

Agenda Report Reviewed by:
City Manager: 

CITY OF SEBASTOPOL
CITY COUNCIL
STAFF REPORT

Meeting Date: December 6, 2016
To: Honorable Mayor and Honorable City Councilmembers
From: Henry Mikus, Engineering Manager
Subject: Discussion and Action of Results of W-Trans Study and recommendations for Willow Street/Jewell Avenue Intersection
Recommendation: Provide direction for next steps.
Funding: Currently Budgeted: Yes No N/A
Net General Fund Cost: \$ none
\$100,000 to \$150,000 cost estimate range for three alternatives could be drawn from the Traffic Impact Fund if current priorities/plans are altered

INTRODUCTION: W-Trans, an engineering consulting firm, has been retained by the City to provide assistance and technical expertise on the following project: Recommendations for Willow Street/Jewell Avenue Intersection potential safety improvements. Steve Weinberger, W-Trans Principal, will be presenting a report to the Council and will be discussing three intersection alternatives. His written report is attached.

BACKGROUND: Due to citizen input, in this case concern over near-misses at the Willow-Jewell intersection, W-Trans is providing some alternate alignments to enhance safety from previous direction from Council. On October 4, 2016 five alternate layouts for improving the intersection were presented to Council. Staff and the consultant were asked to further refine details and supply cost estimates to three preferred alternates.

DISCUSSION: W-Trans and City Staff are seeking Council feedback on the additional information plus changes made resulting from the discussion with Council October 4, 2016. W-Trans developed, to finer detail, the three scenarios chosen by the Council for further study. It is hoped Council will be able to select their single preferred choice. Cost estimates for the three alternates are also provided, with a range between \$100,000 and \$150,000. An alternative for each scenario would be to simply utilize pavement striping to outline the proposed changes, allowing use as a “test” to check effectiveness and acceptance by the traveling public. “Striping only” versions of the proposed intersection layouts are included in the attached drawings.

RECOMMENDATION: Provide direction/approval on recommendations as outlined by Staff and W-Trans.

Attachment(s):

- W-Trans written report
- W-Trans cost estimates
- W-Trans intersection proposed layouts

Intersection Alternatives for Jewell Avenue/Willow Street

Background

W-Trans has been tasked with developing alternative intersection geometrics for the intersection of Jewell Avenue/Willow Street. At the previous council meeting on October 4, 2016, W-Trans presented five optional alignments which would each create a more standard intersection, increase pedestrian access and provide more space for landscaping features. Based on the direction from the City Council, three alternatives have been refined and will be presented.

Since the last meeting, the Consultant and City staff met with the Fire Department to review the alternatives and discuss potential issues with fire truck maneuverability. Field tests were conducted with the City's largest ladder truck to help inform the concept design.

It should be noted that Willow Street including the intersection with Jewell Avenue will be repaved in 2017. Therefore, this is an opportune time to complete these modifications. Prior to the repaving project, any of the alternatives can be striped temporarily to test the circulation and maneuverability. After repaving, striping can be installed either with the new alternative or with the existing lane geometrics.

Alternatives

The 3 alternatives include:

Alternative A - Closure of the northern curved section of Willow Street

Under this alternative, all traffic would utilize the southern section of Willow Street and create a more standard T intersection which would be Stop controlled. Traffic on Jewell Avenue would run free flow. The existing island would be incorporated into the added green space. Sidewalks/walkways would be added to provide access to the southwest corner of the island where the new crosswalk would be located. The ultimate alignment and a short term striping installation are attached.

Alternative B - Closure of the southern straight section of Willow Street

Under this alternative, all traffic would utilize the northern section of Willow Street with realignment to eliminate the curve and closure of the southern segment of Willow Street. This realignment would create a more standard T intersection which would be Stop controlled. Traffic on Jewell Avenue would run free flow. The existing island would be incorporated into the added green space. Sidewalks/walkways would be added to provide access to the new crosswalk on the Willow Street leg of the intersection. The ultimate alignment and a short term striping installation are attached.

Alternative C - Conversion of Willow Street to a One-Way Couplet

Under this alternative, traffic on either side of the median would be converted to a 'one-way' couplet with westbound traffic on the north and southbound traffic on the south. The northern section would be realigned to eliminate the curve. This realignment would create an 'elongated' T intersection which would be Stop controlled on the Willow Street approach. Traffic on Jewell Avenue would run free flow. The existing island would remain in its current configuration separating the two directions of travel before they rejoin to the east. Green space would be created both north and south of the intersection. Sidewalks/walkways would be added to provide access to the new crosswalks. The ultimate alignment and a short term striping installation are attached.

Assessment

All 3 of these alternatives provide the following features:

- Ability to serve the vehicle turning movement demands
- Increase in pedestrian access and additional pedestrian crosswalks
- Maintenance of the existing island with the tree and utility pole.
- Similar supply of on-street parking on Willow Street.
- No change to residential driveway access in the vicinity
- Elimination of the speed and vehicle conflicts on the “Willow to Jewell curve.”
- An opportunity for additional green space and urban design elements.
- Accommodation of City fire truck maneuverability.
- More bike friendly access conditions.
- Ability to be installed as a temporary striping project to test the results.

If installed permanently, all 3 of the alternatives will require:

- New sections of sidewalk
- Curb ramps for ADA access to the new crosswalk.

Following is a discussion of other issues associated with each specific alternative:

Alternative A

All traffic is served on the southern section of Willow Street bringing more traffic closer to the residences on the south side of the intersection.

This configuration will require the second largest amount of new sidewalk to be provided of the 3 alternatives, but will only require 2 new curb ramps.

The reclaimed pavement area for green space is the largest of the three alternative which could create an opportunity for more design possibilities, but would likely be a more costly landscaping project. (It may not be possible to provide contiguous space for an expanded park because of the abrupt elevation difference between the park space and the road in this area.)

Both pedestrian crossings of Jewell Avenue would be to the far south which may generate a desire to add a midblock crossing further north which may need additional crossing facilities to supplement the crossing.

Alternative B

This configuration will require the largest amount of new sidewalk to be provided of the 3 alternatives, and will require 4 new curb ramps.

The closure of the southern section of Willow Street will require extension of an existing private driveway as shown on the plans.

The added crosswalks across Jewell Avenue are located in a more advantageous location for pedestrian crossing activity.

Alternative C

This configuration will require the least amount of new sidewalk to be provided of the 3 alternatives, but will require 5 new ADA curb ramps.

The added northern crosswalk across Jewell Avenue would be located in a more advantageous location for pedestrian crossing activity.

The elongated intersection alignment, although not typical, would not be expected to cause additional vehicle conflicts given the volume and speed of traffic in this area.

The reclaimed pavement areas for green space are a small size which are likely to be a less costly landscaping project than the two larger areas in the other two alternatives.

Action Requested

Council should provide direction on which of the 3 alternatives (A, B or C) Public Works should move forward to implementation, or provide direction on leaving the intersection in its current configuration for next year's repaving project.

**Detailed Engineer's Estimate For
Construction Items Only**

Agency: City of Sebastopol

Project Name: Intersection Improvements at Jewell and Willow

Project Location: Sebastopol, California

Date of Estimate: October 24, 2016

Prepared by: Steve Weinberger and William Petker

Alternative A - Ultimate

Item No.	Description	Quantity	Units	Unit Cost	Total
1	Curb and Gutter	382	LF	\$35.00	\$13,370
2	Sidewalk	1,721	SF	\$8.00	\$13,768
3	Ramps	1	EA	\$5,000.00	\$5,000
4	Roadway Excavation	285	CY	\$35.00	\$9,960
5	Landscaping & Irrigation	5,005	SF	\$12.00	\$60,060
6	Signing and Striping	1	LS	\$5,000.00	\$5,000

TOTAL: \$107,158

Alternative B - Ultimate

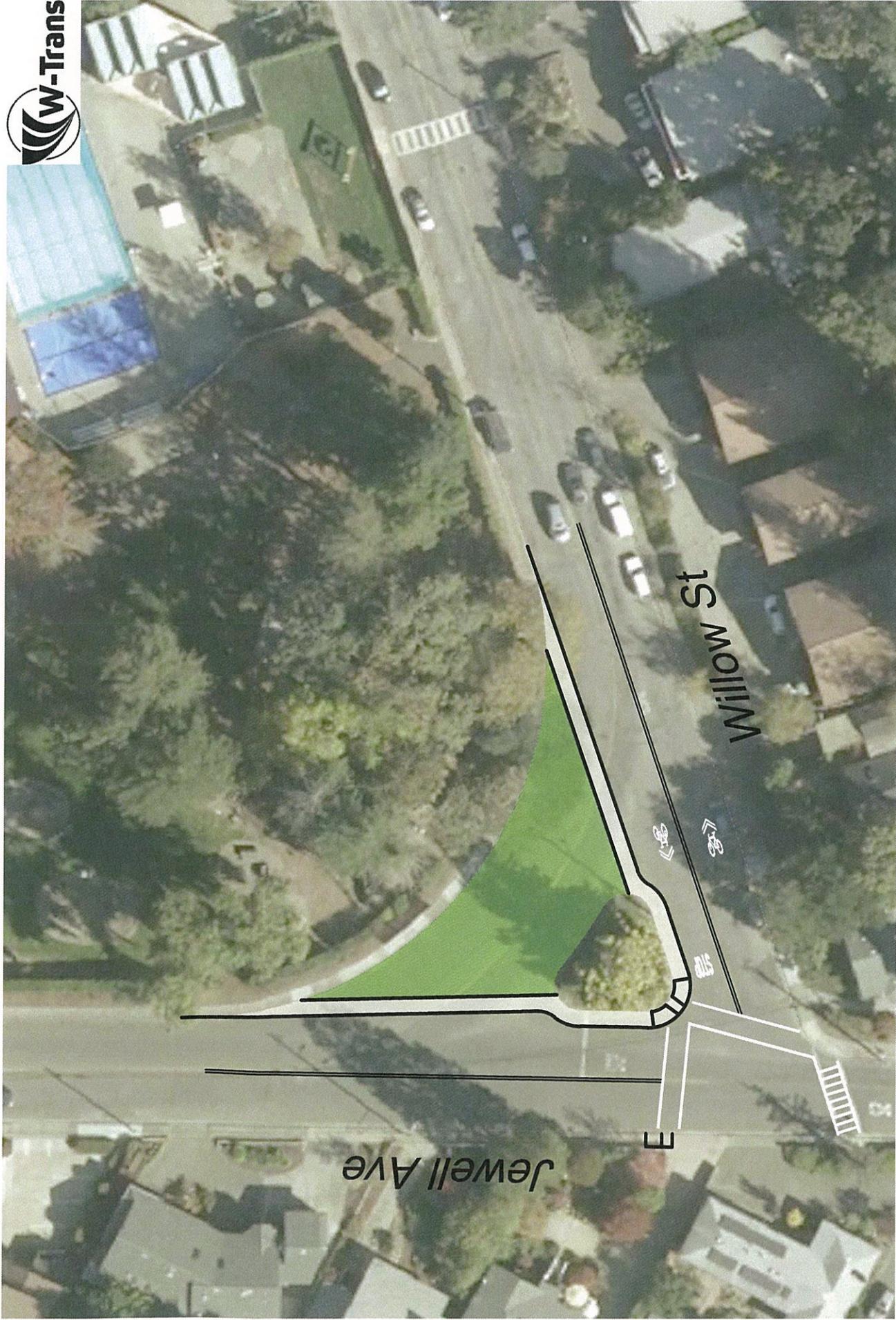
Item No.	Description	Quantity	Units	Unit Cost	Total
1	Curb and Gutter	469	LF	\$35.00	\$16,415
2	Sidewalk	2,409	SF	\$8.00	\$19,272
3	Ramps	7	EA	\$5,000.00	\$35,000
4	Roadway Excavation	317	CY	\$35.00	\$11,081
5	Landscaping & Irrigation	4,533	SF	\$12.00	\$54,396
6	Signing and Striping	1	LS	\$6,000.00	\$6,000
7	Install Driveway	430	SF	\$12.00	\$5,160

TOTAL: \$147,324

Alternative C - Ultimate

Item No.	Description	Quantity	Units	Unit Cost	Total
1	Curb and Gutter	470	LF	\$35.00	\$16,450
2	Sidewalk	1,320	SF	\$8.00	\$10,560
3	Ramps	6	EA	\$5,000.00	\$30,000
4	Roadway Excavation	200	CY	\$35.00	\$7,006
5	Landscaping & Irrigation	3,414	SF	\$12.00	\$40,968
6	Signing and Striping	1	LS	\$5,750.00	\$5,750

TOTAL: \$110,734



Intersection Modification for Jewell Ave and Willow St

Alt A



Intersection Modification for Jewell Ave and Willow St

Alt A - Striping

SEB050

10/19/2016



Intersection Modification for Jewell Ave and Willow St

Alt B

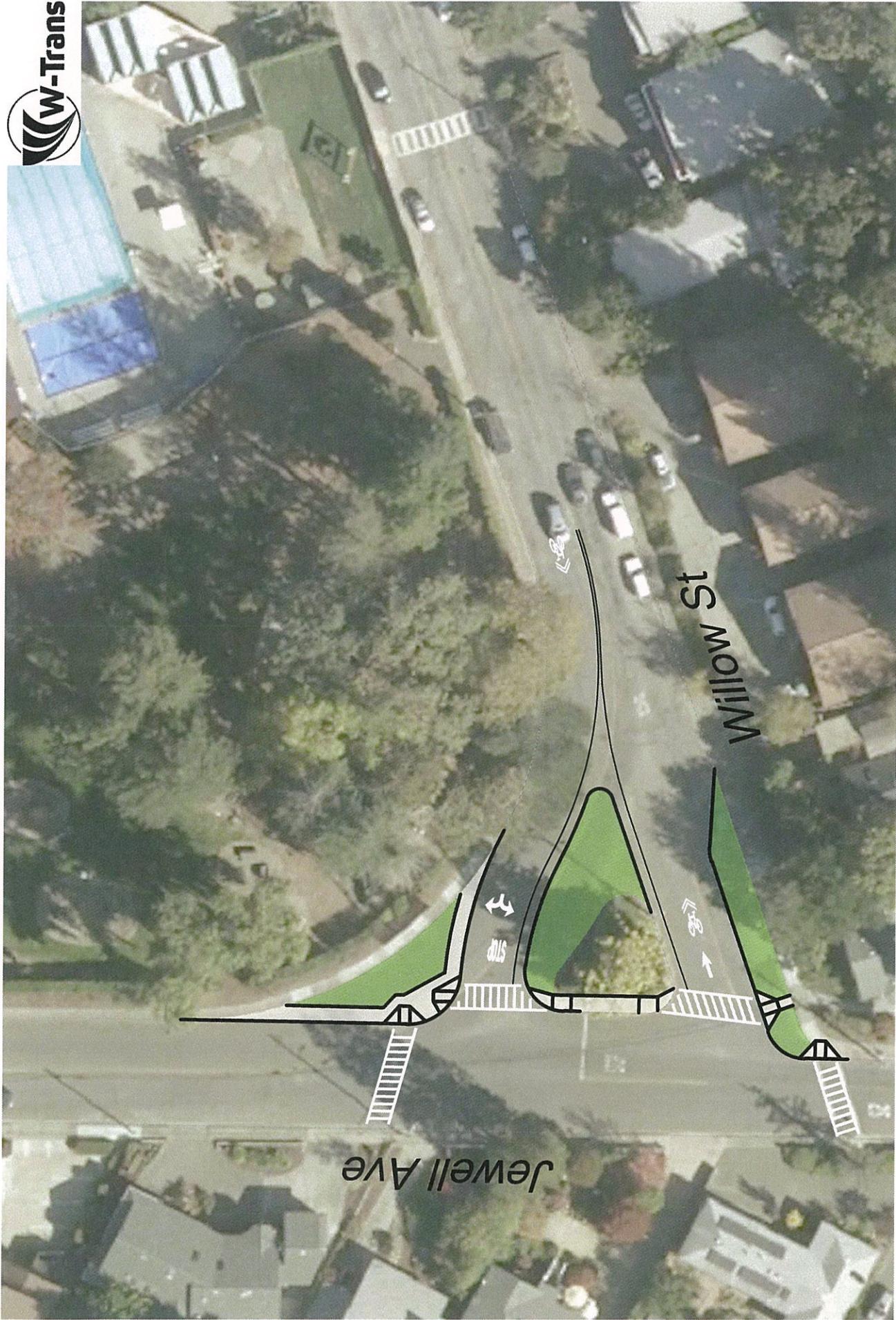


Intersection Modification for Jewell Ave and Willow St

Alt B - Stiping

SEB050

10/19/2016



Intersection Modification for Jewell Ave and Willow St

Alt C

SEB050

10/19/2016



Intersection Modification for Jewell Ave and Willow St

Alt C - Striping

SEB050

10/19/2016