



500 West Big Beaver
Troy, MI 48084
troymi.gov

J-05

CITY COUNCIL AGENDA ITEM

Date: April 7, 2017

To: Brian Kischnick, City Manager

From: MaryBeth Murz, Purchasing Director
David Roberts, Fire Chief

Subject: Bid Waiver – Fire Department Emergency Vehicle Preemption – Opticom GPS

History

Since the 1970s, 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 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. Included is a map showing intersections with and without Opticom.

Global Traffic Technologies' Opticom Managed Services now 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, can anticipate which traffic signal(s) to change next, clearing the intersection of traffic ahead of the emergency vehicle. Such technology also allows for smarter more efficient EVP with minimal disruption to traffic. (An on-line demonstration can be found at: <http://www.gtt.com/emergency-vehicle-preemption-gps/>)

Since the fall of 2016, Opticom GPS has been installed at intersections along Big Beaver Road, from Livernois to Rochester Road, and in fire vehicles at Station #1 for TFD evaluation purposes. The evaluation has proven effective.



500 West Big Beaver
Troy, MI 48084
troymi.gov

CITY COUNCIL AGENDA ITEM

History (Continued)

New specifications have been added to the Engineering Department's design requirements for signal-controlled intersections. As intersections are updated with new signals, Opticom GPS will be installed along with IR equipment. Both the IR and GPS will work simultaneously and remain operational until a total transition is accomplished, at which time the IR equipment can be removed.

Purchasing

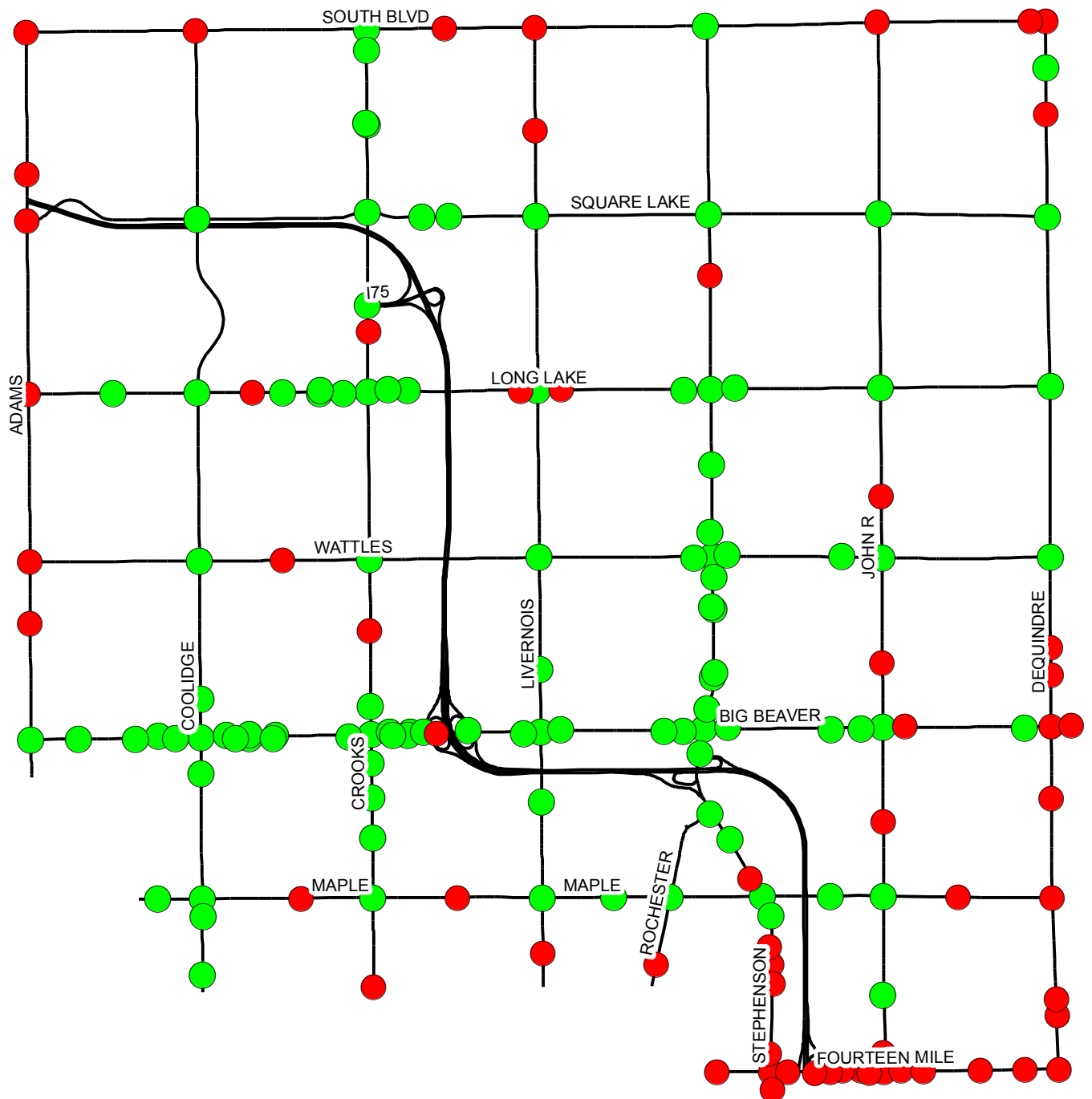
Opticom EVP equipment has been the standard in Troy since the 1970s. Opticom IR and GPS equipment are both compatible with one another, allowing for simultaneous operation during the transition to GPS technology. It is recommended the bid process be waived because *Carrier & Gable, Inc., of Farmington Hills, Michigan*, is the only authorized dealer in Michigan for Global Traffic Technologies, the manufacturer of the Opticom GPS equipment. Since Opticom GPS can work simultaneously with existing IR technology, this will allow for a planned and budgeted transition over time.

Financial

Funds are available in the Fire Department Operating Account 101.336.338.7740.115 to purchase the first set of mobile Opticom GPS emitters (preemption vehicle kits). Future purchases of intersection signal receiving equipment will be budgeted as a Capital Improvement Project and brought before Council for approval.

Recommendation

City management recommends the approval to waive the bid process and authorize the purchase of Opticom GPS Emergency Vehicle Preemption equipment from *Carrier & Gable, Inc., of Farmington Hills, Michigan*, in the amount of **\$12,888.00**, as detailed in the attached quotation, for the current (4) GPS Preemption Vehicle Kit Series 2000 equipment (emitters) that have been installed temporarily in TFD vehicles.



Legend

Traffic Signal

- Opticom Present (102 in total)
- No Opticom Present (61 in total)

*Opticom inventory provided By RCOC



CARRIER & GABLE, INC.

24110 Research Drive
Farmington Hills, MI 48335
(248) 477-8700 (248) 473-0730 • FAX

www.carriergable.com

SALES QUOTE

Sales Quote Number: 27222

Sales Quote Date: 2/3/2017

Expires On: 5/3/2017

Page: 1

ALL VALUES STATED IN U.S. DOLLARS

Sell

To: TROY, CITY OF
CHIEF DAVID ROBERTS
500 W. BIG BEAVER
TROY, MI 48084

Ship

To: TROY, CITY OF
CITY HALL
500 W. BIG BEAVER
TROY, MI 48084

Quote/Bid Ref:	Intersection: BIG BEAVER CORRIDOR	Customer ID: 2110
Project No.:	Project City:	SalesPerson: Kiel McIntosh
Shipment Within:	Project County:	
Shipping Terms:	Sheet:	
Terms: NET 30 DAYS	Project Misc.:	

Item No.	Description	Cross-Reference No.	Qty.	Unit Price	Total Price
151OPTICOM	OPTICOM PRIORITY CONTROL		9	6,289.18889	56,602.70
151-2500	RADIO, OPTICOM GPS MDL 3100		9		
151-0764	PHASE SELECTOR, 4 CH 764		9		
151-3500	AUXILIARY INTERFACE PANEL, MODEL 768		9		
103-7495	MINI-BRAC FOR OPTICOM SENSOR MOUNT		9		
151-NS004903	CABLE, 1000' REEL, GPS INSTALL MDL 1070		1		
	***** END of KIT *****				
151-2010	GPS PREEMPTION VEHICLE KIT SERIES 2000		4	3,222.00	12,888.00
151-NS009308	OPTICOM INTELLIGREEN KIT		1	6,091.00	6,091.00

Amount Subject to Sales Tax 0
Amount Exempt from Sales Tax 75,581.70

Subtotal: 75,581.70
Invoice Discount: 0.00
Total Sales Tax: 0.00
Total: 75,581.70