



ATTACHMENT "A"

March 5, 2024

Mr. Jack Haralson
Director of Public Works
City of Texas City
7800 Emmett F. Lowry Expressway
Texas City, Texas 77591

Re: Proposal for Engineering Design and Construction Phase Services for "**Phase 2 – FM 517 Water Plant Project**"
City of Texas City, Texas

Dear Mr. Haralson,

ARKK Engineers, LLC (ARKK) is pleased to submit this proposal for performing engineering services for the above project. The proposal is based on our understanding of the project as discussed in our previous meetings and conversations. For your convenience this proposal consists of General Overview, Scope of Services, and Fee.

GENERAL OVERVIEW

In 2020, the City of Texas City completed the construction of Phase 1 of the FM 517 Water Plant facility, located in the far north quadrant of the City, on FM 517 just west of SH 146. The Phase 1 project consisted of a booster pump station, a 5,000 gallon hydro-pneumatic tank, a 67,500 gallon ground storage tank, a generator, surface water meter station, driveways, control building, water connections, drainage, and sitework.

In the service area of this water plant facility, there is planned a new development ("Lakeside") that will include 960 new residential homes. It is anticipated that the development will be completed in approximately 4 years from the present time. The purpose of this project is to provide water supply for the following:

- 960 connections for the Lakeside development
- 20 connections for the existing DISD Intermediate school
- 1 existing commercial water connection (Boat storage facility on FM 3436)
- 50 future connections assumed, various locations
- 1,031 connections

For this Phase 2 Water Plant Facility, the scope of the work will be the design of the following major components:

- A water well having a rated capacity of 700 gallons per minute;
- A new 15,000-gallon hydropneumatic water tank;
- A new ground storage tank having a nominal capacity of 350,000 gallons;
- Capacity improvements to the existing booster pump station;
- Electrical improvements to accommodate the larger booster pumps and to accommodate the proposed water well equipment;
- A generator sized to operate the proposed water well;
- Sitework, including grading, sidewalks, yard piping, drainage;
- All equipment will be SCADA-ready and designed in consultation with the City's SCADA contractor/consultant. SCADA programming will be included as an allowance in the construction contract to facilitate the construction contractor hiring of the City's SCADA contractor directly.

The estimated construction cost of these improvements is \$4,300,000. This figure will be refined as the design phase progresses.

This proposal addresses the engineering services ARKK will provide the City during the Design and Construction Phase. The proposal is separated into Basic Services (expected normal engineering services) and Special Services. This proposal does not include performing any surveying, geotechnical and environmental studies for the project area as these are not anticipated to be needed. Surveying and geotechnical engineering data performed previously for the existing water plant site will be utilized.

The following section details the scope of engineering services proposed for this Project.

SCOPE OF SERVICES

I. DESIGN PHASE SERVICES

A. Basic Services - Design Phase

- Meet with City of Texas City staff to discuss and finalize design criteria and acquire pertinent information regarding the Project.
- Prepare civil, mechanical, and electrical engineering design including specifications, drawings, and contract documents based on the previously listed water plant improvements.

- Coordinate with the City of Texas City staff during the design phase. Provide draft documents for their review and comments.
- Coordinate with Texas Commission on Environmental Quality (TCEQ) during the design phase. Furnish necessary documentation to TCEQ for their review.
- Coordinate with Harris-Galveston Subsidence District (HGSD) during the design phase. Furnish necessary documentation to HGSD for their review. Prepare application for new water well.
- Prepare and submit to City 60% bid document package comprised of PDF copies of plan drawings and list of technical specifications for the project.
- Prepare and submit to City 90% bid document package comprising of PDF copies of plan drawings and specifications for the project.
- Incorporate appropriate comments from pertinent governmental entities into the final bid documents.
- Prepare a final cost estimate for the project.
- Furnish two (2) sets of construction documents to the City.

B. Special Services - Design Phase

1. Survey Services

- Surveying services are not proposed. The existing water plant site design survey and drawings will be utilized.

2. Geotechnical Services

- Geotechnical engineering services are not proposed. The existing water plant site geotechnical engineering study will be utilized.

3. Reproduction

- Costs for reproduction will be charged under special services for reproduction of plans, specifications and reports beyond the three (3) sets of construction documents provided (as listed in the design services) to the City.

- Reproduction for review sets, submittals to the City, governmental agencies, and utility companies will be included in the cost for reproduction.

4. Permitting

- Submit plans, forms, and design summary letter to the TCEQ reflecting the proposed water plant improvements.
- Submit a formal application to the Houston Galveston Subsidence District for the proposed water plant improvements.

II. BID PHASE SERVICES

- Assist the City of Texas City (City) in obtaining bids for the project (three separate bids). The City will advertise the project and will absorb all related advertising costs. ARKK will coordinate with the City and will assist in developing the wording of the advertisement.
- Dispense construction documents via the CivCastUSA online plan room (by Amtek USA) to prospective bidders.
- Conduct a pre-bid conference for potential bidders. Prepare meeting agenda and minutes summary.
- During the bidding process, provide information to and answer questions from potential bidders concerning the Project's construction documents.
- Prepare addendums to the contract as necessary for the project.
- Prepare bid tabulation for the project. Check the bids for mathematical errors and/or bid irregularities.
- Evaluate the bid results and the qualifications of the apparent low bidder, and advise the City as to the acceptability of the apparent low bidder for the project.
- Prepare an engineering letter of recommendation for City Commission award of the construction contract for the project.
- Upon award by City Commission, prepare four (4) copies of conformed Project Manual for Contractor's agreement with City.

III. CONSTRUCTION PHASE SERVICES

A. Basic Services – Construction Phase

- Conduct a pre-construction conference for the project.
- Act as the City's Project representative during the construction phase.
- Review and respond accordingly to all submittals as required by the contract specifications.
- Prepare change orders necessitated by field conditions.
- Review the contractor's pay estimates, evaluate the completion of work and make payment recommendations to the City.
- Visit the site at intervals appropriate to the various stages of construction to observe the progress and quality of executed work and to determine in general if such work is proceeding in accordance with the Contract Documents.
- ARKK will not be responsible for the means, methods, techniques, sequences or procedures of construction selected by the Contractor(s) or the safety precautions and programs incident to the work of the Contractor(s). ARKK's effort will be directed toward providing a greater degree of confidence for the City that the completed work of Contractor(s) will conform to the Contract Documents, but ARKK will not be responsible for the failure of Contractor(s) to perform the work in accordance with the Contract Documents. During site visits and on the basis of on-site observations ARKK shall keep the City informed of the progress of the work, shall endeavor to guard the City against defects and deficiencies in such work and may disapprove or reject work failing to conform to the Contract Documents.
- Conduct a final inspection of the Project and make a recommendation for Final Payment on the project.
- Engineer shall provide one set of reproducible record plans based on the Contractor's red line marked up as-built drawings.

B. Special Services – Construction Phase

1. Construction Observation Services:

- Provide one construction observer (project-site representative) to observe the progress of construction activities and to assist in the interpretation of plans and specifications. The estimated contract time is expected to be 400 days, due primarily to expected lead times on ordering of the generator equipment. The anticipated active construction contract duration for the project is estimated to be 240 calendar days. The construction observation budget is based on providing a project site representative part time an average of 20 hours/week for the active 240 calendar day construction period.
- The project-site representative will be on-site based on project packaging timing and will be on-site for fewer days per week during the initial and completion stages of the work, and more often during the middle portion of the construction contract when the work is most active.
- Provide engineering and technical office personnel support throughout construction.
- The project-site representative shall maintain daily reports in a format satisfactory to the City of Texas City.
- The project-site representative will attend meetings with the Contractor and the City of Texas City such as pre-construction conference, progress meetings, and other project related meetings where his presence is requested by the City of Texas City.
- The project-site representative will take periodic photographs of the construction progress and of key items of concern.
- The project-site representative will estimate quantities installed for use in reviewing monthly pay estimates.
- The project-site representative will aid in the coordination of activities of the testing laboratory.
- The project-site representative will assist in the performance of a final inspection, the preparation of a punch list and subsequent follow up inspections.
- The project-site representative will be provided in an effort to aid in the process of observing performance of work of the Contractor(s). Through more extensive

on-site observations of the work in progress, ARKK shall endeavor to provide further protection for the City of Texas City against defects and deficiencies in the work of the contractor(s); but the furnishing of such on-site representative will not make ARKK responsible for construction means, methods, techniques, sequences or procedures or safety precautions or programs, or for Contractor(s) failure to perform their work in accordance with the Contract Documents.

- ARKK will process daily reports and other administrative office duties.

3. Construction Materials Testing:

- Construction materials testing is included in this proposal as a budgetary item. It is anticipated that a separate construction testing firm mutually agreeable to the City of Texas City (City) and ARKK will be utilized as a subcontractor to ARKK to perform the testing services. The City has the option to contract directly with the materials testing firm.

FEE

1. DESIGN PHASE

Design Services: Civil & Mechanical - Lump Sum	\$170,250.00
Electrical Engineering by Baird, Gilroy, & Dixon: Cost plus 10%:	\$34,100.00
Hydrogeology by John Seifert: Cost plus 10%:	\$19,030.00
TCEQ and HGSD Permitting: Lump Sum	\$6,000.00
HGSD New Well Permit Fee: Cost plus 10%:	\$500.00
Bid Phase Services (3 Packages): Lump Sum	<u>\$3,750.00</u>
Total Design Phase Amount	\$233,630.00

2. CONSTRUCTION PHASE SERVICES

Reproduction Budget: Cost plus 10%	\$ 3,500.00
Construction Administration Services: Civil & Mechanical - Lump Sum	\$53,315.00
Construction Administration Services: Electrical – Lump Sum	\$ 12,650.00
Construction Administration Services: Hydrogeologist – Lump Sum	\$ 11,550.00
Construction Observation: (Hourly and cost plus 10%)	\$78,200.00
Coating and Welding Inspections by Clark Northup: (Cost plus 10%)	\$25,010.00
*Construction Materials Testing Budget: (Cost plus 10%)	<u>20,000.00</u>
Total Construction Phase Amount	\$204,225.00

Total All Services **\$437,855.00**

The anticipated construction contract duration for the project is estimated to be 400 calendar days, with an active construction period of 240 calendar days. The construction observation budgetary fees are based on providing a project site representative an average of 20 hours/week for the 240 calendar day active construction period. Hourly charges for on-site field representative shall be charged based on a raw labor rate times a multiplier of 2.70. Mileage will be charged at the prevailing IRS rate. Reimbursable expenses will be charged at cost plus 10%.

ARKK Engineers, LLC appreciates the opportunity to submit this proposal and we look forward to continuing working with the City of Texas City on this very important project.

Sincerely,

ARKK ENGINEERS, LLC



Madhu Kilambi, P.E.

Senior Project Manager / Principal