



500 West Big Beaver
Troy, MI 48084
troymi.gov

J-09

CITY COUNCIL AGENDA ITEM

Date: March 13, 2019

To: Mark F. Miller, City Manager

From: Tom Darling, Financial Services Director
MaryBeth Murz, Purchasing Manager
David Roberts, Fire Chief

Subject: Bid Waiver & Budget Amendment – Emergency Vehicle Preemption – Opticom GPS

History

Since circa 1975, the Fire Department has implemented and made use of emergency vehicle preemption (EVP) in the form of electronic emitters on fire apparatus and fire staff vehicles, and receivers on traffic signals at numerous intersections throughout the city. More recently, and over the last 15+ years, EVP emitters have been installed on EMS Paramedic First Responder vehicles. EVP allows responding emergency vehicles equipped with such emitters to change the traffic signal to green in their favor, thereby reducing the likelihood of right angle, broadside collisions as a result of entering the intersection against a red signal, and increasing the safety and improving the response time of responders.

Since its inception, EVP in Troy has made use of the Opticom infrared (IR) technology, changing traffic signals one-at-a-time via line of sight IR light waves. While this method has proven effective over the years, the technology is limited in that there must be a clear line of sight between the vehicle emitter and the traffic signal receiver, and receivers need to be continually maintained through cleaning and realignment efforts by the Road Commission for Oakland County (RCOC).

Global Traffic Technologies Opticom Managed Services of St. Paul, Minnesota, offers a new and improved GPS-based technology to change traffic signals. GPS radio does not require line of sight to operate effectively, and does not require on-going maintenance to clean and realign receivers. Radio transmitters and receivers interface with GPS to determine an approaching emergency vehicle's speed and, based on direction of travel as determined by GPS and vehicle accessories, can anticipate which traffic signal(s) to change next, clearing the intersection of traffic ahead of the emergency vehicle before it reaches each intersection. Such technology allows for smarter, more efficient EVP with minimal disruption to traffic.

The original intent was to change Troy's remaining IR-equipped intersections, approximately 100+ in total, over to GPS-based technology gradually over approximately 10 years through the Fire Department's annual capital budget account. With the impending I-75 construction, however, and the expected increase in traffic on surface streets as a result; and the concern for traffic backups affecting the Fire Department's ability to respond to and from the fire stations, a more urgent need has been identified to reduce the installation timeline.



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Global Traffic Technologies has agreed to provide the City of Troy with the required amount of new GPS-based equipment in order to change over all of the remaining IR-equipped traffic signals, and remaining TFD vehicles within an estimated 1-year time frame. The RCOC, who will install the new equipment and remove the old equipment, has agreed to the plan.

Purchasing

- Working together, and after consulting with the Engineering Department, RCOC, and the Director of Financial Services over the last several months, the Fire Department and Department of Public Works are requesting a budget amendment to purchase the required Opticom GPS equipment.
- Additionally, in the best interest of the City it is recommended the bid process be waived to allow *Global Traffic Technologies, LLC, of St. Paul, Minnesota*, the manufacturer of the Opticom GPS equipment, to provide the necessary equipment for RCOC to install.
- *Global Traffic Technologies* recognizes the City of Troy as a leader in emergency vehicle preemption, and sees benefit to assist the City with providing the necessary equipment as quickly as it can to make a faster switch to the GPS system.
- Several intersections along Big Beaver Road have already been changed-over to GPS-based technology for which Troy City Council approved a bid waiver on April 10, 2017 (Resolution #2017-11-179-J-7).
- Remaining intersections along Big Beaver Road and other major streets will be identified for installation.

Financial

The cost of the GPS Opticom preemption equipment is \$420,576. Funds to purchase this equipment will be taken from the Fire Department Capital Budget Account #401.336338.7978.035, Project #2019C0012, which already has \$70,000 budgeted this fiscal year. This will require a budget amendment, therefore, in the amount of \$350,580.

Recommendation

In the best interest of the City it is recommended to waive the bid process in order to authorize the purchase of Opticom GPS Emergency Vehicle Preemption equipment from *Global Traffic Technologies, LLC, of St. Paul, Minnesota*, in the amount of **\$420,576.00**, as detailed in the attached sales quote, for (93) GPS Preemption intersection kits (receivers) and (29) vehicle kits (emitters). City management also requests a budget amendment to the Fire Department Capital Budget Account in the amount \$350,580.00.

Global Traffic Technologies, LLC
 7800 Third St., N.
 Saint Paul, MN 55128
 United States

800-258-4610 or 651-789-7333

Bill To	Customer	NetSuite Opp't	Date	Expires
Troy, MI	Troy, MI	9187	12-Feb-19	13-May-19

Ship To	Solution/Purchase Type	Term: For Ongoing Services
Troy, MI	Purchase	10

500 W. Big Beaver Road Troy, MI 48064		Intersections	Vehicles
Attn: Dave Roberts		93	29

Items	Qty	Description	Price Per Item	Extended Price
Intersection components:				
	93	Model 760 card rack	\$ 236.00	\$ 21,948.00
	93	Model 764 multimode phase selector	\$ 1,677.00	\$ 155,961.00
	93	Model 768 auxiliary interface panel	\$ 316.00	\$ 29,388.00
	93	Model 3100 series mast-mount radio receiver	\$ 1,617.00	\$ 150,381.00
Vehicle components:				
	29	Model 2100/2101 series vehicle kit	\$ 1,812.00	\$ 52,548.00
Miscellaneous items:				
	15000	OPTICOM GPS 1070 INSTALLATION CABLE 500 FT SPOOL (Quantity in feet)	\$ 0.69	\$ 10,350.00
Proposal notes:				
Reference SPR 7878.				
Discounts assume old equipment will be returned to GTT.				
Total before applicable shipping, duties and/or taxes				\$ 420,576.00

Prices reflect 2019 increases and may be discounted for orders placed prior to December 31, 2018.

To the extent this proposal is a "Budgetary Proposal," it is to be used for informational purposes only and is not intended to be a binding contract between the Parties. The prices provided in the Budgetary Proposal are estimates only and are based on information and pricing known as of the date of the Budgetary Proposal.

For services, a signed Master Service Agreement ("MSA") must accompany the order, such agreement is available at <http://www.gtt.com/servicesagreement/>. The terms and conditions that govern the MSA are available at http://www.gtt.com/sales_terms/.

When included, intersection installation pricing assumes a standard configuration without complications. Not included in this proposal are the following items, which will require additional cost: 1) crushed conduit or any other issues preventing cable from being installed, 2) lane or road closures, 3) police or other resources needed at the installation area, and/or 4) other third-party costs not known at the time of the proposal.

Proposal assumes the intersection cabinets are in good working order and contain wiring diagrams.

Vehicle installation assumes standard installation and does not include: 1) special mounting brackets, 2) excess wiring, and/or 3) swapping out previously installed (replacement) vehicle hardware.

Project management expenses can increase in instances where development, if required, is not fully scoped.

Proposal excludes any activities associated with: 1) traffic control plan, 2) water pollution control plan, 3) changeable message signs/flaggers, 4) permits/bonds/fees, and/or 5) removal/repair/replacement of concrete, asphalt, conduits or wiring.