RESOLUTION NO. 2091

A RESOLUTION OF THE CITY OF WILSONVILLE ACTING IN ITS CAPACITY AS ITS LOCAL CONTRACT REVIEW BOARD EXEMPTING THE CITY FROM COMPETITIVE BIDDING REQUIREMENTS OF ORS 279C AND THE WILSONVILLE CODE, AUTHORIZING THE CITY ENGINEER TO SIGN A PROFESSIONAL SERVICES AGREEMENT WITH PORTLAND ENGINEERING, INC. (PEI) TO PROVIDE PROFESSIONAL (ENGINEERING) SERVICES AND PROJECT MANAGEMENT SERVICES FOR THE PROJECT KNOWN AS THE UTILITY SYSTEMS COMMUNICATION AND SECURITY PROJECT # 510.950.45030.00000.1054 AND # 520.950.45030.00000.2064.

WHEREAS, on June 4, 2007, the Wilsonville City Council adopted a Capital Improvement Program for the City that included a FY 2007/08 appropriation of $408,120 to fund the Water System Telemetry Improvements and Reservoir Modifications (Project No. 510-950-45030-00000-1054) and a FY 2007/08 appropriation of $188,100 to fund the WWTP & Lift Station SCADA Improvements (Project No. 520-950-45030-00000-2064); and

WHEREAS, the Utility Systems Communication and Security Project is comprised of the work listed in the Capital Projects Budget for the Water System Telemetry Improvements and Reservoir Modifications (#1054) and the WWTP & Lift Station SCADA Improvements (#2064); and

WHEREAS, the City Engineer seeks the services of an engineering firm to provide engineering and project management services with the referenced project; and

WHEREAS, the City Engineer proposes to utilize the experience and expertise of Portland Engineering Inc. (PEI).; and

WHEREAS, on the 18th day of October, 1999, the City of Wilsonville adopted Ordinance No. 511 amending WC 2.310 Contract Review Board Definitions by adopting State findings, policies and methods of fostering competition and definitions consistent therewith, amending WC 2.314 to provide for competitive bids or proposals, providing for contracting officers and the creation of procedures for the screening and selection of professional services; and

WHEREAS, finding (3), paragraph (10) subparagraph (b) states: "The City Council shall adopt by resolution and the contracting officer shall follow the Oregon

Attorney General's Model Public Contracting Rules (Division 35, Consultant Selection: Architectural and Engineering Personal Services Contracting), for screening and selection of persons to perform architectural and engineering personal services contracts for public improvement projects. Provided, however, any provisions in WC 2.310-2.314 for exemptions will also apply and shall take precedent over the Division 35 Model Rules as the Board or Contracting Officer may determine."; and

WHEREAS, Section 2.310 (1) (a) of the Wilsonville Code defines public contracts as being other than agreements for personal service. The contract to be awarded is for engineering professional services; and

WHEREAS, Section 2.312 of the City code states that "The Council is hereby designated as a Local Contract Review Board and relative to contract concerns for the City, shall have all the powers granted to the State Contract Review Board"; and

WHEREAS, Section 2.314 (1) states that "All [certain exceptions are granted] contracts shall be based upon competitive bids or proposals…" which the City interprets to mean public contracts, but in the event it is construed to apply to any contract, the City recites and finds as set forth below; and

WHEREAS, Section 2.314 (2) states that "The Board, may, by Resolution, exempt other contracts from competitive bidding if it finds (a) the lack of bids will not result in favoritism or substantially diminish competition in awarding the contract; and (b) the exemption will result in substantial cost savings. In making such a finding, the Board may consider the type, cost amount of the contract, number of persons available to bid and such other factors as the Board may deem appropriate"; and

WHEREAS, PEI is currently the City's System Integrator and provides On Call Services for the Willamette River Water Treatment Plant, the Wastewater Treatment Plant as well as Public Works, and therefore, has extensive and valuable information and experience which could be utilized in the project management of the referenced project thereby reducing the overall project costs and schedule; and

WHEREAS, the Scope of Work for the task order based contract is marked "Exhibit A", attached hereto and incorporated herein; and

WHEREAS, staff has determined that the fees for the services as proposed by PEI are fair and reasonable reflecting the extensive and valuable information which will not have to be reconstructed or duplicated; and

WHEREAS, the contract will be for a term of three (3) years and may be renewed for two (2) additional three-year terms **subject to annual appropriation under the Oregon** Budget Law; and

WHEREAS, the estimated fees for Engineering and Project Management for the Project are not to exceed $596,220; and

WHEREAS, the City of Wilsonville desires to execute a Professional Services Agreement in a timely manner.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1.   The recitals of findings above are incorporated by reference herein.

2.   The City Council, acting as the Local Contract Review Board, does hereby exempt the award of a contract for engineering professional services from competitive bidding and further concludes this award will not diminish competition and will result in substantial cost savings.

3.   The City Council, acting as the Local Contract Review Board, does hereby approve and authorize the City Engineer to sign a Professional Services Agreement between the City of Wilsonville and Portland Engineering, Inc., a copy of which is marked Exhibit "B", attached hereto and incorporated herein, to provide the project management services recited within for the referenced project.

4. Subject to final completion of all improvements specified in the contract documents and any supplemental changes, the City Engineer is authorized to certify the required improvements complete and make final payment including release of retainage.

4.   The City Engineer is authorized to approve change orders to this contract so long as total project costs do not exceed the budget amount.

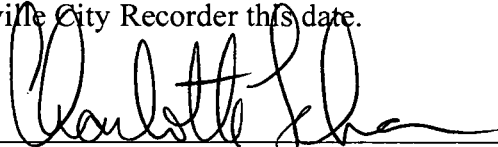5.   Authorize the expenditure of project funds as budgeted or amended from:

ACCOUNT	AMOUNT
510-950-45030-00000-1054	$408,120

520-950-45030-00000-2061 $188,100

6.   This resolution is effective upon adoption.

        ADOPTED by the Wilsonville City Council at a regular meting thereof this 7th day of January, 2008, and filed with the Wilsonville City Recorder this date.

                                                _____
                                                CHARLOTTE LEHAN, Mayor

ATTEST:

_____
Starla J Schur, Deputy City Recorder, CMC

SUMMARY OF VOTES:

Mayor Lehan	Yes
Councilor Kirk	Yes
Councilor Knapp	Yes
Councilor Ripple	Abstain
Councilor Nunez	Yes

Performance Based Scope of Work: Task Order Based Services for Utility Systems Communication and Security – Telemetry Project

Overview

Of all the major categories of water resources planning, none is more crucial than water supply. A dependable water supply is essential to human activity. Whether drawing water into the home for cooking, from a fire hydrant to extinguish a blaze, or into a plant to fabricate computer chips, a day without water would cause severe hardships. After water supply, water resources' planning focuses on water quality, that is, the prevention of pollutants from entering the water supply. To this end, Policy 3.1.5 of the City's Comprehensive Plan states: "The City shall continue to develop, operate and maintain a water system…capable of serving all urban development within the incorporated City limits, in conformance with federal, state, and regional water quality standards."

Until the end of the 19th century, raw sewage was discharged from cities and communities into local streams and bodies of water. In today's environment, urban areas use municipal treatment facilities to control the treatment and disposal of wastewater. The collection and transportation of liquid wastes via sanitary sewer systems and pump stations from their origin to wastewater handling facilities has reduced the health hazard due to water borne diseases. To this end, Policy 3.1.4 of the City's Comprehensive Plan states: "The City shall continue to operate and maintain the wastewater treatment plant and system in conformance with federal, state, and regional water quality standards."

A water distribution system delivers potable water through a system of pipes, pump stations, and reservoirs. Similarly, a wastewater collection system transfers wastewater through a network of pipes and pumping stations to a central collection point for treatment. Water and wastewater system operators have the responsibility to maintain the elements of the system and to see that said elements perform correctly and reliably. An operator's main responsibilities are supervision and control. Supervision means examining the systems performance and deciding if it is acceptable. Control is when the operator adjusts the system (manual control) to affect performance, or when the system adjusts itself (automatic control.)

Because distribution and collection systems and facilities may be at various, separate locations, the information and ability needed to control and supervise the system must be gathered at some centralized point accessible to the operator. As facilities become more widely distributed, data and control signals have to be transmitted over longer distances than secondary (direct) instrumentation can provide. Telemetry systems were developed to provide long-distance communication.

A telemetry system consists of three parts: a telemetry transmitter, a receiving unit; and the communication channel. These parts are commonly known as: RTU (remote telemetry unit), which is the telemetry transmitter, data collector, and local control;

SCADA system (supervisory control and data acquisition), which is the receiving unit composed of networked computers that stores, analyzes, and displays the data from the rtu, the SCADA also provides remote control functionality for the rtu, when the rtu is configured as a programmable logic circuit (plc); and the communication protocol/physical channel. Communication protocol refers to the language that instruments, transmitters, programs, and computers use to communicate. Communication physical channel refers to phone lines, wireless, radio, etc.

Because water and wastewater systems and facilities are spread out, they are inherently vulnerable to a variety of activities, natural or man-made, that may compromise the respective systems' ability to deliver potable water or collect/transport liquid waste. A failure of either systems mission can lead to deleterious effects to the health and safety of the public and all other users. The telemetry system provides the operator and police with automatic notification by remote security measures such as intrusion alarms on buildings, gates, and fences. Operators are also notified by alarms when operational parameters are out of bounds, such as reservoir or wet well overflow, pump failure, loss of pressure, etc.

Background

The wastewater collection system operators manage eight (8) remote lift (pump) stations and several flow monitoring devices in the collection system. The lift stations are equipped with Autocon rtus. The wastewater plant is equipped with a Wonderware 7 SCADA system running on an old personal computer with the Microsoft NT operating system. Communication is accomplished with a Wonderware Autocon Server over leased phone lines.

The existing system operates without major problems. However, there are some serious concerns and constraints. The most significant concern is the age of the system. The Autocon communication equipment is out-of-date technology and we are unable to obtain spare parts. This means that there is no remote control over station equipment, a limited number of signals (hence alarms) can be monitored (each station is at capacity), and Autocon is based on older Microsoft software which is not supported or upgradeable. Because of the Autocon software and hardware, the pc that houses the SCADA system has to run NT as the computer operating system, which is not supported by Microsoft, the pc is a standalone without backup, and since the pc is a standalone it is being required to prepare reports, monitor, archive and alarm out if necessary, tasks that are increasingly straining the system and therefore has caused system failures. Finally, the lift stations need some serious instrumentation upgrades to function up to new Department of Environmental Quality regulations. Instrumentation upgrades cannot occur until the Autocon hardware is replaced.

The water distribution system operators manage seven (7) well sites, two (2) reservoirs and one (1) pump station at the Elligsen reservoir property, one (1) reservoir and one (1) pump station at the Charbonneau reservoir property, one (1) reservoir at the C-level site, five (5) pressure reducing valve stations, and several earthquake valves that are mostly linked by telemetry. The water telemetry system, with some minor exceptions for newer

installations, equipment, and software workarounds, suffers from the same concerns and constraints that the wastewater system does. The situation is exacerbated because the water treatment plant does not have control over pumps that deliver finished water from the B-level to C-level pressure zones. This inability results in pumping and plant operating inefficiencies.

The current level of performance of both the water and wastewater telemetry systems is sufficient for limited data collection, but not for supervisory control. The systems cannot be upgraded due to lack of software support and the lack of spare parts, nor can they be expanded to meet current and future regulatory requirements. The systems cannot handle an increase in security monitoring or alarming needs. Finally, in case of emergency, the City Hall Emergency Response Team does not have access to water and wastewater system or facility information, except by phone. If the phone system, either land or cell based, goes down, information would have to be obtained physically, if possible.

Requirements

The foregoing Overview and Background sections represent the City's responsibilities, objectives, and need. Until recently, SCADA/Telemetry systems were used to provide monitoring and control of remote equipment and facilities. SCADA systems were most often used in a reactive manner to identify system faults as they occurred and to record system data and events for later analysis. Present demands for increased efficiencies, along with security of the utilities assets and products, means that SCADA systems must now be pro-active and include a lot of data management and security functionality that allows problems to be avoided - rather than just recorded.

The City seeks a SCADA/Telemetry system for the water and wastewater systems and facilities that:
- is able to transfer and present information to/from a range of sources and locations, while ensuring that data integrity and appropriate update rates are maintained.
- is able to provide 'near real-time' updates from RTUs that are spread over a large geographical area, using a range of secure communications media, to multiple 'users' who are also remotely located.
- Provide security to our water and wastewater systems

Due to the need for greater efficiencies and security, the SCADA/Telemetry system must be robust and able to meet several challenges that include:
- Managing larger data traffic loads due to increased monitoring of local and remote sites,
- Implementing standby/backup servers, development nodes, and communications links for critical system infrastructure,
- Securing the communications traffic between various devices and users,
- Restricting and authenticating access to both the system and the field assets,

- Management of on-line configuration processes to avoid induced system errors (most system failures occur when system maintenance/upgrades are being deployed),
- Managing the collected data for display, storage, and access by users and other business systems, including events/alarms.
- Provide security.

Using a water reservoir as an overall example of system upgrade, the old system was merely able to monitor the surface elevation of the water in the tank. The new system must be able to:
- monitor the physical security of the reservoir site and buildings using video surveillance and intruder detection,
- monitor water quality, such as chlorine residual, using online analyzers,
- monitor water parameters, such as time in storage, surface water elevation, system pressure, rate of inflow/outflow, etc.,
- monitor the communications link and field equipment for error and reliability,
- control pumps, valves, and other devices as necessary.
- Provide security.

Scope

This performance-based task-oriented project encompasses a wide range of sites ranging from lift stations, pressure reducing valve stations, and water reservoirs acting as remote sites to be connected to the respective SCADA systems at the Water Treatment Plant and the Wastewater Treatment Plant. The project will involve the consultant's staff carrying out a wide range of tasks, and managing the project to a successful completion within a very tight 10 month timescale. The consultant will be given outline requirements and site documentation by City staff. The documentation will include documents such as legacy IO schedules, site plans, p&ids, etc. Consultant engineers will then carry out a detailed site survey in order to generate a gap analysis, i.e.: to identify and cost the difference between what was required by the City and what is already available at any given site.

Consultant's engineers will collate this material and, in conjunction with City staff, complete a Process, Instrumentation, and Signal Selection Workbook. With a completed selection workbook, recommended site scopes of work, and planning level cost estimates, task oriented work orders will then be issued to the consultant for execution. Design elements on this project will be coordinated by the City's Project Manager and the Consultant's Engineer on a site by site basis and managed by the Consultant's Project Manager.

The Consultant's project manager will ensure that:
- The identified sites are compliant with the City of Wilsonville's operational requirements, the Selection Workbook, and with their respective legislative requirements.
- An accurate scope of work was compiled for the site to meet its specification, operational, and, legislative requirements.

- Accurate and realistic target costs were compiled for each site.
- The enclosure and panel fabricators, electrical, and construction subcontractors were successfully managed.
- The approved scope of works was completed on time and within budget
- Liaised with City Water and Wastewater Operations personnel to gain approved access to sites
- The site telemetry was reconfigured or replaced and commissioned with the minimum of disturbance to normal operations.
- Revised documentation was issued on the completion of work on any site.
- Comply with DEQ requirements.

The Consultant's engineer will ensure that:
- Surveyed, tested, and, reported on the site's existing telemetry, PLC, electrical, and, instrumentation.
- Installed and commissioned electrical components and cabling are operational.
- Installed and commissioned instrumentation and associated signal converters are operational.
- Installed, configured, and, commissioned new telemetry stations are operational.
- Reconfigured existing or configure new PLCs are operational.
- Created and compiled site documentation packs that included: Wiring Schedules, Site Location Maps, Commissioning Records, Operation and Maintenance Manuals, and, AutoCAD Drawings.
- Operate stand-by power as necessary/equipped.

Task Order Methodology

1. Task Identification

   a. Task Scope

      i. Identify specific scope of task

      ii. Identify/verify requirements, functional approach, technical constraints

      iii. Identify specific complexities, risks, mitigation strategies

      iv. Identify potential solutions, perform trade-off analysis, etc.

   b. Task Preliminary Engineering

      i. Define technical approach and schedule

      ii. Identify skills needed and plan for staffing

      iii. Identify and plan deliverables

      iv. Identify risks and detail mitigation plans

c. Task Execution

    i. Requirements layout and detailing

    ii. Fully engineer, design, document and develop system equipment and support items

    iii. Perform developmental test to assure specifications are met

    iv. Operational and support systems procured and deployed

    v. Perform operational tests to ensure system effectiveness

d. Operations & Maintenance

    i. Operation and Maintenance Manual

    ii. Operational personnel training

    iii. Systems fielded/deployed to users

    iv. Continued support for fielded system

    v. Follow-on evaluation and improvement

e. Miscellaneous (if applicable)

    i. Operator interface engineering

    ii. Other (see Scope above)

Deliverables

The following is a short list of tasks previously identified for both the water and wastewater systems:

WATER

Willamette River Water Treatment Plant (WRWTP)
1. Telemetry Node
    a. Connect new lease line on Allen Bradley Telemetry System
2. Master Telemetry Unit
    a. Install and configure a new Allen Bradley (AB) SCADA system Master Telemetry Unit (MTU) and panel at the WRWTP enabling the WRWTP to directly access remote sites (such as the Elligsen and C reservoirs, Wilsonville Road and Kinsman Road prv stations and Charbonneau reservoir/pump station).

3. Backup
    a. Configure pw MTU and water treatment plant MTU as back-ups.
4. Update Operator Interface (OI) nodes

    a. Upgrade and configure the Wonderware SCADA software and the operator interface (OI) nodes at the WRWTP and PW. This allows the operators to see the same screen, data and controls, to allow for development tasks to take place at one location and to allow automatic system upgrades.

Elligsen Reservoirs, Pump Station, and Well

1. Allen Bradley RTUs (well and pump station)
   a. Replace Autocon systems with Allen Bradley RTUs, transfer leased line to Allen Bradley Telemetry System, and relocate B-level reservoir level transmitters wiring from Elligsen well-house to B-level pump station. (New RTU will allow WRWTP to poll B-Level directly and control C-Level pumps.)

C-Level Reservoir

1. Instrumentation
   a. Relocate level transmitters and other electronics to new above ground cabinet.
2. Allen Bradley RTUs
   a. Replace Autocon Remote Transmission Unit (RTU) with new Allen-Bradley (AB) SCADA RTU. New RTU will allow WRWTP to poll C-Level directly.
3. Chlorine Analyzer
   a. Install a real-time, free chlorine analyzer at C-level reservoir in a new above ground cabinet. Electrical and mechanical constructions costs for the C-level chlorine analyzer overlap with the construction costs for the C-Level RTU telemetry work.

Charbonneau

1. Allen Bradley RTUs
   a. Replace Autocon RTU with new AB SCADA RTU with sufficient Input/Output (I/O). New RTU will allow WRWTP to poll Charbonneau pump station and reservoir directly.
2. Valving
   a. Install valve to enable the Charbonneau Reservoir to be filled remotely. Install relief valve in district supply line to reservoir drain to prevent high water pressure, in case pump station is shut down and district is supplied directly from plant or to exercise the fire pumps.

Well Pump Stations (all sites)

1) Allen Bradley RTUs
   a) Replace Autocon RTU with new AB SCADA RTU with sufficient Input/Output (I/O). New RTU will allow WWTP to poll pump stations directly.
2) Instrumentation

a) Replace level transmitters and other electronics; integrate into new rtu and communications network. Program new rtu/plc for local control in case of emergency.

Future Tasks (budget permitting)
1. Pressure Reducing Valve Stations
   a. Burns Way and Brockway prv stations do not have telemetry or monitoring capability. (Burns Way does not have power.)
2. Charbonneau Pump Station
   a. **Refurbish Charbonneau pump station motor controls, cabinet, and electrical equipment.**

WASTEWATER
Lift Stations (all sites)
1) Allen Bradley RTUs
   a. Replace Autocon RTU with new AB SCADA RTU with sufficient Input/Output (I/O). New RTU will allow WWTP to poll pump stations directly.
2) Instrumentation
   a. Replace level transmitters and other electronics; integrate into new rtu and communications network. Program new rtu/plc for local control in case of emergency.

Waste Water Treatment Plant (WWTP)
1. Master Telemetry Unit
   a. Install and configure a new Allen Bradley (AB) SCADA system Master Telemetry Unit (MTU) and panel at the WWTP enabling the WWTP to directly access remote lift station sites and the Charbonneau pump station.
2. Backup
   a. Install a server dedicated to WWTP and Lift Station SCADA that incorporates auto-backup. Server would allow operation of WWTP and Lift Station regardless of connection to City network.
3. Update Operator Interface (OI) nodes
   a. Upgrade and configure the Wonderware SCADA software and the operator interface (OI) nodes at the WRWTP and PW. This allows the operators to see the same screen, data and controls, to allow for development tasks to take place at one location and to allow automatic system upgrades.
4. Combine two applications
   a. Currently there are two separate versions of Wonderware, one for the plant and one for the pump stations. These applications will be combined into one with appropriate safeguards.
5. Network capability
   a. Currently there are three Wonderware workstations, the workstations shall be networked such that software updates can be performed over the network, they can serve as mutual backup, they each can read the new MTU, in case one goes down, the others are still functional.

6. Computer hardware
   a. Upgrade the workstations sufficiently to handle the graphics, processing, and archival needs today and several years in the future.

BOTH
Wonderware
1. Upgrade
   a. Upgrade, install, and configure all sites with the latest versions of Wonderware, Wonderware IndustrialSQL, the version of the Microsoft operating system used in the city, and other software (such as Active Factory) as necessary.
2. Alarm modifications
   a. Both systems employ a hardware driven alarm system. With the new Wonderware versions, alarm function will be handled by the software with the hardware version as backup.
3. Mobile troubleshooting
   a. Add a Wonderware InTouch runtime license to a laptop for mobile trouble shooting and maintenance. Add network connection points and/or wireless communication areas within the wastewater treatment plant, lift stations, reservoirs, well houses, etc., to allow access to SCADA and PLC's via laptop/notebook.

City Hall
1. View Only Node (for both water and wastewater)
   a. Install and configure a view only Operator Interface (OI) node at city hall. This allows for independent (view only) access to specific SCADA parameters for data acquisition, processing, and history. This permits the integration of SCADA data to the Water Model for on-going calibration and access to wastewater (eventually) and water systems data during emergencies.

Communications (all sites, serves both water and wastewater)
1. Licensed Frequency Survey
   a. A licensed frequency will be required for a radio system instead of a wireless ethernet alternative for which it is best to have direct line of sight for the optimal function of the ethernet system. Included in the task are a radio survey of the system sites and the procurement of the FCC license. The radio survey and license application tasks are time intensive and will be critical path to the commencement of a wireless SCADA telemetry project. This task should be executed first.

2. Upgrade Communications Network
   a. Upgrade Communications Network between WWTP, WRWTP, Charbonneau, and PW to provide reliability, security, and performance. Install an industrial high speed secure wireless Ethernet connectivity narrowband RF link parallel to the existing dial-up phone network. For

critical control purposes, the control and data acquisition functions of the Charbonneau pump station AB SCADA RTU (previously upgraded from the Autocon RTU) will be integrated into the WRWTP and PW MTU's. Charbonneau communication will be independent and a backup of the Verizon leased line, in case of emergency.

PROFESSIONAL SERVICES AGREEMENT
ON-Call Consulting Services for Portland Engineering, Inc.

THIS AGREEMENT is made and entered into as of the date first indicated on the signature page, by and between the City of Wilsonville, Wilsonville, Oregon, a municipal corporation of the State of Oregon, hereinafter called "City", and **Portland Engineering, Inc.** hereinafter called "Consultant."

WHEREAS, City has need for the services of a company with the particular training, ability, knowledge, and experience possessed by Consultant, and

WHEREAS, City has determined that Consultant is qualified and capable of performing the professional services as City does hereinafter require, under the terms and conditions set forth hereafter:

THEREFORE, the parties agree as follows:

Article 1. Scope of Work
Consultant agrees to perform On-Call Consulting Services for the City as requested and as designated by Task Order in Exhibit A – Scope of Work. When notified by the City Project Manager of the scope of a given Task Order, Consultant shall deliver in writing a signed quote indicating (a) Consultant's availability to perform the work requested, (b) the not-to-exceed price (and basis for same) to perform the work, and (c) the estimated time for performance. If selected to perform the work, Consultant shall initiate services upon receipt of City's Notice to Proceed – Task Order (xx), together with a modified copy of Exhibit A – Scope of Work, which document shall incorporate the scope, quote, and relevant information for Task Order (xx). Consultant agrees to complete work that is detailed in Exhibit A – Scope of Work, City agrees to complete the applicable work that is detailed in the attached Exhibit B – Items to be Provided by the City of Wilsonville (modified as necessary), by this reference, both Exhibits are made a part hereof.

Article 2. Effective Date and Duration
This Agreement shall become effective from the date of execution by both parties and shall expire, either when tasks required hereunder are complete and accepted, or on XXXX, 2008, unless earlier terminated or extended in accordance herewith. All work under this Agreement shall be completed before the expiration of this Agreement.

Article 3. Compensation
City agrees to pay Consultant, on a time and material basis, an estimated amount of **XXXX** dollars (**$XXXX**) for performance of those services described in Exhibit A – Scope of Work of this Agreement. Said payment shall cover all costs associated with the performance of

services as described in Exhibit A. Compensation will be based on an hourly basis as shown in the attached Exhibit C - Billing Rate Schedule of this agreement, related itemized direct expenses, and by this reference made a part hereof. Payment will be based on Consultant's invoice, subject to the approval of Project Manager for the City, listed herein, and not more frequently than monthly. A short narrative progress report shall accompany each invoice, which report shall discuss any problems or potential causes for delay, with the status of the Task Order, amount of work completed, and other relevant information. Payment shall be payable within thirty (30) days from the date of receipt by the City.

Article 4. Contact Information

All notices, bills, and payments shall be made in writing and may be given by personal delivery, mail, or fax. Payments may be delivered by personal delivery, mail, or electronic transfer. The following addresses and contacts shall be used to transmit notices, bills, payments, and other information:

Project Manager for City:	Project Manager for Consultant:
City of Wilsonville	Company: **Portland Engineering, Inc.**
Attn: **Jadene Stensland**	Attn: **Mike Hogan**
Address: 29799 SW Town Center Loop E Wilsonville, OR 97070	Address: 2020 SE 7th Avenue, Suite 200 Portland, OR 97214
Phone: (503) 570-1538	Phone: (503) 256-7718
Fax: (503) 682-7025	Fax: (503) 256-7679
Email Address: stensland@ci.wilsonville.or.us	Email Address: mhogan@portlandengineers.com

Article 5. Consultant as Independent Contractor

Consultant acknowledges that for all purposes related to this Agreement, Consultant is and shall be deemed to be an independent contractor as defined by ORS 670.600 and not an employee of City, shall not be entitled to benefits of any kind to which an employee of City is entitled and shall be solely responsible for all payments, insurance, taxes and or other expenses associated with the performance of the Consultant's duties required by law. Furthermore, in the event that Consultant is found by a court of law or any administrative agency to be an employee of City for any purpose, City shall be entitled to offset compensation due, or to demand repayment of any amounts paid to Consultant under the terms of this Agreement, to the full extent of any benefits or other remuneration Consultant receives (from City or third party) as a result of said finding and to the full extent of any payments that City is required to make (to Consultant or to a third party) as a result of said finding.

Consultant acknowledges that for all purposes related to this Agreement, Consultant is not an officer, employee, or agent of the City as those terms are used in ORS 30.265.

Article 6. Indemnification

City has relied upon the professional ability and training of Consultant as a material inducement to enter into this Agreement. Consultant's work will be performed in accordance with generally accepted professional practices and standards as well as the requirements of applicable federal, state, and local laws.

Consultant and City, **to the extent allowed by law,** agree to indemnify and defend the other, and the other's officers, agents and employees and hold them harmless from any and all liability, causes of action, claims, losses, damages, judgments or other costs or expenses including attorney's fees and witness costs and (at both trial and appeal level, whether or not a trial or appeal ever takes place) incurred by the party being indemnified resulting from the indemnifying party's acts (or failure to act when action is appropriate) that may be asserted by any person or entity which in any way arise from or relate to this Agreement or the performance of obligations under this agreement. **In this connection, Consultant waives any rights under ORS 30.285 and ORS 30.287.** If any aspect of this indemnity shall be found to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of this indemnification.

Article 7. Standard of Services and Warranty

The Consultant agrees to perform and warrants that his/her services will be of the quality and of the standard of care, skill, and diligence normally provided by a professional individual in the performance of similar services. The Consultant warrants that the recommendations, guidance, and performance of any person assigned under this Agreement shall be in accordance with the professional standards and requirements of this Agreement.

Article 8. Insurance

Consultant shall maintain insurance acceptable to City in full force and effect throughout the term of this contract. Such insurance shall cover all risks arising directly or indirectly out of Consultant's activities or work hereunder.

The policy or policies of insurance maintained by the Consultant shall provide at least the following limits and coverages:

a. Commercial General Liability Insurance

Consultant shall obtain, at Consultant's expense, and keep in effect during the term of this contract, Comprehensive General Liability Insurance covering Bodily Injury and Property Damage on an "occurrence" form (1996 ISO or equivalent). This coverage shall include Contractual Liability insurance for the indemnity provided under this contract. The following insurance will be carried:

Coverage	Limit
General Aggregate	1,000,000
Products-Completed Operations Aggregate	1,000,000
Each Occurrence	1,000,000
Fire Damage (any one fire)	50,000
Medical Expense (any one person)	5,000

b. Business Automobile Liability Insurance
   If Consultant will be using a motor vehicle in the performance of the services herein, Consultant shall provide City a certificate indicating that Consultant has business automobile liability coverage for all owned, hired, and non-owned vehicles. The Combined Single Limit per occurrence shall not be less than $1,000,000. Said insurance shall name City as an additional insured and shall require written notice to City thirty (30) days in advance of cancellation.

c. Workers' Compensation Insurance
   The Consultant and all employers providing work, labor, or materials under this Contract that are either subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage that satisfies Oregon law for all their subject workers or employers that are exempt under ORS 656.126. Out-of-state employers must provide Oregon workers' compensation coverage for their workers who work at a single location within Oregon for more than 30 days in a calendar year. Consultants who perform work without the assistance or labor of any employee need not obtain such coverage. This shall include Employer's Liability Insurance with coverage limits of not less than $500,000 each accident.

d. Insurance Carrier Rating
   Coverages provided by the Consultant must be underwritten by an insurance company deemed acceptable by the City. The City reserves the right to reject all or any insurance carrier(s) with an unacceptable financial rating.

e. Certificates of Insurance
   As evidence of the insurance coverage required by the contract, the Consultant shall furnish a Certificate of Insurance to the City. No contract shall be effected until the required certificates have been received and approved by the City.

Article 9. Termination

The parties agree that any decision by either party to terminate this Agreement before the date specified under Article 2. Effective Date and Duration shall be accompanied by written notice to the other party prior to the date termination would take effect. There shall be no penalty for early termination. If City terminates the contract pursuant to this paragraph, it shall pay Consultant for services rendered prorated to the date of termination.

Article 10. Agreement Modifications
Modifications to this Agreement are valid only if made in writing and signed by all parties.

Article 11. Subcontracting
No portion of the Agreement may be subcontracted to any other individual, firm, or entity without the express and prior approval of the City.

Article 12. Non-Assignment

No portion of nor any interest in this Agreement may be assigned to a third party without the express and prior approval of the City.

Article 13. Ownership of Work Product

City shall be entitled to ownership and possession of any and all work products, at no additional cost during the products useful lifetime and which are located at City workplaces, of Consultant which result from this Agreement, including any computations, plans, correspondence or pertinent data and information gathered by or computed by Consultant prior to termination of this Agreement by Consultant or upon completion of the work pursuant to this Agreement.

Article 14. Governing Law

Consultant shall comply with all applicable federal, state, and local laws; and rules and regulations on non-discrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition, or disability. The provisions of this Agreement shall be construed in accordance with the provisions of the laws of the State of Oregon. All provisions required by ORS Chapter 279 **A, B and C** to be included in a contract of this type are incorporated into this Agreement as though fully set forth herein. Any action or suits involving any question arising under this Agreement must be brought in the appropriate court of the State of Oregon.

Article 15. Complete Agreement

This Agreement and attached exhibit constitutes the entire Agreement between the parties. No waiver, consent, modification, or change of terms of this Agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification, or change if made, shall be effective only in specific instances and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. Consultant, by the signature of its authorized representative, hereby acknowledges that he/she has read this Agreement, understands it and agrees to be bound by its terms and conditions.

Article 16. Survival

The warranties, indemnifications and other acts required to be performed beyond the term of this Agreement shall survive the termination or expiration of this Agreement.

IN WITNESS WHEREOF, City has caused this Agreement to be executed by its duly authorized undersigned officer and Consultant has executed this Agreement on the date herein below first written.

CONSULTANT: **CITY OF WILSONVILLE:**

Portland Engineering, Inc.   By_____
Name of Firm   Michael A. Stone
Employer I.D. No._____   City Engineer

By _____   Mailing Address:
Typed or   29799 SW Town Center Loop East
                                                                       Wilsonville, OR 97070
Printed Name:_____
Title: _____

Mailing   Address:

_____

_____

_____

ENGINEERING DEPARTMENT
STAFF REPORT & RECOMMENDATION

DATE: January 7, 2008

TO: Honorable Mayor and City Councilors

FROM: Jadene Stensland, P.E.
                 Deputy City Engineer, Capital Projects

SUBJECT: Utility Systems Communications and Security – Telemetry
                 (Project No. 1054 & 2064)

SUMMARY
The attached Resolution No. 2091 awards the contract for the Utility Systems
Communications and Security – Telemetry Project. Utility Systems Communication and
Security are vitally important to the City. The improvements will assist in the operation
and emergency response at the facilities.

RECOMMENDATION
Staff respectfully recommends that the City Council award the contract for the Utility
Systems Communications and Security – Telemetry Project in the amount not to exceed
$596,220 to Portland Engineering, Inc. (PEI).

DISCUSSION
The Resolution is for the task-oriented contract and scope of work for the Utility Systems
Communications and Security – Telemetry Project for the water and wastewater systems.
The water system telemetry project # 1054 and the wastewater system SCADA
Improvements project # 2064 have an approved budget of $596,220 in the FY 07/08
capital project annual budget.

The City of Wilsonville utilizes a secure computer control system (known as Supervisory
Control and Data Acquisition, or SCADA) to monitor and operate the water and
wastewater systems. SCADA allows staff to control pumps, valves and water levels from
a centralized location. In addition, SCADA will provide security alarms and monitoring
of the water system.

The Willamette River Water Treatment Plant (WRWTP) and the Wastewater Treatment
Plant already use Programmable Logic Controllers (PLC) and SCADA. This is the
beginning phase of the security and communication systems and will incorporate the
remote locations in our distribution and collection systems.

The current level of performance of both the water and wastewater telemetry systems is
sufficient for limited data collection, but not for supervisory control. The systems cannot
be upgraded due to lack of software support and the lack of spare parts, nor can they be

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expanded to meet <u>current</u> and future regulatory requirements. The systems cannot handle an increase in security monitoring or alarming needs. Finally, in case of emergency, the City Hall Emergency Response Team does not have access to water and wastewater system or facility information, except by phone. If the phone system, either land or cell based, goes down, information would have to be obtained physically, if possible. The water and wastewater crews have 46 and 75 call-outs per year, respectively. Therefore, an improved and effective communication and security system will save time and money for the community.

In 2001, PEI worked with engineering, treatment plant, and water crew staff to complete an exhaustive survey of the water facilities (wells, reservoirs, pump stations, etc.) for the purpose of devising an upgrade path to link all of the water facilities, including the plants, and bring the facilities up to a desired operating minimum. The result of this survey is the water section under the attached Scope of Work deliverables. The wastewater information is taken from a Wastewater Treatment Plant Staff memo dated May 24, 2007. Engineering would suggest that a survey of off-site wastewater facilities be conducted along the lines of the survey previously completed for the water facilities.

Due to the technical challenges related to the design, programming and maintenance of SCADA, the City has historically relied on the expertise of a contracted electrical engineer known as a systems integrator.

Establishing a systems integrator of record will eliminate the need to go through the Request for Proposal process for every SCADA project. This will lower costs, shorten schedule and reduce the amount of staff time spent on obtaining contractors.

In 2005, PEI was the sole respondent to the City Request for Statement of Qualifications to provide SCADA and systems integration support services. Their proposal was separately evaluated by a panel of three (3) staff members. It was determined that PEI has the qualifications, capabilities, staffing and experience necessary to provide the services the City needs. PEI was the design/build consultant for the City's SCADA system upgrade in FY '06-'07 and the City's previous experience with this firm has been positive.

Projects will be assigned to PEI on an as-needed task order basis. Once assigned, PEI will prepare and submit a cost proposal for the City's review and approval. If approved by City Council, the PEI contract will be for a term of three (3) years and may be renewed for two (2) additional three-year terms.

The Scope of Work is used to describe the city's needs, expectations, performance specifications, and tasks. Following a brief overview, the scope goes on to give a background, requirements, task order methodology, and deliverables. As a task is completed, it is reviewed by members of a quality control committee, to ensure the performance and adequacy of the deliverable for the requirements is met, before the continuation of a task.

The draft contract is based on a short form contract that was devised, with Paul Lee's estimable help, for Portland Engineering Inc. (PEI) several years ago. PEI is a local firm with offices based in Portland, Oregon. They have design-build contracts as well as on-call services contracts with many of the local agencies, including cities of Hillsboro, Forest Grove, Tigard and the Joint Water Commission.

Our contract is modified to facilitate a task order based contract, to be billed out as time-and-material, not-to-exceed fee. The reason for this is that as a facility, such as a water pump station, is upgraded, unforeseen systemic problems are uncovered. Rather than issue a change order, or generate one big general contract to provide a telemetry system, this tact enables us to maintain control and grow the system to our needs as we check its performance in the real world (and prioritize improvements).

The result of these reviews and contracts will be an integrated Telemetry/SCADA system able to take us into the 21st century, respond to emergencies, and proffer savings in maintenance and operations.