

# **REPORT TO THE TRAFFIC AND TRANSPORTATION COMMISSION**

## ***City of Salinas, California***

DATE: June 8, 2017

BY: James Serrano, Transportation Manager  
Jose Saucedo, Assistant Engineer

SUBJECT: 2017 TRAFFIC SIGNAL PRIORITY LIST – CANDIDATE LOCATIONS

### **RECOMMENDATION:**

The Traffic and Transportation Commission is requested to consider recommending the approval of the 2017 Traffic Signal Priority List.

### **DISCUSSION:**

On May 13, 2008, City Council adopted a resolution to certify the 2007 Traffic Signal Priority List and selected three (3) intersections for signalization. The Williams/Freedom intersection ranked No. 1 on the priority list, and was constructed in July of 2009. There was delay on the delivery of the remaining two locations of Alisal/Skyway-Quilla & Laurel/St Edwards due to the economy, which resulted in the loss of funding for construction of new traffic signals (CIP #9654).

Because these were City priorities staff pursued alternative funding to continue the implementation. An Air District grant which promotes projects that reduce greenhouse gas emissions, and reduce congestion funded an alternative solution to the Alisal/Skyway signal. A traffic study performed at the Alisal/Skyway-Quilla intersection indicated that a roundabout would perform better than a traditional traffic signal. Staff determined that use of a modern roundabout would be a preferred alternative for the Alisal/Skyway-Quilla location and one that qualified for grant funding. Other funds were secured in support of the Air District grant and the roundabout at Alisal/Skyway was completed on November of 2015.

Staff continued to apply for grants to fund the intersection of Laurel/St Edwards since (CIP #9654) remained unfunded, but were unsuccessful. This year, staff received measure G funds for design of the traffic signal and is working to complete design by August of this year. Staff also expects funding for traffic signals (CIP #9654) to be reinstated for fiscal year 2017-2018. Thus, construction for the Laurel/St Edwards traffic signal is anticipated to begin at the end of the year.

With funding for CIP #9654 restored and the last intersection constructed this year, staff continues the process of producing a new Traffic Signal Priority List. Traffic staff compiled a list of candidate intersections for traffic signals throughout the years. The suggestions came from public requests, input from Commissioners/Council members, environmental document/traffic study findings, and staff's knowledge of traffic operations. The intersections were studied to see if they met one of the

eleven traffic signal warrants specified in the CA-MUTCD. If one or more of the traffic signal warrants were met, the intersection is analyzed for “priority points” to determine where the intersection falls with respect to other candidate intersections meeting warrants.

Staff uses means of prioritizing intersections to consider signalization to provide a rational basis for selecting the intersection(s) to be funded for traffic signal installation. This “Salinas criteria” was developed in 1995 to evaluate and rank those intersections that meet one or more traffic signal warrant of the CA-MUTCD. Criteria were based on methodologies used by other local agencies (i.e. San Jose, Sacramento, Stockton, etc.), known methods used in the past by the City, and concerns/needs that are specific to Salinas. Generally, intersections most appropriate for traffic signal consideration receive a minimum of 200 points based on the 5 following factors.

**TRAFFIC VOLUMES** – The first factor is traffic volumes, which include volumes on both the major and minor streets entering the intersection. In general, higher priority candidate intersections typically have a minimum of 5000 daily trips on the major street and 2000 daily trips on the minor street.

**TRAFFIC ACCIDENTS** – “Correctable” or right-angle accidents are the second factor considered, with 20-points multiplied by the average annual accident rate; generally established over the past five (5) years. These accident types are a primary concern because they have the highest impact, cause the greatest damage, and they indicate a need to clarify right-of-way assignment (the primary purpose of a traffic signal).

In addition to the points received for the accident rate staff added a multiplier of 5 for each individual pedestrian and bicycle accident occurring at the intersection. The multiplier was added to add more weight to the potential safety enhancements a traffic signal may provide for pedestrians and bicyclists.

For intersections that have existed for less than 5 years, the average accident criteria is based on the number of years the intersection has been functioning (or in existence) and the annual average thereof (i.e. an intersection that has existed for only 3 years will consider only the 3-year accident history in which it has existed).

**DISTANCE TO NEAREST SIGNALIZED INTERSECTION** – The distance to the nearest signalized intersection is also weighed because a signal’s effectiveness tends to lessen when placed too close to another intersection that is controlled with a traffic signal. The inefficiency of back-to-back signals occurs when there is inadequate coordination between the two, and reasonable coordination generally requires quarter mile (1300 foot) spacing. Further, traffic signals spaced at greater distances (i.e. every half mile or so) provide a “platooning” effect; thereby creating gaps for other intermediate non-signalized intersecting side street traffic to access the major street.

**TRAFFIC SPEEDS** – Traffic speed is the fourth factor and provides a relation for both safe sight distance and the time it takes to safely access a major street from a minor street. This factor also impacts pedestrian safety and ability for a person to safely cross a street.

**ALL-WAY STOP CONTROL** – The fifth factor gives priority points for intersections currently controlled with an all-way STOP installation. Warrants for an all-way STOP and traffic signal have

similarities, and signaling an existing all-way STOP intersection may reduce traffic congestion, improve overall traffic operations, and also improve air quality. Not all vehicles are not required to stop if signalized, and generally, there is less overall delay.

Finally, intersections where the City has secured funds for construction of a signal are removed from the list. The following intersections were evaluated for the priority list but funding has been secured to build the traffic signal or an alternative safety enhancement has been identified, therefore no longer needed to be on the Signal Priority List.

<b>Main Street at Cherokee Drive</b>	Signal funded by Harden Ranch Plaza
<b>Main Street at Navajo Drive</b>	Signal funded by HSIP Grant
<b>Main Street at Chaparral Street</b>	(Worm-Directional median opening to allow and restrict left turns) funded By HSIP Grant
<b>Alisal Street at Capitol Street</b>	Signal Jointly Funded by Monterey County and City of Salinas. All-Way Stop installed on interim basis.
<b>Alvin Street at El Dorado</b>	Signal funded by an ATP Grant

### **SUMMARY OF FINDINGS**

The staff will be presenting the resulting list of intersections recommended for installation of a traffic signal.

Staff has compiled data for each of the intersections shown on the attached summary sheet and scored each according to the criteria detailed above. The following five intersections prove to have the highest scores among signals.

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|--|--------------|
| 1. Boronda Road at Sanborn Road                | (226 points) |
| 2. Williams Road at Garner Avenue              | (205 points) |
| 3. Davis Road at Chevron-Westridge Driveway    | (188 points) |
| 4. Constitution Boulevard at Las Casitas Drive | (187 points) |
| 5. Alvin Drive at Linwood Drive                | (186 points) |

As stated before, intersections most appropriate for traffic signal consideration receive a minimum of 200 points based on the factors discussed above. The following is staff's recommendation for each intersection scoring near 200 points.

**BORONDA / SANBORN:** The Boronda Road at Sanborn Road intersection has the highest number of priority points, and experienced 4 “correctable” accidents in a 5-year period. Volumes on Boronda Road are over 10,000 with side traffic volumes of 3,300. This equates to approximately 24% of total volumes entering intersection is from the side street.

**WILLIAMS / GARNER:** The Williams Road at Garner Avenue intersection has the fourth highest number of priority points, and experienced 4 “correctable” accidents in a 5-year period.

**CONSTITUTION BOULEVARD/LAS CASITAS:** This intersection scores 187 priority points and shows 6 correctable collisions in the last 5 years.

**ALVIN / LINWOOD:** This intersections scores a point lower than the Constitution/Las Casitas intersection. However, the Alvin Linwood Drive intersection has a higher number of correctable collisions. There is also a pedestrian and bicycle collision in the last 5 years. Staff would recommend that this intersection be prioritized higher.

**DAVIS / CHEVRON-WESTRIDGE DRIVEWAY:** The Davis Road / Chevron-Westridge driveway intersection is 1,060 feet south of the Davis-Westridge intersection (signalized), 1,164 feet north of the Davis-Laurel intersection (signalized) and forms a 4-legged intersection with the Westridge Shopping Center driveway and Chevron gas station driveway. Davis Road has a curvature at the point of intersection with said driveways causing sight visibility challenges for motorists attempting to make a right turn or left turn out of the Westridge Shopping Center Driveway.

Davis Road is a 4-lane arterial street with raised median island and left turn pockets at primary driveways and street intersections. A bike lane is striped on both sides of the street along with NO PARKING designations along the street frontage. Davis Road handles 27,337 vehicles per day, while both driveways handle 2,469 vehicles per day. There have been 9 right angle accidents at this location over the past 5 years. The intersection may ultimately serve a hotel that was approved in the Westridge Shopping Center Precise Plan, and will likely require some intersection modifications when constructed. The existing primary land uses in the area are commercial/retail with Costco (retail store), the Chevron Service Station and several restaurants having the most direct access to this intersection.

Although the priority points are respectable, the accidents rate is lower than Alvin/Linwood or Constitution/Las Casitas which likely have higher safety needs, and the future construction of a hotel may have some impact on the ultimate intersection design. Thus, staff recommends that this intersection be re-considered for priority once development is formally approved for construction, or the top three intersections are signalized.

*Thus, staff recommends the following traffic signal priority locations:*

- 1. Boronda/Sanborn*
- 2. Williams/Garner*
- 3. Alvin/Linwood*
- 4. Constitution Boulevard/Las Casitas*

**ISSUE:**

Shall the Traffic and Transportation Commission recommend City Council adopt a resolution certifying the 2017 Signal Priority List and selecting the top three (3) locations?

**FISCAL IMPACTS:**

The fiscal year (FY) 2017-2018 budget is anticipated to provide another \$380,000 to fund a traffic signal installation (approximately \$400,000). With approval of the highest three (3) priority locations as recommended by the Traffic and Transportation Commission, and approved by City Council, staff will commence design on the first intersection, and identify funding options to construct the rest. With continued funding, the last of the signals would be completed by 2021.

**TIME CONSIDERATIONS:**

Staff expects Council to consider this issue and certify the priority list in July 2017, so the traffic signal design can be commenced in August/September 2017. The goal is to complete the priority traffic signalized intersections by 2020.

**CITY COUNCIL GOALS:**

This issue generally addresses the 2017 City Council Goal: Excellent Infrastructure.

**ALTERNATIVES/IMPLICATIONS:**

1. The Commission may recommend City Council adopt a resolution certifying the 2017 Traffic Signal Priority List and identifying the top three (3) priority locations; or
2. Direct Staff to evaluate additional intersections to determine priority.

**CONCLUSIONS:**

At its meeting of June 8, 2017, the Traffic and Transportation Commission is requested to review the attached list of non-signalized intersections, and recommend City Council adopt a resolution certifying the 2017 Traffic Signal Priority List, and select the top three (3) priorities for funding by the City of Salinas.

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