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**TO:** Chairperson Vered Meltzer and Members of the Utilities Committee

**FROM:** Chris Shaw, Utilities Director

**DATE:** January 5, 2022

**RE:** *Award Contract Amendment 3 to Jacobs Engineering for the Water Treatment Facility Optimized Corrosion Control Treatment (OCCT) Studies in the amount of \$31,740 and a total revised contract of \$190,790*

**BACKGROUND:**

Corrosion in a water distribution system can lead to shortened asset life of infrastructure components and reduced water quality to customers taps. Nationally and at the state level lead levels have become a concern amongst the public. This is a result of corrosion where water systems release lead which is above regulatory limits. Currently, the Appleton Water Treatment Facility meets all State and Federal requirements for lead. However, the Wisconsin Department of Natural Resources is recommending improvements to the City's Corrosion Control Plan. The purpose of this Corrosion Control Treatment project is to determine the best course of action that will enhance water quality (reduce any existing lead) while being fiscally responsible to the utility's rate payers.

This project had two prior phases. The first phase consisted of the theoretical water chemistry needed to decrease the corrosiveness of Appleton water. The second phase completed a full scale experiment with lead service lines that were incorporated into a testing apparatus. The apparatus was computer controlled and evaluated a number of treatment alternatives. As an outcome of the theoretical and actual phases a report was submitted to the WDNR with recommendations for corrosion treatment. The recommendation allows for the elimination one treatment chemical and addition of two more.

To produce information regarding this change and also complete a preliminary engineering phase of the changes, I am recommending a contract amendment for Phase 3 be executed with Jacobs Engineering to produce the following:

**SCOPE OF WORK:**

- Determine modifications needed to use one of either two existing chemical systems
- Determine modifications needed to convert to phosphoric acid (e.g., safety, storage, ventilation, etc.)
- Determine modifications needed to the existing sodium hydroxide storage and feed system
- Prepare conceptual design criteria for the two new chemical systems including feed rates that will meet WDNR requirements
- Prepare a construction cost estimate (Class 5), including bidding, construction services, and construction costs
- Provide a technical report detailing the preliminary engineering findings

This engineering work was not included earlier due to the unknown recommendations of phase 2. An evaluation team comprised of myself, the technical services manager, the water plant manager, and the utilities deputy director completed a review of the Jacobs engineering proposal and found it to be of good value. Moreover, Jacobs has produced well on project deliverables during the first two phases of OCCT work.

**RECOMMENDATION:**

Award Phase 3 OCCT Contract Amendment 3 to Jacobs Engineering Engineering in the amount of \$31,740 and a total revised contract of \$190,790. If you have any questions regarding this project please contact Chris Shaw at ph: 920-832-2362