

CITY OF PITTSBURGH  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF TRANSPORTATION AND ENGINEERING  
ALLEGHENY COUNTY, PA

REQUEST FOR TRAFFIC ENGINEERING  
SERVICES LETTER OF INTEREST

The Office of the Director of the DEPARTMENT OF PUBLIC WORKS OF THE CITY OF PITTSBURGH will receive Letters of Interest with a current SF 330 form for TRAFFIC ENGINEERING services until 4:00 p.m., on October 9, 2013, for the following:

INSTALLATION AND SUPPORT SERVICES FOR TRAFFIC SIGNAL SOFTWARE  
FOR THE  
TRAFFIC SIGNAL SYSTEM UPGRADE PROJECT  
LOCATED AT CITY OF PITTSBURGH'S CENTRAL BUSINESS DISTRICT  
BTE PROJECT NO. 12502  
MPMS No. 95744

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**DPW BTE Project No. 12502**

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Appendix A – Pittsburgh Traffic Network Ethernet Conversion – Technical  
Memorandum - November 04, 2010

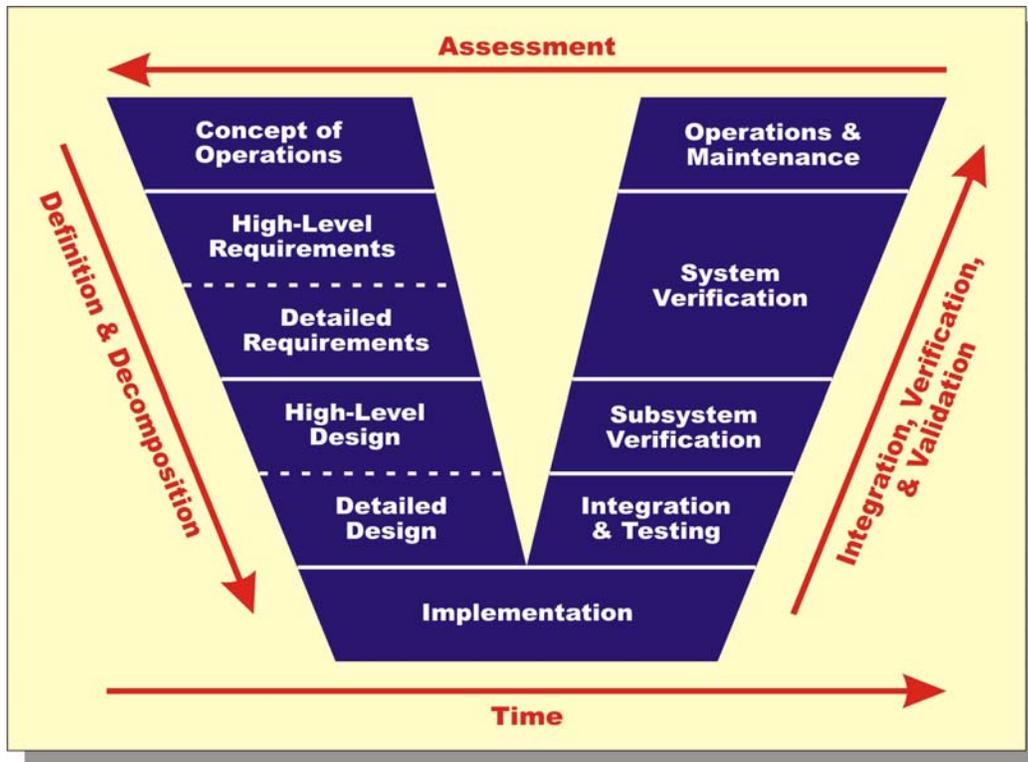
Appendix B – Specifications for Ethernet conversion

# 1. INTRODUCTION

## 1.1 PURPOSE

The City of Pittsburgh, through its Department of Public Works Bureau of Transportation Engineering (DPW - BTE), is soliciting a Letter of Interest from qualified firms for designing, supplying, installing and integrating an Advanced Traffic Management System (ATMS) for the City's traffic control system. This work will install a central computer system to upgrade the existing system. The system must be capable of communicating to local intersection controllers (This communication must consist of handling local and signal system timings and functions, reporting, diagnostic features, etc.) traffic detectors, and video detection cameras, PTZ cameras, as well as reversible lanes, variable message signs, transit priority facilities and HOV facilities to provide an Intelligent Transportation System (ITS) to manage the demands of traffic in the City of Pittsburgh. The system should also be capable of receiving data from a radio network. Finally, how the system can address adaptive control now and/or in the future should be addressed.

In order to design, supply, install, and integrate the most appropriate ATMS, the qualified firms will need to follow 23 CFR 940 – Systems Engineering Process (SEP) which is outlined in the the Vee Diagram shown below.



This will require the development of a project Architecture that encompasses the market packages necessitated by the project.

A Systems Engineering Management Plan will also need to be developed. The System Engineering Management Plan shall describe the qualified firms proposed efforts for planning, controlling and conducting a fully integrated software engineering effort. The Plan will be used to understand and evaluate the vendor's engineering work efforts as a part of the contract monitoring process.

In addition, the qualified firms will be required to develop a Concept of Operations (ConOps). The purpose of the ConOps is Stakeholder Identification and Communication; High-level System Definition; Foundation for Lower-level System Description; and Definition of Major User Classes and User Activities. The ConOps should be a document available, and relevant, to all stakeholders in the system, no matter what their background or role within the system. It should be readable and relevant to high-level decision makers, to the ATMS manager, and to the ATMS operator(s).

Finally, the Vendor shall develop the system requirements; high level design; detailed design requirements; implementation; integration and testing; subsystem verification; system verification; operations and maintenance and assessment of the system to validate that the project goals were met and identification of areas for improvement.

Ultimately, the Bidders are to propose a system meeting the requirements of this Request for Proposal (RFP), including a 30-day demonstration period with two groups of five signals. The selected Vendor will be responsible for providing all necessary hardware and software. The selected Vendor will perform all programming, customization and integration required to provide the City with a fully functional system meeting these requirements. The supplier will also be required to provide the City with training sufficient to allow for continued operations, maintenance and expansion of the system. Training shall occur after the system has successfully passed all testing.

## **1.2 BACKGROUND**

The Central Business District (CBD) of Pittsburgh is a densely developed, congested area that serves as the employment, business and commercial hub of Western Pennsylvania. Access is restricted to a limited number of river crossings and land corridors. The roadway network is complicated by narrow streets and intersecting street grids. A number of regional attractions are located near the CBD, including Heinz Field, PNC Park, Rivers Casino, Consol Energy Center, David L. Lawrence Convention Center among others. Combined with other developments in the downtown, the North Shore, the Strip District and other surrounding neighborhoods, the CBD has varied activity and traffic patterns throughout the day and night.

The relevant stakeholders for this project include, at a minimum:

City of Pittsburgh DPW - BTE  
PennDOT  
FHWA

The City currently has type 170 controllers using Wapiti software installed at all intersections within the project area. There is also one 2070 controller that will likely be integrated to the system at a later date. Many intersections are interconnected with fiber optic cabling. A project is currently underway to update the RS232 communication to Ethernet communication to provide for more reliable communications to the network.

Funding for the Central System is available as City Signal Upgrades - Software Project No. 12502.

### **1.3 EXISTING SYSTEM**

#### **1.3.1 Traffic Controllers**

The initial installation of the existing central system consisted of 89 signalized intersections. At present, approximately 130 are on-line. All controllers are operating programs based upon a time of day, day of week. The majority of these intersections are operating pre-timed timing plans, but selected intersections have some actuation. The current MIST or Traffic View system can be used for monitoring intersection operations and for uploading and downloading traffic plans. MIST provides the time of day and date information to each controller once per day. Currently, MIST is functioning largely as a point-to-point system and due to some communications issues is generally only handling time calls at this time, while also assisting with intersection monitoring.

All 89 controllers in the original system conform to specifications for Model 170A Traffic Signal Controller System - Hardware Specifications FHWA-IP-78-16, dated 1985 and Section 952 of the PennDOT Publication 408 Specifications. Controllers were originally installed in Type 330 cabinets. The City currently specifies Type 336 cabinets to allow for more space in the cabinets.

The City has a system of approximately 130 traffic signals that are to be incorporated into the software program. The system extent is shown in Appendix B.

These signals account for nearly one-quarter of the City's 610 traffic signals. Several of these intersections may be off-line during the installation of the central system due to ongoing construction projects. The central system should include all of these intersections in design, operational layout and preparation of graphics and databases. Final integration and testing of any intersections not connected to the network at the time of installation and testing will be demonstrated with a local connection.

The City has an existing licensing agreement with Wapiti Micro Systems, Inc., covering use of this software at all intersections Citywide. The City is entitled to all upgrades to

this software under the terms of the license. At this time, all intersections on the system are operating with Type 170 controllers using WAPITI W4IKS Software. In addition, the City has recently installed one 2070 controller that is anticipated to be added to the system.

### **1.3.2 System Detectors**

A total of 99 system detectors were installed at one time for system sampling. Over time, and with a lack of use, many sampling detectors have either been removed or are not functional. If system sampling and flow detection is desired in the future, cameras or radar may be added to the system at a later date. As a part of this project, system detectors will be assumed to not exist. However, individual intersections may have detection and the ability to accommodate these detectors in the future should be addressed in the LOI.

### **1.3.3 Fiber-Optic Interconnect**

A fiber-optic interconnect system was installed in Phase I of the CTRTCS. This system consists of a high-speed backbone data ring and a low speed distribution network. Each of these services uses two fibers in the same 12-fiber multimode cable. A separate fiber cable with 6 single-mode fibers has been provided on the backbone ring to provide for future services such as video surveillance, communication, or changeable signs.

The RS-232 communication system is currently being upgraded to an Ethernet system. Further details on the conversion and anticipated communication system are available in the Technical Memorandum prepared for the CBD Signal Upgrades project.

### **1.3.4 Control Room and Facilities**

The Control Room is located in room 301 of the City County Building.

The Traffic Signal Shop is located in the Strip District at the intersection of 27th Street and Liberty Avenue.

### **1.3.5 City LAN**

The City LAN runs TCP/IP over an ATM network. Offices of the Department of Public Works, Bureau of Transportation and Engineering are located on the third floor of the City-County Building, a nine-story building. The City-County Building has been wired to accommodate high-speed data communications. A Mxxx Dxxx Fxxx (MDF) is located on each floor, with a fiber-optic backbone connecting each floor. Data outlets have been installed in each office, with IDF Category 5 connections to the MDF on that floor. A direct fiber-optic connection has been installed between the Control Room and the Basement MDF. The network has been extended to the Traffic Signal Shop by a fiber-optic connection.

## **2. SYSTEM REQUIREMENTS**

The features listed in this document should be considered minimum requirements for the desired ATMS. The City of Pittsburgh is interested in examining and acquiring the most innovative and up to date technology that is available. Letters of Interest should highlight additional features available in the software package presented that have been used by other agencies and proved to be useful.

### **2.1 CENTRAL COMPUTER SYSTEM**

Design, furnish and install all components of a central computer system necessary to meet the functional requirements of this specification. At a minimum, provide a system including the following components. Note that all network devices shall be Simple Network Time Protocol (SNTP) devices:

#### **2.1.1 Central Computer**

Furnish and install a central computer(s) capable of operating the traffic control software as described in Section 2.2. Furnish necessary servers capable of performing all required computations for the eventual system size of at least 700 intersections, 700 system detectors and 300 cameras. Furnish a user interface including a 104-key keyboard, video and mouse (KVM). Furnish and install equipment compatible with Microsoft Windows operating system currently in use by the City and capable of operating the traffic control software as specified.

#### **2.1.2 Mobile Devices**

Furnish and install all necessary software on two notebooks capable of running the software described in Section 2.2. Furnish and install software or mobile applications on two tablets (iOS, Android or Windows Mobile operating system) capable of running the software described in Section 2.2.

#### **2.1.3 System Clock**

Furnish and install a system clock that communicates to all controllers. Ensure ongoing system calibration to this time. The clock shall be set to the eastern time zone and automatically adjust for daylight savings time. This shall be a Simple Network Time Protocol (SNTP) device.

#### **2.1.4 Back-up System**

Provide a Network Management System capable of monitoring the entire network and disbursing instructions and monitoring groups of devices at one time. Provide a backup system capable of making a complete backup of the hard drive without operator intervention. Provide backup software which will allow incremental, partial or full, automatic timed backups at user-specified times. Include reusable media sufficient to

make ten complete backups of the system. The system shall allow for full system functionality for servers and work stations after restoring from backup. The backup shall be located off-site at the signal shop.

### **2.1.5 Records**

Provide a system capable of making and storing a complete record of the signal operations without operator intervention. At a minimum, records shall be searchable by type, location and operator. Records shall be formatted for printing. Records must be maintained for at least 10 years either by the server or external device. If an external device is used, one year of records must be stored on each device with ten devices provided.

### **2.1.6 Uninterruptible Power Supply**

Provide an Uninterruptible Power Supply (UPS) and a Remote Power Management Device (RPM) to support the system in the event of a power failure. The RPM allow the system to be rebooted remotely.

## **2.2 TRAFFIC CONTROL SOFTWARE**

Provide traffic control software capable of monitoring local intersection operation, responding to traffic conditions, and providing central control to Type 170/2070 controllers at local intersections. Provide a system with the following capabilities:

Decentralized, distributed-intelligence traffic control system, with phase sequencing and cycle timing functions maintained locally by the existing intersection controllers. Timing plan transitions and offset relationships are also to be maintained locally;

Traffic control software must be compatible with Wapiti W4IKS software; latest release, as used by the City's existing Type 170/2070 controllers. No other controller software will be accepted. The City's agreement with Wapiti provides upgrades at no charge, however the selected firm will be responsible for all costs and work associated with updating the software at intersections within the project limits;

Operator-free central system that performs control and monitoring functions unattended;

Polling of each local controller once per second, and monitoring and processing returns from each intersection once per second. Data requested and returned on each poll to include phase status, timings, phase calls, and detector status;

Ability to upload, download, store or edit timing plans and software programs stored in local Type 170 controllers based upon user command at any workstation;

Potential vendors should demonstrate flexibility in accommodating future controller types (i.e. 2070 controllers for example);

A Windows based user interface, capable of accepting commands via menus and mouse selection or by keyboard input, running on a local area network;

A real-time graphic of phase operation at all intersections, accessible from the graphic display system or any workstation connected to the central computer. This graphic must be capable of full-screen display showing the entire system simultaneously, with the ability to provide a detailed simultaneous display of real time operation at one or more local intersections;

Ability to define any number of zones consisting of one or more intersections and associated system detectors. Section definitions are to be user editable via command entry or TOD/DOW scheduling;

Be capable of operating in four different modes: manual, time-of-day, local or off-line; as follows:

In manual mode, the operator may command an intersection to operate in a particular timing plan. This mode can be invoked on a system-wide, sectional, or intersection basis. A manually-selected timing plan will remain in effect until manually deselected.

In time-of-day mode, the central computer will command local intersections to operate particular timing plans according to a user defined time-of-day, day-of-week, week-of-year schedule, or pre-scheduled events.

In local mode, the local intersection will operate in timing plans determined by its locally stored programs, and will not be commanded by the central computer to select any specified plans.

In off-line mode, the local intersection will operate in timing plans determined by its locally stored software, and will not communicate with or be polled by the central computer.

For all modes, method of operation can be specified on an individual intersection, section, or system basis by operator command or at specific times programmed by the operator. Allow for the scheduling of preprogrammed events up to 1 year in advance;

As may become necessary, the software shall be capable of monitoring intersections that may be running in adaptive mode.

Include a user-editable database of all controller functions, including the system timing plans for each intersection. The database must be capable of storing at least 20 timing plans for each intersection.

Ability to limit user access to specified functions and databases, as determined by the system operator;

Ability to monitor and log detector failures, both of system loops and local control loops;

Ability to monitor and log local intersection failures, errors and preemptions (both manual and pre-programmed) determined by the Conflict Monitor and 170 controller at each individual intersection;

Ability to log and review timing changes, per intersection or system wide;

Ability to monitor and store information gathered by count stations connected to local intersections;

Ability to monitor intersection phase operation, and evaluate whether each controller is operating in accordance with the timing plan specified by the Central System;

Ability to update clocks in Type 170 controllers, individually or system-wide, upon operator command or automatically at user-specified intervals;

Provide a time space diagram in real time;

Provide a mechanism to alert staff to user-defined events, alerts, and malfunctions by way of voice, text, and email; all alerts shall be logged and recorded.

Ability to activate flash operation at a local intersection;

Capable of accommodating up to 700 intersections. The initial installation will consist of approximately 130 intersections, as enumerated in Appendix B;

Ability to create a database of all system activity, including mode of operation or implementation of timing plans made by the central system, including time of implementation, intersections affected, and identification of timing plan implemented; all intersection and system malfunctions and preemptions;

Ability to gather and report information from Traffic Signals Controllers, Preemption/ Priority, Uninterruptible Power Supply, Loop Detection, Video

Detection, Radar Detection, CCTVs, Variable message Signs, Conflict Monitors, etc. In the case of ITS devices, the ability to control the devices shall be provided;

Ability to create reports, including system status, intersection operation, intersection status, failure summary, and system log;

Ability to show priority/ preemption calls and to place priority or preemption calls from the central command;

The user interface shall have an intuitive menu structure. The system shall have a system map. The System map shall be capable of showing the current green phase. The system shall have intersection specific maps that show all signal indications as well as phasing;

Ability to schedule predefined plans for special events over one or multiple intersections with a single input from the user;

Individual intersections shall not lose communications for more than (4) hours and the vendor shall be responsible for ensuring that coordination amongst control sections is maintained;

Accommodating future adaptive deployments should be addressed within the LOI;

Provide system security plan and necessary equipment (i.e. Firewalls, etc.) to ensure the security of the ATMS system.

Develop a Verification and Validation Plan to ensure that there is an acceptable way to verify when each requirement is met. The plan shall be provided and approved prior to deployment of the system.

The City anticipates that the proposed traffic control software includes the above features in one or more modules or programs without the need for further software development or testing. If any of the above features are not available "off-the-shelf," clearly indicate these features in the proposal, along with a schedule for implementation and testing.

### **2.3 GRAPHIC FILES**

Prepare and incorporate all graphic files needed for the user interface, including but not limited to intersection geometry, detector location, lane designation, signal indications, street names, and geographic features. City base mapping is available in GIS format, and signal plans are available in hard copy. Field verification of information including lane alignment, turn restrictions, and signal phasing is required; this will not require a topographical field survey crew. Background information must be user-editable, both for modification of existing intersections or addition of new installations or features.

## **2.4 DATABASE AND TIMING PLANS**

Create a database or databases as needed for the central system operation. Install into the central system database all required information including existing signal timing plans (up to three per intersection).

Initial timing plans will be the existing plans in the local controllers.

## **2.5 COMPUTERWORK STATIONS**

Hardware exceeding these requirements may be provided at time of installation, if the specifications are acceptable to the Director and the original bid price is not exceeded. For all computers, provide a three-year parts and labor warranty from the manufacturer, including three years on-site, next business day, service.

### **2.5.1 TRAFFIC ENGINEERING & GRAPHICS WORK STATIONS**

Provide a total of five PC workstations. Include with each workstation two color monitors, high end graphics card, input keyboard, and related controllers and interface devices, packaged as an individual desktop unit. Two PCs will be located in Room 301 of the City County Building and three work stations will be located at the Traffic Signal? Shop.

Provide most recent version of the following software along with all associated documentation:

Software meeting the requirements of section 2.2  
Microsoft Office 2010 including Word, Excel, Access, Outlook and  
PowerPoint,  
McAfee VirusScan,  
Highway Capacity Software  
AutoCAD LT with symbols pack,  
SYNCHRO 8 Professional

All software must be the appropriate version for use with the Operating System. Ensure that the software is operational and free of conflicts with the operating system.

Any additional software required to develop maps or required for operating the ATMS must be included.

All licensing agreements are the responsibility of the contractor.

## **2.5.2 FIELD WORK STATIONS**

Provide two notebooks as specified in 2.1.2 to be used by traffic control electricians.

Provide most recent version of the following software along with all associated documentation:

Software meeting the requirements of section 2.2  
Microsoft Office 2007,  
McAfee VirusScan.

## **2.5.3 PRINTERS**

Provide printers and all necessary communications software and hardware as needed to connect to computers using the City network as follows:

Provide two color laser printers. One is to be connected to the traffic engineering workstations in the City County Building and the other to the Work stations located in the Traffic Signal Shop. These printers must be capable of printing text or graphics at resolutions up to 600 dpi, and must have dual feeder trays capable of accommodation 8 ½" x 11" and 11" x 17" paper; individually.

## **2.6 SYSTEM INTEGRATION AND SUPPORT**

### **2.6.1 System Integration**

Provide a fully functional, operating traffic control system meeting all the functional requirements of this specification. Design, furnish and install all hardware and software necessary to achieve these functions. Enumeration of specific hardware or software requirements in these specifications establishes minimum functional requirements for the traffic control system, and does not constitute a complete system design.

This document provides a functional specification of the required system. Bidders may propose a system meeting the same functionality required in this LOI, although differing in the actual technical specifications. Any such substitution must be noted in the original Technical and Price proposals, and must clearly demonstrate to the Director's satisfaction that the requirements of these specifications are met or exceeded. Exceptions will not be granted to the use of Wapiti W4IKS software at the local controllers or to a Windows compatible user interface.

### **2.6.2 Training**

Provide qualified instructors and training material and conduct formal classroom and "hands on" training in the operation and maintenance of the traffic control system. Conduct training courses for the computer hardware, local area network, and traffic control software.

Conduct the courses at a City-provided location in Pittsburgh at a time approved by the Director prior to start of the Observation Period but after the installation acceptance test. Provide training material generated for the course for each attendee, to serve as subject guidance during the course as well as quick reference material for future use. Deliver all course material in reproducible form to the Director immediately following course completion.

At least 30 days prior to commencement of the training courses, submit to the Director detailed course curricula, draft manuals and materials, and resumes of the instructors. The Director will review and request modifications of the course submittal data as appropriate and formally request the desired courses.

Provide 15 hard copies of the approved course material at least 21 days in advance of the scheduled course. Provide the course material in electronic format. No more than 10 persons will attend each course. Do not conduct more than 6 hours of classroom or hands-on training in any one day. The course shall be videotaped.

Provide a course including at least 24 hours of instruction in the operation and maintenance of the hardware and software provided as part of this contract. Include operation of the central computer system including the operating system, entry level networking, the graphics display system, and all peripherals. This will include system start-up, data transfer, access, login procedure, system management for the local area network, preventative maintenance, and data backup and restoration.

Provide a course including at least 30 hours of instruction in operation of the traffic control software. Include definition and editing of system segments, selection of traffic control modes, theory and practice of traffic-responsive operation, editing and installing new or modified timing plans, modifying intersection and system display graphics, downloading and uploading information to local intersections, monitoring local intersection operation and failure methods, and system errors and troubleshooting. Also include instruction in system expansion, including adding new intersections, creating intersection and system graphics, and creating new timing plans. Do not include instruction in the utilization of the traffic analysis software provided on the traffic engineering workstations.

### **2.6.3 Documentation**

Provide complete documentation for all hardware and software furnished as part of this contract. For all third-party hardware and software, provide one copy of the manufacturer's documentation for each individual unit furnished. Provide 10 bound copies of all manuals and documentation for the local area network and the traffic control software.

#### **2.6.4 Licensing**

License or obtain licenses to the City for all software provided under this contract. License all software for City use without payment of additional royalties or licensing fees.

License the central system to account for future expansion, whether by City forces or private contractors, to all traffic signals within the City or on coordinated arterial systems partially within the City. Reducing future costs should also be addressed within the LOI.

License the installation of the traffic control software on the central computer system provided under this contract, or on any computers used by the City to replace these computers at a later date. License installation of any software necessary for operating, monitoring or controlling the ATMS on any workstation used by the City, and the Pennsylvania Department of Transportation District 11.

Obtain and provide licenses for all third-party software and operating systems provided on PC workstations under this contract. These licenses are to be the standard license provided by the manufacturer, granting the City all usual rights to use said software.

All converted timing plans, graphic information, and other data produced under this contract will become the property of the City.

#### **2.6.5 Warranty and Support**

Beginning with the time of installation or modification, maintain all equipment which is installed or modified, until final system acceptance. Secure all guarantees that are customarily issued by equipment manufacturers for the specific equipment provided under this contract. Ensure that the form in which such guarantees or warranties are obtained include the provision that they are subject to transfer to the City of Pittsburgh, and provide this transfer at the time of system acceptance for all that are still in effect at that time.

Fully and completely guarantee the work in this contract for 365 days after the date of final system acceptance. Excluded from this requirement are expendable supplies and materials such as toner cartridges, printer paper, etc. Preventative maintenance of equipment will be the City's responsibility following Final Acceptance. This guarantee obligates the contractor to the total and complete responsibility of providing an operating traffic control system for 365 days after the date of final system acceptance. For a failure or malfunction of equipment during this period, the guarantee will provide that a qualified person arrive on-site to correct the problem within 24 hours of notification from the Director or his representative. In order to ensure that that malfunctioning equipment is replaced in a timely manner, the Vendor shall supply a minimum of one (1) spare for each piece of hardware provided.

### **2.6.6 Technical/ Operational Support**

Provide three years of technical/ operations support at no additional cost to the City following final acceptance of the system. Provide this support at the request of the City to answer questions and provide refresher courses in the operation and maintenance of the system, expand the system, transfer software to new computers or troubleshooting. Respond to a request for operational support within 24 hours. The provider shall be available by phone, fax or email.

Provide On-Site support as necessary.

### **2.6.7 Installation Acceptance Test**

Provide an installation acceptance test procedure for all acceptance items (i.e. software, network equipment, etc.) to the City for review and approval at least 30 days prior to beginning the test. Demonstrate that all equipment is functioning properly and is properly interconnected as a system.

Following installation of the central computer system and all subsystems, demonstrate the capability for proper data transfer to and from each intersection controller and the central computer via the central communications equipment. Demonstrate the capability of the system to operate in all modes. Furnish all test hardware and software. Completion of the installation acceptance test constitutes an interim acceptance of the system.

### **2.6.8 Observation Period**

Upon successful completion of the installation acceptance test, begin a sixty-day Observation period for the system. The City will be responsible for operation of the system during the Observation Period. The observation period will demonstrate full-scale system operation under day-to-day operational conditions. The City and its consultant will, during this time, evaluate whether the total system is properly installed, operates all traffic signals in all modes of operation, is free from problems, complies with the Contract Documents, and exhibits the stable, reliable performance level required for the control of traffic.

The following conditions apply to the Observation Period:

Failure of any item, with the exception of expendable hardware items such as light bulbs, will require restarting the Observation Period for its full duration for that item after it is repaired. All failures must be acknowledged within 12 hours of notification and corrective actions completed within 48 hours.

No operational problems are permitted to persist during the Observation Period. If such a problem is encountered, stop and restart the test until the problem is corrected, even if the problem is not the result of a specific hardware malfunction or software error.

Halt the Observation Period in the event of any system shutdown during the Observation Period, including shutdowns for required testing and correcting of deficiencies. Do not restart the Observation Period until a period of successful performance as determined by the City has proven that the corrections or modifications made are valid, the problem is corrected, and no new system problems or deficiencies were created as a result of the change. Diagnostic testing which does not result in changes to system hardware or software does not require demonstration of successful performance before resuming the Observation Period Time.

### **2.6.9 Final Acceptance**

Project completion and final acceptance will occur at the successful completion of the Observation Period. All contractor-supplied documentation having errors, omissions or changes which have been detected or occurred as a result of system modifications or other reasons during testing, must be corrected and resubmitted.

Final acceptance will not be granted until the level of performance defined in these specifications has been reached, and all other requirements of the Contract Documents have been met to the satisfaction of the Director.

### **3. INSTRUCTION FOR PROSPECTIVE FIRMS**

Prospective firms are required to review and acknowledge the City's [General Requirements and Information for Consultant Candidates for City Sponsored Federally Funded Transportation Projects](#). These guidelines outline eligibility, submission and contractual requirements as well as evaluation criteria for prospective firms wishing to submit a Letter of Interest.

### **4. SELECTION PROCESS/ SCHEDULE**

The Letters of Interest will be reviewed first for eligibility and completeness. Those found eligible will then be evaluated and rated by a Qualifications Committee in accordance Project Personnel, Past Firm Performance, Submission Quality, Quality Assurance and Control Plan, and Subconsultant Qualifications and Roles. The Letter of Interest should specifically address each of the above criteria. The Quality Assurance and Control Plan should address the following:

Procedures and/or elements that will ensure (1) a cost effective project and (2) a quality implementation plan; and

Procedures and/or elements that will minimize training costs and future maintenance costs and ensure meeting schedule.

The Qualifications Committee shall recommend the top three ranked candidates. The Director of Public Works shall review the recommendations of the qualification committee and forward the three firms to be recommended to the Pennsylvania Department of Transportation (hereinafter called the Department) as the consultants to submit proposals. Upon receipt of the approval of the consultants from the Department, a technical proposal shall be requested from the consultants.

Upon release of the RFP, potential candidates will be invited to a scope of work meeting at which time the project will be explained in detail. Representatives from the Department will be invited to the meeting. The consultants' proposals shall include a detailed written scope of work. The consultants will be advised of the applicable Federal regulations, review procedures, contract format, and administration. A copy of Division 1 of the Department's Form 442 will be supplied to the consultants with the understanding that the specifications will be made a part of the contract. The consultants will be given a name and phone number to contact in case he/she would have any questions during the preparation of his/her proposal.

Upon receipt of the technical proposals from the consultants, the qualification committee shall schedule consultant interviews after which they will review and rate the technical proposals and make a recommendation from the ranking of the shortlisted consultants for the purpose of negotiating an engineering agreement.

Once concurrence is granted by the Department, a price proposal will be solicited from the recommended firm. Following negotiations, a pre-award audit will be submitted to the Department for concurrence. Upon concurrence, a consultant agreement will be prepared by the City and circulated for signatures.

**SELECTION PROCESS/SCHEDULE**  
(Standard Selection Process)

No.	Event	Date
1.	The City issues Advertisement/Posting of RFLOI	9/11/13
2.	Convene <b>MANDATORY</b> Pre-Submission Meeting (Scheduled for 1:30 p.m., Room 301 City-County Building)	9/25/13
3.	Deadline for Written Queries <i>(4:00 p.m. date of Pre-submission meeting)</i>	9/25/13
4.	The City Issues Responses <i>(1 week from No. 3)</i>	10/02/13
5.	Deadline for Submittal of RFLOI <i>(2 wks. from No. 3)</i>	10/09/13
6.	Finalize ranking and submit Short List to Director, DPW, for concurrence	10/23/13
7.	Submit Short Listed Firms PennDOT/FHWA for concurrence	10/30/13
8.	City issues detailed Technical Proposal to top three candidates	11/18/13
9.	City to convene Scope of Work Meeting (Scheduled for 10:00 a.m., Room 301 City-County Building)	11/25/13
10.	Deadline for Written Queries	11/25/13
11.	City Issues Responses <i>(1 week from No. 9)</i>	12/03/13
12.	Deadline for Submittal of Technical Proposals <i>(2 wks. from No. 9)</i>	12/13/13
13.	Interview/Demonstration dates of Top Three Candidates <i>(2nd wk. from No. 12)</i>	
	Week of 01/06/14, Room 301, City-County Building	01/06/14
14.	<b>PROPOSAL SELECTION/RECOMMENDATION</b>	01/24/14
15.	Finalize ranking and submit to Director, DPW, for concurrence	01/24/14
16.	Submit top ranked firm to PennDOT/FHWA for concurrence	01/31/14
17.	Notification of Top Firm/Solicitation of Price Proposal	02/21/14
18.	Compare Price Proposal to independent man-hour assessment/Negotiate Price Proposal	
19.	Submit Pre Award Audit to PennDOT	03/26/14
20.	Concurrence from City MBE/WBE Committee	04/16/14
21.	Notify Unsuccessful Candidates.	04/18/14
22.	Draft Consultant Agreement	
23.	Anticipated Start Date of Contract <i>(8 wks. from No. 19)</i>	05/21/14

All respondent communications concerning this solicitation must be directed to the RFLOI Coordinator at the following points of contact:

NAME: Amanda Purcell, P.E.  
TITLE: Municipal Traffic Engineer  
ADDRESS: Bureau of Transportation and Engineering  
Department of Public Works  
Room 301, City-County Building  
414 Grant Street  
Pittsburgh, PA 15219  
Phone: 724-255-8846 Fax: 412-255-8847  
E-Mail: Amanda.Broadwater@PittsburghPA.gov

All official communications should be in writing to the RFLOI Coordinator. Any verbal communications will be considered unofficial and non-binding on the City. Written questions and requests for clarification must be received no later than the date as set forth in below. The City shall respond to written questions and requests for clarification in writing, and shall post them on the City's website.

The Director may reject any Letters of Interest if the submitting firm is found to be ineligible, or the submission incomplete, and may waive any irregularity in the submission of Letters of Interest.

The City encourages responses from small firms, minority and women-owned firms, and firms that have not previously worked for the City. The City's goals for this Project will be 17% of the total price for MBE participation, and 8% of the total price for WBE participation. Attached is the City's Solicitation and Commitment form to be submitted with the Letter of Interest. (Complete for solicited MBE and WBE firms only.)

## **5. SUBMITTING**

Submit five (5) copies of the paper version of the Letter of Interest, Solicitation/Commitment Form, and current SF 330 form to:

City of Pittsburgh Department of Public Works  
Bureau of Transportation and Engineering  
Room 301, City-County Building  
414 Grant Street  
Pittsburgh, PA 15219  
Attn: Amanda Purcell

Guidelines for submissions as outlined in [General Requirements and Information for Consultant Candidates for City Sponsored Federally Funded Transportation Projects](#) are to be strictly followed. All submissions are due by 4:00 p.m., October 9, 2013. Paper submissions will be date stamped upon receipt.

The Director will receive Letters of Interest with accompanying SF 330 until the day and hour stated above. The Director will not consider any Letter of Interest received after the set day and hour and will return it to the addressee unopened. The firm is responsible for ensuring that the Director receives its Letter of Interest by the set day and hour.

Robert Kaczorowski, Director  
Department of Public Works  
City of Pittsburgh



**CITY OF PITTSBURGH MBE/WBE/Veteran SOLICITATION AND COMMITMENT FORM-WAIVER**

COMPANY NAME:		USE ADDITIONAL SHEETS IF NECESSARY	
ADDRESS:		BTE NO./PROJECT TITLE	
CITY, STATE:		FROM COVER PAGE	
PHONE-BUSINESS - EMERGENCY:			
EMAIL - FAX			
FOR ASSISTANCE CALL THE EQUAL OPPORTUNITY REVIEW COMMISSION (412) 255-8904 · FAX (412) 255-4794			
PLEASE EXPLAIN IN DETAIL WHY A WAIVER IS REQUESTED.		<ol style="list-style-type: none"> <li>1. FAILURE TO COMPLETE AND SUBMIT FORM MAY BE SUFFICIENT CAUSE FOR BID REJECTION</li> <li>2. APPLICABLE FORM MUST BE RETURNED SIGNED</li> </ol>	
SIGNATURE: <input checked="" type="checkbox"/>		DATE: _____	