



DEPARTMENT OF
UTILITIES

Department of Utilities
Wastewater Treatment Plant 2006 East Newberry
Street Appleton, WI 54915
p: 920-832-5945
f: 920-832-5949
www.appleton.org/government/utilities

MEMORANDUM

Date: August 8, 2024
To: Chairperson Vered Meltzer
From: Corey Popp, Director of Information Technology
CC: Chris Stempa, Director of Utilities
Subject: **Utilities Committee Action: Engineering Services Contract to Donohue and Associates, Inc. as part of Utilities Department Network System Upgrades Project in the amount of \$222,890 with a 15% contingency of \$33,443 for a project total not to exceed \$256,324**

BACKGROUND:

The City of Appleton's Wastewater Treatment Plant (AWWTP) campus consists of 19 buildings totaling approximately 280,000 square feet that are located on the north half of a 38-acre parcel adjacent to the Lower Fox River. One-foot-thick concrete tunnels descending to a maximum depth of 20 feet below grade interconnect 16 of the 19 buildings. The maximum building height is 100 feet above ground. The City of Appleton's Water Treatment Facility (AWTF) is comprised by a single 173,232 total square foot building constructed in 2001 residing on 26 acres in the City of Menasha. The basement level galleries and equipment rooms within the treatment complex are configured based on the treatment system tankage descending to a maximum 25 feet below ground. An aerial site plan is found on Attachment 2. The maximum building height is 20 feet above ground.

The AWWTP and AWTF are each supported by two independent Ethernet networks, the City's Enterprise Resource Planning (ERP) network and the Utility Department's Supervisory Control and Data Acquisition (SCADA) network. The existing networks are outdated, complex to maintain, and at times unreliable. The City of Appleton and Utilities Department wishes to modernize.

The SCADA network is independent and currently air gapped from the city's ERP network and must remain independent and air gapped. The city ERP network at both facilities connects to the Internet and the City's Mitel telephone system. The AWWTP connects by way of the Appleton Area Metropolitan Fiber Optic Network (AAMFON). The AWTF connects by way of a site-to-site IPsec VPN across a third-party Internet connection.

There is an antiquated public address system at the AWWTP that is accessed by way of Spectralink wireless telephones. At both facilities, Viking Access System gate operators are opened and closed remotely by way of touch tones sent through the Spectralink wireless phones (while on plant grounds and within range of Motorola access points).

The AWWTP wireless voice communication is facilitated by 28 wireless IP Spectralink phones running on approximately 180 Motorola access points located throughout the campus. Similarly, the AWTF wireless voice communication is facilitated by 12 wireless IP Spectralink phones running on approximately 31 Motorola access points.

The City of Appleton's cellular coverage is adequate, until within the tunnel systems at both facilities, but in areas point coverage significantly degrades and eventually becomes unusable. As a result of poor below grade cellular coverage, the WI-FI networks are configured to enable WI-FI calling on the guest VLAN. The guest VLAN is the wireless network staff members connect to when within campus buildings and tunnels or on facility grounds within WI-FI coverage.

REQUEST FOR PROPOSAL

A Request for Proposal (RFP) was formulated with a scope of work that will deliver the City a campus wide network system Conditions Assessment and Project Alternatives Technical Memorandum (TM). The information and costs identified will be utilized to shape decisions as part of a 2026 or 2027 construction project. The Conditions Assessment shall document the existing network system condition and associated infrastructure. This will likely require the use of diagnostic tools, wireless surveys, and/or testing to aid in revealing existing system deficiencies.

Based on the findings of the Conditions Assessment, a minimum of two projects will be developed that staff would evaluate for potential inclusion as part of a future construction project. Each alternative will consider short-term or immediate needs (within 1 to 2 years) including, but not limited to, improvements to address reliability or functionality issues (i.e. poor cabling), equipment obsolescence, compliance, and/or security concerns. Each alternative should also account for advancements in technology, expandability, integration, compatibility, and redundancy. This includes future upgrades that would address industry accepted practices for network architecture and equipment standards. This document will be provided to staff to select a concept for further development as part of Phase II

Each alternative will provide sufficient supporting details within the Project Alternatives TM. The contracted engineer or consultant will revise the final document, if or as necessary, to incorporate new information following the initial Conditions Assessment. At the conclusion of this process, staff will submit to the committee of jurisdiction the recommended Project Alternative to be carried forward for a public bid construction project.

RFP PROCESS

A Request for Proposals (RFPs) process was initiated in May 2024. Only one firm, Donohue and Associates, Inc. (Donohue), was present at the mandatory Pre-Proposal meeting and produced a complete proposal. Internal capacity coupled with the uniqueness and complexity of the scope of work outlined in the RFP was the rationale provided as to why other firms did not respond. Donohue has successfully completed a number of complex construction projects for the Utilities Department in the past. Within the last year, they have completed SCADA network evaluations at the AWWTP and AWTF. They are familiar with the facilities and the level of effort necessary to supply the deliverables outlined in the RFP. Donohue recognizes the complexity of the scope of work and has devised a project team made up of engineers and industry professionals experienced in network and communication system upgrades.

PROPOSAL

The Information Technologies Department and Utilities Department organized an evaluation team to critically review each the written proposal based on established criteria described in the RFP. Sealed fees were revealed following the proposal evaluation process. Donohue’s proposal satisfied the review criteria, and their service fee was within the available CIP budget. The appropriation of cost associated with this engineering service contract will be shared between the AWWTP and AWTF at 80% and 20% respectively. That allocation is based on the anticipated network system infrastructure that will be installed and/or upgraded at each treatment facility.

The Scope of Services described within their proposal includes the following compensation on a Time and Expense basis.

Service Description	Fee
Phase 1 - AWWTP Network Assessment	\$68,635
Phase 2 - Network Upgrade Planning	\$39,710
Phase 3 - Network Upgrade Design and Bidding	\$114,545
TOTAL	\$222,890

RECOMMENDATION:

I am recommending the approval of an engineering contract to Donohue and Associates, Inc. as part of the Utilities Department Network System Upgrades Project in the amount of \$222,890 with a 15% contingency of \$33,443 for a project total not to exceed \$256,324.

If you have any questions regarding this project, please contact Corey Popp at 920-832-5892.