



MEMORANDUM

To: Mayor and City Council

From: Kumar Gali, P.E., Assistant Director of Public Works - Operations
Kent Collins P.E., Director of Public Works

Date: November 9, 2021

Reference: Wagon Wheel Elevated Storage Tank Rehabilitation Design

2040: Foundation Pillar: Sustainable City Government
Goal 4: City Services to Ensure High Levels of Customer Satisfaction

General Information:

- Wagon Wheel Elevated Storage Tank (WWEST) is one of the City's elevated tanks that supplies water to the community.
- WWEST has a capacity of 2-million gallons and was originally constructed in 1998.
- In July of 2021, Dunham Engineering completed pre-rehabilitation inspection and evaluation for the WWEST and rated the tank condition to be in fair to poor in overall condition.
- Based on the inspection results, Dunham Engineering recommended rehabilitation of WWEST within 1-year.
- Design and construction engineering and monitoring professional services contract with Dunham Engineering is for \$85,000.
- The opinion of probable construction cost for the actual rehabilitation work is \$1.129 million. The award of construction contract will be prepared for approval in a future meeting after design is complete.

Introduction:

This agenda item is being presented to consider approval to enter into a design, construction engineering and monitoring contract with Dunham Engineering for the Wagon Wheel Elevated Storage Tank rehabilitation project in the amount of \$85,000; funded through Bond proceeds; and authorizing the City Manager to sign and execute any necessary documents.

Analysis:

WWEST, located near Northpoint Drive and Royal Lane, is an elevated water storage tank with a capacity of 2-million-gallons constructed in 1998. The tank consists of a 40-foot-tall bowl structure that sits on a 108-feet-tall concrete pedestal, for a total height of 148-feet.

In July 2014 Dunham Engineering and U.S. Underwater Services conducted a pre-rehabilitation inspection and evaluation for both of City's elevated storage tanks. Under normal conditions a tank such as this can be expected to need repainting/rehabilitation every 15-20 years. The results from the 2014 evaluations recommended rehabilitation and painting of both elevated tanks, with varying levels of rehabilitation. At that time the inspection of Southwestern EST was determined to be in "Fair" condition and WWEST determined to be in "Good" condition. Southwestern elevated storage tank was rehabilitated and painted in 2018 with Dunham Engineering providing the design, specifications, bid documentation and periodic monitoring of the contractor during the construction period to ensure contract compliance. In July of 2021, Dunham Engineering conducted another evaluation of WWEST and rated the tank condition to be in fair to poor in overall condition. Based on the results from the inspection and evaluation, Dunham Engineering recommended rehabilitation of WWEST within one year.

With approval of this contract, Dunham Engineering will prepare detailed design drawings, bid documents for the necessary rehabilitation and painting, review bids, and make recommendation for the construction award. They will also review submittals and shop drawings and perform field inspections of the construction work for compliance. Dunham Engineering is a specialty engineering firm that concentrates in the field of elevated storage tank structural design, construction, corrosion control, and inspections. They have completed many projects of similar nature and staff had good experience with them on Southwestern Elevated Storage tank rehabilitation project.

Legal Review:

The City's standard contract has been reviewed by legal periodically, with changes made as requested.

Fiscal Impact:

The fiscal impact of this item is \$85,000.00, funded through Bond proceeds.

Recommendation:

The Public Works Department recommends approval of this item.