



**TOWN OF LOS GATOS
COUNCIL AGENDA REPORT**

MEETING DATE: 02/16/2021

ITEM NO: 7

DATE: February 11, 2021
TO: Mayor and Town Council
FROM: Laurel Prevetti, Town Manager
SUBJECT: Authorize the Town Manager to Negotiate and Execute a Vendor Agreement with Econolite Systems, Inc. in an Amount Not to Exceed \$352,494, Including Contingency, for the Automated Traffic Signal Performance Measures and Virtual Bike Detection/Bike Signal Priority Project (CIP No. 813-0227 Traffic Signal Modernization)

RECOMMENDATION:

Staff recommends that the Town Council authorize the Town Manager to negotiate and execute a vendor agreement with Econolite Systems, Inc. in an amount not to exceed \$352,494, including contingency, for the Automated Traffic Signal Performance Measures (ATSPM) and Virtual Bike Detection/Bike Signal Priority (VBD/BSP) Project (CIP No. 813-0227 Traffic Signal Modernization).

BACKGROUND:

Town staff began the Traffic Signal Modernization Project in 2018, also referred to as the Smart Signals Project. The project involves several traffic signal related technology improvements that would upgrade the Town owned and operated traffic signals and enhance the signal systems with state-of-the-art adaptive technologies. The project is funded by the Town's Traffic Mitigation Fee program and grants from the Santa Clara Valley Transportation Authority (VTA) and Metropolitan Transportation Commission (MTC), including the Innovative Deployments to Enhance Arterials (IDEA) grant, for a total project budget of approximately \$2.9 million.

The goals of the Smart Signals Project are to improve multimodal safety and traffic operations; improve travel time for vehicles, bicycles, and pedestrians; improve the ability to plan for and respond to variable traffic volumes and patterns; test new technologies for bicycle detection and priorities; and help address traffic congestion issues on Los Gatos Boulevard.

PREPARED BY: WooJae Kim
Town Engineer

Reviewed by: Town Manager, Assistant Town Manager, Town Attorney, Finance Director, and Parks and Public Works Director

PAGE 2 OF 6

SUBJECT: Automated Traffic Signal Performance Measures and Virtual Bike Detection/Bike Signal Priority Project (CIP No. 813-0227 Traffic Signal Modernization)

DATE: February 11, 2021

BACKGROUND (continued):

The primary components of the project include the implementation of the Advanced Traffic Management System (ATMS) and Adaptive Traffic Signal Control System (ATCS); Smart Signals Field Improvements; and ATSPM and VBD/BSP. At the December 17, 2019 meeting, the Town Council authorized the Town Manager to proceed with a multi-step procurement process for the project.

On June 2, 2020, the Town Council awarded the consultant services agreement for the implementation of the ATMS and ATCS portions of the project to Econolite Systems, Inc. The scope of the ATMS is to replace the outdated traffic signal controller units with equipment and platform that can provide a robust monitoring of real-time status information, ability to update controller programming, maintenance alerts, system security, and recordkeeping of traffic signal operations at 18 of the 31 Town signals. Through the ATCS project, the remaining 13 traffic signals along and adjacent to Los Gatos Boulevard will be equipped with an adaptive traffic control system. The 13 include nine existing traffic signals along Los Gatos Boulevard, three adjacent traffic signals on Blossom Hill Road, and one on Los Gatos-Saratoga Road at Alberto Way. Each of these will be upgraded to handle real-time changes to the signal timing parameters in response to changes in the traffic conditions. The purpose of providing an adaptive control along this corridor is to better manage recurring and unexpected congestion and traffic delays due to periodic traffic volume fluctuations and complex traffic patterns.

On May 19, 2020, the Town Council awarded the consultant services agreements for the design of the Smart Signals Field Improvements to Iteris, Inc. The field improvements would improve the Town traffic signals infrastructure and network connectivity required to operate the ATMS and ATCS (also ATSPM and VVBD/BSP) technologies to better coordinate signals along the arterials, enable data collection, and allow centralized signal operations and monitoring from the Town's new Traffic Management Center in real-time. This project would install fiber optic cable and equipment to connect Town traffic signals to a high-speed communications network and cellular wireless connectivity for an interconnected network. The design for the field improvements has been completed, and the Smart Signals Field Improvements was authorized to be advertised for bid by Council at the January 19, 2021 meeting.

DISCUSSION:

The ATSPM and VBD/BSP applications are the final components of the Smart Signals Project as required by the IDEA grant program. The ATSPM application must be fully integrated with the ATMS/ATCS and collect real-time data from various detection sources at signalized intersections for the purpose of delivering graphical information and feedback on the traffic signal performance measures. The information will be used to improve signal coordination that can allow for a fully adaptive system along Los Gatos Boulevard. The vendor selected for the implementation of ATSPM system is expected to provide systems and staff support, monitoring

SUBJECT: Automated Traffic Signal Performance Measures and Virtual Bike Detection/Bike Signal Priority Project (CIP No. 813-0227 Traffic Signal Modernization)

DATE: February 11, 2021

DISCUSSION (continued):

and reporting of data, assistance in operations and maintenance, quality control, and Town staff training.

Bicycle detection (VBD/BSP) would also be integrated with the ATMS/ATCS and utilize smart phone applications, Global Positioning System (GPS), and video detection at the nine traffic signaled intersections along Los Gatos Boulevard to detect bicyclists and prioritize a green traffic light when applicable. The following are the nine intersections proposed for VBD/BSP along Los Gatos Boulevard:

1. Los Gatos - Saratoga Road
2. Kennedy Road - Caldwell Avenue
3. Nino Avenue
4. Roberts Road-Shannon Road
5. Blossom Hill Road
6. Los Gatos Almaden Road – Chirco Drive
7. Village Square Driveway
8. Gateway Drive – Garden Lane
9. Lark Avenue

The Town will work with the Los Gatos-Monte Sereno Safe Routes to School (SR2S) organization to introduce and roll out the smartphone application for the VBD/BSP to appropriate student groups. The SR2S organization will assist with the outreach and education related to the bike detection and signal prioritization at the nine Los Gatos Boulevard intersections and bring students onboard with using the smart phone application and promote active transportation means to commute to schools.

RFP Process

The Town first released the RFP for ATSPM and VBD/BSP on September 8, 2020. The RFP was posted on the Town’s website and sent to potential consultants. The RFP scope for the ATSPM had to be reissued on November 9, 2020, due to proposers not being able to meet mandatory system requirements. Requirements were modified to allow proposers to qualify. Below is a summary of proposals received for the ATSPM and VBD/BPS RFP’s by the due date of December 4, 2020:

	Parsons	Traffop	Miovision	Econolite Systems	Sensys Networks	Traffic Patterns
ATSPM	X	X	X	X		
VBD/BSP	X			X	X	X

“X” denotes proposals received.

PAGE 4 OF 6

SUBJECT: Automated Traffic Signal Performance Measures and Virtual Bike Detection/Bike Signal Priority Project (CIP No. 813-0227 Traffic Signal Modernization)

DATE: February 11, 2021

DISCUSSION (continued):

The evaluation committee, consisting of Town staff and representatives from grantor agencies VTA and MTC, evaluated the proposals and shortlisted consultants for oral interviews. On December 14, 15, and 16, the committee interviewed Parsons, Econolite Systems, and Traffop for the ATSPM; and Sensys Networks, Parsons, and Econolite Systems for the VPS/BSP portion. After a thorough review, the committee selected Econolite Systems as the most qualified firm to provide consultant services for the implementation of both ATSPM and VBD/BSP applications.

Econolite Systems proposed to deliver a fully integrated ATSPM system with all 31 Town traffic signals, as required in the RFP scope. In addition, the user interface of the smartphone application proposed for the VBD/BSP component was determined to be the most ideal for students and other bicyclists. Econolite Systems will also provide one year of operational support to assist the Town staff to monitor and operate the system, including making recommendations on signal coordination changes as required. The scope of services proposed by Econolite Systems is included as Attachment 1.

The implementation of the ATSPM and VBD/BSP will be funded through the IDEA federal grant. As a recipient of the federal grant, the Town needs to comply with federal regulations in administering the project as reflected in the draft vendor agreement included as Attachment 2.

CONCLUSION:

Approval of the recommendation will allow this project to move forward with the award and implementation of the ATSPM and VBD/BSP to finalize the Smart Signals Project.

COORDINATION:

This report was coordinated with MTC staff, the Town Attorney, and the Finance Department.

FISCAL IMPACT:

Traffic Signal Modernization (CIP No. 813-0227) in the FY 2020/21 – 2024/25 CIP Budget has sufficient funds for the contract.

SUBJECT: Automated Traffic Signal Performance Measures and Virtual Bike Detection/Bike Signal Priority Project (CIP No. 813-0227 Traffic Signal Modernization)

DATE: February 11, 2021

FISCAL IMPACT (continued):

Traffic Signal Modernization		
CIP No. 813-0227		
	Budget	Costs
Grant Fund	\$1,826,400	
Traffic Mitigation	\$1,103,289	
Total Project Budget	\$2,929,689	
Proposed ATSPM and VBD/BSP		\$352,494
ATCS-ATMS Vendor (Econolite)		\$581,649
Design of Field Elements (Iteris)		\$135,390
Field Construction		\$750,000
Project Management (W-Trans)		\$200,000
Staff Costs		\$129,280
Misc. Prior Year Expenditures		\$76,523
Project Costs Committed		\$2,225,336
Available Balance		\$704,353

Staff costs are tracked for all projects. Tracking of staff costs allows for accountability in the costs of projects, recovery of costs from grant funded projects, and identification of future staffing needs. This project utilizes a combination of full-time budgeted staff and temporary staff that support fluctuating workloads. The Town will seek reimbursement for qualifying staff charges from grant funds.

ENVIRONMENTAL ASSESSMENT:

As this portion of the Smart Signals program is software implementation, it is not a project for CEQA purposes. The construction portion of the Smart Signals project is Categorical Exempt (15301(c) Existing Facilities). As required for federally funded projects, staff will work with Metropolitan Transportation Commission, the project sponsor, to determine project exemption under the National Environmental Policy Act.

PAGE 6 OF 6

SUBJECT: Automated Traffic Signal Performance Measures and Virtual Bike Detection/Bike
Signal Priority Project (CIP No. 813-0227 Traffic Signal Modernization)

DATE: February 11, 2021

ATTACHMENTS:

1. Proposed Scope of Services from Econolite Systems
2. Draft Vendor Agreement with Econolite Systems