



2/17/2022

To: Mayor and City Council members  
Upcoming construction award that when finished will allow two water plants to return to service with a total of 4.2MGD. Single bidder but all indicators are we received a bid in-line with current industry cost. Inflationary pressures are impacting the budget but with adjustments on other projects the overall planned Enterprise Fund debt sale for FY22 will be within the Intent to Reimburse  
-Trent

**To:** Clay Pearson, City Manager  
**From:** Morgan R Early, Project Manager  
**CC:** Trent Epperson, Deputy City Manager  
Robert Upton, Director of Engineering and Public Works  
Skipper Jones, Assistant Director of Capital Projects  
David Van Riper, Assistant Director of Public Works  
Eric Hammond, Assistant Director of Public Works

**Date:** February 17, 2022

**Re:** Pre-Award Memo for Construction of the Bailey Water Treatment Plant Improvements and Sanitary Sewer Line project

### Executive Summary

This memo provides information about the progress on the Bailey Water Treatment Plant (WTP) Improvement and Sanitary Sewer Line project status and the forthcoming proposed award of a contract for construction to LEM Construction, Inc. in the amount of \$12,593,561.91. This construction contract is scheduled for presentation to Council on the February 28, 2022 meeting agenda. The construction contracts for both projects will exceed the available project budget, so staff will be requesting an additional appropriation to address the budget shortfall from Fund 539 Revenue Bond 2022 Fund.

### Background

The 2.8 million gallon per day (MGD) water well at the Bailey water plant and the 1.4 MGD water well at the Magnolia plant are vital contributors to the City's distribution system capacity for drought contingency and to meet peak day demands. Both water wells are necessary per our City Water Model to meet regulatory capacities as the City builds-out. Staff has maintained a log of numerous customer comments and complaints regarding brown/rusty colored water within the areas served by these wells. These complaints, and subsequent testing, indicate elevated levels of iron and manganese in the groundwater. While these minerals are secondary constituents and do not affect the safety of the water, manganese and iron are considered nuisance constituents due to the color and taste they can impart. Due to the complaints and the ability to provide water from other sources in the City, the wells were taken off-line until a treatment system could be installed to remove these minerals.

Phase 1 of this project was the design and installation of a new 1 MG pre-stressed concrete Ground Storage Tank to replace the existing welded steel tank at the Bailey WTP. Construction was completed in June 2020.

Phase 2 includes: construction of a water transmission line to transport water from the Magnolia Water Plant to the Bailey for treatment, a treatment system (Aerelater) to remove the iron and manganese from the groundwater produced by both Bailey and Magnolia wells, construction of a new Lift Station and Force Main to discharge backwash from the treatment system to the sanitary sewer at Veterans, SCADA integration, and removal of the damaged steel Ground Storage Tank. The Aerelater treatment system utilizes a filtration reactive media of potassium permanganate, otherwise known as "green sand", to remove these constituents from the water. Once completed, this project will allow these wells to return to service.

## Current Status

Design was completed and the proposal phase began in November 2021. Staff selected the Competitive Sealed proposal process for this work to allow the City to consider the contractor's proposed schedule, experience, reputation, safety record, and project approach, in addition to price. This information is imperative for multi-discipline projects such as plant work that require a high degree of plant experience from the contractor. This process is detailed in (Local Gov't Code Chapter 2269), subchapter (B) procurement process. Proposals were received and read aloud December 9, 2021. The City's standard practice of publishing the project advertisement for two consecutive weeks with a mandatory pre-bid conference was followed. There were four attendees to the pre-bid meeting and two opportunities were provided for prospective responders to visit the site prior to submission of their qualifications and proposal.

One well qualified contractor, LEM Construction, Inc. (LEM) submitted a complete proposal of \$12,593,561.91 which is approximately 4% below the engineer's construction estimate of \$13,178,000.00, as shown on Exhibit A: Tabulation of Bids. The probable reason for the single respondent is the amount of plant work currently going on in the region that has absorbed the plant contracting capacity and the relative size of the project precluding smaller plant contractors from being able to obtain performance bonds. The single respondent is a well known plant contractor in the project size range and would have scored highly if there had been other respondents.

The proposal received from LEM was reviewed to ensure it met the pre-defined selection criteria and then scored for evaluation. The Selection Criteria evaluates:

1. Proposed price for performance of the full scope of work
2. Experience and qualifications of Offeror's project team
3. Offeror's experience with projects of similar scope, value and complexity
4. Completeness of Offeror's project approach narrative and proposed schedule
5. Reputation and Offeror's history with proposed sub-contractors/ vendors
6. Offeror's Quality Assurance Program and Safety Record
7. Offeror's financial capacity to adequately fund the work of the project

LEM's qualification and financial proposal received a score of 87/100 points based on the above criteria. No mathematical errors or irregularities were identified, and their proposal is within budget. The design Engineer, eHT, as well as Staff reviewed and evaluated the qualifications, project approach, safety record and schedule, and researched the work history and references provided by LEM. LEM is a reputable heavy civil/water/wastewater contractor in Texas and has completed multiple successful projects with eHT. LEM has recently completed the 10 MGD expansion of Missouri City's surface water treatment plant demonstrating their ability to perform larger projects. eHT has provided a Recommendation to Award to LEM Construction Co, Inc.

Staff considered re-bidding the construction project after receiving only one response, however because materials, equipment, and labor costs have seen unprecedented inflation, especially since the bids were submitted in November 2021, the design Engineer and Staff have high confidence that this is a competitive proposal and anticipate rebidding will likely result in higher costs. The budget was last updated in February 2021 during the CIP budgeting process before much of the inflation had impacted projects and final changes to the plans were completed. The final Engineer's estimate, which took into account recent bids on similar projects, was 4% higher than LEM's bid indicating we received competitive pricing. Upon evaluation of the proposal package submitted by LEM, the company has demonstrated they are a qualified firm to competently complete this project on time and within budget.

Upon presentation to Council on the February 28 Agenda, Staff will request an additional appropriation of \$912,000 from Fund 539 Revenue Bond 2022 Fund to the Bailey Sewer Line (WW2007) project and \$1,600,000 from Fund 539 Revenue Bond 2022 Fund to Bailey Water Plant Improvements (WA1901) project. The Engineering & Public Work and Finance Staff have worked together to ensure that the additional appropriation request will not exceed the overall FY22 Intent to Reimburse amount of \$69,576,000. This has been achieved by reducing the amount of debt to be sold for projects that can delay their debt sale until FY23 based on the current schedule plus projects that are underbudget.

**Next Steps**

Providing Council's award on February 28<sup>th</sup>, a Notice to Proceed is expected to be issued to LEM to begin construction in March 2022, in conjunction with the project milestone. The construction phase is anticipated at 18 (eighteen) months to substantial completion and an additional two months for commissioning and final acceptance. This construction schedule may be adjusted based on material and equipment availability. A baseline schedule will be developed, tracked and revised, as necessary throughout the construction phase to advise Council of any changes or delays.

This project will require Construction Material Testing (CMT) services. CMT is needed for testing select fill, cast in place concrete, backfill, and concrete paving to ensure materials placed meet specifications. This work includes visual inspection and testing for concrete masonry unit (CMU) walls, grout, and bolted/welded steel & pipe connections. Staff will recommend to Council at the February 28<sup>th</sup>, 2022 meeting the CMT contract to Terracon Consultants, Inc. in the amount of \$212,735.00.

The funding shortfall and effort to identify additional funding has delayed Staff's request to award the contract for construction. The Bid Documents required the contractor to hold his bid for up to ninety days from the Bid Date. Awarding this contract at the February 28<sup>th</sup> meeting falls within the ninety-day window.

**Budget Info**

WA1901 – Bailey Water Plant

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
W/S Revenue Bonds	2018B	620,000		620,000
W/S Revenue Bonds	2019B	4,240,000		4,240,000
W/S Revenue Bonds	TBS 2022	7,980,000		7,980,000
	TBS			
W/S Revenue Bonds	2022*	1,600,000		1,600,000
Impact Fee - Debt				-
Other Funding Sources				-
<b>Total Funding Sources</b>		<b>14,440,000</b>	-	<b>14,440,000</b>

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	658,691	12,080	670,771

Construction (Tank)	1,596,570		1,596,570
Construction (Pretreatment)		11,445,390	11,445,390
Construction Materials Testing	16,493	164,230	180,723
FF&E			-
<b>Total Expenditures</b>	<b>2,271,754</b>	<b>11,621,700</b>	<b>13,893,453</b>

<b>Project Contingency</b>	<b>4%</b>		<b>546,547</b>
<b>Project Balance</b>			<b>(0)</b>

**\*Additional Appropriation, if approved by Council**

To address the budget shortfall, staff is requesting an additional appropriation of \$1,600,000 from Fund 569 Revenue Bond 2022 Fund.

WW2007 – Bailey Sewer Line

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
Certificates of Obligation				-
System Revenue - Cash		30,000		30,000
W/S Revenue Bonds	2021B	600,000		600,000
	TBS			
W/S Revenue Bonds	2022*	912,000		912,000
Impact Fee - Debt				-
Other Funding Sources				-
<b>Total Funding Sources</b>		<b>1,542,000</b>	<b>-</b>	<b>1,542,000</b>

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	49,500		49,500
Construction		1,398,172	1,398,172
Construction Management/Inspection			-
Construction Materials Testing		48,505	48,505
FF&E			-
<b>Total Expenditures</b>	<b>49,500</b>	<b>1,446,677</b>	<b>1,496,177</b>

<b>Project Contingency</b>	<b>3%</b>		<b>45,823</b>
<b>Project Balance</b>			<b>-</b>

**\*Additional Appropriation, if approved by Council**

To address the budget shortfall, staff is requesting an additional appropriation of \$912,000 from Fund 569 Revenue Bond 2022 Fund.

## Schedule Info

	<b>Base Line</b>	<b>Current</b>
<b>Design Start</b>	December-18	January-19
<b>Bid Start</b>	April-21	November-21
<b>Construction Start</b>	January-22	March-22
<b>Construction Completion</b>	August-23	

## Recommendation

Three items will be recommended at the February 28<sup>th</sup> City Council meeting:

1. Staff will recommend award the construction contract to LEM Construction Co, Inc. in the amount of \$12,593,561.91.
2. Staff will recommend the award of Construction Materials Testing contract to Terracon Consultants, inc. in the amount of \$212,735.00.
3. Staff will recommend approve an additional appropriation of \$912,000 from Fund 539 Revenue Bond 2022 Fund to the Bailey Sewer Line (WW2007) project and \$1,600,000 from Fund 539 Revenue Bond 2022 Fund to the Bailey Water Plant Improvements (WA1901) project.

## Previous Memos

11/08/18, 08/08/19, 11/07/19, 01/30/20, 04/02/20, 08/06/20, 01/14/21, 05/06/21, 09/16/21

Map

