughout the study area. Starting in the southeast, SR 16 enters Esparto along an east-west alignment that terminates at County Road 21A (CR 21A). At this point, SR 16 shifts to a north-south alignment along Yolo Avenue. At the north end of town, at Woodland Avenue, the north-south alignment terminates at County Road 87 (CR 87). From there, SR 16 alternates between an east-west and north-south alignment until County Road 85B (CR 85B) where it leaves the Esparto area. For the purposes of this study, local street names, such as Yolo Avenue, have been utilized where possible to reduce ambiguity between study locations.

Existing and planned pedestrian and bicycle facilities are shown in **Figure 2**. Notable improvements implemented since the 2006 study include the addition of bike lanes, high visibility crosswalks, and sidewalks on both sides of Yolo Avenue. These improvements reflect the initial implementation phase of the Esparto *Main Street Revitalization Plan* (Local Government Commission, 2007). Additionally, frontage improvements for the Mercy Housing project, Esperanza Crossing, included sidewalks and pedestrian path connectivity. Although the improvements on Yolo Avenue expanded pedestrian facilities along the street, pedestrian facilities outside of the immediate downtown area remain fragmented and, in many cases, sporadic or absent. The planned bicycle and pedestrian projects and alignments illustrated on Figure 2 will close some critical gaps in the alternative transportation network, although some gaps, particularly in residential neighborhoods, will remain. Until the Yolo Avenue bridge over Lamb Valley Slough is replaced and widened, an important gap in pedestrian and bicycle connectivity will remain between the southern and northern ends of Esparto's "Main Street".

Study Locations

Existing intersection operations were evaluated at the following six existing intersections in the study area, and 2 proposed project driveways:

1. County Road 20X / County Road 87
2. Woodland Avenue / State Route 16 / Yolo Avenue (SR 16) / County Road 87
3. Capay Street / Yolo Avenue (SR 16)
4. Plainfield Street / Yolo Avenue (SR 16)
5. County Road 21A / State Route 16 / Yolo Avenue (SR 16)
6. State Route 16 / County Road 86A
7. *County Road 20X / Winters Street Extension (Plus Project and Cumulative Conditions Only)*
8. *State Route 16 / Cowell Drive Extension*

Existing and Planned Multimodal Transportation Facilities

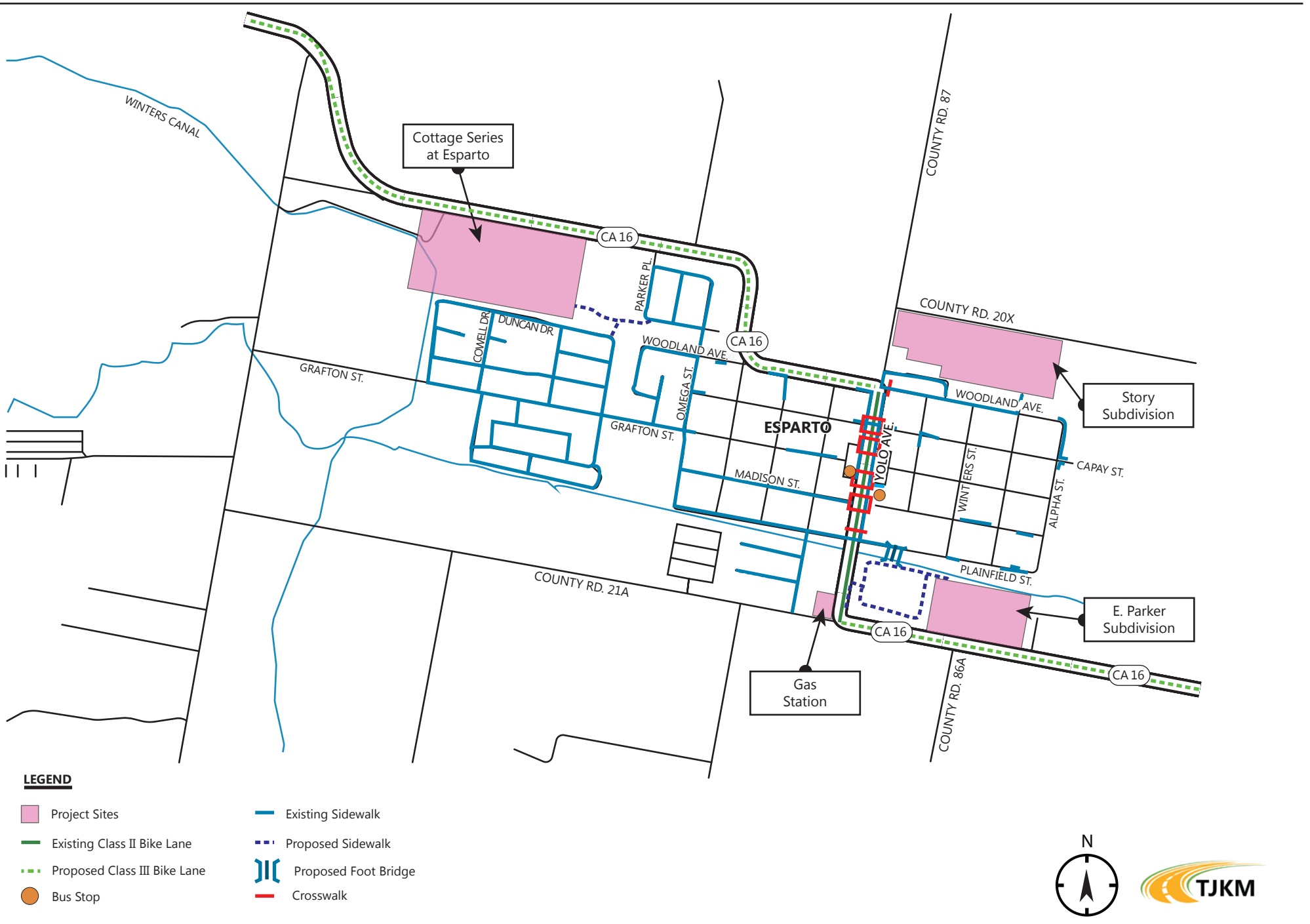

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Figure 2

Analysis Scenarios & Data Collection

In consultation with County staff, Weekday and Saturday PM peak hour conditions were selected for analysis. This selection is consistent with recent transportation studies, including the *Cache Creek Hotel Expansion* EIR, and reflects reasonably conservative conditions that account for regional traffic peaks due to casino operations. Existing traffic volumes were collected at select locations in September 2017 and were supplemented with transportation data from the 2016 *Cache Creek Resort Hotel Expansion* traffic impact study and the 2006 *Eastern Esparto Circulation* Study. Counts taken in 2017 indicated that 2016 volumes remain relatively similar, and in some cases, lower. Therefore, at locations where new counts were not taken, 2016 counts were adjusted in order to balance "through" volumes along SR 16. Side street volumes remained relatively consistent between counts in 2006, 2016, and 2017. Existing peak hour traffic volumes and lane configurations are presented in **Figure 3**.

Existing Intersection Level of Service

Intersection Level of Service (LOS) was evaluated using the *Highway Capacity Manual* (HCM) 6th Edition methodology, implemented through *Synchro Version 10* (Trafficware) software. Where roadway geometry is inconsistent with the HCM 6th Edition methodologies, acceptable substitute methodologies were utilized. For example, the three-way stop-controlled intersection at Woodland Avenue / Yolo Avenue, was analyzed in the microsimulation software *SimTraffic Version 10* (Trafficware) to obtain average vehicle delays for the worst-case approach.

The County's *General Plan* and *Transportation Impact Study Guidelines* set LOS thresholds for roadways throughout the County. The minimum acceptable LOS on SR 16 in Esparto varies between LOS D and LOS E (LOS E is applicable along the Yolo Avenue alignment, and between Woodland Avenue and CR 85B). As shown in **Table 1**, all study intersections operated at or below acceptable LOS thresholds during both Weekday and Saturday afternoon peak periods.

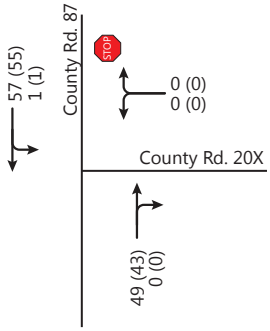
Table 1. Existing Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1,2]	Peak	Existing	
					LOS	Delay[3]
1	County Road 20X / County Road 87*	D	TWSC	Weekday	A	0.0
				Saturday	A	0.0
2	Woodland Avenue / SR 16 / Yolo Avenue (SR 16) / County Road 87	E	3WSC**	Weekday	A	7.0
				Saturday	A	6.9
3	Capay Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	B	14.7
				Saturday	C	15.9
4	Plainfield Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	C	17.8
				Saturday	C	18.9
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	AWSC	Weekday	D	28.0
				Saturday	D	26.8
6	SR 16 / County Road 86A	D	TWSC	Weekday	C	20.1
				Saturday	C	18.2

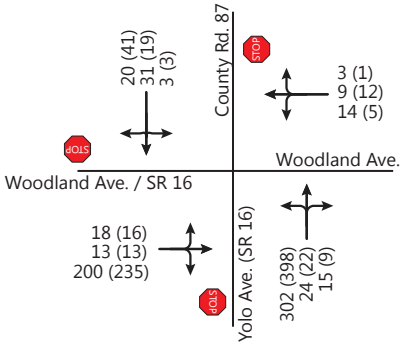
** No conflicting volume was observed at this intersection, resulting in no delay.*
*** The northbound approach at this intersection is uncontrolled. Reported delay results reflect microsimulation runs.*
1. For two-way stop-control (TWSC) and three-way stop (3WSC) control, delay and LOS expressed for worst movement.
2. For all-way stop control, (AWSC) delay and LOS expressed for intersection average.
3. Delay expressed in seconds.

Existing Intersection Geometrics & Turning Movements

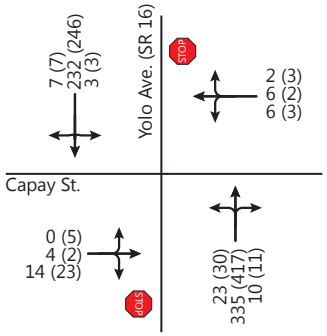
Intersection #1
County Rd. 20X & County Rd. 87



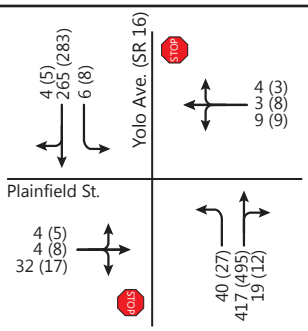
Intersection #2
Woodland Ave. / SR 16 &
Yolo Ave. (SR 16) / County Rd. 87



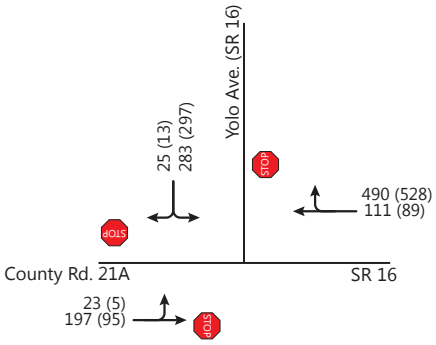
Intersection #3
Capay St. & Yolo Ave. (SR 16)



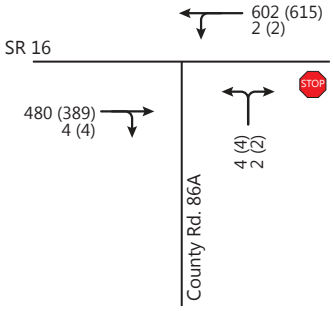
Intersection #4
Plainfield St. & Yolo Ave. (SR 16)

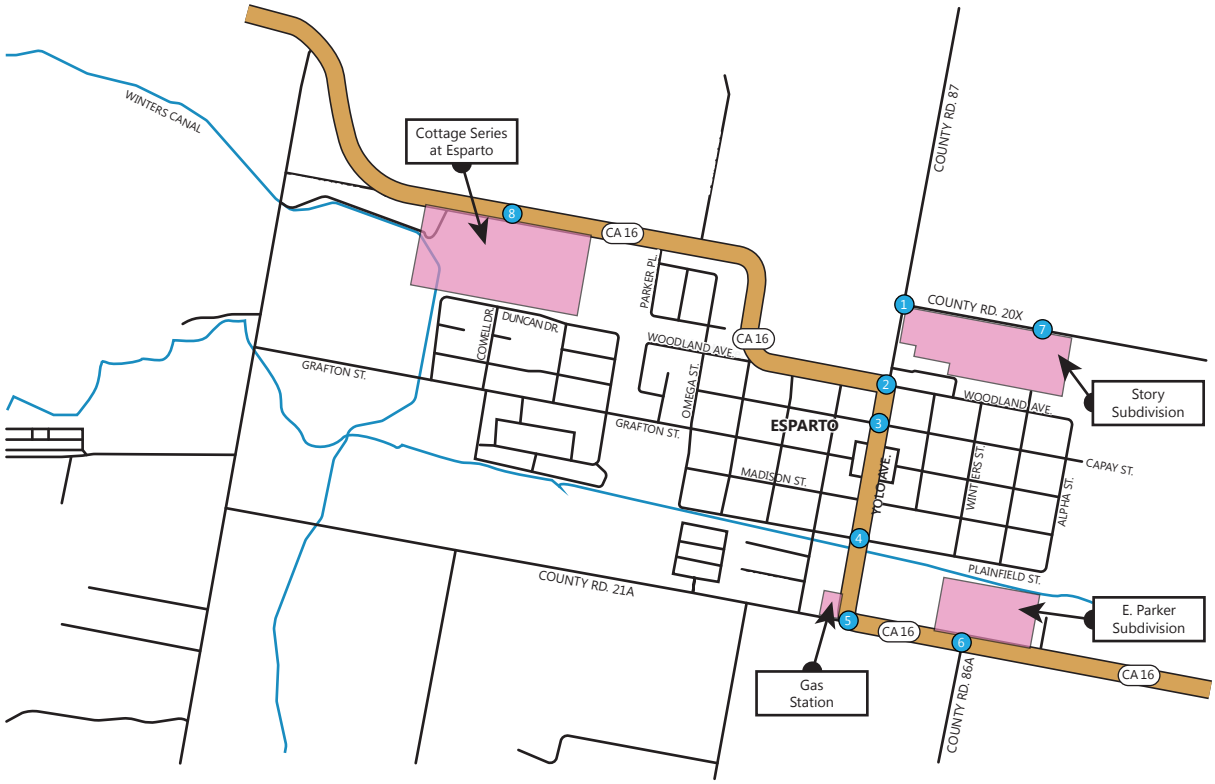


Intersection #5
County Rd. 21A / SR 16 & Yolo Ave. (SR 16)



Intersection #6
SR 16 & County Rd. 86A





LEGEND

- X Study Intersection
- Project Sites
- XX Weekday PM Peak Hour Volumes
- (XX) Saturday PM Peak Hour Volumes

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NEAR TERM CONDITIONS

Near Term conditions were utilized to establish the analysis baseline for the impact assessment of the proposed development projects included in this study. *Near Term* conditions were selected as the baseline analysis for this study because the following approved / pending projects are anticipated to be completed prior construction of any of the proposed projects. The approved / pending projects included in the *Near Term (No Project)* conditions baseline include the following:

Land Development Projects

For the purposes of this study, *Near Term* conditions include construction of the Cache Creek Hotel Expansion project, which is currently under construction, and estimated to be completed by December 2018, and the Yocha Dehe Tribal Lands Project north of Cache Creek Casino & Resort on SR 16 (25 dwelling units and 84,600 square feet of office). The *Near Term* scenario also includes development of the Esparto Community Park & Aquatic Center, located east of Yolo Avenue (SR 16), between Lamb Valley Slough and SR 16. Traffic associated with the Cache Creek Hotel Expansion was obtained from the 2016 *Cache Creek Resort Hotel Expansion* traffic impact study and added to the study intersections.

Traffic associated with the Esparto Community Park & Aquatic Center was manually generated and assigned to the Esparto transportation system. **Table 2** presents the trip generation calculations for that project. After reviewing the available land use categories in the Institute of Transportation Engineers *Trip Generation Manual, 10th Edition*, the closest appropriate land use was "Soccer Fields", which also includes pools and basketball courts, which are proposed uses for the park.

Table 2. Esparto Community Park & Aquatic Center Trip Generation Summary

Proposed Land Uses (ITE Code)	Size	Units	Weekday PM Peak						Saturday, Peak Hr. of Generator					
			Rate	*In %*	*Out %*	*In*	*Out*	*Total*	*Rate*	*In %*	*Out %*	*In*	*Out*	*Total*
Community Park & Aquatic Center														
Soccer Complex (488)	3	Fields	*16.43*	*66*	*34*	32	17	49	*40.10*	*48*	*52*	58	62	120
Estimated Pedestrian Trip Discount (10%)						*-3*	*-2*	*-5*				*-6*	*-6*	*-12*
Total						**29**	**15**	**44**				**52**	**56**	**108**

Notes:

Source - ITE Trip Generation Manual, 10th Edition (2017).

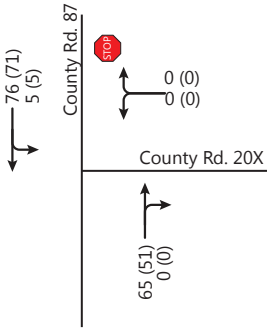
Transportation Projects

Caltrans has a State Route 16 Safety Improvement Project (IS/MND, June 2015, Caltrans) planned in the study area, with an anticipated construction with an anticipated construction commencing late summer or fall 2018, to be finished by November 2020. However, the proposed improvements were not included in the *Near Term* conditions, since the timeline for construction completion is not certain. This project, which would signalize the intersection of CR 21A / SR 16 / Yolo Avenue, is included in the *Cumulative* baseline conditions analysis. The project is depicted in **Appendix B** and would also include a continuous two-way left turn lane along segments of State Route 16 and Yolo Avenue.

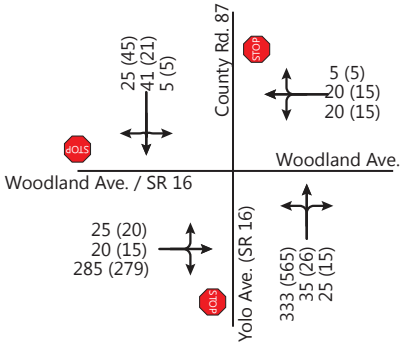
Figure 4 presents the *Near Term (No Project)* intersection volumes. **Table 3** presents the *Near Term (No Project)* intersection LOS results.

Near Term (No Project) Intersection Geometrics & Turning Movements

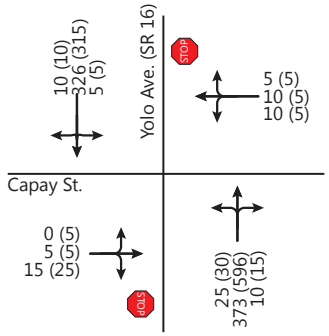
Intersection #1
County Rd. 20X & County Rd. 87



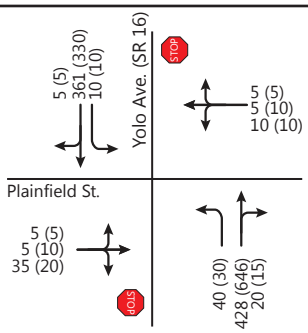
Intersection #2
Woodland Ave. / SR 16 &
Yolo Ave. (SR 16) / County Rd. 87



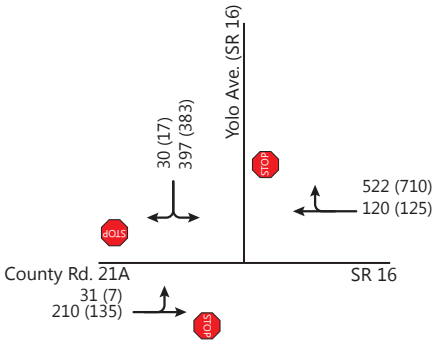
Intersection #3
Capay St. & Yolo Ave. (SR 16)



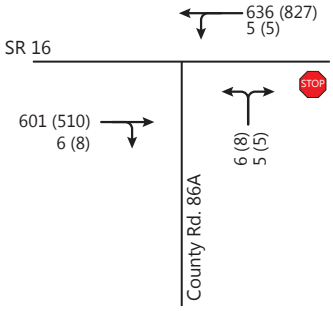
Intersection #4
Plainfield St. & Yolo Ave. (SR 16)

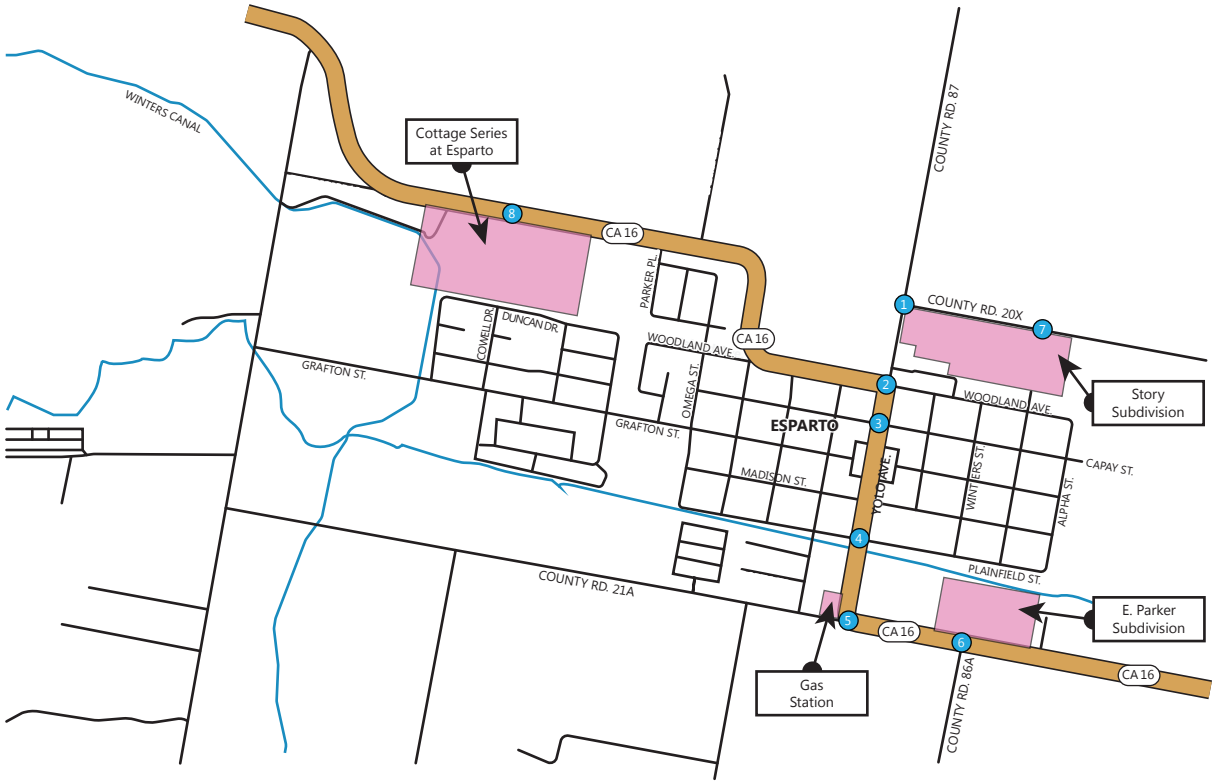


Intersection #5
County Rd. 21A / SR 16 & Yolo Ave. (SR 16)



Intersection #6
SR 16 & County Rd. 86A





LEGEND

- X Study Intersection
- Project Sites
- XX Weekday PM Peak Hour Volumes
- (XX) Saturday PM Peak Hour Volumes

N

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Table 3. Near Term (No Project) Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1,2]	Peak	Existing	
					LOS	Delay[3]
1	County Road 20X / County Road 87*	D	TWSC	Weekday	A	0.0
				Saturday	A	0.0
2	Woodland Avenue / SR 16 / Yolo Avenue (SR 16) / County Road 87	E	3WSC**	Weekday	A	7.4
				Saturday	A	9.8
3	Capay Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	C	17.3
				Saturday	C	23.0
4	Plainfield Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	C	20.8
				Saturday	C	24.6
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	AWSC	**Weekday**	**F**	**59.3**
				Saturday	**F**	**124.0**
6	SR 16 / County Road 86A	D	TWSC	Weekday	C	23.0
				Saturday	D	27.2

** No conflicting volume is anticipated in Near Term (No Project) conditions at this intersection, resulting in no delay.*
*** The northbound approach at this intersection is uncontrolled. Reported delay results reflect microsimulation runs.*
1. For two-way stop-control (TWSC) and three-way stop (3WSC) control, delay and LOS expressed for worst movement.
2. For all-way stop control, (AWSC) delay and LOS expressed for intersection average.
3. Delay expressed in seconds.
Bold indicates unacceptable LOS

As shown in Table 3, most study intersections are anticipated to continue operating better than LOS thresholds, with the exception of the CR 21A / SR 16 / Yolo Avenue intersection. This intersection is anticipated to degrade to LOS F during the Weekday and Saturday p.m. peak hours. The Caltrans Safety Improvement Project will signalize this intersection, improving operations. Improved operations are presented in the *Mitigations and Proposed Improvements* section of this report.

Near Term + Project Conditions

Near Term +Project conditions include traffic anticipated to be generated by the proposed projects identified in Figure 1 and described below. This analysis scenario identified potential project impacts.

Proposed Project Trip Generation

Trip generation was estimated for these projects based on published trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. Pass-by trip reduction rates published in the Trip Generation Handbook were applied to the gas station and fast food restaurant trip generation. The combined projects are expected to produce 5,758 new weekday trips, including 420 new trips in the weekday p.m. peak hour, and 584 new trips in the Saturday p.m. peak hour. **Table 4** presents the trip generation summary for the proposed projects.

Net trips generated by each proposed project were distributed and assigned to study intersections using the same distribution pattern used in the 2006 Circulation Plan study: 18 percent to/from SR 16 west, two percent to/from CR 87 north, 72 percent to/from SR 16 east, five percent to/from CR 86A, and three percent to/from CR 21A. Assigned trips were then added to study intersections to produce *Near Term + Project* conditions. Trip distribution and assignment are presented in **Figure 5**, and peak hour traffic volumes and lane configurations under *Near Term + Project* conditions are presented in **Figure 6**.

Table 4. Proposed Project Trip Generation Summary

Proposed Land Uses (ITE Code)	Size	Units	Daily, Weekday		Weekday PM Peak						Saturday, Peak Hr. of Generator					
			Rate	Trips	Rate	In %	Out %	In	Out	Total	Rate	In %	Out %	In	Out	Total
Cottage Series at Esparto																
Single Family Detached Housing (210)	181	dwelling units	*9.52*	1,723	*1.00*	*63*	*37*	114	67	181	*0.93*	*54*	*46*	91	77	168
E. Parker Subdivision																
Single Family Detached Housing (210)	62	dwelling units	*9.52*	590	*1.00*	*63*	*37*	39	23	62	*0.93*	*54*	*46*	31	27	58
Story Subdivision																
Single Family Detached Housing (210)	78	dwelling units	*9.52*	743	*1.00*	*63*	*37*	49	29	78	*0.93*	*54*	*46*	39	34	73
Gas Station																
Gas Station with Convenience Market & Carwash (946)	10	fueling positions	*152.84*	1,528	*13.86*	*51*	*49*	71	68	139	*14.52*	*50*	*50*	73	72	145
Gas Station Peak Hour Pass by Trip Reduction (ITE) , 56%[1]					*56%*			*(40)*	*(38)*	*(78)*				*0*	*0*	*0*
Fast Food Restaurant with Drive-Through Window (934)	2.4	1,000 sq.ft.	*496.12*	1,173	*32.65*	*52*	*48*	40	37	77	*59.00*	*51*	*49*	71	69	140
Fast Food Peak Hour Pass by Trip Reduction (ITE) , 50%[2]					*50%*			*(20)*	*(19)*	*(39)*				*0*	*0*	*0*
Sub Total				2,702				51	48	99				144	141	285
Grand Total				**5,758**				**253**	**167**	**420**				**305**	**279**	**584**

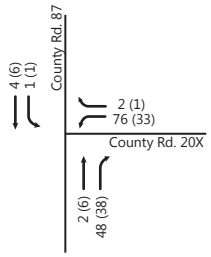
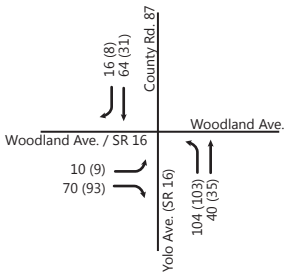
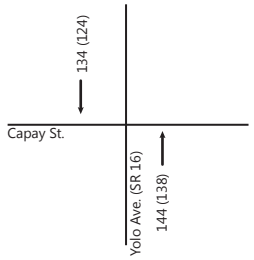
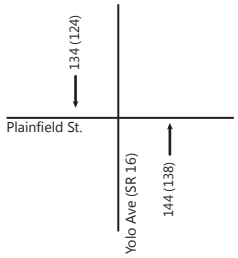
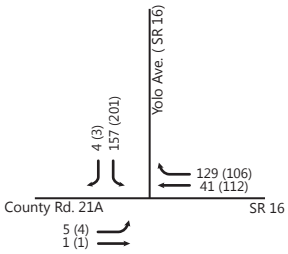
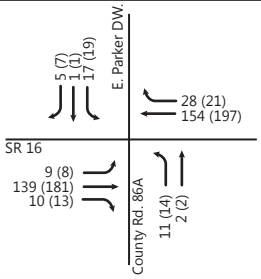
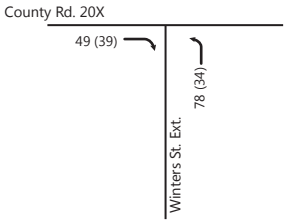
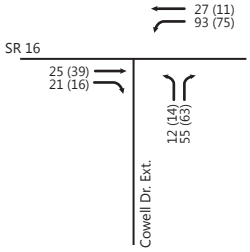
Notes:

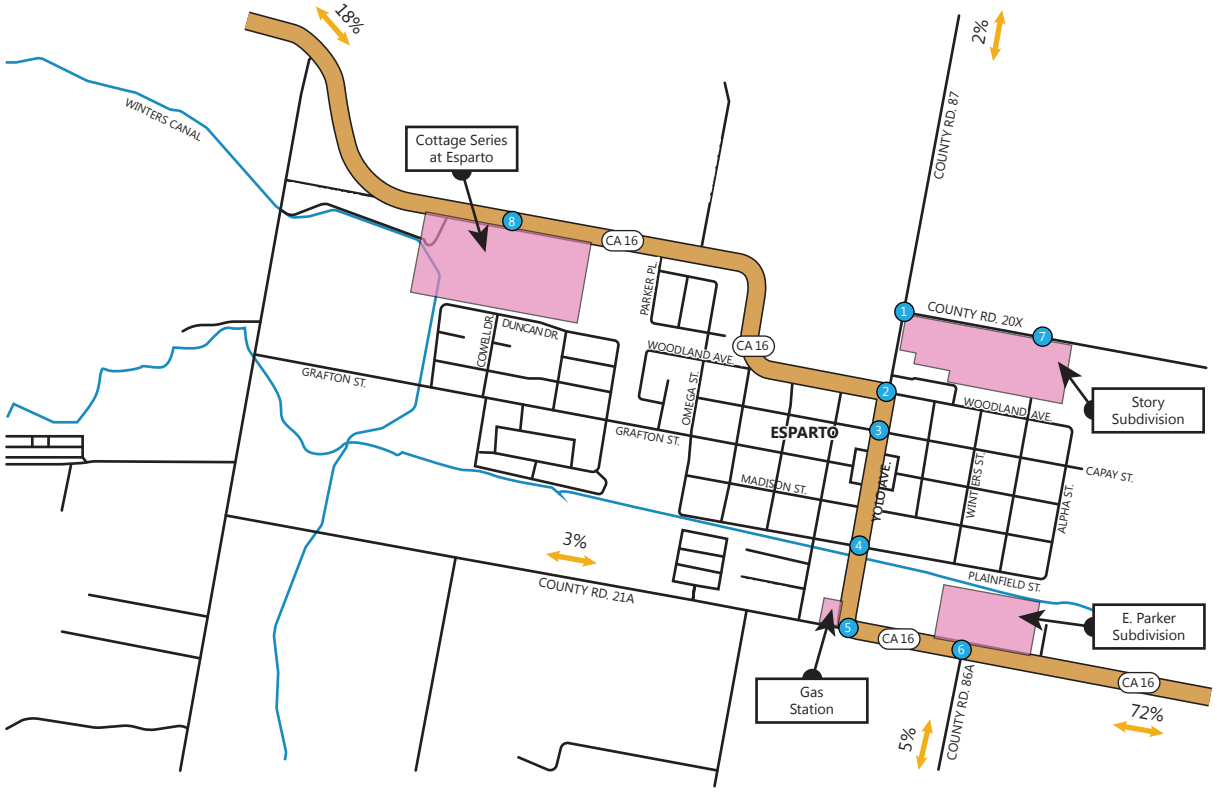
Source – ITE *Trip Generation Manual, 9th Edition* (2012)

[1]ITE Pass-by reduction rate of 56% for Gasoline/Service Station with Convenience Market (ITE Code 945)

[2]ITE Pass-by reduction rate of 50% for Fast Food Restaurant with Drive-Through Window (ITE Code 934)

Proposed Project Trip Distribution and Assignment

Intersection #1 County Rd. 20X & County Rd. 87	**Intersection #2** Woodland Ave. / SR 16 & Yolo Ave. (SR 16) / County Rd. 87	**Intersection #3** Capay St. & Yolo Ave. (SR 16)	**Intersection #4** Plainfield St. & Yolo Ave. (SR 16)
			
Intersection #5 County Rd. 21A /SR 16 & Yolo Ave. (SR 16)	**Intersection #6** SR 16 & County Rd. 86A / E. Parker Subdiv. Project DW.	**Intersection #7** County Rd. 20X & Winters St. Extension	**Intersection #8** SR 16 & Cowell Dr. Extension
			



LEGEND

- X — Study Intersection
- Project Sites
- XX — Weekday PM Peak Hour Volumes
- (XX) — Saturday PM Peak Hour Volumes
- X % — Trip Distribution

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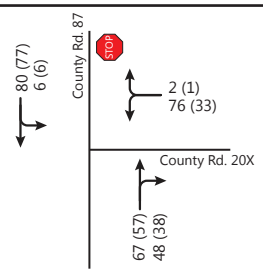
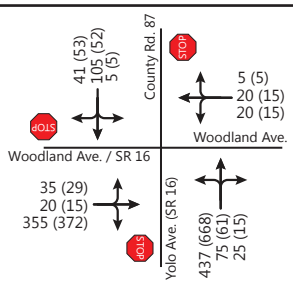
Near Term Plus Project Intersection Geometrics & Turning Movements

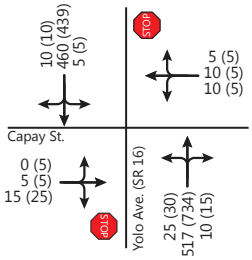
Intersection #1
County Rd. 20X & County Rd. 87



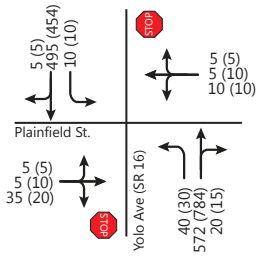
Intersection #2
Woodland Ave. / SR 16 &
Yolo Ave. (SR 16) / County Rd. 87



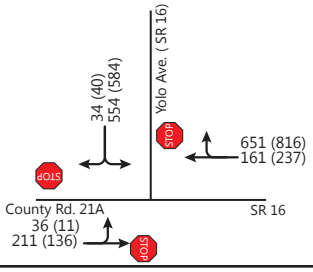
Intersection #3
Capay St. & Yolo Ave. (SR 16)



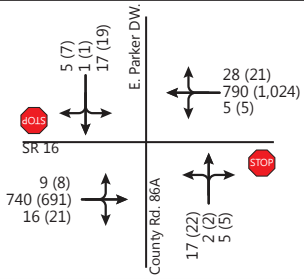
Intersection #4
Plainfield St. & Yolo Ave. (SR 16)



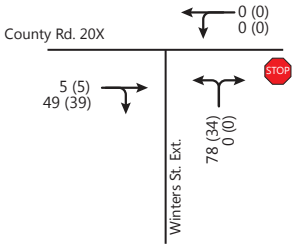
Intersection #5
County Rd. 21A /SR 16 &
Yolo Ave. (SR 16



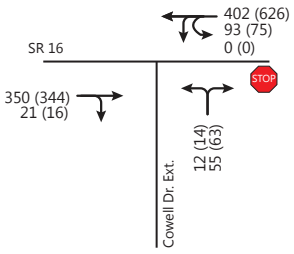
Intersection #6
SR 16 & County Rd. 86A /
E. Parker Subdiv. Project DW.

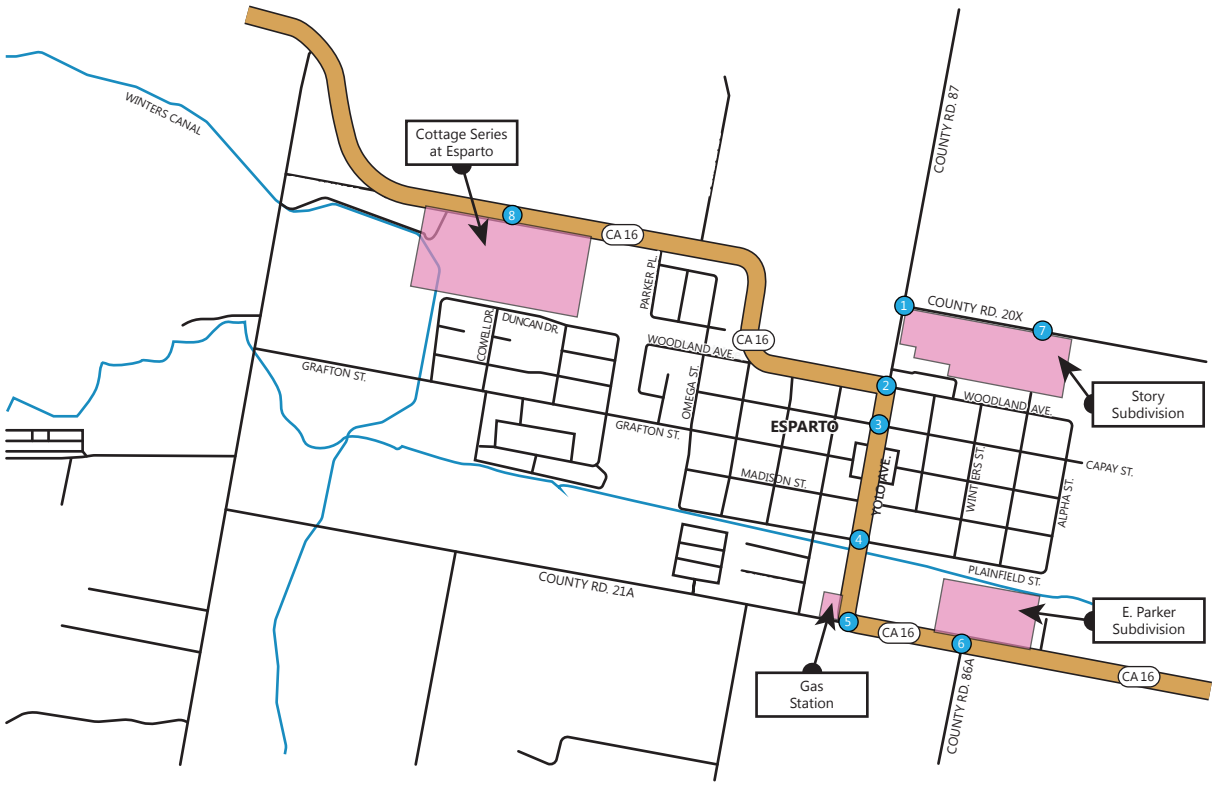


Intersection #7
County Rd. 20X &
Winters St. Extension



Intersection #8
SR 16 & Cowell Dr. Extension





LEGEND

- X Study Intersection
- Project Sites
- XX Weekday PM Peak Hour Volumes
- (XX) Saturday PM Peak Hour Volumes

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Figure 6

Near Term + Project intersection LOS results are presented below in **Table 5**. As shown in Table 5, intersection operations are anticipated to continue to remain mostly acceptable at all study intersection with the addition of project-generated traffic.

However, the LOS F conditions identified at the CR 21A / SR 16 / Yolo Avenue intersection in the *Near Term (No Project)* condition Weekday and Saturday p.m. peak hours are anticipated to worsen in the *Near Term + Project* condition. The approved and planned Caltrans Safety Improvement Project will signalize this intersection, improving operations. Improved operations are presented in the *Mitigations and Proposed Improvements* section of this report.

Additionally, the SR 16 / CR 86A intersection is anticipated to operate at LOS F during both the Weekday and Saturday p.m. peak hour conditions. This intersection serves as the primary project driveway for the E. Parker Subdivision project. The approved and planned Caltrans Safety Improvement Project will add a two-way left turn lane at this intersection, improving operations. Improved operations are presented in the *Mitigations and Proposed Improvements* section of this report.

Table 5. Near Term + Project Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1,2]	Peak	Existing	
					LOS	Delay[3]
1	County Road 20X / County Road 87	D	TWSC	Weekday	B	10.3
				Saturday	A	9.8
2	Woodland Avenue / SR 16 / Yolo Avenue (SR 16) / County Road 87	E	3WSC*	Weekday	C	19.4
				Saturday	C	18.4
3	Capay Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	C	24.7
				Saturday	D	34.0
4	Plainfield Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	D	31.2
				Saturday	E	36.4
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	AWSC	**Weekday**	**F**	**170.2**
				Saturday	**F**	**405.2**
6	SR 16 / County Road 86A / E. Parker Subdivision Project Driveway	D	TWSC	**Weekday**	**F**	**79.5**
				Saturday	**F**	**176.8**
7	County Road 20X / Winters Street Extension (Story Subdivision Project Driveway)	D	TWSC	Weekday	A	9.0
				Saturday	A	8.8
8	SR 16 / Cowell Drive Extension (Cottage Series at Esparto Project Driveway)	D	TWSC	Weekday	B	11.3
				Saturday	C	15.1

** The northbound approach at this intersection is uncontrolled. Reported delay results reflect microsimulation runs.*

1. For two-way stop-control (TWSC) and three-way stop (3WSC) control, delay and LOS expressed for worst movement.
2. For all-way stop control, (AWSC) delay and LOS expressed for intersection average.
3. Delay expressed in seconds.

Bold indicates unacceptable LOS

CUMULATIVE CONDITIONS

For the purposes of this study, *Cumulative* conditions generally represent buildout of the Esparto General Plan, buildout of County General Plan land uses, regional traffic growth, and buildout of the approved / pending projects included in the *Near Term* conditions and the proposed projects included in the *Near Term + Project* conditions. Additionally, *Cumulative* conditions includes construction of the Caltrans *State Route 16 Safety Improvement Project*, depicted in Appendix B. Two *Cumulative* transportation network scenarios are analyzed and included in this study, as described below.

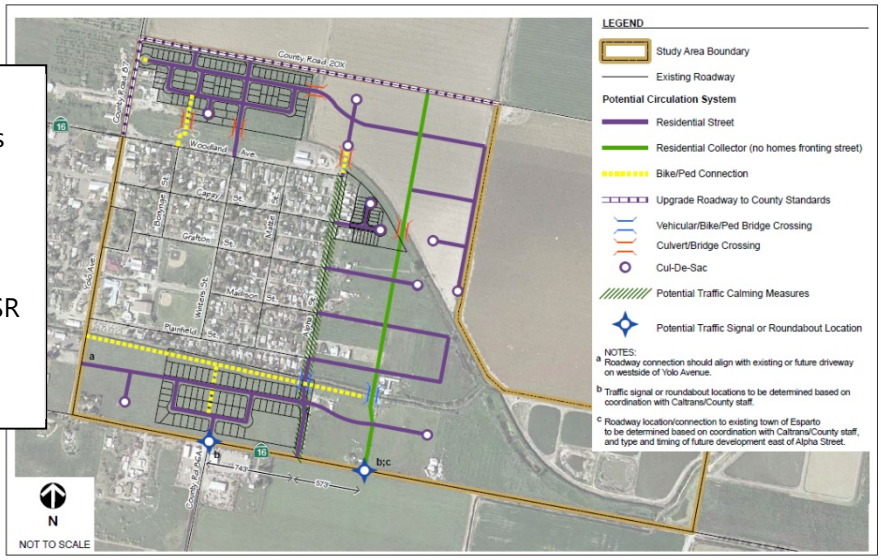
Cumulative (Without New North-South Connection)

In the *Cumulative (Without New North-South Connection)* scenario, no additional transportation projects in the study area were included beyond the Caltrans *State Route 16 Safety Improvement Project*. In order to remain consistent with recently approved environmental documents, the forecasts for this scenario were developed to be consistent with the *Cumulative* analysis condition included in the 2016 *Cache Creek Resort Hotel Expansion* traffic impact study. However, while that study included theoretical buildout of the Esparto General Plan land uses, the specific uses for the proposed development projects included in the *Near Term + Project* scenario were not known. Therefore, the *Cumulative (Without New North-South Connection)* analysis scenario has been adjusted to reflect development of the four proposed land development projects described in the previous section. **Figure 7** presents the *Cumulative (Without New North-South Connection)* intersection geometrics and volumes.

Cumulative (With New North-South Connection)

In the *Cumulative (With New North-South Connection)*, buildout of adopted transportation improvements from the Esparto General Plan are included. In particular, this scenario will include construction of a new north-south residential collector between SR 16 and CR 20X, east of Alpha Street. This new connection will significantly relieve congestion and travel demand on SR 16 through downtown Esparto by diverting local residential traffic from SR 16 to the new collector.

The *East Esparto Circulation Plan* shown here is included as part of the adopted 2007 *Esparto General Plan* and includes a new north-south residential collector between SR 16 and County Road 20X, east of Alpha Street.

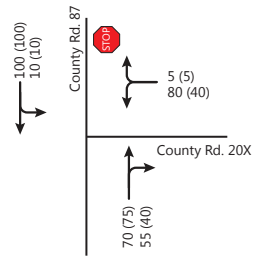


The forecasts for this scenario were developed based on the *Cumulative (Without New North South Connection)* forecasts, with a portion of traffic volume to and from residential neighborhoods east of SR 16 redistributed from SR 16 to the new north-south connection east of the current Alpha Street alignment. Roughly 15% of total north-south travel demand through Esparto was shifted from SR 16 to the new north-south street system. This shift is consistent with the redistribution anticipated in the 2006 *Eastern Esparto Circulation Study*. **Figure 8** presents the *Cumulative (With new North South Connection)* intersection geometrics and volumes.

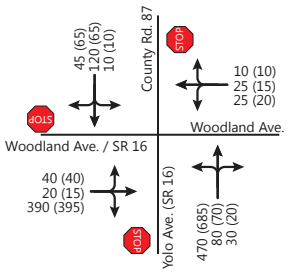
***Note**: Based on discussions with County staff, it is not anticipated that the Esparto General Plan land uses will fully build out as currently adopted. The County is seeking to update the community's General Plan, including the Land Use Element. It is anticipated that the updated Land Use Element would include a lower intensity and more diverse mix of land uses than currently adopted. The analysis of the currently adopted General Plan may therefore present a conservative assessment of future conditions, since it is anticipated that the updated General Plan would likely reduce total travel demand and vehicle miles travelled.*

Cumulative (Without New North-South Connection) Intersection Geometrics & Turning Movements

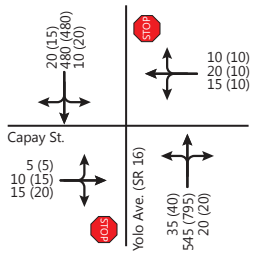
Intersection #1
County Rd. 20X & County Rd. 87



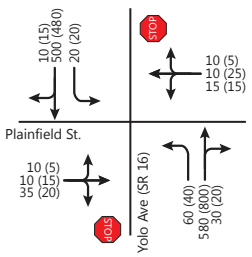
Intersection #2
Woodland Ave. / SR 16 &
Yolo Ave. (SR 16) / County Rd. 87



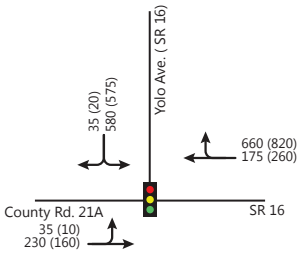
Intersection #3
Capay St. & Yolo Ave. (SR 16)



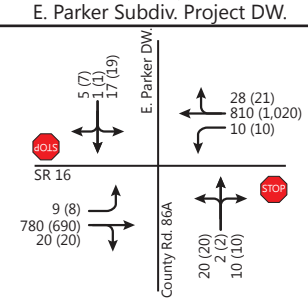
Intersection #4
Plainfield St. & Yolo Ave. (SR 16)



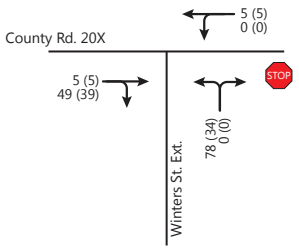
Intersection #5
County Rd. 21A /SR 16 &
Yolo Ave. (SR 16



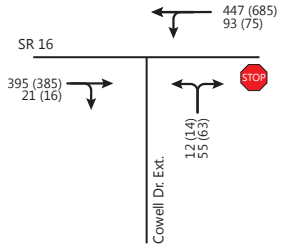
Intersection #6
SR 16 & County Rd. 86A /
E. Parker Subdiv. Project DW.

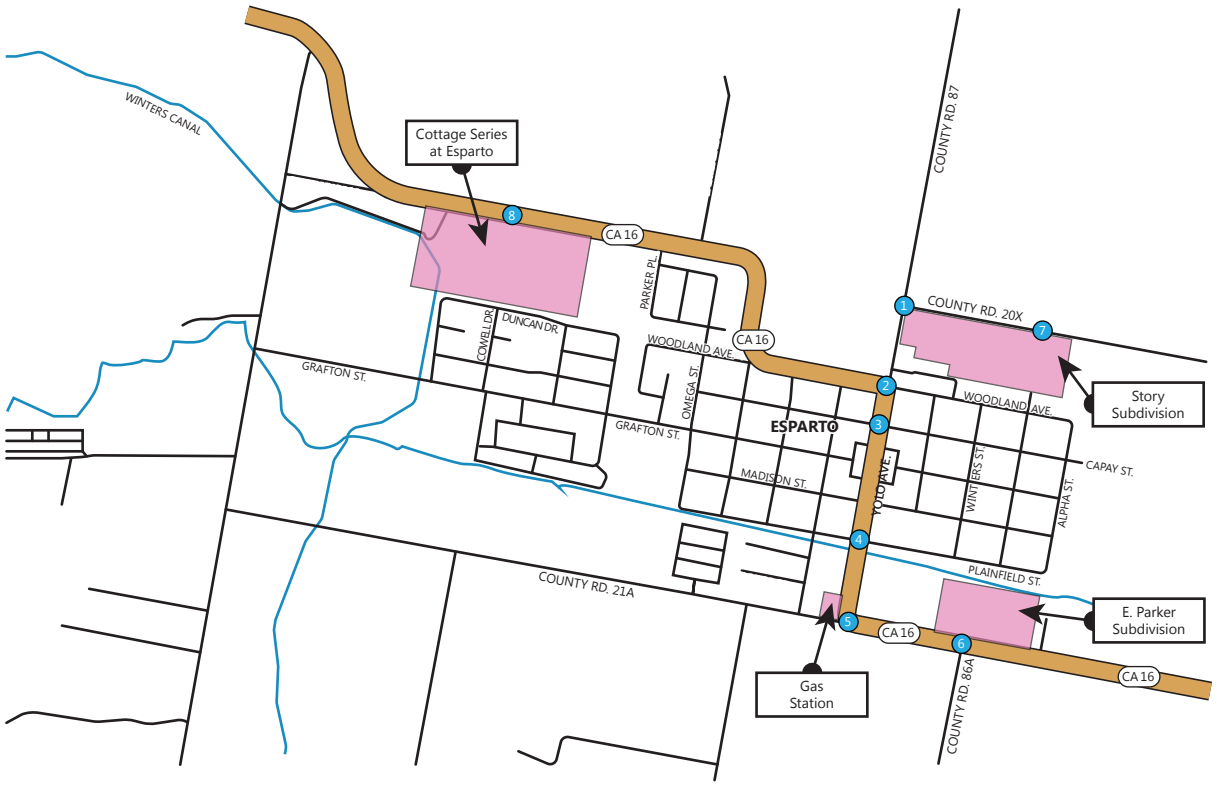


Intersection #7
County Rd. 20X &
Winters St. Extension



Intersection #8
SR 16 & Cowell Dr. Extension





LEGEND

- X Study Intersection
- Project Sites
- XX Weekday PM Peak Hour Volumes
- (XX) Saturday PM Peak Hour Volumes

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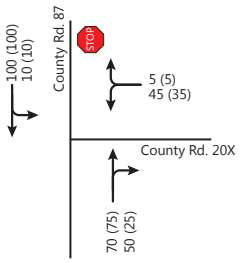
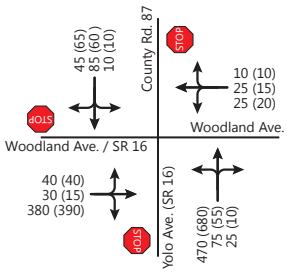
Figure 7

Cumulative (With New North-South Connection) Intersection Geometrics & Turning Movements

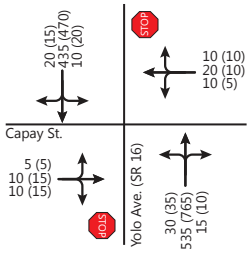
Intersection #1
County Rd. 20X & County Rd. 87



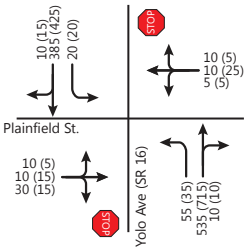
Intersection #2
Woodland Ave. / SR 16 &
Yolo Ave. (SR 16) / County Rd. 87



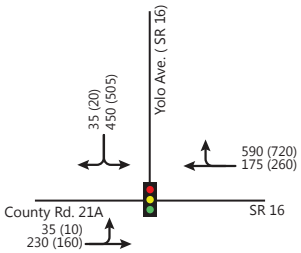
Intersection #3
Capay St. & Yolo Ave. (SR 16)



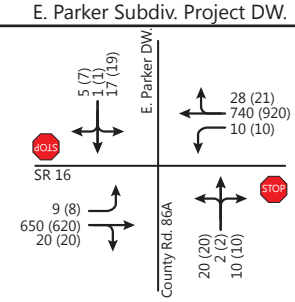
Intersection #4
Plainfield St. & Yolo Ave. (SR 16)



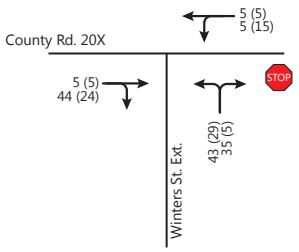
Intersection #5
County Rd. 21A /SR 16 &
Yolo Ave. (SR 16



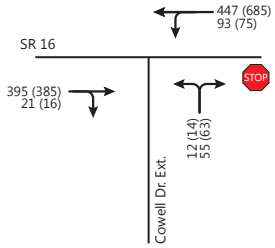
Intersection #6
SR 16 & County Rd. 86A /
E. Parker Subdiv. Project DW.

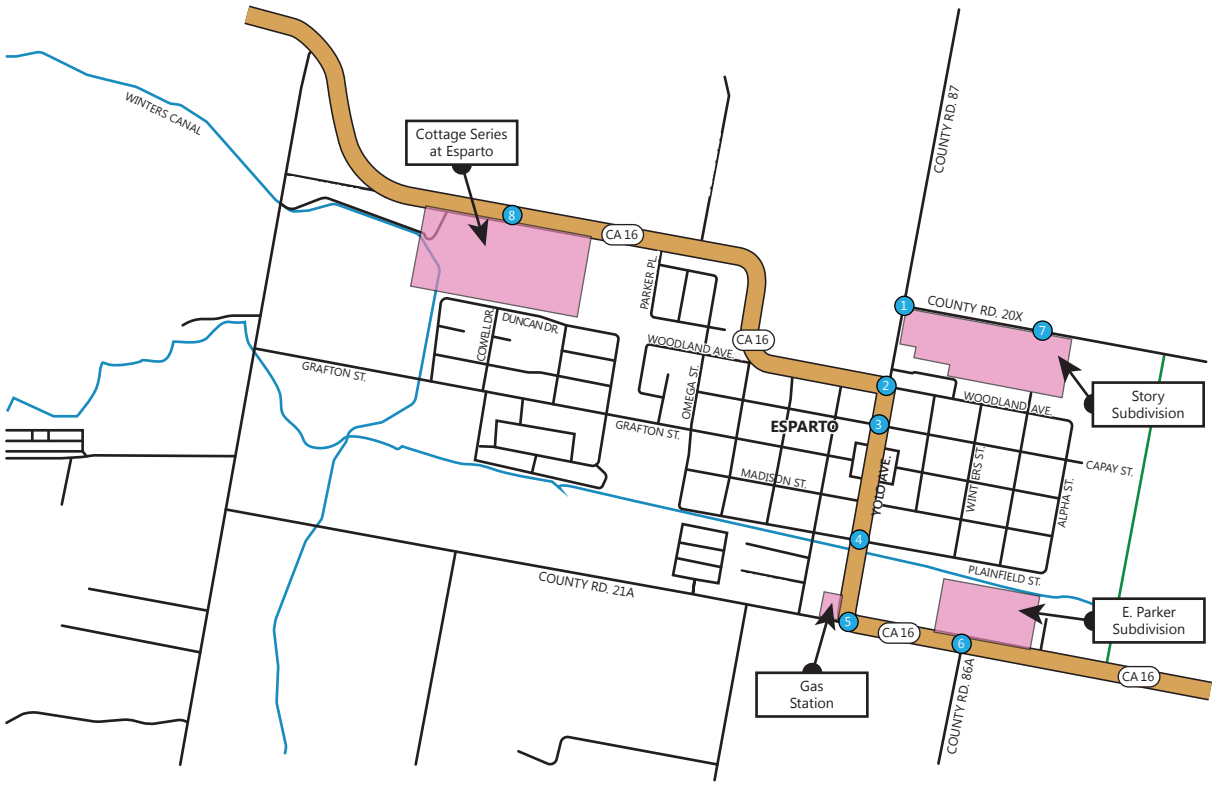


Intersection #7
County Rd. 20X &
Winters St. Extension



Intersection #8
SR 16 & Cowell Dr. Extension





LEGEND

- X — Study Intersection
- Project Sites
- XX — Weekday PM Peak Hour Volumes
- (XX) — Saturday PM Peak Hour Volumes
- Proposed North-South Connection

Figure 8

Cumulative (Without New North-South Connection)

As shown in Table 6, *Cumulative (Without New North-South Connection)* conditions identify deficiencies at the Plainfield Street and Capay Street intersections with Yolo Avenue (SR 16). These results are consistent with the findings of the 2006 study and are the result of increasing north-south "through" traffic on Yolo Avenue, which makes it difficult for vehicles entering from side streets to find suitable gaps in traffic.

The proposed project driveways are anticipated to operate at acceptable LOS with implantation of the Caltrans *SR 16 Safety Improvement Project*. However, the E. Parker Subdivision driveway along SR 16 is anticipated to approach unacceptable LOS during the Saturday p.m. peak hour. The planned traffic signal will help exiting vehicles find gaps in eastbound traffic when making southbound left turns onto SR 16. However, drivers entering from SR 16 into the E. Parker Subdivision may have difficulty finding gaps in oncoming westbound traffic during these peak hour conditions. If additional development projects are granted access opposite the E. Parker Subdivision driveway, intersection control (signalization or roundabout) will likely be required at this driveway.

Table 6. Cumulative (Without New North-South Connection) Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1,2]	Peak	Existing	
					LOS	Delay[3]
1	County Road 20X / County Road 87	D	TWSC	Weekday	B	10.7
				Saturday	B	10.2
2	Woodland Avenue / SR 16 / Yolo Avenue (SR 16) / County Road 87	E	3WSC*	Weekday	D	27.6
				Saturday	D	29.7
3	Capay Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	D	31.9
				Saturday	**F**	**61.0**
4	Plainfield Street / Yolo Avenue (SR 16)	E	TWSC	**Weekday**	**E**	**40.4**
				Saturday	**F**	**58.2**
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	Signal**	Weekday	C	23.0
				Saturday	C	20.5
6	SR 16 / County Road 86A / E. Parker Subdivision Project Driveway	D	TWSC**	Weekday	C	22.7
				Saturday	D	26.4
7	County Road 20X / Winters Street Extension (Story Subdivision Project Driveway)	D	TWSC	Weekday	A	9.0
				Saturday	A	8.8
8	SR 16 / Cowell Drive Extension (Cottage Series at Esparto Project Driveway)	D	TWSC	Weekday	B	14.6
				Saturday	C	16.5

** The northbound approach at this intersection is uncontrolled. Reported delay results reflect microsimulation runs.*

***Analyzed using HCM 2000 methodologies, due to HCM 6th Edition & HCM 2010 methodology constraints of proposed geometry.*

1. For two-way stop-control (TWSC) and three-way stop (3WSC) control, delay and LOS expressed for worst movement.
2. For signal, delay and LOS expressed for intersection average.
3. Delay expressed in seconds.

Bold indicates unacceptable LOS

Cumulative (With New North-South Connection)

As shown in Table 7, *Cumulative (With New North-South Connection)* conditions identify no deficiencies at study intersections following the redistribution of local traffic from Yolo Avenue (SR 16) to the new north-south connection east of Alpha Street. These results are consistent with the findings and recommendations of the 2006 study and are the result of reducing north-south "through" traffic on Yolo Avenue sufficiently to provide acceptable gaps in traffic for vehicles turning on to and off of side streets.

As with *Cumulative (Without New North-South Connection)* conditions, the proposed project driveways are anticipated to operate at acceptable LOS with implementation of the Caltrans *SR 16 Safety Improvement Project*. Compared to *Cumulative (Without New North-South Connection)*, the E. Parker Subdivision driveway along SR 16 is anticipated operate better, due to the reduction in "through" traffic on SR 16 and the increase in acceptable gaps for vehicles turning off of and on to SR 16 from the side street approach. As with *Cumulative (Without New North-South Connection)* conditions, the planned traffic signal will also help exiting vehicles find gaps in eastbound traffic when making southbound left turns onto SR 16, yet drivers entering from SR 16 into the E. Parker Subdivision may still have to wait for acceptable gaps during peak hour conditions. If additional development projects are granted access opposite the E. Parker Subdivision driveway, intersection control (signalization or roundabout) will likely be required at this driveway.

Table 7. Cumulative (With New North-South Connection) Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1,2]	Peak	Existing	
					LOS	Delay[3]
1	County Road 20X / County Road 87	D	TWSC	Weekday	B	10.3
				Saturday	B	10.1
2	Woodland Avenue / SR 16 / Yolo Avenue (SR 16) / County Road 87	E	3WSC*	Weekday	C	22.4
				Saturday	D	26.2
3	Capay Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	D	26.3
				Saturday	E	42.1
4	Plainfield Street / Yolo Avenue (SR 16)	E	TWSC	Weekday	C	23.5
				Saturday	D	34.4
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	Signal**	Weekday	B	18.8
				Saturday	B	18.7
6	SR 16 / County Road 86A / E. Parker Subdivision Project Driveway	D	TWSC**	Weekday	C	19.6
				Saturday	C	23.0
7	County Road 20X / Winters Street Extension (Story Subdivision Project Driveway)	D	TWSC	Weekday	A	8.9
				Saturday	A	8.9
8	SR 16 / Cowell Drive Extension (Cottage Series at Esparto Project Driveway)	D	TWSC	Weekday	B	14.6
				Saturday	C	16.5

** The northbound approach at this intersection is uncontrolled. Reported delay results reflect microsimulation runs.*

***Analyzed using HCM 2000 methodologies, due to HCM 6th Edition & HCM 2010 methodology constraints of proposed geometry.*

1. For two-way stop-control (TWSC) and three-way stop (3WSC) control, delay and LOS expressed for worst movement.
2. For signal, delay and LOS expressed for intersection average.
3. Delay expressed in seconds.

Bold indicates unacceptable LOS

IMPROVEMENT RECOMMENDATIONS & MITIGATIONS

This section describes improvements that would improve intersection LOS for each analysis scenario included in this report. Improvements that address project impacts identified in the *Near Term + Project* condition are identified separately.

Existing Conditions Improvement Recommendations

No intersection LOS deficiencies were identified in the existing conditions analysis. No improvements to improve intersection LOS are required for existing conditions.

Several gaps in the Esparto bicycle and pedestrian network were identified in Figure 2. In order to provide a comprehensive multimodal transportation system, that supports safe mobility choices for all users, the County should continue to plan, program, and seek funding opportunities with partner agencies and stakeholders such as Caltrans and the Yocha Dehe Wintun Nation to implement the County' 2013 *Bicycle Transportation Plan*, the 2007 Esparto *Main Street Revitalization Plan*, and the Town of Esparto's 2007 *General Plan* to continue closing pedestrian connectivity gaps, particularly in the vicinity of schools.

The County should continue to seek opportunities to close multimodal connectivity gaps in conjunction with future development projects and by aggressively pursuing grant funding opportunities through Caltrans programs like the Highway Safety Improvement Program and Active Transportation Program.

Near Term (No Project) Conditions Improvement Recommendations

The intersection of CR 21A / SR 16 / Yolo Avenue is anticipated to reach LOS F conditions during the Weekday and Saturday p.m. peak hours. The Caltrans *SR 16 Safety Improvement Project* that is scheduled for construction beginning in late Summer / early Fall 2018, with completion by November 2020, will improve intersection LOS to acceptable conditions. **Table 8** presents the improved intersection LOS.

Table 8. Near Term (No Project) Mitigated Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1]	Peak	Existing	
					LOS	Delay[2]
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	Signal*	Weekday	B	14.8
				Saturday	B	10.6

**Analyzed using HCM 2000 methodologies, due to HCM 6th Edition & HCM 2010 methodology constraints of proposed geometry.*

1. For signal, delay and LOS expressed for intersection average.
2. Delay expressed in seconds.

As discussed in the existing conditions section above, several gaps in the Esparto bicycle and pedestrian network were identified in Figure 2. The planned Community Park & Aquatic Center will provide a reliable and safe pedestrian connection off of SR 16, over Lamb Valley Slough, between the park and Esparto High School. This project will close an important gap in the pedestrian network. The Caltrans *SR 16 Safety Improvement Project* will also increase pedestrian connectivity by constructing sidewalks between the Community Park & Aquatic Center and the CR 21A / SR 16 / Yolo Avenue intersection and building a crosswalk at the signalized intersection.

As recommended above, the County should continue to seek opportunities to close multimodal connectivity gaps in conjunction with future development projects and as grant funding opportunities arise. Ultimately, the goal should be the presence of a comprehensive multimodal transportation system that offers reliable and safe mobility choices for current and future Esparto community members.

Near Term + Project Improvement Recommendations

In the *Near Term + Project* condition, buildout of the proposed development projects is anticipated to worsen the *Near Term (No Project)* deficiency at the CR 21A / SR 16 / Yolo Avenue intersection, causing an impact. Buildout of the proposed development projects is also anticipated to generate a deficiency at the SR 16 / CR 86A / E. Parker Subdivision driveway, causing an impact.

In both cases, currently approved Caltrans plans to implement the *SR 16 Safety Improvement Project* will eliminate these deficiencies. The impacts to these locations would be significant until the improvements are in place. **Table 9** presents the improved intersection LOS following implementation of the Caltrans Safety Improvement Project.

From a multimodal perspective, the proposed projects could have significant impacts to bicycle and pedestrian circulation if they result in the creation of new multimodal network gaps. Project frontage improvements should include full width sidewalks and consideration should be given to the provision of bicycle and pedestrian trail connectivity to the existing Esparto community, where appropriate. The proposed project site plans reviewed at the time of this report's preparation appear to include appropriate bicycle and pedestrian network connections to existing and / planned multimodal facilities.

Table 9. Near Term + Project Mitigated Intersection Level of Service

ID	Intersection	LOS Threshold	Control[1,2]	Peak	Existing	
					LOS	Delay[3]
5	County Road 21A / SR 16 / Yolo Avenue (SR 16)	D	Signal*	Weekday	C	30.4
				Saturday	C	30.7
6	SR 16 / County Road 86A / E. Parker Subdivision Project Driveway	D	TWSC*	Weekday	C	21.2
				Saturday	D	26.2

**Analyzed using HCM 2000 methodologies, due to HCM 6th Edition & HCM 2010 methodology constraints of proposed geometry.*

1. For two-way stop-control (TWSC), delay and LOS expressed for worst movement.
2. For signal, delay and LOS expressed for intersection average.
3. Delay expressed in seconds.

Cumulative (Without New North-South Connection) Improvement Recommendations

The deficiencies identified in the *Cumulative (Without New North-South Connection)* conditions analysis are generally consistent with those found past studies. The Capay Street / Yolo Avenue (SR 16) intersection is anticipated to degrade to LOS F in the Saturday p.m. peak hour, and the Plainfield Street / Yolo Avenue (SR 16) intersection is anticipated to degrade to LOS E and LOS F during the Weekday and Saturday p.m. peak hours, respectively.

New North-South Connection Option

Construction of a new north-south connection between SR 16 and CR 20X will provide acceptable operations at all analyzed locations, as shown in Table 7, in the *Cumulative (With New North-South Connection)* conditions analysis.

Without New North-South Connection Options

Without implementation of a new north-south connection east of Alpha Street, the following improvements could be implemented to improve LOS at deficient intersections in *Cumulative (Without New North-South Connection)* conditions:

Capay Street / Yolo Avenue (SR 16):

Signalization of this intersection would provide acceptable operations under *Cumulative (Without New North-South Connection)* conditions.

Alternatively, a two-way left turn lane was recommended at this location in the 2006 *Eastern Esparto Circulation Study* in order to provide two-stage gap acceptance for minor street movements. Since that time, a restriping throughout Esparto along the length of Yolo Avenue (SR 16) has changed the geometry and urban design of the corridor. A two-way left turn lane at this location would provide acceptable LOS conditions at this location but would require restriping of Yolo Avenue (SR 16) and elimination of some of the design elements from the 2007 Esparto *Main Street Revitalization Plan* that have been implemented, such as diagonal parking north of Capay Street.

Plainfield Street / Yolo Avenue (SR 16):

Signalization of this intersection would provide acceptable operations under *Cumulative (Without New North-South Connection)* conditions.

Alternatively, turn restrictions at this location would provide acceptable operations. In particular, elimination of the northbound left turn from Yolo Avenue (SR 16) onto Plainfield Street would reduce delay at this intersection and improve LOS to acceptable range. Elimination of this movement would have some impact to neighborhood access and circulation. However, full access is provided at the adjacent Madison Street intersection and from Fremont Street via CR 21A. Other turn restrictions could be considered but could have more significant circulation and access impacts to existing and future uses.

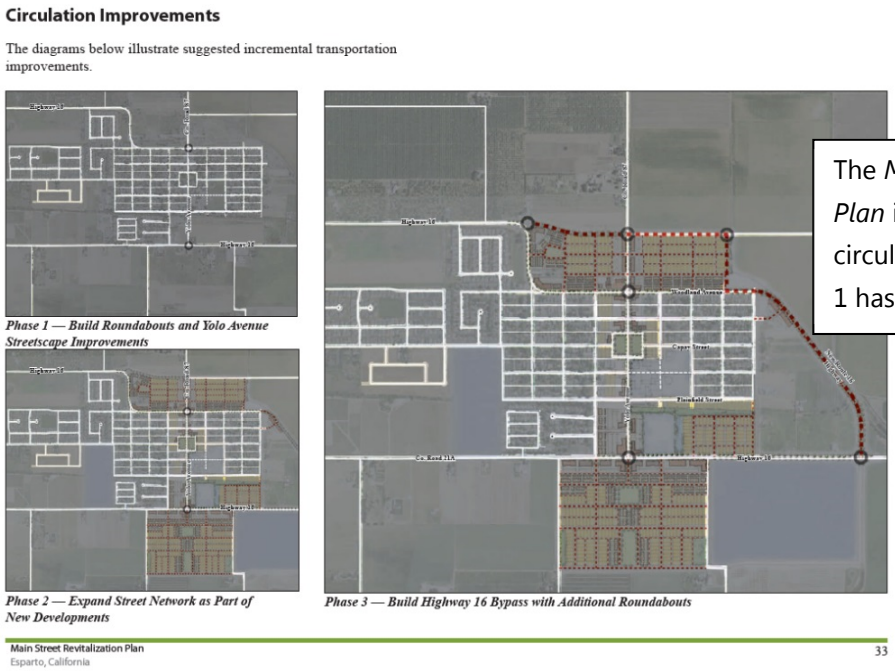
The elimination of the northbound left turn lane may also provide sufficient roadway width to consider new pedestrian and/or bicycle connectivity across the Lamb Valley Slough bridge.

Cumulative (With New North-South Connection) Improvement Recommendations

No intersection LOS deficiencies were identified in the *Cumulative (With New North-South Connection)* conditions analysis. No improvements to improve intersection LOS are required for these conditions. However, the new north-south connection should be constructed in such a manner that discourages regional through traffic from cutting through and impacting established Esparto neighborhoods. The 2007 Town of Esparto *General Plan* circulation plan accomplishes this by restricting access between the new north-south connection and Woodland Avenue, which turns into SR 16 west of Yolo Avenue. If and when a new north-south connection is constructed between SR 16 and CR 20X, it should be planned and designed to minimize impacts to established and future Esparto neighborhoods.

Main Street Revitalization Plan Considerations

Implementation of additional improvements based on the Esparto *Main Street Revitalization Plan* guidelines should be encouraged, as they provide improved multimodal safety and accessibility for the Esparto community and contribute towards an improved urban design along Yolo Avenue and. Phase 1 has been partially implemented. Physical hardscaping to complete Phase 1 improvements along Yolo Avenue should be pursued. Elements of subsequent phases, such as Phase 2, must be revisited, as development plans change in the community. Phase 3 of the plan, shown below, includes a SR 16 bypass, which may no longer be feasible or desirable by the community, stakeholders, the County, or Caltrans.



The *Main Street Revitalization Plan* includes three phases of circulation improvements. Phase 1 has been partially

As additional elements of this plan are implemented, such as pedestrian refuge islands, bulbouts, crosswalks, and other traffic calming measures conducive to downtown livability, the new north-south connection east of Alpha Street will become more critical to relieve vehicular congestion and travel demand along Yolo Avenue.

PROJECT FAIR SHARE CALCULATIONS

The proposed projects' contributions towards improvements required to mitigate *Cumulative* conditions deficiencies are based on their respective proportional contributions towards growth along Yolo Avenue. The method utilized to determine the combined projects' fair share towards improvement needs is based on Equation C-1 in the Caltrans *Guide for the Preparation of Traffic Impact Studies*, shown below:

EQUITABLE SHARE RESPONSIBILITY: **Equation C-1**
NOTE: $T_E < T_B$, see explanation for T_B below.

$$P = \frac{T}{T_B - T_E}$$

Where:
P = The equitable share for the proposed project's traffic impact.
T = The vehicle trips generated by the project during the peak hour of adjacent State highway facility in vehicles per hour, vph.
T_B = The forecasted traffic volume on an impacted State highway facility at the time of general plan build-out (e.g., 20 year model or the furthest future model date feasible), vph.
T_E = The traffic volume existing on the impacted State highway facility plus other approved projects that will generate traffic that has yet to be constructed/opened, vph.

Combined Project Fair Share Calculation

Because *Cumulative* impacts were identified along Yolo Avenue during both the Weekday and Saturday p.m. peak hours, an average was utilized to determine the combined projects' fair share responsibility towards the required improvements. The north leg of the CR 21A / SR 16 / Yolo Avenue was utilized to establish fair share, as follows:

T = 295 / (314)

T_B = 1,290 / (1,425)

T_E = 821 / (843)

Weekday p.m. peak hour / (Saturday p.m. peak hour)

P = 63% / (54%)

Individual Project Fair Share Calculation

Having established the combined projects' fair share responsibility towards *Cumulative* conditions improvements as 63% in the Weekday p.m. peak hour and 54% in the Saturday p.m. peak hour, the individual fair share per proposed project was then calculated based on each projects' trip generation estimate.

	Weekday	Saturday p	*Cumulative* Fair Share	*Cumulative* Average
Cottage Series at Esparto	181 (43%)	168 (29%)	27% / (16%)	22%
E. Parker Subdivision	62 (15%)	58 (10%)	10% / (5%)	8%
Story Subdivision	78 (19%)	73 (13%)	12% / (7%)	10%
Gas Station Project	99 (23%)	145 (49%)	14% / (26%)	20%
Total	**420 (100%)**	**584 (100%)**	**63% / (54%)**	**60%**

Prepared by National Data & Surveying Services

SR16 / Yolo Ave & County Road 21 A

Peak Hour Turning Movement Count

ID: 17-07708-001
City: Esparto

Day: Thursday
Date: 09/07/2017

PEAK HOURS	SOUTHBOUND	COUNT PERIODS
NONE	AM	NONE
NONE	NOON	NONE
04:30 PM - 05:30 PM	PM	04:00 PM - 06:00 PM

SR16 / Yolo Ave

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	25	0	283	0	513	PM

EASTBOUND (County Road 21 A)			
AM	NOON	PM	
0	0	136	⇦
0	0	0	↶ 0
0	0	23	↱ 0
0	0	197	→ 0
0	0	0	↴ 0
AM	NOON	PM	

WESTBOUND (County Road 21 A)			
PM	NOON	AM	
490	0	0	↰ 0
111	0	0	← 0
0	0	0	↶ 0
0	0	0	↰ 0
481	0	0	⇨
PM	NOON	AM	

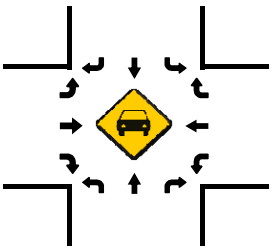
CONTROL			
0			
TEV	0 AM	0 NOON	1130 PM
PHF			0.91

PM	0	0	0	0	1	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

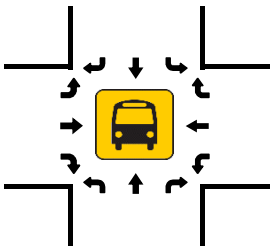
NORTHBOUND

SR16 / Yolo Ave

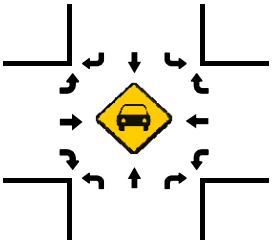
Total Vehicles (AM)



Total Vehicles (AM)



Total Vehicles (NOON)



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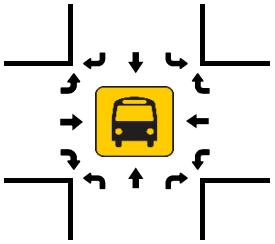
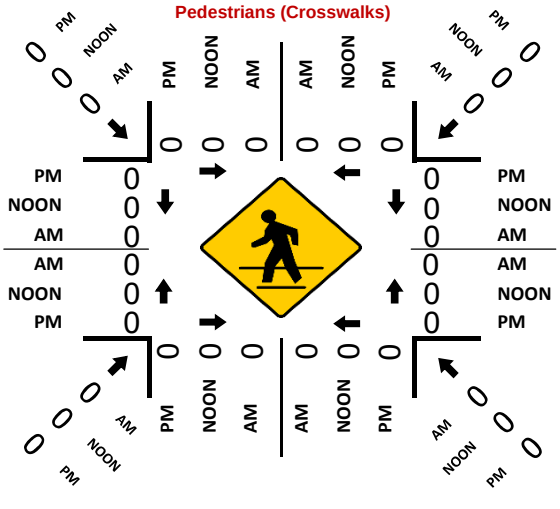
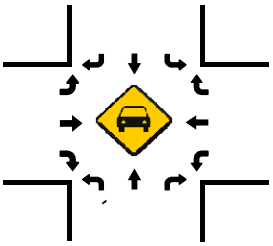


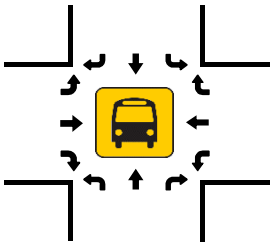
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

SR16 / Yolo Ave & County Road 21 A

Peak Hour Turning Movement Count

ID: 17-07708-001
City: Esparto

Day: Saturday
Date: 09/09/2017

PEAK HOURS	SOUTHBOUND	NORTHBOUND	COUNT PERIODS
	NONE	NONE	
	NONE	NONE	
	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM	

SR16 / Yolo Ave — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	13	0	297	0	533	PM

SR16 / Yolo Ave — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

County Road 21 A — EASTBOUND

AM	NOON	PM	
0	0	102	⇦
0	0	0	↰ 0
0	0	5	↱ 0
0	0	95	→ 0
0	0	0	↴ 0

County Road 21 A — WESTBOUND

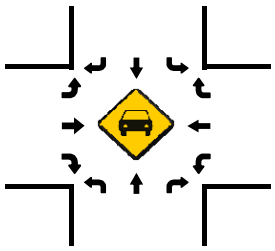
PM	NOON	AM	
528	0	0	↰ 0
89	0	0	← 0
0	0	0	↰ 0
1	0	0	↰ 0
393	0	0	⇨

CONTROL

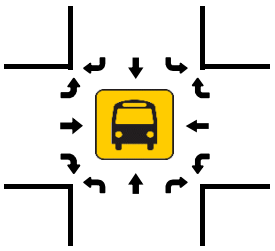
0

	AM	NOON	PM
TEV	0	0	1028
PHF			0.90

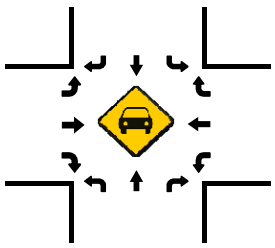
Total Vehicles (AM)



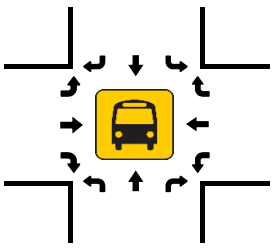
Total Vehicles (AM)



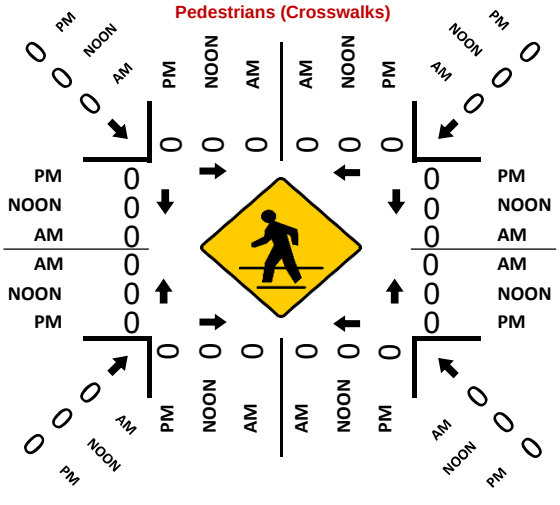
Total Vehicles (NOON)



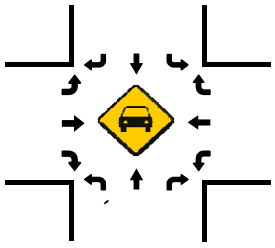
Total Vehicles (NOON)



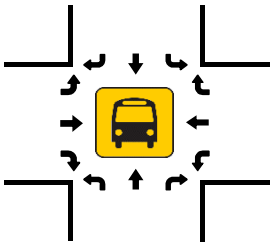
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

SR16 / Yolo Ave & Woodland Ave

Peak Hour Turning Movement Count

ID: 17-07708-002
City: Esparto

Day: Thursday
Date: 09/07/2017

PEAK HOURS

AM: NONE
NOON: NONE
PM: 04:30 PM - 05:30 PM

COUNT PERIODS

AM: NONE
NOON: NONE
PM: 04:00 PM - 06:00 PM

SR16 / Yolo Ave — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	20	31	3	0	45	PM

Woodland Ave — EASTBOUND

AM	NOON	PM	
0	0	331	⇦
0	0	0	↰ 0
0	0	18	↱ 0
0	0	13	→ 0
0	0	200	↴ 0
AM	NOON	PM	

WESTBOUND — Woodland Ave

PM	NOON	AM	
3	0	0	↰ 0
9	0	0	← 0
14	0	0	↰ 0
0	0	0	↩ 0
31	0	0	⇨
PM	NOON	AM	

CONTROL

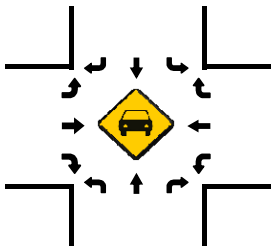
0

	AM	NOON	PM
TEV	0	0	652
PHF			0.91

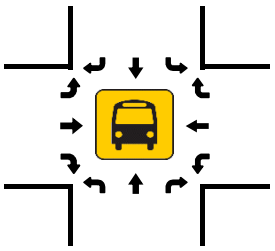
SR16 / Yolo Ave — NORTHBOUND

PM	245	0	302	24	15	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

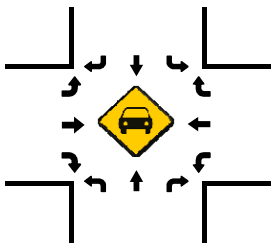
Total Vehicles (AM)



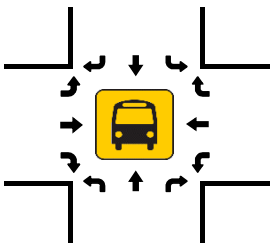
Total Vehicles (AM)



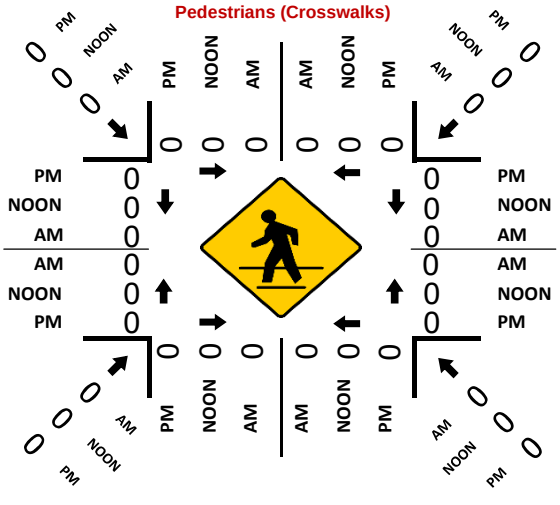
Total Vehicles (NOON)



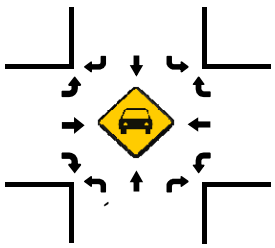
Total Vehicles (NOON)



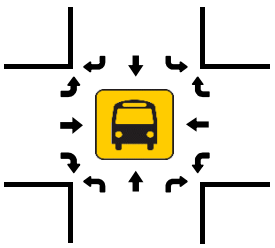
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

SR16 / Yolo Ave & Woodland Ave

Peak Hour Turning Movement Count

ID: 17-07708-002
City: Esparto

Day: Saturday
Date: 09/09/2017

PEAK HOURS	SR16 / Yolo Ave (SOUTHBOUND)	COUNT PERIODS
	NONE	
	NONE	
	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

AM	0	0	0	0	0	AM	NONE
NOON	0	0	0	0	0	NOON	NONE
PM	41	19	3	0	39	PM	04:00 PM - 06:00 PM

CONTROL: 0

	AM	NOON	PM
TEV	0	0	774
PHF			0.88

Woodland Ave EASTBOUND

AM	NOON	PM	
0	0	451	⇦
0	0	0	↰ 0
0	0	16	↑ 0
0	0	13	→ 0
0	0	235	↱ 0

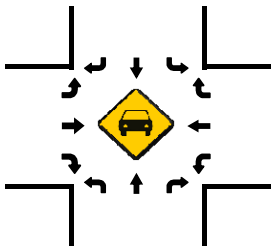
WESTBOUND Woodland Ave

PM	NOON	AM	
1	0	0	↰ 0
12	0	0	← 0
5	0	0	↰ 0
0	0	0	↱ 0
25	0	0	⇨

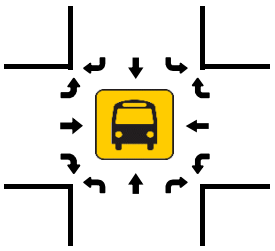
NORTHBOUND SR16 / Yolo Ave

	⇩	↰	←	↑	↱	
PM	259	0	398	22	9	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

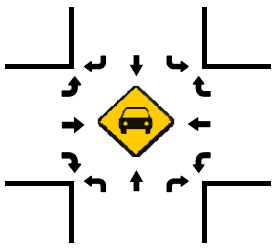
Total Vehicles (AM)



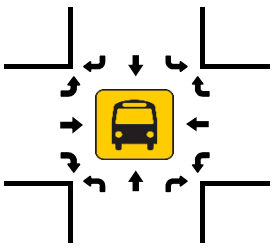
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (NOON)



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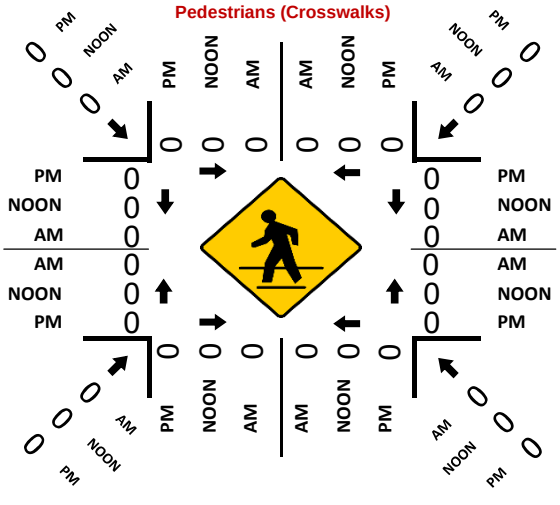
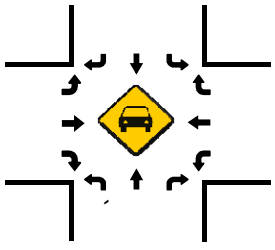
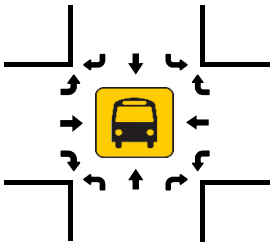


Total Vehicles (PM)



Total Vehicles (PM)



East Esparto Circulation Study

	Existing Conditions - Weekday PM Peak Hour, unbalanced												
	Intersection	**source**	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	County Road 20X / County Road 87	2006	0	*38*	0	1	*32*	0	0	0	0	0	0	0
2	SR 16 / Woodland Avenue / County Road 87 / Yolo Avenue	2017 new	302	24	15	3	31	20	18	13	200	14	9	3
3	Capay Street / Yolo Avenue	2016 #7	23	255	10	3	179	7	0	4	14	6	6	2
4	Plainfield Street / Yolo Avenue	2016 #9	40	309	19	6	226	4	4	4	32	9	3	4
5	County Road 21A / SR 16 / Yolo Avenue	2017 new	0	0	1	283	0	25	23	197	0	0	111	490
6	SR 16 / County Road 86A	2006	4	*0*	2	0	*0*	0	0	378	4	2	562	0
	Existing Conditions - Weekday PM Peak Hour, balanced												
	Intersection	**source**	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	County Road 20X / County Road 87	2006**adjusted N/S**	0	***49***	0	1	***57***	0	0	0	0	0	0	0
2	SR 16 / Woodland Avenue / County Road 87 / Yolo Avenue	2017 new	302	24	15	3	31	20	18	13	200	14	9	3
3	Capay Street / Yolo Avenue	2016 #7 **adjusted N/S**	23	***335***	10	3	***232***	7	0	4	14	6	6	2
4	Plainfield Street / Yolo Avenue	2016 #9**adjusted N/S**	40	***417***	19	6	***265***	4	4	4	32	9	3	4
5	County Road 21A / SR 16 / Yolo Avenue	2017 new	0	0	1	283	0	25	23	197	0	0	111	490
6	SR 16 / County Road 86A	2006**adjusted E/W**	4	0	2	0	0	0	0	***480***	4	2	***602***	0

	Existing Conditions - Saturday PM Peak Hour, unbalanced												
	Intersection	**source**	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	County Road 20X / County Road 87	2006 weekday PM	0	*38*	0	1	*32*	0	0	0	0	0	0	0
2	SR 16 / Woodland Avenue / County Road 87 / Yolo Avenue	2017 new	398	22	9	3	19	41	16	13	235	5	12	1
3	Capay Street / Yolo Avenue	2016 #7	30	*467*	11	3	*239*	7	5	2	23	3	2	3
4	Plainfield Street / Yolo Avenue	2016 #9	27	*522*	12	8	*254*	5	5	8	17	9	8	3
5	County Road 21A / SR 16 / Yolo Avenue	2017 new	0	0	0	297	0	13	5	95	0	1	89	528
6	SR 16 / County Road 86A	2006 weekday PM	4	*0*	2	0	*0*	0	0	*378*	4	2	*562*	0

	Existing Conditions - Saturday PM Peak Hour, balanced												
	Intersection	**source**	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	County Road 20X / County Road 87	2006 wkdy pm**adj N/S**	0	***43***	0	1	***55***	0	0	0	0	0	0	0
2	SR 16 / Woodland Avenue / County Road 87 / Yolo Avenue	2017 new	398	22	9	3	19	41	16	13	235	5	12	1
3	Capay Street / Yolo Avenue	2016 #7 **adjusted N/S**	30	***417***	11	3	***246***	7	5	2	23	3	2	3
4	Plainfield Street / Yolo Avenue	2016 #9**adjusted N/S**	27	***495***	12	8	***283***	5	5	8	17	9	8	3
5	County Road 21A / SR 16 / Yolo Avenue	2017 new	0	0	0	297	0	13	5	95	0	1	89	528
6	SR 16 / County Road 86A	2006 wkdy pm**adj E/W**	4	0	2	0	0	0	0	***389***	4	2	***615***	0

Source key:

2006: Fehr & Peers 2006 East Esparto Circulation Plan

2016, intersection #: Cache Creek TEIR traffic study

2017 new: collected for TJKM

FOR DESIGN STUDY ONLY

49-160-10

49-384-03

49-384-04

49-384-01

49-160-11

49-160-17

49-160-14

49-160-15

49-160-13

R/W DEDICATION

R/W DEDICATION

Proposed Signal Location (Optional)

N

49-170-07

49-170-08

49-170-09

49-170-44

49-170-45

49-170-11

49-170-12

LEGEND

- STATE OF CA RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- 20' CLEAR RECOVERY ZONE
- PROPERTY LINES (APPROXIMATE)
- CUT/FILL LINES
- FLOWLINES

NOTE: STUDY LIMITS SHOWN ARE APPROXIMATE DUE TO AERIAL PHOTO DISTORTION

FEET 0 50 100 150

SCALE

LOCATION 3
COUNTY ROAD 21A
SIGNAL

Date: 02.10.15