Meeting Date: March 15, 2023

Submitted by: Eric Joudrey – Manager of Water and Wastewater Operations

Report No: PWE 15-2023

Subject: SCADA Standards Consultants Award

Recommendation:

THAT Report PWE 15-2023 regarding SCADA Standards Consultants Award be received;

AND THAT the SCADA Standards be awarded to Eramosa Engineering Inc. in the amount of $138,389.52 (taxes not included);

AND FURTHER THAT the Mayor and Clerk be authorized to execute the necessary contract documents.

Purpose:

To inform and seek Council approval for the consultant award of the Supervisory Control and Data Acquisition (SCADA) Standards for the Water and Wastewater Department as a single source award in accordance with the Procurement Policy Section 34; "The Municipality may conduct a single source procurement process where there is more than one source of supply in the open market, but only one source is recommended due to predetermined and approved specifications. The procurement may be conducted using a single source process if the goods and/or services are available from more than one source, but there are valid and sufficient reasons for selecting one supplier."

Background:

Municipal Water and Wastewater staff and Eramosa Engineering completed a SCADA Road Map in 2022 to identify long-term plans and goals for their SCADA systems. This Road Map is intended to define the process to upgrade existing systems and deploy technology that provides operations and management with control and monitoring capabilities over their Water and Wastewater SCADA Systems.

Over the course of several months the project focused on four key areas:

1. Understanding the Current State;
2. The Desired State – End User Experience Focus;
3. Standardized approach to hardware, software & networks; and
4. Implementation Plan.

The focus of these four key areas along with developing in-depth knowledge and understanding of the entire Municipal SCADA system resulted in three technical memos outlining a process to commence with upgrades to the existing systems and recommendations along with timelines for the next ten (10) years.

Analysis:

To properly roll out an overall SCADA Upgrade Program, a foundational project is the development of SCADA standards that can be used to upgrade the SCADA system as well as deliver the SCADA components of capital project, specific to water and wastewater.

One key take away from the Road Map project about our current SCADA system is lack of standardization with multiple programs, different hardware and alarming configurations within our current system. SCADA Standards are critical for the Municipality as they set the requirements for how a system is to be designed, programmed and built, how a graphic on the SCADA system will function, and how an alarm is to be programmed. Consistency and standardization are important from an operational perspective so that an operator can respond to and interact with a repeatable process that has the same look and feel across all facilities. Developing standards for how the SCADA systems are to be designed, programmed and tested provides the Municipality with the opportunity to deploy a standard SCADA upgrade program spread out over multiple year at multiple locations, support capital project delivery and provide a foundation for consistency resulting in improved efficiency. The SCADA Standard process will include:

1. Control System Standards
2. Human Machine Interface (HMI) Standards and Templates
3. Programmable Logic Control (PLC) Programming Standard
4. Process Control Narrative Template
5. Alarm Management Standard

The project will be completed in the fall of 2023, with regular meetings and workshops attended by the Water and Wastewater Operations and Management staff.

Financial Implications:

The Municipal Council approved 2023 budget for the SCADA Replacement is $300,000.

The consultants fee for undertaking this work is $138,389.52 (taxes not included).

Strategic Plan:

This matter aligns with following strategic priorities:

- Sustainable Infrastructure and Services

- Responsive Municipal Government

Attachments:

N/A