"…meeting community needs…enhancing quality of life."

Department of Utilities
Wastewater Treatment Plant
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TO: Chairperson Vered Meltzer and Members of the Utilities Committee

FROM: Chris Shaw, Utilities Director

DATE: January 21, 2021

RE: ***Award the Engineering contract for 2021 Solids Dewatering Equipment Upgrades Project to McMahon in the amount of $325,872 with a 10% contingency of $32,587 for a Project Total not to exceed $358,459.***

BACKGROUND:

For approximately 25 years the Appleton Wastewater Treatment Plant (AWWTP) has successfully utilized Ashbrook Simon Hartley Winkle presses or belt filter presses (BFPs) to dewater anaerobically digested sludge. Each of the three BFP have run times in excess of 4,000 hours per year and producing on, average, (5-year) 25,500 wet tons per year. Although reliable and efficient, these BFPs have reached their useful life.

There has been reconditioning work during the late 2000's but that effort was not intended to go beyond the priority repairs identified at that time. The original functioning electrical hard wire relays remained untouched and are still in use today. These existing relays do not provide the diverse functional capabilities offered by present-day technologies. This includes the ability to fully integrate BFP unit processes with the existing supervisory control and data acquisition (SCADA) computer operating system. To accomplish this, the existing hard wire relay system will require replacement by a programmable logic controller (PLC) and new relay modules. Since the original installation of the BFPs, there have been unit processes that have become obsolete (e.g. lime pasteurization process phased out by anaerobic digestion as part of 1994 plant upgrades), including improvements to the solids dewatering polymer batch system. These former treatment processes and ancillary chemical feed systems continue to share common space within existing electrical control panels. This CIP is intended to address unused electrical wiring and components from past improvements and upgrades which remain within the existing BFP control cabinets. Preliminary engineering services in 2021 will provide observations, data, alternatives, costs, conclusions, and recommendations that will be utilized to shape subsequent project construction phasing involving additional dewatering equipment and/or upgrades to the three existing BFPs. It is anticipated that following the installation and successful startup of new equipment that the project work would transition to rebuilding the three existing BFPs and address remnant hard wiring associated from obsolete equipment and processes. This work would also involve upgrades to outdated hard wire relays with PLC technology and the replacement of antiquated and/or degraded components outside the electrical hardwire systems

RFP PROCESS

Request for Proposals (RFPs) were submitted to four engineering firms for professional services. The services sought will guide the Utilities Department throughout the solids equipment upgrade process from planning and design phases, through active construction. Each of the firms invited as part of the RFP process were selected based on an extensive resume of wastewater industry work and past successful project work at the AWWTP.

The Utilities Department organized an evaluation team to critically review each firm's written proposal based on established weighted criteria described in the RFP. Each proposal was given a score by team members based on content and independent of costs. Sealed fees were revealed following the tally of each team member scores. The table below summarizes the proposal review team's tallied scores, engineering firm's proposed fee, and the calculated value score which incorporates the proposed fee to determine the best overall proposal. The higher the final value score, the greater the value of the proposal.

RFP Evaluation Results

COMPANY	SCORE	QUOTE	VALUE
Applied Technologies, Inc.	224	$412,273	54.3
Donohue and Associates	338	$353,650	95.6
McMahon Associates, Inc.	512	$325,872	157.1
Strand Associates	426	$694,900	61.3

Notes

1. "Total Score" represents the combined total from each of the three evaluation team members.
2. Point Value Factor Method = (Qualitative Proposal Score/ Quote Price) x 100,000. The highest point value factor derived is considered the best value proposal.

The McMahon Associates, Inc. (McMahon) proposal received the highest overall evaluation score by the review team and provided the greatest overall value using the point value calculation. The McMahon project team proposal demonstrated a comprehensive understanding of project needs and an approach to deliver a successful project.

RECOMMENDATION:

Approval of an Engineering contract for 2021 Solids Dewatering Equipment Upgrades Project to McMahon in the amount of $325,872 with a 10% contingency of $32,587 for a Project Total not to exceed $358,459.

If you have any questions or require additional information regarding this project please contact Chris Stempa at 920-832-5945.