



CITY OF SALINAS

COUNCIL STAFF REPORT

DATE: AUGUST 4, 2020

DEPARTMENT: PUBLIC WORKS - TRAFFIC DIVISION

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TITLE: 2020 INTERSECTION IMPROVEMENTS PRIORITY LIST

RECOMMENDED MOTION:

A motion to approve a resolution approving the 2020 Intersection Improvements Priority List and fund the top two priorities.

RECOMMENDATION:

It is recommended that the City Council approve the 2020 Intersection Improvements Priority List and fund the top two priorities.

EXECUTIVE SUMMARY:

The Traffic and Transportation Commission and City staff recommend the approval of the 2020 Intersection Improvements Priority List to fund the top two (2) priorities for intersection improvements. Intersection improvements may include a traffic signal, roundabout, or other traffic control device as determined most appropriate on a case by case basis. The list of candidate intersections came from public requests, input from Commissioners and Council members, environmental documents, traffic study findings, and staff's understanding of traffic operations. The recommended intersections met one or more warrants based on the California Manual of Uniform Traffic Control Devices (CA-MUTCD) and are prioritized based on the City of Salinas point system.

BACKGROUND:

Given a finite amount of available funding, there is a need to provide a rational basis for prioritizing intersection improvements. Staff uses a scoring procedure to provide a rational basis for prioritizing traffic signal installations at intersections. While traffic signals can provide additional traffic control at intersections, it is not the only treatment available for intersection improvements. Often other types of intersection control may provide advantages compared to a traffic signal and could be a preferable alternative. This year staff proposes broadening the program to consider intersection improvements rather than exclusively evaluating traffic signals. Intersection

improvements may include roundabouts, traffic signals, and full or partial access medians as possible alternatives.

This prioritization scoring criteria was developed to evaluate and rank those intersections that meet one or more traffic signal warrants of the CA-MUTCD. Criteria is based on methodologies used by other local agencies (i.e. San Jose, Sacramento, Stockton, etc.), established methods used in the past by the City, and concerns/needs that are specific to Salinas.

Traffic Volumes – The first factor is traffic volumes, which include volumes on both the major and minor streets entering the intersection. Higher priority candidate intersections typically have a minimum of 5,000 daily trips on the major street and 2,000 daily trips on the minor street.

Traffic Collisions – “Correctable” or right-angle collisions are the second factor considered, with 20-points multiplied by the average annual accident rate; generally established over the past three (3) years. These collisions 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 control device.

In addition to the points received for the accident rate, staff added a multiplier of 2 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 3 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 2 years will consider only the 2-year accident history in which it has existed).

Distance to the 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 a 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 signalizing an existing all-way STOP intersection may reduce traffic congestion, improve overall traffic operations, and improve air quality.

PAST INTERSECTION IMPROVEMENTS PRIORITY PROJECTS

On August 29, 2017, City Council approved the 2017 Traffic Signal Priority List and selected four (4) intersections for signalization via Council Resolution 21244. The following were the recommended priority order given by the Traffic and Transportation Commission:

1. **Alvin Drive at Linwood Drive**- The intersection was the top ranked priority on the priority list. The signal design is complete and plans are approved. The project is being constructed in conjunction with the Alvin Drive/Linwood Drive Safe Routes to School CIP Project 9219. Construction is projected to commence this summer 2020.
2. **Boronda Road at Sanborn Road**- This intersection was evaluated for a roundabout option through an Intersection Control Evaluation (ICE) analysis. The ICE analysis is a standard procedure for comparing a roundabout or traffic signal at an intersection by applying various benefit costs metrics. City Council approved a roundabout option at this intersection via Council Resolution 21511, with the understanding that this concept was not fully funded and the planning and design phase would require more time. The future growth areas north of Boronda are now changing the travel demand forecast for this intersection. The capacity and design of this intersection is being planned in coordination with the future development environmental studies.
3. **Williams Road at Garner Avenue**- This intersection is in the design phase and has been slowed by design challenges and future considerations. Design challenges at this location include physical constraints such as driveway density, narrow sidewalks, grading and both overhead and underground utilities. Furthermore, Williams Road is planned for a median and utility undergrounding project. The future configuration of the roadway should be finalized before the traffic signal design can be completed in order to avoid throw-away costs.
4. **Constitution Boulevard at Las Casitas Drive**- The design and construction documents for this intersection are complete. The City is planning to bid this work for construction in the near future.

SUMMARY OF FINDINGS

Staff has compiled data for each of the intersections shown on the attached summary sheet and scored each according to the criteria detailed above. Generally, intersections most appropriate for improvement considerations receive a minimum of 200 points based on the five metrics. The following seven (7) intersections prove to have the scores above the recommended 200 points to install intersection improvements.

1. Harden Parkway at McKinnon Street	(348 points)
2. Freedom Parkway at Rider Avenue	(319 points)
3. N Davis Road at Chevron Driveway/Westridge Driveway	(295 points)
4. Independence Boulevard at Danbury Street	(241 points)

5. Harden Parkway at Regency Circle	(223 points)
6. E Alisal Street at Filice Street	(215 points)
7. Williams Road at Garner Avenue	(205 points)

The following are a summary of staff's recommendations for intersections scoring above 200 points.

- 1) **HARDEN PARKWAY AT MCKINNON STREET:** This intersection ranks first with 348 points. The collision history shows 8 correctable collisions in the last 3 years. The intersection is currently an all-way stop. It is nearby an elementary school, middle school, and a high school. Staff recommends an (ICE) intersection control evaluation prior to making a final determination of the preferred improvements at this location.
- 2) **FREEDOM PARKWAY AT RIDER AVENUE:** This intersection ranks second with 319 points. The collision history shows 6 correctable collisions in the last 3 years. The intersection is currently controlled by an all-way stop and near an elementary school and public park. Fire Station No. 5 is immediately adjacent to the intersection and has concerns with a traffic signal. Staff therefore recommends an intersection control evaluation prior to making a final determination of the preferred improvements at this location.
- 3) **N DAVIS ROAD AT CHEVRON DRIVEWAY/WESTRIDGE DRIVEWAY:** This intersection ranks third with 295 points. The collision history shows 3 correctable collisions in the last 3 years. Davis Road is the major street and the two minor approaches are private driveways. A traffic signal at this location may create an increase in delay, emissions and rear-end collision potential on Davis Road. Staff recommends an (ICE) intersection control evaluation to evaluate median access control, prior to making a final determination of the preferred improvements at this location.
- 4) **INDEPENDENCE BOULEVARD AT DANBURY STREET:** This intersection ranks fourth with 241 points. The collision history shows 4 correctable collisions in the last 3 years. This intersection previously ranked 11th in the 2017 Signal Priority List. The intersection is adjacent to the Everett Alvarez High School and staff recently upgraded school crossing with a Rectangular Rapid Flashing Beacon (RRFB) in 2017 to enhance the safety of school pedestrians crossings.
- 5) **HARDEN PARKWAY AT REGENCY CIRCLE:** This intersection ranks fifth with 223 points. The collision history shows 4 correctable collisions in the last 3 years. Harden Parkway has a curvature at the point of intersection with Regency Circle causing sight visibility challenges for motorists attempting to make a left turn. There have been 2 pedestrian and 1 bike reported collisions.
- 6) **ALISAL STREET AT FILICE STREET:** This intersection ranks sixth with 215 points. The collision history shows 5 correctable collisions in the last 3 years, including 1 pedestrian and 1 bicycle. Volumes on Alisal Street are over 17,800 average daily traffic (ADT) and volumes on Filice Street are relatively low 1,900 ADT. The intersection ranks 2nd highest in total volume entering intersections among the evaluated intersections with

higher than 200 priority points. The intersection is located less than an 1/8th of a mile between signalized intersections on Alisal Street, which makes a traffic signal or roundabout less desirable. Furthermore, the East Alisal Vibrancy Plan adopted by City Council may change the roadway and surrounding land use. Staff recommends further evaluation of the intersection and final determination of the East Alisal Corridor Plan before selecting any intersection improvements at this location.

7) **WILLIAMS ROAD AT GARNER AVENUE:** This intersection ranks seventh with 205 points. The collision history shows 9 correctable collisions in the last 3 years. The intersection is currently in the design phase, which has been slowed by design challenges and future considerations. Design challenges at this location include physical constraints such as driveway density, narrow sidewalks, grading and both overhead and underground utilities. Furthermore, Williams Road is planned for a median and utility undergrounding project. The future configuration of the roadway should be finalized before the traffic signal design can be completed in order to avoid throw-away costs. Staff is preparing for a Highway Safety Improvement Program (HSIP) grant which may fund the improvements with the larger Williams Road project

OTHER CONSIDERATIONS

Several intersections were not evaluated in the Intersections Improvement Priority Program. Intersections where the City has already secured funds, a funding source is already known, or intersection improvements may require additional evaluation in coordination with planned development are not included in this list. The following intersections were considered for the priority list but are not evaluated in the Intersection Improvements Priority Program.

Main Street at Cherokee Drive

Traffic Signal funded by Harden Ranch Plaza – Applying for encroachment permit to begin construction.

Main Street at Navajo Drive

Signal funded by a HSIP Grant. Project Awarded - Summer 2020 Construction

Main Street at Chaparral Street

Median improvements to restrict left turns funded By HSIP Grant-Project Awarded - Summer 2020 Construction

Alisal Street at Capitol Street

Monterey County is committed to fund a traffic signal as identified in the Monterey County Government Center Traffic Impact Analysis. All-Way Stop installed on interim basis

Alvin Street at El Dorado Drive

Signal funded by an Active Transportation Program (ATP) Grant-Project Awarded – Summer 2020 Construction

Alisal Street at Bardin Road	Roundabout funded by an ATP grant and local funds. Expected for construction in 2021
Sconeberg Parkway at Bardin Road	Roundabout funded by an ATP grant and local funds. Expected for construction in 2021
Alisal Street at Murphy Street	Traffic signal planned as offsite improvements for the new Police Station. The traffic signal planned for construction in 2021.
Boronda Road at Hemingway Drive	Roundabout is planned as offsite improvements for the North of Boronda Future Growth Area.
Abbott Street at Alameda Avenue	The City's Traffic Improvement Program plans for a median at this intersection. This improvement is funded by the City's Traffic Fee Ordinance. Potential nearby development will require further evaluation for the appropriate improvements.
Constitution Boulevard at Natividad Medical Center	Monterey County is committed to fund a traffic study as identified in the Monterey County Jail Housing Addition Traffic Impact Analysis.
Sherwood Drive at Sherwood Place	Future signal will be planned with school expansion. Additional consideration may need to be given to the Carr Lake Park project and Bernal Extension.
Williams Road at Grandhaven Street	This intersection is within the scope of the Williams Road Improvement Project. Improvements are identified in the Williams Road Traffic Analysis.
Williams Road at Alisal High School Driveway	Future signal will be planned with any changes to school circulation or school expansion.
Sanborn Road at Buckhorn Drive	This location was previously ranked number 10 on the 2017 traffic signal priority list, with a score of 124 points. With no significant changes in the area it was presumed this intersection would be a low priority. Furthermore, other improvements at this location have been approved and are currently planned.
Sanborn Road at Antigua Ave	This location was previously ranked number 13 on the 2017 traffic signal priority list, with a score of 75 points. With no significant changes in the area it was presumed this intersection would be a low priority.

Westridge Parkway at Costco and Walmart Driveway

This location was previously ranked number 12 on the 2017 traffic signal priority list, with a score of 112 points. With no significant changes in the area it was presumed this intersection would be a low priority

Airport Boulevard at Skyway Boulevard

Intersection improvements are planned in coordination with the Travel Center and Airport Lease Development Projects

San Juan Grade Road at Van Buren Avenue

Intersection improvements are planned in coordination with the West Area Specific Plan

CONCLUSION

Staff recommends the intersections improvements for Harden Parkway at McKinnon Street and Freedom Parkway at Rider Avenue. Staff recommends each intersection be evaluated for a traffic signal, roundabout and other alternatives using an ICE analysis prior to making a final determination for the appropriate intersection control.

CEQA CONSIDERATION:

Not a Project. The City of Salinas has determined that the proposed action is not a project as defined by the California Environmental Quality Act (CEQA) (CEQA Guidelines Section 15378). In addition, CEQA Guidelines Section 15061 includes the general rule that CEQA applies only to activities which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. Because the proposed action and this matter have no potential to cause any effect on the environment, or because it falls within a category of activities excluded as projects pursuant to CEQA Guidelines section 15378, this matter is not a project. Because the matter does not cause a direct or foreseeable indirect physical change on or in the environment, this matter is not a project. Any subsequent discretionary projects resulting from this action will be assessed for CEQA applicability.

CEQA documents will be prepared prior to an intersection improvement project.

STRATEGIC PLAN INITIATIVE:

The Intersection Improvements Prioritization supports Council goals of public safety.

FISCAL AND SUSTAINABILITY IMPACT:

The available budget for traffic signal priorities (CIP 9094) is approximately \$1,710,000. The available funding is programmed for two traffic signal priority projects expected to be completed in 2021. In the upcoming fiscal years continued contribution towards this capital improvement program is anticipated, but given current economic realities, it is not anticipated to be able to fully fund any improvements. However, there will be adequate budget to begin the planning and design

for two (2) priority intersections and seek additional funding options such as grant funding to implement improvements. Staff is also seeking Council's commitment to fund the construction phase of these projects. When the design phase of the project is complete, staff will return to the Council with the estimated costs to construct the project and funding recommendations. The construction of any priority project will not be possible until funds are secured to fully finance improvements.

ATTACHMENTS:

Attachment 1: Resolution

Attachment 2: 2020 Intersection Improvements Priority List