

City of Mercer Island



SCADA and Telemetry Systems Replacement

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(Revised September 26, 2018) Addendum I

(Revised October 10, 2018) Addendum II

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SECTION 1.0 ADMINISTRATIVE INFORMATION

The purpose of this Request for Proposal (RFP) is to solicit proposals from qualified vendors or consultants (“Consultant”) for the design, configuration, integration, programming, and construction engineering support and replacement (Project) of the City of Mercer Island’s (“City”) existing Supervisory Control and Data Acquisition (SCADA) and Telemetry systems.

1.1 REQUEST FOR PROPOSAL SCHEDULE

The following schedule provides key dates for the consultant selection process. The City reserves the right to change these dates and will notify Consultants in such a case. Consultants who intend to submit a proposal should notify the primary contact listed in section 1.3 via email by October 10th, 2018 of their intent to submit a proposal so that inquiries can be collected and distributed to all interested parties. The City reserves the right to modify the procurement schedule at any time.

ACTIVITY	DATE
Request for Proposal Release	September 26 th , 2018 (Revised)
Notification of Intent to Submit Proposal	October 10 th , 2018 5:00pm (Revised)
Pre-proposal Meeting	October 12 th , 2018 10:00am (Revised)
Questions Due	October 18 th , 2018 10:00am (Revised)
City Response to Questions	October 23 th , 2018 5:00pm (Revised)
Proposals Due	October 26 th , 2018 2:00pm (Revised)
Notification of Finalists	October 30 th , 2018
Finalist Interviews	November 8 th – 15 th , 2018 (Revised)
Selection of Winning Proposal	December 2018
Notice to Proceed (Pending Council Approval)	January 2019
Final Project Completion	April 1 st , 2022

The City will conduct a pre-proposal meeting for those interested in responding to the RFP. Attendance at this meeting is voluntary. The meeting will begin at City Hall at the date/time indicated in this RFP. At this meeting, the City will offer information about the Project and the procurement process. Those who attend the pre-proposal meeting will have the opportunity to tour various City facilities, including a limited number of remote sites following the meeting to familiarize themselves with site conditions and constraints. Due to space constraints, each Proposer is limited to a maximum of 2 attendees at the meeting and site tour.

All attendees to the pre-proposal meeting will be expected to comply with the City’s safety requirements, including hardhat, steel-toed shoes, reflective safety vest, and safety glasses. Each attendee must provide their own personal safety equipment.

1.2 SUBMISSION OF PROPOSALS

Proposals are due no later than **2:00 PM, Pacific Standard Time on October 26th, 2018.**

Proposals must be submitted in electronic format. The City prefers to receive proposals in PDF format, via email. Electronic copies may also be submitted on CD-ROM or USB storage device.

Proposals should be marked as follows and sent to:

EMAIL:

To: Brian.McDaniel@mercergov.org
Subject: RFP SCADA and Telemetry Replacement

(When a proposal submitted by email has been received, a response email will be sent to confirm receipt.)

US MAIL or HAND DELIVERY:

Brian McDaniel, City of Mercer Island
Re: SCADA and Telemetry Systems Replacement
9611 SE 36th St
Mercer Island, WA 98040

Following the submission of proposals and final evaluation, the City of Mercer Island will have the right to retain unsuccessful proposals.

By submitting a proposal, the Consultant agrees to all applicable provisions, terms and conditions associated with this RFP.

The content requirements set forth in this RFP represent the minimum content requirements for the Proposal. It is the Proposer's responsibility to include information in its Proposal to present all relevant qualifications and other supporting materials. It is the Proposer's responsibility to modify such materials so that only directly relevant information is included in the Proposal. The Proposal should not contain standard marketing or other general materials.

1.3 CONSULTANT INQUIRIES

Submit questions by email to the address listed below. No telephone questions will be accepted or considered. Consultants should refer to the specific RFP paragraph number and page and should quote the passage being questioned. The City will receive questions until 10:00am October 18th, 2018. All questions and responses will be sent via email to those who have submitted their intent to submit a proposal by October 23rd, 2018 at 5:00pm.

The City will delete consultant names from the text of question(s) and answers being sent.

Brian McDaniel
Utility Operations Manager
Email brian.mcdaniel@mercergov.org

1.4 OWNERSHIP OF MATERIALS

All materials submitted in response to this RFP become the property of the City. Proposals and supporting materials will not be returned to consultants.

1.5 COST OF PROPOSALS

The City shall not be responsible or liable for any costs incurred by the Consultants in the preparation and submission of their responses to this RFP, including vendor demonstrations if requested by the City.

1.5 LATE SUBMISSION

Proposals received after the closing date will not be accepted. The City is not responsible for late delivery or proposals lost in delivery. Proposals postmarked on the due date will not be accepted unless received by the due date and time. Please refer to Section 1.1 for the due date and time.

1.6 ERRORS IN PROPOSAL

The City is not liable for errors in consultant proposals. A Consultant may correct an error in his or her proposal with City approval. Changes after the submission date may be made only to correct an error in an existing part of a proposal. New material may not be submitted. No oral, telephone or faxed modifications, or corrections will be accepted.

1.7 REJECTION OF PROPOSALS

The City reserves the right to reject any or all proposals which are deemed to be non-responsive, late in submission, or unsatisfactory in any way. The City shall have no obligation to award a contract for product, work, goods, and/or services as a result of this RFP. Rejection of any or all proposals does not preclude the City of Mercer Island from procuring products or services from, contracting with, or otherwise engaging with vendors or consultants in the future.

1.8 SUB-CONTRACTOR/PARTNER DISCLOSURE

The Consultant may propose the entire solution. If the proposal by the Consultant requires the use of sub-contractors, partners, and/or third-party products or services, this must be clearly stated in the proposal. The City requires that the Consultants submitting proposals shall have primary project and service liability for all products and services which shall collectively meet the RFP requirements until such a time that the City deems the project complete or until additional terms and conditions are agreed upon by Consultant and the City in a new and separate written agreement. The City will not refuse a proposal based upon the use of sub-contractors or third-party products. The consultant shall remain solely responsible for the performance of all work, including work that is sub-contracted.

1.9 EVALUATION AND SELECTION CRITERIA

Consultants and proposed solutions will be evaluated on the following criteria, including but not limited to:

- Understanding of approach to project
- Understanding the City's needs as expressed in the consultant's proposal
- References
- Experience and qualifications of the company and its resources
- Team experience developing and implementing hardware/software design standards
- Team experience designing, configuring, programming, and integrating SCADA and Telemetry systems
- ~~Cost of services and products~~
- Ability to meet the functional and technical requirements
- Ability to provide deliverables and meet deadlines as stated throughout the RFP
- Additional criteria and information established through this proposal process which lends itself to establishing the Consultant's ability to perform the work outlined in this RFP

1.10 CONSULTANT INTERVIEWS

The Consultant may be invited to an interview to discuss the capabilities of the proposed products and services to the City evaluation team. This interview (if requested), along with questions and answers, will be a critical component of the overall consultant evaluation.

1.11 CONSULTANT SELECTION

The City reserves the right to make an award based solely on the information provided, to conduct discussion, or to request proposal revisions if deemed necessary. The Consultant selected for the award will be chosen based on the City's evaluation and determination of which Consultant will provide the greatest benefit to the City. Therefore, proposals should contain the Consultant's best and most competitive terms as related to the submission requirements of this RFP.

1.12 CONTRACT NEGOTIATIONS

At the City's sole discretion, a maximum of three firms may be invited to participate in interviews. The top-ranked Proposer will be selected for contract award. If negotiations with any selected Proposer are not successful, the City may elect to negotiate with the next-ranked Proposer. The City reserves the right to decline to award a contract for Services as a result of the RFP; Withdraw the RFP and reject any or all Proposals; Not award to any or all Proposers and issue a subsequent request for proposals based on refinements or concepts proposed in response to this RFP or otherwise.

1.13 RFP ERRORS and AMENDMENTS

The City is not liable for any errors in this request for proposals and reserves the right to amend this request at any time prior to the closing date.

SECTION 2.0 PROJECT INFORMATION & REQUIREMENTS

2.1 PROJECT OVERVIEW

The City of Mercer Island is located in Lake Washington between the cities of Seattle and Bellevue in Washington State. The City is 14 square miles in area with approximately 24,000 residents who are provided a full range of municipal services including a water and wastewater utility.

The City's water system receives 100 percent of its potable water supply from Seattle Public Utilities (SPU). The City system contains two four-million-gallon steel reservoirs and distributes water through approximately 120 miles of water distribution piping, 87 pressure-reducing stations, and two pumping booster stations providing service to approximately 7,558 customers. The City has proposed projects scheduled for the 2019-2020 biennium that will require integration and coordination with the SCADA replacement project, including the construction of a booster chlorination station, implementation of a meter replacement program, and asset management software. The customer base is comprised of 95 percent residential use with the remaining comprised of commercial, multi-family, and dedicated irrigation accounts.

The City's sewer system is comprised of approximately 113 miles of collection system piping and 18 pump stations that flow to King County for treatment off island. The 18 pump stations are primarily located on the shores of Lake Washington, collect and pump wastewater from one station to the next via collection and conveyance pipes located in the lake.

The City's two existing monitoring systems operate independently. The water system utilizes a Siemens WinCC HMI system Siemens PLC's, and operates as a SCADA system. The sewer utility telemetry system (Telemetry system) monitors the 18 sewer pump stations. The Telemetry system monitors, but does not control the remote stations, using a GE Cimplicity system with primarily Schneider Electric controllers. The City recently completed a telemetry system upgrade project that was implemented over the last 15 years. It separated sewer system monitoring from the water SCADA system. Sewer system alarms are routed from the sewer Telemetry system to the water SCADA HMI system to access the existing Win911 system for all call out notifications. Remote sites are monitored using leased telephone lines that present reliability problems.

In 2017, the City completed a SCADA master plan that outlined the City's intent to merge the two monitoring systems into one platform. Upon request, a copy of the SCADA Master Plan may be provide to proposer's that submit a notice of intent to submit proposal along with a completed signed confidentiality agreement (Appendix A). The City has selected the Siemens OA as the technology that will be used.

As part of its SCADA Master Plan, the City has selected Siemens PLCs and WinCC OA HMI for implementation. This project involves the development of design, standards, specifications, and implementation documents; the configuration, programming, and implementation of fully integrated SCADA and Telemetry systems; and the development of requirements for integrating this new system with the City's existing business applications.

The project has the following primary objectives:

- High Availability SCADA and Telemetry Systems
- Standards Based Design, Configuration, and Implementation
- Capable of Integration with City Business Applications
- Utilize NIST Cybersecurity Framework for Industrial Control Systems
- Minimize Life Cycle Costs
- Minimal Operational Impact During Project
- Meets the City's Desired Implementation Schedule
- Ensures City Staff are Highly Trained to Operate and Utilize the System

2.2 PROJECT OBJECTIVES

- **High Availability SCADA and Telemetry Systems**
The City seeks a high availability system. Hardware, software, networking, and data should be designed to withstand power failures, network outages, hardware failures, and data corruption with as little downtime and data loss as possible.
- **Standards Based Design, Configuration, and Implementation**
The City seeks a system that reduces proprietary and custom design, configuration, and implementation. The City should be able to continue the ongoing operation and support of the system utilizing a variety of qualified contractors, hardware suppliers, and other support activities in the event any contractor or supplier becomes unavailable. Design and implementation should conform to industry standards recognized by qualified industry professionals. Implementation at each site should be consistent using structured programming and configuration standards.
- **Capable of Integration with City Business Applications**
The City seeks a system that can integrate with other applications through well-documented application programming interfaces using common programming languages and web services. Systems where integration capabilities are desired include Azteca Cityworks, ESRI ArcGIS, and Harris iCIS/Inhance. In addition, the City would like to be able to develop custom reports utilizing common tools such as Crystal Reports and Microsoft Excel.
- **Utilize NIST Cybersecurity Framework for Industrial Control Systems**
The project should be designed and implemented with best practices and defined frameworks like the NIST Cybersecurity Framework for Industrial Control Systems.
- **Minimize Lifecycle Costs**
The project should be designed to minimize the cost of ongoing lifecycles of hardware and software components.

- **Minimize Operational Impacts During Project**

The City will need to continue operating its existing SCADA and Telemetry system during this project. Minimizing impact to daily operations and careful coordination with City staff is desired.

- **Meets the City's Desired Implementation Schedule**

The City does not want to repeat a 15-year implementation timeframe. The ability to design, configure, and implement the entire system by April of 2022 is desired.

- **Ensures City Staff are Highly Trained to Operate and Utilize the System**

A key goal of the project is to ensure City staff are fully trained on how to operate and take full advantage of the systems capabilities in order to successfully support the City's water and wastewater utilities.

2.3 PROJECT SCHEDULE

The City's intent is to execute a contract and issue a notice to proceed with the successful Consultant by January of 2019. Project completion is desired by April 1st, 2022.

2.4 PROJECT SCOPE

Design of the Replacement SCADA and Telemetry System:

- Develop implementation requirements for design and specification of the replacement systems
- Develop hardware and software Standards, providing flexibility for integrating with current and future enterprise-wide systems
- Develop implementation documents for construction (control room and panel design and installation documents, control strategies, etc.); produce a "typical RTU design with site lists" that the contractor will use to provide individual detailed fabrication drawings for each remote site; contractor will provide the system hardware and system software, as well as the PLC/SCADA application software; selected Proposer will provide the application software for all HMIs and servers and work with the contractor to test and commission the systems
- Develop and implement the Network, HMI and server design in coordination with City IT staff
- Develop a construction sequencing and commissioning plan and schedule
- Select construction contractor for systems implementation

SCADA and Telemetry Systems Integration and Construction Management:

- Provide pilot system software development using a lab simulation process representing key elements of the Systems (SCADA servers, master station, one sample remote sewer site and one sample remote water site) (City to purchase pilot test hardware/software)
- Provide control system software development and acceptance testing requirements
- Update the hardware and software Standards
- Provide required system-wide SCADA software development documents
- Startup and commissioning services during implementation
- Coordinate with the construction contractor; Note: The City will assist the construction contractor in such areas as private property access, traffic management, equipment staging and delivery, public relations, property access notifications and scheduling, and all other associated installation coordination support services required during construction activities
- Define requirements for integration of SCADA and Telemetry Systems to business applications such as GIS, CMMS, AMI, utility billing, etc. in coordination with City IT staff
- Provide the following project construction management activities:

- Track and review costs incurred in providing services
- Perform monthly status reporting including information such as the number of submittal and/or design modification reviews to date
- Organize and maintain project records
- Meet with the City's project manager monthly to review the scope, schedule and costs of completed and anticipated Consultant services
- Providing summarized meeting minutes and site visit summaries

Construction Engineering Support:

- Review contractor submittals, shop drawings, respond to RFIs, requests for change proposals and/or change orders, provide design clarifications, review or prepare costs estimates for changes, attend construction meetings, and conduct site visits to observe conditions discovered during construction, providing services necessary for resolving conflicts with existing facilities or other unanticipated conditions encountered during construction, preparing or reviewing design revisions, reviewing contractor provided as-built documentation, and providing final inspection services
- For contractor provided construction scheduling and coordination activities
- For contractor provided construction permits and staging
- Review contractor provided commissioning plan
- Coordinate contractor delivery, installation, start-up and commissioning of replacement systems components, networks, communication systems and interfaces with existing systems
- For contractor provided risk management services

2.5 PROJECT DOCUMENTATION

The Consultant shall provide a complete set of documentation for all implemented systems prior to acceptance and close-out of this project. All drawings, specifications, and other documents and electronic data furnished during the project will become the City's property at project closure.

2.6 PROJECT ACCEPTANCE

The City reserves the right to withhold a percentage of payment until the requirements of the project have been completed and approved by the City. Proposals are required to establish payment milestones. Final acceptance criteria for each milestone should be included in proposal and will be defined during contract negotiations but in general should include the following:

- Delivery, Configuration, and Implementation of all products and services
- A period of stability no less than 30 days after implementation
- Delivery of documentation

2.7 KICKOFF/REQUIREMENTS REVIEW MEETING

The City will conduct a kickoff meeting with the Consultant after a fully executed agreement is in place to ensure that the project begins with clear expectations and results. The overall project history, goals and objectives, requirements, and expectations will be discussed. Other items include:

- Team Introductions
- Project Management and Communication
- Schedule and Change Control
- Project Specifications

- Project Documentation
- Acceptance Criteria
- Project Closure and Acceptance

SECTION 3.0 CONSULTANT SUBMISSION REQUIREMENTS

Proposals should be no more than 20 pages in total.

3.1 TRANSMITTAL LETTER

Provide a formal letter of transmittal with the proposal that commits the Consultant to its proposal and states that the proposed solution meets the requirements of each subsection of this RFP. The transmittal letter must be signed by an officer of the Consultant authorized to do so. Also include contact information for: (1) person responsible for answering questions regarding the proposal, (2) the person responsible for contract negotiation, and (3) the signer.

3.2 EXECUTIVE SUMMARY

Provide an overview of the proposal including your company's unique abilities to meet the project requirements. This section need only be one to three pages.

3.3 COMPANY INFORMATION, HISTORY & PROFILE

This section provides each Consultant with the opportunity of demonstrating how its history, organization, and partnerships differentiate it from competitors. Careful attention should be paid to providing information relevant to The City's needs. Provide a concise profile of your company to include the following:

- Full legal company name and year of establishment
- Organization address, phone number and primary contact information
- History of organization
- Location of corporation or head quarters
- Tax identification number
- Does another company own you or do you own other companies?
- Current number of employees
- Total number of completed projects. Please included whether the projects were public or private, the size and scope of the projects, and dates of completion.
- Availability to proceed with project
- Is the organization involved in any pending litigation that may affect its ability to provide its proposed solution or ongoing maintenance or support of its products and services?
- Certification that consultant is a manufacturer partner and certified on proposed equipment as of date of the proposal

3.4 PROJECT PLAN & PROPOSED SOLUTION

The Consultant must include a plan for implementing the project described in this RFP. The plan must be comprehensive enough in scope and provide details that convey the Consultant's ability to manage this project. The plan must include project organization and management, milestones, tasks, dates, and acceptance criteria. Provide a summary review and assessment of City's scope, budget and schedule. Provide a confirmation of the project's viability or assessment of scope adjustments required to achieve scope, schedule and budget performance requirements to meet the City's needs.

3.5 QUALIFICATIONS AND EXPERIENCE

List the project team. Provide names, roles, involvement levels and durations, and relevant experience for each person on the team. Provide descriptions of up to five relevant automation projects related to water and wastewater infrastructure completed or in progress by the project team members within the last five years. In progress project relevance will be considered by level of completion. Project descriptions should include:

- Project Name and Location
- Total Installed Cost
- Start and Completion Date
- Client Name and Contact Information
- Roles of proposed project team members
- Narrative description of project and relevance to this project
- Types of Standards Developed
- I/O Point Counts, Quantities of PLC's, PLC Type, Telemetry System Type, and HMI
- Business Application Integrations

Provide evidence of relevant qualifications for project team in SCADA and Telemetry systems engineering, design, configuration, programming, and integration in support of the City's selected technology: Siemens WinCC OA, Siemens S7-1200/1500 PLCs and associated Siemens technology.

Documents sealed by a Professional Engineer licensed in the State of Washington will be required for applicable construction documents.

3.6 SUB-CONTRACTORS/PARTNERS

Proposals must list any sub-contractors, partners, and/or third party entities who are involved in fulfillment of the proposed solution and describe the specific role of each.

3.7 REFERENCES

Consultants must provide a list of at least three references from the past 5 years where the Consultant provided services for a similar project that is being proposed in this RFP. Required reference information:

- Customer/Company Name
- Street address, City/State/Zip code
- Contact name/title, telephone and email address

3.8 SERVICES, PRODUCTS, PRICING, and PAYMENT SCHEDULE

All proposals should be structured such that the City can accept or refuse portions of the proposal. A comprehensive line item cost section must be included in the proposal including estimated tax if applicable.

3.9 WARRANTY AND SUPPORT

The Consultant should describe how the warranty and support of the system works.

3.10 CONSULTANT'S SECTION

This section is reserved for Consultants to provide information that they feel is necessary but was not requested. A response to this section is not required. Consultants may discuss potential issues that are relevant to this RFP and to their proposal. Consultants may comment on requirements that they may think are missing from this RFP.