



PUBLIC WORKS DEPARTMENT

MEMORANDUM

DATE: October 23, 2018

TO: WILMA QUAN-SCHECTER, City Manager
Office of the City Manager

THROUGH: SCOTT L. MOZIER, Director 
Public Works Department

RANDALL MORRISON, Assistant Director 
Public Works Department

FROM: JOHN STANBOULIAN, Public Works Manager
Public Works Department

**SUBJECT: AWARDING SOLE SOURCE PURCHASE CONTRACTS TO
TRAFFICWARE GROUP INC.,
1) IN THE AMOUNT OF \$586,000 FOR THE PURCHASE OF SYNCHRO
GREEN ADAPTIVE MODULES FOR THE 28 INTERSECTIONS
REQUIRED FOR THE HERNDON AVENUE ITS ADAPTIVE TRAFFIC
SYNCHRONIZATION PROJECT (PW00743) AND
2) IN THE AMOUNT OF \$338,100 FOR THE PURCHASE OF SYNCHRO
GREEN ADAPTIVE MODULES FOR THE 16 INTERSECTIONS
REQUIRED FOR THE WEST SHAW AVENUE ITS ADAPTIVE TRAFFIC
SYNCHRONIZATION PROJECT (PW00742)**

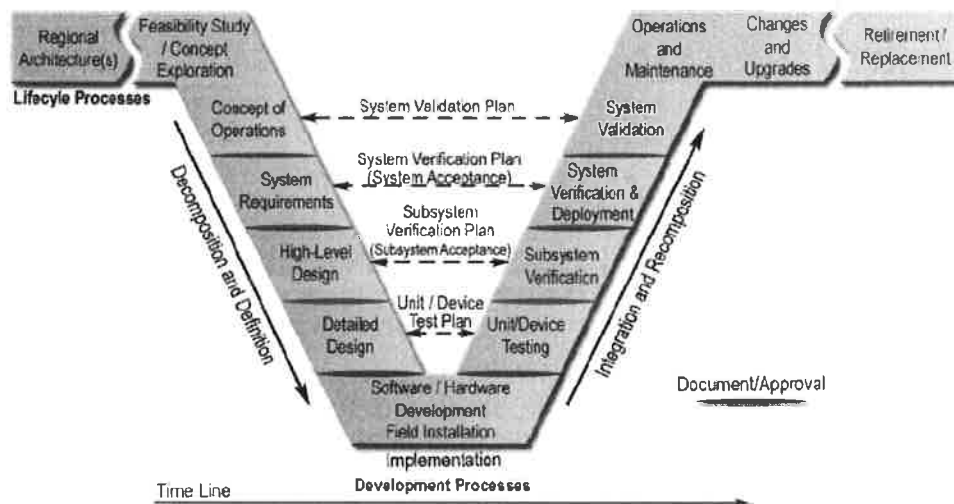
Trafficware Group Inc., (Trafficware) is the sole-source manufacturer, distributor, and configurator for the City of Fresno's Advanced Transportation Management System (ATMS), Synchro Green Adaptive Signal Control Technology (ASCT) System, and traffic signal controller's central processing unit (CPU) and software.

System Engineering & Procurement:

The Public Works Department's Traffic Operations Center (TOC) deployed Trafficware ATMS software in 2001 which monitors 330 of the City's 500 intelligent traffic signals through the transportation fiber/wireless network. Trafficware Synchro Green ASCT System was deployed in 2013, as part of east Shaw Avenue Traffic Synchronization project, which improved travel times an average of 27%, successfully addressing varying seasonal traffic conditions for Fashion Fair,

California State University Fresno, Save Mart Center, and numerous businesses along the corridor without any issues.

In 2012, the City's ASCT System was competitively bid as part of the east Shaw Avenue Intelligent Transportation System (SR41 to 168) Project, Bid File 3192-11381. In 2013, the System Engineering Management Plan (SEMP) for the Synchro Green ASCT System was approved for deployment by Caltrans and Federal Highway Administration (FHWA). The System Engineering Management Plan (SEMP) was based on U.S. Department of Transportation requirements for System Engineering for Intelligent Transportation Systems and Model Systems Engineering Documents for Adaptive Signal Control Technology (ASCT) Systems. The System Engineering (SE) extensive requirements are best illustrated and summarized graphically by the SE V-Diagram.



Public Interest Finding:

During 2017-2018, Caltrans Cost Effectiveness/Public Interest Finding (Caltrans Local Assistance Procedure Manual, Exhibit 12-F) was filed with Caltrans Local Assistance and FHWA's Proprietary.PIF@dot.ca.gov web site for the sole source procurement of Trafficware Synchro Green ASCT, as essential for synchronization with the existing City's systems for safe interoperability and cost effectiveness. The Public Interest Finding included Trafficware estimates for \$586,000 for the purchase of Synchro Green Adaptive Modules for the 28 intersections required for Herndon Avenue ITS Adaptive Synchronization Project (PW00743), and for \$338,100 for the purchase of Synchro Green Adaptive Modules for the 16 intersections required for west Shaw Avenue ITS Adaptive Synchronization Project (PW00742).

During the City's Fiscal Year 2019, the Public Works Department is in construction phase for 1) Herndon Avenue Adaptive ITS Traffic Signals Synchronization Project (Golden State Blvd to Willow Ave) and 2) west Shaw Avenue Adaptive ITS Traffic Signals Synchronization Project (SR 99 to SR41).

1. On June 14, 2018, the City Council awarded a construction contract to Kertel Communications, Inc., dba Sebastian of Fresno, CA in the amount of \$1,039,477 as the lowest responsive and responsible bidder, for Herndon Avenue Project, Bid File 3593. The Herndon Avenue Project is constructing the necessary ITS infrastructure improvements that will prepare the corridor for the deployment of the Synchro Green ASCT modules. The June 14, 2018 Staff Report to City Council stated that separate from the ITS infrastructure construction contract, but as part of the overall Herndon Avenue project, staff will be bringing to City Council a sole-source contract for the purchase of Synchro Green ASCT modules for 28 intersections.
2. The west Shaw Avenue Adaptive ITS Project includes only the deployment of the Synchro Green ASCT modules for 16 intersections. The west Shaw Avenue ITS infrastructure improvements were constructed in 2012.

Sole-Source:

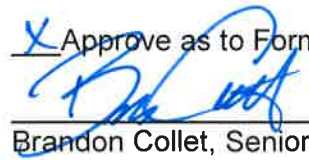
The Trafficware Synchro Green module is manufactured, distributed, configured, and maintained only by Trafficware Group Inc. In January 17, 2018, Public Works Department received Trafficware Group Inc., written notification, stating that Trafficware Group Inc., will distribute only through Trafficware direct sales channel to agencies for all Trafficware Synchro Green ASCT modules, configuration, and support. The Trafficware Synchro Green ASCT modules include traffic signal controller central processing unit boards (2070-1C CPU), intersection licenses, configuration, training, and a 5 year warranty.

The Trafficware Synchro Green ASCT System has gone through extensive system engineering, review and approval process by Caltrans and FHWA. The Synchro Green ASCT System has been operating since 2013 along east Shaw Avenue corridor, improving travel times by an average of 27%. Public Works Department Traffic Operations Center and Traffic Signal Maintenance staff have extensive experience with the state-of-the-art Synchro Green ASCT System that has demonstrated reliability, safety, and effective operations and will best serve the City's transportation system.

The Trafficware price list for South Carolina DOT, Local Governments, 2013, was used to assess the Trafficware quotes for the City of Fresno. The 2018 Synchro Green license quote for City of Fresno is 14.8% higher as compared with 2013 license prices which accounts for a 2.8% annual price inflator if a similar California state-wide contract were negotiated today. As a general comparison, the 2012 Shaw Ave ITS Adaptive Project (SR41 to SR168) low bid for Trafficware Synchro Green ASCT System was \$305,000 for 9 traffic signals (approximately \$33,900 per traffic signal). The 2018 Trafficware's direct cost to the City for expanding the existing system to Herndon Avenue is \$586,000 for 28 traffic signals (\$20,928 per traffic signal), and the direct cost to the City for expanding the existing system to west Shaw Avenue is \$338,100 for 16 traffic signals (\$21,131 per traffic signal) which is an approximately 38% savings. The Herndon Avenue and west Shaw Avenue projects' grant funding and associated approvals are based on manufacturer direct to local agency pricing.

The projects will have no impact on the General Fund and are funded by Federal grant from the Congestion Mitigation and Air Quality (CMAQ) Program and Proposition 111 Gas Tax.

Staff recommends Council award a sole-source purchase contract to Trafficware Group Inc., 1) in the amount of \$586,000 for the purchase of Synchro Green adaptive modules for the 28 intersections required for the Herndon Avenue ITS Adaptive Synchronization Project (PW00743) and 2) in the amount of \$338,100 for the purchase of Synchro Green Adaptive Modules for the 16 intersections required for the west Shaw Avenue ITS Adaptive Traffic Synchronization Project (PW00742) and authorize the Purchasing Manager to sign and execute the purchase order on behalf of the City of Fresno.

☒ Approve as to Form:


Brandon Collet, Senior Deputy City Attorney

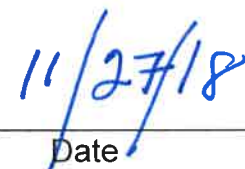


Date

☒ Approve Request:

☐ Deny Request:


Wilma Quan-Schechter, City Manager



Date

Illustration
Synchro Green ASCT
Traffic Signal Controller
Central Processing Unit (2070LX-1C CPU)

