

TECHNICAL MEMORANDUM

TO: Grant Watanabe, PE, CFM – Director of Public Works & Engineering Services City of Fair

Oaks Ranch

FROM: Joel D. Valdez, PE, CFM – Senior Project Engineer - K Friese & Associates

RE: 500K Ground Storage TANK – Fair Oaks – Tank Budget Research

DATE: October 17, 2024

INTRODUCTION

Background

The City of Fair Oaks Ranch (the City) is planning to install a new 500,000-gallon ground storage tank (GST) at Water Plant #5 near Keeneland and Jodhpur drives in far northwest Bexar County. K Friese and Associates, Inc. (KFA) was tasked with researching GST installation costs and comparing costs to the Maguire Iron, Inc. (Maguire) Final Project Price Proposal dated January 26, 2024. Others will design and construct the pump station and electrical improvements in a separate phase.

KFA contacted ground storage tank vendors and contractors, performed a review of available data, and obtained recent bids for similar work. Below is a summary of the findings.

RECENT BID TABS

KFA reviewed recent bid tabulations from CivCast posted for the following counties: Bexar, Comal, Guadalupe, Bandera, and Kendall. Only one recent bid tab of comparable size was found. Therefore, we expanded the search for similar-sized tanks across Texas and found a few more bids. We have compared the Maguire proposal with the bid tabulations found in Table 1 based on price per gallon.

Bid Opening Bid Amount^{1,2} **Entity and Project Tank Type Tank Size** Price per Name Date (gallons) Gallon³ 2,200,904 \$4.40/Gal **SAWS Meghan Pump** 11/2023 Prestressed 500K Station Concrete Northeast Texas MWD 03/2022 Welded Steel \$2.36/Gal \$1,175,600 500K Base Bid (2.59/Gal) Northeast Texas MWD 03/2022 Prestressed \$1,237,400 500k \$3.86/Gal Alt Bid Concrete (\$4.23/Gal) 07/2024 City of Glen Rose Welded Steel \$706,500 250K \$2.83/Gal City of Fair Oaks Ranch 01/2024 Welded Steel 1,425,000 500k \$2.85/Gal Maguire Proposal

Table 1 - Bid Comparison Analysis

Notes:

- Only Applicable bid items were used for the bid comparison analysis, which included tank, tank foundation, site grading, restoration, and yard piping.
- 2) When more than one bid was present in the bid tabulation, the Low Apparent Bid or the awarded bidder was used for the bid comparison analysis.
- Price adjusted for inflation shown in parenthesis, using the Bureau of Labor Statistics Website. https://data.bls.gov/cgi-bin/cpicalc.pl

EXHIBIT B



As part of our additional research, KFA coordinated with Preload's Vice President of Sales for a cost estimate to provide a 500,000-gallon wire-wound prestressed concrete GST. Preload stated that a general number for this locale would be a rough order of magnitude (ROM) of \$1,000,000 for the floor, walls, and dome. This assumes a standard 4-inch floor and does not include site work, subgrade preparation, or electrical.

Preload added that a concrete GST project of similar size, with Preload serving as the prime contractor and with adequate soils, would have a ROM of \$1,750,000 for the entire project (\$3.50/Gal). This cost would include site work and subgrade preparation, structural fill, backfilling, the foundation, underlap piping and encasements, piping, and valves under and outside the tank. This assumes there is adequate space for construction. KFA did not share the space and height restrictions with Preload, and we anticipate that the overall ROM would be higher.

CONCLUSION / RECOMMENDATIONS

Overall, KFA found that the proposal from Maguire for \$1,425,000 (\$2.85/Gal) is a competitive bid compared to recent bid tabs for similar-sized projects and significantly lower than the initial cost of concrete tanks. Please note that KFA did not take the life cycle costs into account for the project. By utilizing The Interlocal Purchasing System (TIPS), the City saves approximately \$300,000 on design fees and time.