



City Council Report

Date: July 11, 2016
To: City Council
Through: Kari Kent, Assistant City Manager
From: Beth Huning, City Engineer
Rob Kidder, Assistant City Engineer
Subject: Brown Road Water Treatment Plant Improvements Project
City Project No. CP0034
District # 5

Strategic Initiatives



Purpose and Recommendation

The purpose of this report is to provide information to the Council concerning the results of the bids received for the Brown Road Water Treatment Plant Improvements Project (See Exhibit "A" for the project location).

Staff recommends that Council award a contract for this project to the lowest responsible bidder, AJ Roberts Industrial, Inc., in the amount of \$2,742,329.96, and authorize a change order allowance in the amount of \$274,233.00.

Background

In September 2012, the City of Mesa commissioned a report to analyze the hydraulic pressure surge conditions that may develop at the Brown Road Water Treatment Plant (BRWTP) high pressure pump stations that feed the Desert Sage and Desert Wells water distribution piping (pressure zone). The study determined that Desert Sage and Desert Wells pressure zones are at risk of experiencing unacceptable water pressure fluctuations stemming from sudden changes in flow due to events such as a loss of power at the plant's pump stations. The report recommended the installation of surge mitigation equipment to reduce the chance of damage to the water distribution system during these events. This project will implement these recommendations.

Discussion

This project includes the installation of hydraulic pressure surge mitigation devices and equipment at the BRWTP for the protection of the existing Desert Sage and Desert Wells water distribution piping and equipment from damage.

The project includes the installation of a 20,000 gallon hydropneumatic tank on the discharge of the Desert Sage High Pressure Pump Station located at BRWTP. The hydropneumatic tank will provide an air cushion to dissipate high pressure surges in the Desert Sage pressure zone.

The project also includes the installation of an 80,000 gallon “feed” tank on the discharge of the Desert Wells High Pressure Pump Station located at BRWTP. The “feed” tank is designed to mitigate negative (vacuum) pressures that may develop in the Desert Wells pressure zone.

Additional improvements include installing non-reverse ratchets on the Desert Sage and Desert Wells pump motors to slow down the reverse flow in the system during a power failure and prolong the life of the pumping equipment.

Once underway, construction of this project is anticipated to last no more than 10 months.

Alternatives

An alternative to this project would be to not construct these improvements. However, this would put the reliability and safety of the water distribution system and customers at risk. Dynamic hydraulic pressure fluctuations can cause severe damage and failure to piping systems. These failures can happen anywhere in the distribution system and disrupt water service until the costly repairs are completed.

Fiscal Impact

The total authorized amount recommended for this project is \$3,016,562.96, based upon the lowest responsible bid of \$2,742,330.00, plus an additional \$274,233.00 (10%) as a change order allowance. This allowance will only be utilized for approved change orders. This project is funded by a 2010 authorized Water bond.

Coordinated With

The Water Resources Department concurs with this recommendation.

CITY OF MESA
MESA, ARIZONA

Brown Road Water Treatment Plant Improvements

PROJECT NO. CP0034

Tabulation of Bids Received, Thursday, May 26, 2016, at 1:30 P.M.

ENGINEER'S ESTIMATE	\$2,748,875.00
1. AJ Roberts Industrial, Inc.	\$2,742,329.96
2. PCL Construction, Inc.	\$2,761,750.00
3. Garney Companies, Inc.	\$2,779,300.00
4. Archer Western Construction, LLC	\$2,799,000.00
5. Schofield Civil Construction, LLC	\$2,999,333.00
6. Hunter Contracting Co.	\$3,060,080.00
7. Action Direct LLC DBA Redpoint Contracting	\$3,299,900.00