

## **HROUDA PUMP STATION UPDATE – February 18, 2020 Worksession**

### **BACKGROUND:**

#### **Location and Condition of the Pump Station**

The pumping station (PS) proposed for replacement is located in the Gills Point Subdivision, Section 9 at the end of Wilkshire Court. See attachment 1 for vicinity map. The PS services over 1400 residential properties and the Tussing Elementary School. It is over 50 years old having been originally constructed in 1969. Based on a 2009 preliminary engineering report from consultants, O'Brien and Gere, Inc. and the department's assessment, the PS is functionally obsolete, mechanically deficient and presents safety concerns for city personnel. Specific problems include but are not limited to the following:

- Access for routine maintenance is severely restricted due to insufficient space in the wet- and dry-wells
- Access to remove and replace internal equipment is problematic due to narrow openings in the well shafts and tops
- Only one pump is operable due to internal deficiencies in valving and piping; however, two operable pumps are required according to state regulations
- Electrical service panels are located outside the PS and by code need to be enclosed
- The wells are located very close to a stream that allows groundwater to infiltrate the wells
- The PS lacks sufficient capacity for current and future hydraulic conditions
- The close proximity of the PS to waters of the United States and its hydraulic and mechanical inadequacy increases the risk of a sanitary sewer overflows into the stream in violation of the Clean Water Act

#### **Description of Project**

The project as proposed would replace and relocate the PS wells and related appurtenances to a position approximately 25' north of the existing location, increasing the separation between the stream and the wells. See Attachment 2 for layout. This parallel location will allow the existing PS to remain in service during construction of the new facility. This will minimize the need for expensive bypass pumping around the existing wells not only during construction but also during flow diversion from the existing PS to the new one. The existing control house will be reused and the existing wells will be obliterated to a point below existing grade.

#### **Procurement History**

In 2017, the City developed a project using a traditional design-bid-build approach and advertised for bids to rehabilitate the PS. The scope including correcting some but not all of the aforementioned deficiencies. However, the City did not receive any proposals from bidders. Comments received from contractors at the pre-bid meeting for the project indicated that the risk of rebuilding the PS in place was unacceptable. They stated that replacing the PS would be the most cost-effective option and the City should consider using a design-build approach.

Consequently, at its regular meeting in September 2019, the department requested that Council authorize the procurement of a design-build project to replace the PS. Design-build is recommended as suitable and fiscally advantageous for this project because it has the following characteristics:

- Relatively simple and straightforward;
- Incorporates integral components as primary systems that require review and approval of structural and prefabricated items; and
- Replacement is largely new construction

In December 2019, the City issued a request for design-build proposals to replace the PS. However, interest by the contracting community in the opportunity was sparse. Only one proposer, Southwood Building Systems, Inc. (SBS) of Ashland, Virginia submitted a proposal.

#### **BUDGET/FINANCIAL IMPACT:**

Council appropriated \$600,000 in the current year for the project based on the department's cost estimate. However, Southwood Building Systems' price proposal is \$1,285,000. The following reasons explain the significant cost/price discrepancy:

- Under estimation largely due to the department's inexperience with design-build projects and omission of price escalation since 2009
- Standards that are higher and more costly for the replacement of material and equipment rather than rehabilitation
- Unforeseen costs to replace certain electrical items such as generator and electrical service (the original project scope included reusing these items)
- Lack of market interest and competition as evidenced by the shortage of bids received

Another contractor who ultimately decided not to submit a proposal shared their pricing information with the department. Their bid would have been in the \$3-4 million range. After review and careful consideration of SBS' proposal and other known information, the department considers \$1,285,000 a fair value to construct the project given the circumstances.

Staff will be recommending the appropriation of additional funds for this project in the FY 20-21 Budget.