"ting community needs...enhancing quality of life."

Department of Utilities
Wastewater Treatment Plant
2006 E Newberry Street
Appleton, WI 54915-3128
920-832-5945 tel.
920-832-5949 fax

To: Chairperson William Siebers and Members of the Finance Committee

From: Utilities Deputy Director, Chris Stempa

Date: November 16, 2022

Re: **Finance Committee Action:** Award "AWWTP Phase I Belt Filter Press Equipment Upgrades Project" Base Bid with no Alternate Bids to Staab Construction in the amount of $5,063,000 with 15% contingency of $759,450 for a project total not to exceed $5,822,450

Finance Committee Action: Approve positive fund balance transfer of $100,000 from the AWWTP Sludge Storage Building Addition Construction Project to the AWWTP Phase I Belt Filter Press Equipment Upgrades Project

---

BACKGROUND

The Appleton Wastewater Treatment Plant (AWWTP) has utilized Ashbrook Simon Hartley Winkle presses or belt filter presses (BFPs) to dewater anaerobically digested sludge for nearly 30 years. Each of the three BFP have run times in excess of 4,000 hours per year and produced, on average, approximately 25,000 wet tons per year. This equipment has been proven to be reliable and efficient. However, the equipment has exceeded typical useful life expectancies which is supported over the past few years with an escalating trend of equipment failures, critical parts obsolescence (e.g., variable frequency drives) and deterioration of structural components caused by years of acid washing.

The original 2023 project was to be accomplished within a single phase and would replace the three (3) existing BFP's with four (4) new BFP's. The additional BFP would satisfy future anticipated loadings associated Sewer Service Area growth and provide redundancy. The project would also address original functioning electrical hard wire relays that have remained untouched from original construction. 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. Since the original equipment installation, there have been unit processes that have become obsolete (e.g., lime pasteurization system) yet remained in the presence of subsequent upgrades (e.g., polymer batch system improvements). These former treatment processes and ancillary chemical feed systems continue to share common space within existing electrical control panels. This project will address unused electrical

wiring and components from past improvements, upgrade second floor HVAC to accommodate new BFP equipment, and the complete the replacement of antiquated and/or degraded components outside the electrical hardwire systems.

As preliminary engineering progressed into 2022, the full extent of the project scope was refined as observations, alternatives, recommendations, and updated equipment estimates were obtained. The substantial increase in costs seen with other capital construction project bids substantially outpaced budgetary projections. The contributing factors for this include lingering supply chain issues, sustained high demands for goods and services, and spikes in commodity prices such as steel and oil. Coupled with inflationary increases, the cost of operations, equipment, and construction have increased beyond prior year's forecasts. As such, out of necessity, the project was segregated into two separate phases over two years.

The 2022 "Phase I Belt Filter Press Equipment Upgrades Project" provides the foundational work from which the 2023 Phase II project will occur. The existing BFPs will remain operational during Phase I construction. This allows for continuity of operation during the installation and startup of new equipment. The substantial completion of Phase I will facilitate the transition to Phase II which involves the complete demotion and replacement of the three existing BFPs and the removal of remnant hard wiring associated from obsolete equipment and replacement of antiquated and/or degraded components outside the electrical hardwire systems.

BIDS:

On Thursday, November 10, 2022 the City opened and reviewed the bids from two contractors which are summarized in the Table 1 below. Each bid met the submittal requirements. Staab Construction was the least cost responsible bidder.

Table 1: Bid Tab Summary

Company	Base Bid
Staab Construction	$5,063,000
Miron Construction	$5,067,331

RECOMMENDATION:

The Utilities Department requests the transfer of $100,000 in remaining funds from the AWWTP Sludge Storage Addition Project to cover the budget shortfall associated with the Phase I Belt Filter Press Equipment Upgrades Project bid price plus 15% contingency. The Finance Department was consulted to help provide this recommendation.

I am requesting an award of the Phase I Belt Filter Press Equipment Upgrades Project base bid to Staab Construction in the amount of $5,063,000 with 15% contingency of $759,450 for a project total not to exceed $5,822,450.

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