



UTILITIES COMMITTEE

JANUARY 8, 2016

4:00 P.M.

COUNCIL CHAMBERS

1. SOLE SOURCE SCADA PROGRAMMING & SOFTWARE

TERI O'NEAL, SENIOR CIVIL ENGINEER - UTILITIES
(STAFF REPORT ATTACHED)

2. SOLE SOURCE CONTROL VALVE & APPURTENANCES PROJECT

TERI O'NEAL, SENIOR CIVIL ENGINEER - UTILITIES
(STAFF REPORT ATTACHED)



UTILITIES COMMITTEE
January 8, 2015

SUBJECT: Sole Source for SCADA Programming and Software

RECOMMENDATION: Motion to forward SCADA programming and software as sole source to the full Council with recommendation to adopt a sole source resolution.

STAFF CONTACT: Scott Spence, City Manager *SS*
Scott Egger, Public Works Director *SE*
Peter Brooks, Water Resources Manager
Teri O'Neal, Senior Utility Engineer *TO*

ORIGINATED BY: Public Works Department

ATTACHMENTS: 1. [Resolution No. 940](#)
2. [Draft Resolution](#)

FISCAL NOTE: Expenses for this project are included in the 2016 Budget. Average annual costs for this work totals \$25,000.

PRIOR REVIEW:

BACKGROUND:

The City of Lacey operates the water and wastewater systems serving Lacey and its Urban Growth Area (UGA). The SCADA (Supervisory Control and Data Acquisition) runs and monitors the system in automated conditions. In addition, SCADA provides human machine interface (HMI) for monitoring, troubleshooting and responding to the system. Each SCADA system is unique to a city's or utility districts system.

A sole sourced programmer and software provider is required due to the complexity of integrating programs with enterprise, instruments, controls, facilities and HMI. In-depth knowledge is needed of Lacey's system to integrate these components via programming and software. The City of Lacey has 20 wells, four treatment facilities, seven reservoirs and over 50 lift stations, which all require broad coordination. A large learning curve would be required for another programmer to write code. Any misunderstanding of our current system has the high potential to cause failures.

Historically, Technical Systems, Inc. (TSI) has been used for system integration for Lacey's overall water and wastewater systems. Resolution No. 940 was approved by Council on August 14, 2008, and the resolution has since expired. A new resolution is necessary acknowledging TSI as the sole source provider for the SCADA programming and software. TSI has designed, provided software, programmed, and implemented the City's SCADA, and they are clearly and legitimately the sole source for services related to this system.

City staff recommends issuing a sole source contract to TSI for SCADA programming and software.

ADVANTAGES:

1. The potential for facility or system-wide failure is significantly reduced.
2. Obtain efficient and quality service for new and existing facilities.
3. Purchasing request involves specials facilities, and is an allowed exemption of competitive bidding requirements per RCW 39.04.280.

DISADVANTAGES:

1. None.

RESOLUTION NO. 940

CITY OF LACEY

A RESOLUTION DECLARING TECHNICAL SYSTEMS, INC. TO BE A SOLE SOURCE FOR CERTAIN SERVICES.

WHEREAS, the City is in need and will, in the future, further be in need of system software and device programming and controls integration for the City's Supervisory Control and Data Acquisition (SCADA) system, and

WHEREAS, Technical Systems, Inc. has designed and implemented the City's entire SCADA system and, based upon its total familiarity with such system and its components is clearly and legitimately the sole source for services related to this system,

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON as follows:

1. Technical Systems, Inc. (TSI) is declared to be the sole source provider for the City's Supervisory Control and Data Acquisition system software and device programming and controls integration.

2. The City staff is authorized to contract with TSI for such services for a period of 3 years after the date of this Resolution and thereafter. However, upon the expiration of 3 years, the performance of TSI will be reevaluated and the Council will take further action to either renew, revise or rescind this Resolution.

PASSED BY THE CITY COUNCIL OF THE CITY OF LACEY, WASHINGTON,
this 14th day of August, 2008.

CITY COUNCIL

By 
Mayor

Attest:


City Clerk

Approved as to form:


City Attorney

Agenda Item 1:

Sole Source SCADA Programming and Software

The draft resolution will be available prior to the Utilities Committee meeting on January 8, 2016.



UTILITIES COMMITTEE
January 8, 2015

SUBJECT: Sole Source for Control Valve Electrical and MCP Project

RECOMMENDATION: Forward the Control Valve Electrical and Motor Control Panel (MCP) Project sole source to the full Council with recommendation to adopt a sole source resolution.

STAFF CONTACT: Scott Spence, City Manager *SS*
Scott Egger, Public Works Director *SE*
Peter Brooks, Water Resources Manager
Teri O'Neal, Senior Utility Engineer *TO*

ORIGINATED BY: Public Works Department

ATTACHMENTS: 1. [Draft Resolution](#)

FISCAL NOTE: Control Valve Electrical and MCP Project was anticipated and included in Lacey's 2015 and 2016 Budget. Funding for the project is provided through Water Budget 410-3418-534 in the amount of \$600,000.

PRIOR REVIEW:

BACKGROUND:

The City of Lacey operates the water and wastewater systems serving Lacey and its Urban Growth Area (UGA). The SCADA (Supervisory Control and Data Acquisition) runs and monitors the system in automated conditions. In addition, SCADA provides human machine interface (HMI) for monitoring, troubleshooting and responding to the system. These systems control the City's utility infrastructure through specialized software programming that monitors and responds to field conditions. This programming was customized specifically for the City's utilities by TSI under previous sole source agreements.

The Control Valve Electrical and MCP project is budgeted in 2015 and 2016 Water Capital Construction. This capital project retrofits five existing pressure regulating valve stations and four existing well houses with equipment that allows remote control and monitoring via the City's SCADA system. This improvement provides the operator increased control and flexibility in managing the water system and controlling the movement of water between pressure zones. With these changes, the water system will be better able to deal with high demand periods.

The Control Valve Electrical and MCP Project PW 2015-11 contract will include programming the MTU (Master Terminal Unit), RTU (Remote Terminal Unit) and HMI (Human Machine Interface); manufacturing and installation of five new RTU control cabinets, adding controls to the pressure regulating valves, upgrading four existing RTU control cabinets, power to the new cabinets, connections from the cabinets to sensors; and pavement, landscaping and concrete repair.

Justification for Sole Source

Pressure regulating valves are located between two pressure zones and send significant amounts of water from the 400 Pressure Zone to the 337 Pressure Zone. New RTUs and controls on five existing pressure regulating valves will be connected to the City's SCADA. The valves will be monitored and controlled automatically through the water system's MTU and HMI via the RTUs. The improvements are unique to the City of Lacey water system and are considered special facilities that must be compatible with the City's existing infrastructure and contain custom programming. The following points justify sole sourcing TSI for the PW 2015-11 contract:

- The overall water system is a unique system and has been programmed by TSI for over 20 years. The project includes expansion to the existing system.
- The pressure regulating valves will interface with four existing wells and the wells' control cabinets require upgrading. The existing cabinets are unique and complex. TSI constructed and programmed the existing wells' control cabinets, making them uniquely qualified to perform this work.
- The proposed regulating valves' cabinets are complex and a consistent cabinet minimizes troubleshooting issues for on-going electrical and electronics technical repairs. Consistency is needed for operation and maintenance during regular and emergency situations. Having TSI manufacture, install and program the control cabinets system will provide a consistent platform that is compatible with the other cabinets in the water system.
- The project consists of a mix of sensors, actuators, and communications and ancillary devices reporting to, receiving data and direction from, and centrally controlled by computer processes. Having the same contractor install control cabinet along with electrical from the power source to the control cabinet to the valves will ensure compatibility of the entire system and maintain continuity of the telemetry system throughout the project.

- Paving, landscaping and concrete repair are not unique; however, these items are a small percentage of the project.

City staff recommends issuing a sole source contract to TSI for the Control Valve Electrical and MCP Project, PW 2015-11.

ADVANTAGES:

1. Sole sourcing this contract to TSI significantly reduces the potential for system incompatibilities, programming errors/omissions, and general system downtime, while providing consistency across facilities to ease operation and maintenance.
2. Purchasing request involves specials facilities, and is an allowed exemption of competitive bidding requirements per RCW 39.04.280.

DISADVANTAGES:

1. None anticipated.



**CONTROL VALVES
OUTSIDE CITY LIMITS**



**CONTROL VALVES
INSIDE CITY LIMITS**

Agenda Item 2:

Sole Source Control Valve & Appurtenances Project

The draft resolution will be available prior to the Utilities Committee meeting on January 8, 2016.