



MEMORANDUM

To:

From: Dave Sorenson
Kimley-Horn and Associates, Inc.

Date: 12/07/2016

Subject: Downtown Salinas Complete Streets

The following memo has been prepared to determine and evaluate the traffic impacts associated with the Downtown Salinas Complete Streets Improvements Project.

DOWNTOWN SALINAS COMPLETE STREETS PROJECT

The City of Salinas has begun to implement portions of the Salinas Downtown Vibrancy Plan with multi-modal improvements to Alisal Street and Main Street.

Between Acacia Street and Front Street, Alisal Street is currently two lanes in direction. The proposed multi-modal improvements would convert the roadway to one lane in each direction with a continuous center turn lane, and improved bicycle and pedestrian facilities. Between Gabilan Street and San Luis Street, Main Street is currently one-way northbound with angled parking on both sides of the street. The proposed multi-modal improvements would convert this section of Main Street to two-way traffic and alternate angle parking midblock. Construction of these improvements will include asphalt overlay/street restriping, modifications to traffic signals, and roadway and pedestrian improvements along Alisal Street and Main Street.

STUDY AREA

Based on funding resources, the Downtown Salinas Complete Streets improvements have been divided into two phases. Phase 1 will consist mainly of improvements to Alisal Street, Phase 2 will consist mainly of improvements to Lincoln Street and the conversion of Main Street to two-way traffic. The intersections identified for evaluation and their prospective phase are shown in **Table 1**. The intersections included in phase 1 are included in the TAMC and HSIP grant funding. They will require signal modifications and roadway/pedestrian improvements to accommodate the proposed striping configuration, left-turn phasing, bicycle detection, and TSP for future BRT.

Table 1 Study Intersections

	Intersection	Traffic Control (a)	Improvement Phase
1	Alisal Street at Acacia Street	Signal	1
2	Alisal Street at Homestead Avenue	Signal	1
3	Alisal Street at Church Street	Signal	1
4	Alisal Street at Lincoln Avenue	Signal	1
5	Alisal Street at Salinas Street	Signal	1
6	Alisal Street at Main Street	Signal	1 & 2
7	Alisal Street at Monterey Street	Signal	1
8	Alisal Street at Pajaro Street	Signal	1
9	Alisal Street at Front Street	Signal	1
10	Main Street at Gabilan Street	Signal	2
11	Alisal Street at Capital Avenue	SSSC/Signal (b)	2
12	Alisal Street at Cayuga Street	SSSC	2
13	Lincoln Avenue at Central Avenue	Signal	2

(a) Signal = Traffic Signal; SSSC = Side Street Stop Control

(b) Future improvement includes installation of traffic signal

ANALYSIS PROCESS

The analysis process includes determining the operations at the study intersections for the a.m. and p.m. peak periods for each improvement phase. Intersections were measured and quantified using the Synchro traffic analysis software package. Results were compared to the County of Monterey's standards for significance to determine if the project has any significant impacts.

Four scenarios were analyzed as part of this traffic impact analysis process, which are listed below:

- **Existing (2014) Conditions**
 - Existing Conditions: Represents the traffic conditions of the existing street network.
 - Existing with Project Conditions: Represents existing street network conditions with the Downtown Salinas Complete Streets improvements.
- **Horizon Year Conditions**
 - Horizon Year Conditions: Represents the traffic conditions of the future street network.
 - Horizon Year with Project Conditions: Represents future street network conditions with the Downtown Salinas Complete Streets improvements.

To analyze the operations of both signalized and unsignalized intersections, Synchro 9 (Trafficware), using the methodologies outlined in the 2000 *Highway Capacity Manual (HCM)*, was used for the analysis.

The following list contains the assumptions used for the intersection analyses:

- Peak-hour factor (PHF) = 0.92 was used for all scenarios.
- Percent of heavy vehicle (PHV) = 2 percent was used for all scenarios.

The 2000 *HCM* published by the Transportation Research Board (TRB) establishes procedures to evaluate highway facilities and rate their ability to process traffic volumes. The terminology "level of service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values.

Level of service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. The LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each minor movement. At a one-way or two-way stop controlled intersection, the delay reported represents the worst movement, which are typically the left-turns from the minor street approach. The criteria for the various levels of service designations can be found in the 2000 Highway Capacity Manual, Chapter 18, Page 6, Exhibit 18-4 and Chapter 19, Page 2, Exhibit 19-1.

At intersections, the measure of effectiveness (MOE) is based on allowable increases in delay. The intersection level of service standard for City of Salinas intersections is LOS D. Caltrans endeavors to maintain a target LOS at the transition between C and D on State Highway facilities. LOS D is considered acceptable in developed areas on state-operated facilities. Facilities over the target LOS D would constitute a significant impact.

INTERSECTION ANALYSIS

This section summarizes the existing and horizon year roadway circulation network, bicycle network, pedestrian facilities, peak-hour traffic volumes, and operations at the study intersections before and after the implementation of the Downtown Salinas Complete Streets improvements. Peak-hour intersection turning movement counts were provided by the City of Salinas. The count dates range from 10/16/2013 to 08/12/2014. Horizon Year peak-hour volumes were calculated by applying a 1% growth to the existing volumes for 20 years. LOS calculation worksheets are included as an attachment.

Alisal Street is a major arterial that operates with an east-west orientation and provides access to State Route 101 and across the city. Between Blanco Road and Front Street Alisal Street is four lanes. On-street parking is generally allowed on both sides of the street and bike lanes are not present. The

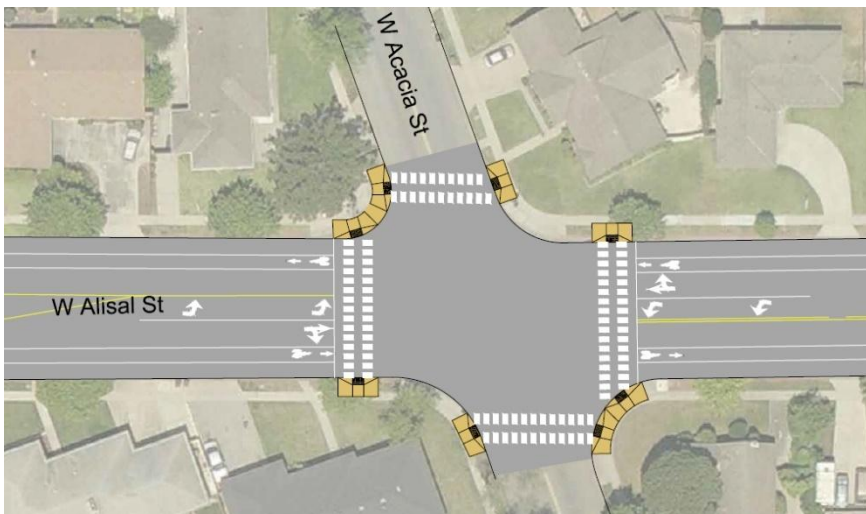
posted speed limit is 35 miles per hour (mph) through the study area, with the exception of the 25 mph school zone between College Drive and Capital Street.

As part of the Phase 1 Complete Streets improvements, Alisal Street between Acacia Street and Front Street will be restriped to have one vehicular travel lane and one bike lane in each direction and a two-way center left-turn lane. On-street parking will be retained between the bike lane and the vehicular travel lane where roadway width allows. All eastbound and westbound left-turns at study signalized intersections will have their own protected phase. In addition, all signals will be retimed to reflect phase and geometry changes.

Main Street is a collector that operates with a north-west orientation and is the center of the downtown area. Between Gabilan Street and San Luis Street, Main Street is one-way northbound. Head-in angled on-street parking is provided on both sides of the street and bike lanes are not present.

As part of the Phase 2 Complete Streets improvements, Main Street between Gabilan Street and San Luis Street will be converted to two-way traffic with one lane in each direction. Angled on-street parking will alternate sides at midblock to balance the parking supply.

Alisal Street at Acacia Street



The figure to the left displays the proposed multi-modal improvements at the intersection of Alisal Street and Acacia Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes, bike lanes, and on street parallel parking.

As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. Currently, northbound and southbound left-turn movements on Alisal Street are permissive phasing. The improvements will include the installation of new signal equipment to provide protected-left-turn phasing at the Alisal Street approaches. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

As stated previously, the operations at the study intersections were analyzed for the a.m. and p.m. peak periods for existing and cumulative conditions. **Table 2** displays the LOS analysis results for the intersection of Alisal Street and Acacia Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 2 Alisal Street at Arcacia Street Intersection LOS Summary – Phase 1

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	7.1	A	14.8	B	7.9	A	18.2	B
	PM	7.2	A	17.5	B	8.0	A	17.8	B

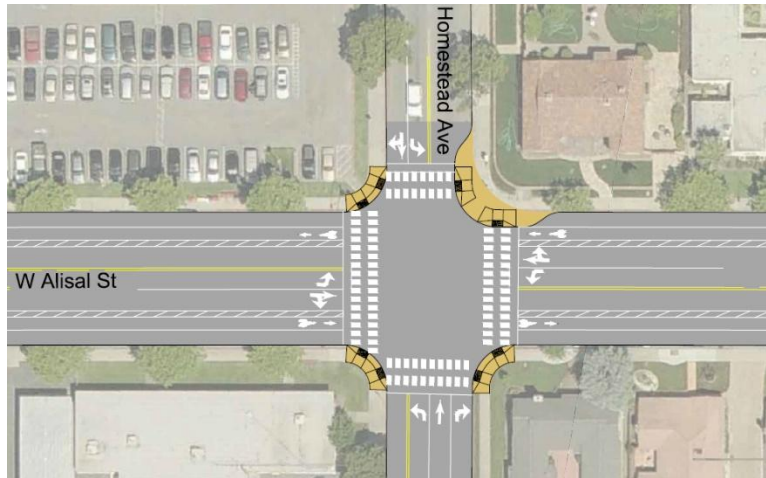
Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS A during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS B or better during both peak periods.

Alisal Street at Homestead Street

The figure to the right displays the proposed multi-modal improvements at the intersection of Alisal Street and Homestead Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes, buffered bike lanes, and on street parallel parking.



As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. A corner bulb out will also be constructed at the northeast corner of the intersection. The northbound approach will be restriped to provide one left-turn lane, one thru lane, and one right-turn lane. Currently, eastbound and westbound left-turn movements on Alisal Street are permissive phasing. The improvements will include the installation of new signal equipment to provide protected-left-turn phasing at the Alisal Street approaches. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

Table 3 displays the LOS analysis results for the intersection of Alisal Street and Homestead Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 3 Alisal Street at Homestead Street Intersection LOS Summary – Phase 1

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	7.8	A	14.6	B	8.9	A	19.9	B
	PM	9.9	A	20.0	B	13.0	B	32.6	C

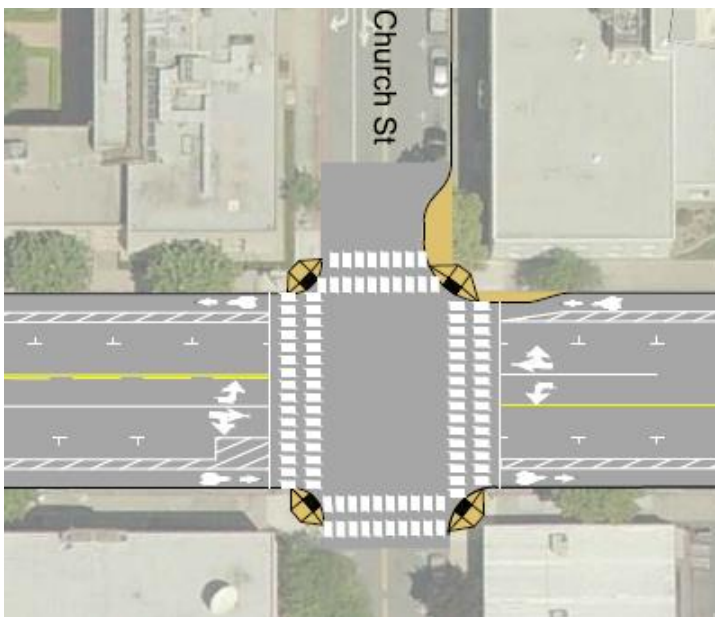
Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS B or better during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS C or better during both peak periods.

Alisal Street at Church Street

The figure below displays the proposed multi-modal improvements at the intersection of Alisal Street and Church Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes, on street parallel parking, and buffered bike lanes. At this intersection, the parallel parking will be placed inside the buffered bike lane to provide additional space between the bike lane and the travel lane and to avoid door zone conflicts.



As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. A corner bulb out will also be installed at the northeast corner of the intersection. Currently, eastbound and westbound left-turn movements on Alisal Street are permissive phasing. The improvements will include the installation of new signal equipment to provide protected-left-turn phasing at the Alisal Street approaches. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

Table 4 displays the LOS analysis results for the intersection of Alisal Street and Church Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 4 Alisal Street at Church Street Intersection LOS Summary – Phase 1

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	4.4	A	8.2	A	4.5	A	8.6	A
	PM	7.3	A	10.4	B	7.6	A	14.0	B

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS A during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS B or better during both peak periods.

Alisal Street at Lincoln Avenue

The figure to the right displays the proposed multi-modal improvements at the intersection of Alisal Street and Lincoln Avenue. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes, on street parallel parking, and buffered bike lanes. At this intersection, the parallel parking will be placed inside the buffered bike lane to provide additional space between the bike lane and the travel lane and to avoid door zone conflicts. Green bike boxes will also be striped on the eastbound and southbound approaches to provide bicyclists with a designated area at the front of the traffic lanes at the signalized intersection.



As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. A corner bulb out will also be installed at the northwest corner of the intersection to better align the northbound and southbound approaches at the intersection.

and provide space for head-in angled parking on Lincoln Avenue. Currently, eastbound and westbound left-turn movements on Alisal Street are permissive phasing. The improvements will include the installation of new signal equipment to provide protected-left-turn phasing at the Alisal Street approaches. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

Table 5 displays the LOS analysis results for the intersection of Alisal Street and Lincoln Avenue under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 5 Alisal Street at Lincoln Avenue Intersection LOS Summary – Phase 1

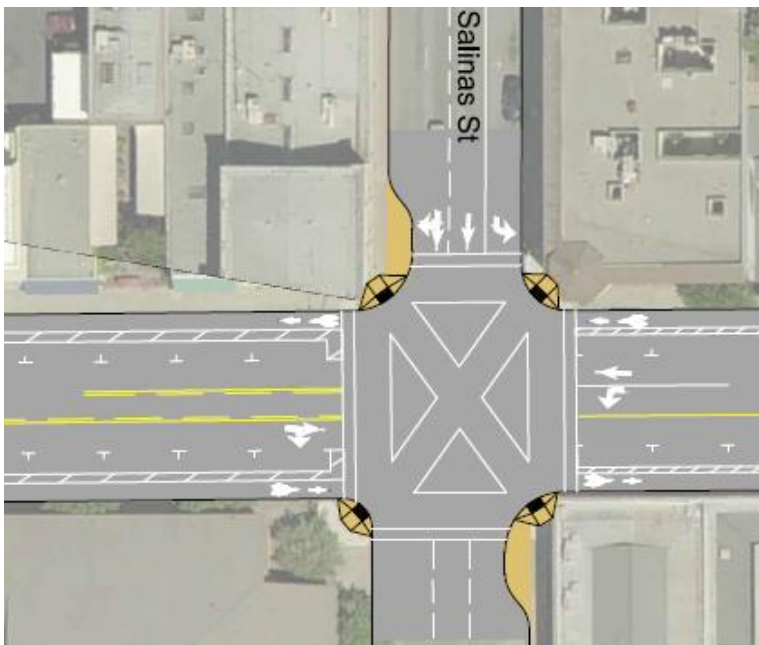
Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	6.7	A	11.4	B	7.1	A	12.4	B
	PM	10.4	B	16.6	B	11.3	B	23.0	C

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS B or better during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS C or better during both peak periods.

Alisal Street at Salinas Street



The figure to the left displays the proposed multi-modal improvements at the intersection of Alisal Street and Salinas Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes, on street parallel parking, and buffered bike lanes. At this intersection, the parallel parking will be placed inside the buffered bike lane to provide additional space between the bike lane and the travel lane and to avoid door zone conflicts.

As part of the improvements, new signal equipment will be installed to provide an exclusive pedestrian phase or pedestrian scramble phase to stop vehicular traffic at all approaches and allow pedestrians at all approaches to cross the street. To accompany the signal phasing changes new diagonal crosswalks and new ADA compliant curb ramps will be installed at the intersection. Corner bulb outs will also be installed at the northwest and southeast corners of the intersection. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

Table 6 displays the LOS analysis results for the intersection of Alisal Street and Salinas Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 6 Alisal Street at Salinas Street Intersection LOS Summary – Phase 1

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	11.9	B	12.5	B	11.6	B	15.2	B
	PM	12.6	B	22.5	C	13.2	B	32.0	C

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

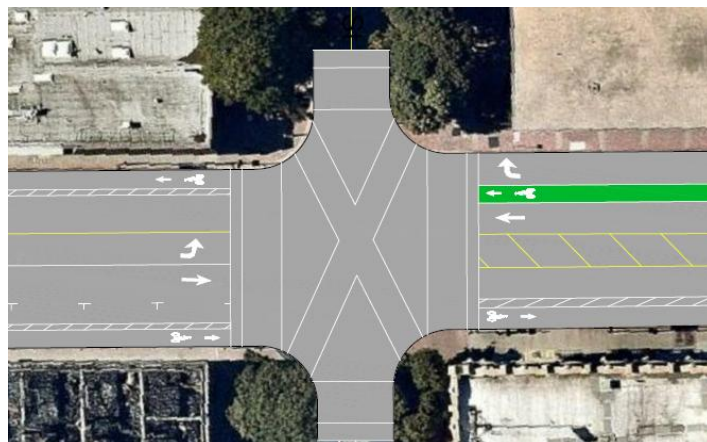
(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

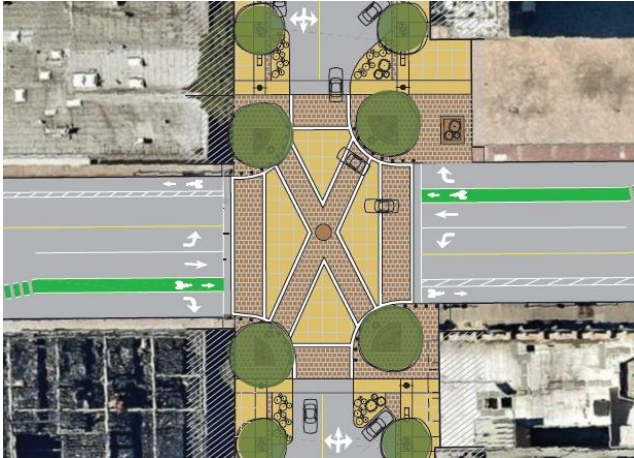
As shown in the table, the intersection operates at LOS B during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS C or better during both peak periods.

Alisal Street at Main Street

The multi-modal improvements at Main Street will be constructed in two phases. The figure to the right displays the proposed improvements at the intersection of Alisal Street and Main Street to be constructed during the first phase of construction. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with a center left-turn lane, on street parallel parking, and bike lanes. The westbound approach will be restriped to provide a green thru bike lane to give bicyclists traveling through the intersection an area to correctly position themselves between the thru and right turn vehicular lanes.



As part of the improvements, new signal equipment will be installed to provide an exclusive pedestrian phase or pedestrian scramble phase. To accompany the signal phasing changes, new diagonal crosswalks will be installed at the intersection. In this phase, Main Street will remain one-way northbound between Gabilan Street and San Luis Street.



In the second phase of construction, Main Street will be converted to two-way traffic. The northbound and southbound approaches will be restriped to provide one lane in each direction. Additionally, the eastbound and westbound approaches will be restriped to provide separate left-turn, thru, and right-turn lanes and green thru bike lanes to give bicyclists traveling through the intersection with an area to correctly position themselves between the thru and right turn vehicular lanes.

Currently, eastbound left-turn movements on Alisal Street are permissive phasing. The phase 2 improvements will include the installation of new signal equipment to provide protected-left-turn phasing at both Alisal Street approaches. The figure to the left displays the proposed improvements to be constructed during the second phase of construction.

Table 7 displays the LOS analysis results for the intersection of Alisal Street and Main Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

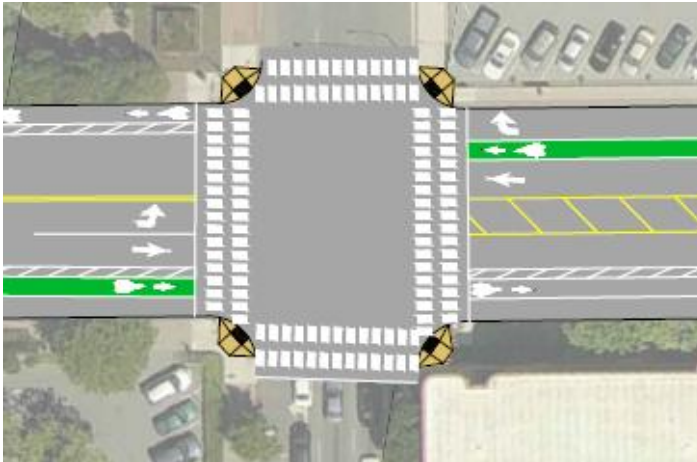
Table 7 Alisal Street at Main Street Intersection LOS Summary

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Phase 1									
Signal	AM	5.4	A	10.5	B	5.7	A	11.8	B
	PM	6.6	A	11.4	B	6.8	A	17.0	B
Phase 2									
Signal	AM	5.4	A	15.1	B	5.7	A	18.3	B
	PM	6.6	A	35.0	D	6.8	A	49.1	D

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS A during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS B or better during both peak periods under Phase 1 and a LOS D or better during both peak periods under Phase 2.



Alisal Street at Monterey Street

The figure to the left displays the proposed multi-modal improvements at the intersection of Alisal Street and Monterey Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with a center left-turn lane and buffered bike lanes. The westbound approach will be restriped to provide a green thru bike lane to give bicyclists traveling through the intersection with an area to

correctly position themselves between the thru and right turn vehicular lanes.

As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. Currently, the eastbound left-turn movement on Alisal Street is permissive phasing. The improvements will include the installation of new signal equipment to provide protected-left-turn phasing at the eastbound Alisal Street approach. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

Table 8 displays the LOS analysis results for the intersection of Alisal Street and Monterey Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 8 Alisal Street at Monterey Street Intersection LOS Summary – Phase 1

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	9.3	A	15.4	B	9.5	A	15.7	B
	PM	12.8	B	18.5	B	14.2	B	29.2	C

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.

(b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS B or better during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS C or better during both peak periods.

Alisal Street at Pajaro Street

The figure to the right displays the proposed multi-modal improvements at the intersection of Alisal Street and Pajaro Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes, buffered bike lanes, and on street parallel parking.

As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. Currently, eastbound and westbound left-turn movements on Alisal Street are permissive phasing. The improvements will include the installation of new signal equipment to provide protected-left-turn phasing at the Alisal Street approaches. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

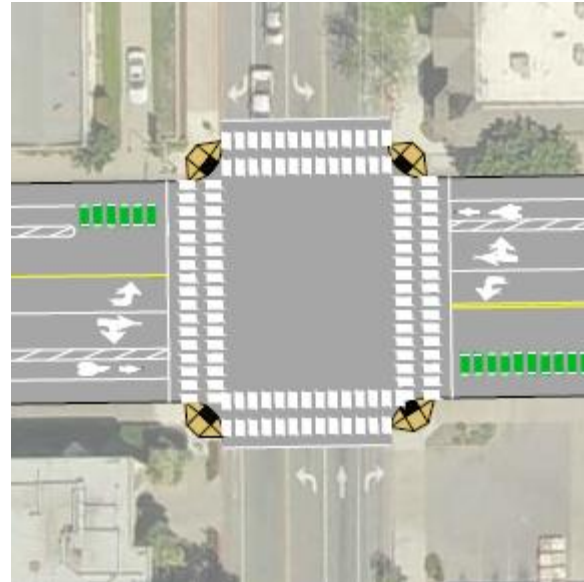


Table 9 displays the LOS analysis results for the intersection of Alisal Street and Pajaro Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 9 Alisal Street at Pajaro Street Intersection LOS Summary – Phase 1

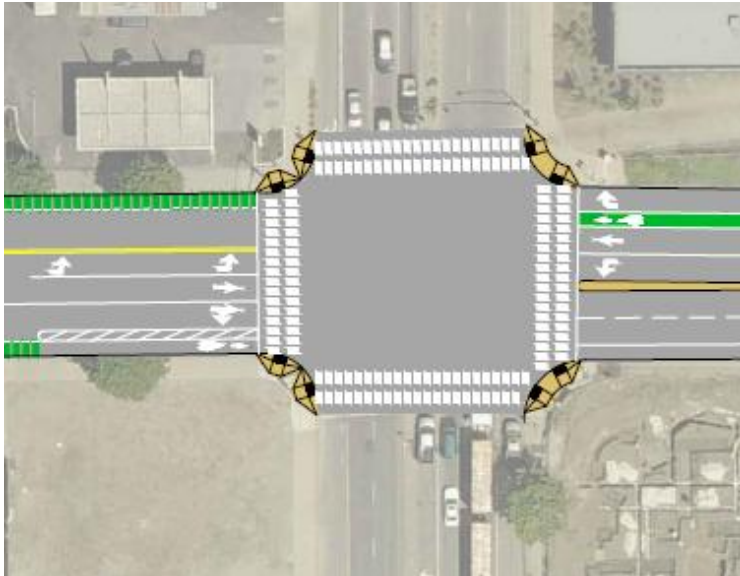
Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	9.5	A	14.4	B	9.8	A	14.9	B
	PM	10.9	B	23.7	C	11.8	B	38.9	D

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS B or better during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS D or better during both peak periods.

Alisal Street at Front Street



The figure to the left displays the proposed multi-modal improvements at the intersection of Alisal Street and Front Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with center left-turn lanes and buffered bike lanes. The westbound approach will be restriped to provide a green thru bike lane to give bicyclists traveling through the intersection with an area to correctly position themselves between the thru and right turn vehicular lanes.

As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. These improvements are included in Phase 1 of the Downtown Salinas Complete Streets Project.

Table 10 displays the LOS analysis results for the intersection of Alisal Street and Front Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 10 Alisal Street at Front Street Intersection LOS Summary – Phase 1

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	21.1	C	24.3	C	26.8	C	31.9	C
	PM	34.8	C	36.7	D	54.8	D	46.5	D

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS D or better during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is also expected to operate at a LOS D or better during both peak periods.

Main Street at Gabilan Street

As stated above, in the second phase of construction, Main Street will be converted to two-way traffic. The northbound and southbound approaches will be restriped to provide one lane in each direction.

The figure to the right displays the proposed multi-modal improvements at the intersection of Main Street and Gabilan Street. As part of the phase 2 improvements, new signal equipment will be installed to provide an exclusive pedestrian phase or pedestrian scramble phase to stop vehicular traffic at all approaches and allow pedestrians at all approaches to cross the street. To accompany the signal phasing changes new diagonal crosswalks will be installed at the intersection. These improvements are included in Phase 2 of the Downtown Salinas Complete Streets Project.

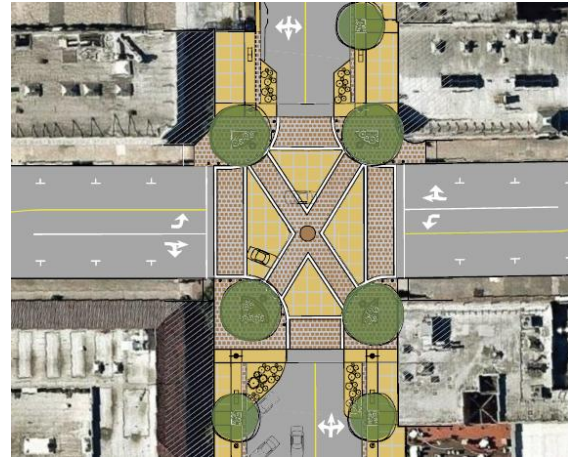


Table 11 displays the LOS analysis results for the intersection of Main Street and Gabilan Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 11 Main Street at Gabilan Street Intersection LOS Summary – Phase 2

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	7.8	A	7.2	A	8.0	A	7.3	A
	PM	6.9	A	7.4	A	6.9	A	8.3	A

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS A during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS A during both peak periods.

Alisal Street at Capitol Avenue

The figure to the right displays the proposed multi-modal improvements at the intersection of Alisal Street and Capitol Avenue. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with a two-way center left-turn lane, buffered bike lanes, and on street parallel parking.

As part of the improvements, high visibility triple-four school crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. Corner bulb outs will also be installed at all corners of the intersection. The improvements will include the installation of a traffic signal. These improvements are included in Phase 2 of the Downtown Salinas Complete Streets Project.

Table 12 displays the LOS analysis results for the intersection of Alisal Street and Capitol Avenue under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

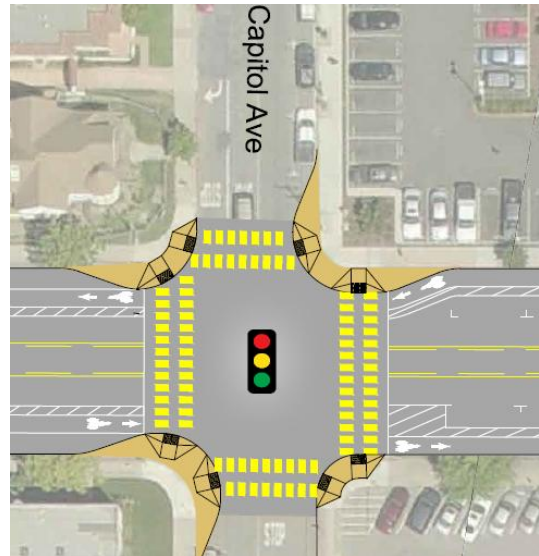


Table 12 Alisal Street at Capitol Avenue Intersection LOS Summary – Phase 2

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
SSSC/Signal (c)	AM	44.6	E	13.7	B	226.3	F	17.1	B
	PM	28.1	D	12.1	B	186.5	F	14.7	B

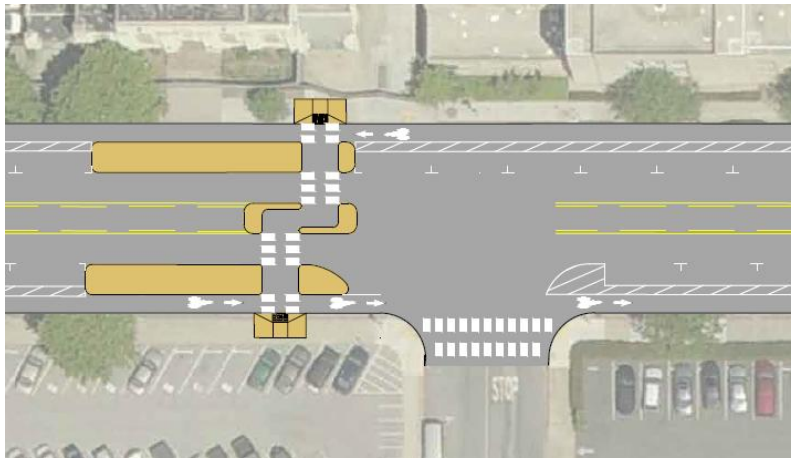
Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.
- (c) Phase 2 improvements includes the installation of a traffic signal

As shown in the table, the intersection operates at LOS F or better during both peak periods under Existing and Horizon Year Conditions under side street stop control. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS B or better during both peak periods.

Alisal Street at Cayuga Street

The figure below displays the proposed multi-modal improvements at the intersection of Alisal Street and Cayuga Street. As shown in the figure, the Downtown Salinas Complete Street improvements include the conversion of Alisal Street to one lane in each direction with a two-way center left-turn lane, buffered bike lanes, and on street parallel parking.



At this intersection, the parallel parking will be placed inside the buffered bike lane to provide additional space between the bike lane and the travel lane and to avoid door zone conflicts. As part of the improvements, floating bus stops will be installed on both sides of Alisal Street just west of the intersection. Floating bus stops are bumped-out bus stops where the bike lane runs behind all bus stop amenities. This design allows buses to stay in their own lane without conflicting with the bike lane and gives bicyclists a place to go that is protected from vehicular traffic. A two stage crossing with center median pedestrian refuge, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at the western legs of the intersection. These improvements are included in Phase 2 of the Downtown Salinas Complete Streets Project.

Table 13 displays the LOS analysis results for the intersection of Alisal Street and Cayuga Street under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 13 Alisal Street at Cayuga Street Intersection LOS Summary – Phase 2

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
SSSC	AM	12.5	B	12.8	C	14.0	B	14.7	B
	PM	13.2	B	14.4	C	15.6	C	18.3	C

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS C or better during both peak periods under Existing and Horizon Year Conditions. With the addition of the improvements, the intersection is expected to operate at a LOS C or better during both peak periods.

Lincoln Avenue at Central Avenue



The figure to the left displays the phase 2 proposed improvements at the intersection of Lincoln Avenue and Central Avenue. As shown in the figure, the Downtown Salinas Complete Street improvements include the installation of bike lanes and on street parking on Lincoln Avenue.

As part of the improvements, high visibility triple-four crosswalks and new ADA compliant curb ramps will be installed at all legs of the intersection. These improvements are included in Phase 2 of the Downtown Salinas Complete Streets Project.

Table 14 displays the LOS analysis results for the intersection of Lincoln Avenue and Central Avenue under Existing, Existing with Project, Cumulative, and Cumulative with Project Conditions.

Table 14 Lincoln Avenue at Central Avenue Intersection LOS Summary – Phase 2

Traffic Control	Peak Hour	Existing		Existing with Project		Horizon Year		Horizon Year with Project	
		Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Signal	AM	7.1	A	7.1	A	7.0	A	7.1	A
	PM	7.7	A	7.8	A	8.1	A	8.5	A

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

As shown in the table, the intersection operates at LOS A during both peak periods under Existing and Horizon Year Conditions. With the addition of the multi-modal improvements, the intersection is expected to operate at a LOS A during both peak periods.

FINDINGS AND CONCLUSIONS

The results of the foregoing analysis indicate that the Downtown Salinas Complete Streets Project would result in acceptable delays at all study intersections. **Tables 15 and 16** provide a summary of the LOS analysis results for Phase 1 and 2, respectively.

Table 15 Phase 1 Intersection LOS Summary

Intersection	Traffic Control	Peak Hour	Existing		Existing with Phase 1		Horizon Year		Horizon Year with Phase 1	
			Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Alisal St at Acacia St	Signal	AM	7.1	A	14.8	B	7.9	A	18.2	B
		PM	7.2	A	17.5	B	8.0	A	17.8	B
Alisal St at Homestead Ave	Signal	AM	7.8	A	14.6	B	8.9	A	19.9	B
		PM	9.9	A	20.0	B	13.0	B	32.6	C
Alisal St at Church St	Signal	AM	4.4	A	8.2	A	4.5	A	8.6	A
		PM	7.3	A	10.4	B	7.6	A	14.0	B
Alisal St at Lincoln Ave	Signal	AM	6.7	A	11.4	B	7.1	A	12.4	B
		PM	10.4	B	16.6	B	11.3	B	23.0	C
Alisal St at Salinas St	Signal	AM	11.9	B	12.5	B	11.6	B	15.2	B
		PM	12.6	B	22.5	C	13.2	B	35.0	C
Alisal St at Main St	Signal	AM	5.4	A	10.5	B	5.7	A	11.8	B
		PM	6.6	A	11.4	B	6.8	A	17.0	B
Alisal St at Monterey St	Signal	AM	9.3	A	15.4	B	9.5	A	15.7	B
		PM	12.8	B	18.5	B	14.2	B	23.8	C
Alisal St at Pajaro St	Signal	AM	9.5	A	14.4	B	9.8	A	14.9	B
		PM	10.9	B	23.7	C	11.8	B	38.9	D
Alisal St at Front St	Signal	AM	21.1	C	24.3	C	26.8	C	31.9	C
		PM	34.8	C	36.7	D	54.8	D	46.5	D

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.

Table 16 Phase 2 Intersection LOS Summary

Intersection	Traffic Control	Peak Hour	Existing		Existing with Phase 2		Horizon Year		Horizon Year with Phase 2	
			Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)	Delay (a)	LOS (b)
Alisal St at Capitol Ave	SSSC/ Signal (c)	AM	44.6	E	13.7	B	226.3	F	17.1	B
		PM	28.1	D	12.1	B	186.5	F	14.7	B
Alisal St at Cayuga St	SSSC	AM	12.5	B	12.8	B	14.0	B	14.7	B
		PM	13.2	B	14.4	B	15.6	C	18.3	C
Alisal St at Main St	Signal	AM	5.4	A	15.1	B	5.7	A	18.3	B
		PM	6.6	A	35.0	D	6.8	A	49.1	D
Main St at Gabilan St	Signal	AM	7.8	A	7.2	A	8.0	A	7.3	A
		PM	6.9	A	7.4	A	6.9	A	8.3	A
Lincoln Ave at Central Ave	Signal	AM	7.1	A	7.1	A	7.0	A	7.1	A
		PM	7.7	A	7.8	A	8.1	A	8.5	A

Signal = Traffic Signal; SSSC = Side Street Stop Control; RA = Roundabout

- (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At SSSC intersections, delay refers to the worst movement.
- (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 9.
- (c) Phase 2 improvements includes the installation of a traffic signal