



August 29, 2024
Proposal No.: M2500512.001P

Mr. Brady Reeves
Project Manager
Grand Prairie City Hall
300 W Main St.
Grand Prairie, TX 75050

Subject: Proposal for Preliminary Engineering and Analysis Report (PEAR) for Rehabilitation of the Elevated Storage Tank – Renovations at 109th and Traders Village

Dear Mr. Reeves:

As requested, we are pleased to submit this proposal for the preliminary engineering and analysis report services of 2.0 million gallon (MG) Elevated Storage Tank (EST) at 109th and Traders Village owned and operated by City of Grand Prairie, Texas. The following sections provide our understanding of the project and our proposed scope of services, related budget and schedule to assist the City of Grand Prairie.

PROJECT UNDERSTANDING

The City of Grand Prairie is seeking an assessment of 2 – 2.0 MG EST for tank repair, maintenance, electrical, site grading, and structural improvements.

PURPOSE AND SCOPE OF BASIC SERVICES

The tanks will first be evaluated in terms of its physical condition and operating performance in a “wet” condition. Kleinfelder will develop planning estimates of the costs to repair tank deficiencies observed and will develop a prioritization of repairs. The scope of work to accomplish this purpose is described in detail below.

TASK 1 – PROJECT MANAGEMENT SERVICES

Upon issuance of Notice to Proceed, Kleinfelder’s project manager will interface with the City project manager on a regular basis and perform the following services:

Task 1.1 Project Execution Plan

The Project Execution Plan will be prepared to assemble and document the basic plan and procedures to be followed during the execution of the work, including project team organization, team contact list, communication protocol, scope of work, budget, quality control procedures, and schedule.

Task 1.3 Project Coordination

Regularly scheduled meetings will be conducted by the project manager to review schedule, budget, and technical and departmental coordination issues. Up to four (4) meetings are anticipated for this project.

Task 1.4 - Develop Health and Safety Plan

Kleinfelder will prepare a Health and Safety Plan (HASP) for the site, including a list of project personnel responsible for health and safety, hazard analysis for the anticipated activities, required personal protective equipment, safety programs, emergency response planning, contingency measures, and forms. Field personnel will be briefed on the plan and will be provided with a copy of the HASP. Kleinfelder's field team will consist of engineering staff, and professional.

TASK 2 – CONDITION ASSESSMENT OF TANKS

Task 2.1 - Review Available Information.

Kleinfelder will review the information provided by the City. Our team may request the following tank information:

- Record drawings for tank and the tank site improvements
- Shop drawings from the tank construction
- Utility coordination and point of contact.
- Any available inspection records or photos including previous dive reports
- Current site photos of known deficiencies if available
- Any special access issues at the tank sites
- Any known sedimentation issues
- Any maintenance record for the EST

Task 2.2 – Condition Assessment of Tank

Kleinfelder will complete a condition assessment of both of the 2.0 MG elevated storage tanks with a dive inspection of the interior and visual assessment for the exterior. Prior to conducting the condition assessment of the interior, divers and equipment will be disinfected prior to entering the tank. Kleinfelder will furnish all the necessary materials, equipment and labor required to accomplish the disinfection. Disinfection will be performed in accordance with the requirements of AWWA C652 "Disinfection of Water Storage Facilities" and the regulations of the State of Texas.

Our team will:

- Perform an appropriate safety briefing for its staff prior to each site visit.
- Photograph the tank to capture the potential issues which have been observed.
- Perform visual assessment for tank's various asset group. For visual assessment of tank, Kleinfelder will use appropriate personal protective equipment (PPE) and fall protection and ensure that entry into tank is in accordance with the Health and Safety plan.

- Diving operations will be conducted in accordance with:
 - a. OSHA, 29 CFR, 1910 Subpart T – Commercial Diving Operations
 - b. ADCI, Consensus Standards for Commercial Diving Operations and Underwater Operations
 When diving is performed, a minimum 3-man dive team according to OSHA regulation will perform the inspection. Divers will provide photographic and video graphic documentation with narration of the tank’s interior inspection.
- Ensure that all divers and other equipment are disinfected prior to entering the tank.
- Make a visual observation of the EST. The foundation (as observed on the ground); the interior of the tank including the sidewall and floor if no sediment is present; interior columns; the roof structure will be reviewed; and other accessible structural components will be reviewed. For any inaccessible features, photographs will be utilized to review and catalogue the areas. Man lifts, or scaffolding will not be used. Field observations will be compared to record drawings and assessed.
- Review record information collected during Task 1 as a post-condition assessment activity.
- Perform a general evaluation of site security.
- Inspection of any water ponding around the water tank and the existing grade; no survey will be completed.
- Interview operations and field staff to discuss the day to day operations of each tank, as well as any outstanding issues.

Assumptions:

- **Dive Conditions/Full Tanks:** City will have tanks full prior to the arrival of the Dive Team. City will notify if water is above 90 degrees prior to inspection.
- **Radio Antennas/Transmitters:** City is responsible for coordinating the turning off of all radio frequency (RF) antennas/transmitters which could create an unsafe work environment.
- **Hatches-Ingress/Egress:** Water access hatch openings are at least 24” x 24” for diver entry.
- **Safe Diving Conditions:** Dive Supervisor will consult with city representative on the final decision regarding safe working conditions.
- **Ladders & Normal Access:** Our prices are for facilities with ladders and normal access. We bring a 14’ ladder. If a ladder over 14’ is needed, the utility must provide it. Definition of an accessible ladder: Climbable (safe – no broken rungs), and within 14 feet of the ground.
- **Insect Infestation:** Utility is responsible for abating insect infestation (i.e. wasps; bees; yellow jackets, etc.) by spraying affected areas/nests.
- **Mobilization/Demobilization:** If we arrive at work site and are unable to complete job due to circumstances the utility is responsible for, we will bill for mobilization and demobilization.
- **Drones:** Client approves the use of drones, if needed, for facility inspection.

Kleinfelder will perform the following observations in Table 1 for both elevated storage tanks to include at a minimum – coating system, structural, safety, security, operational and sanitary conditions as well as general details.

1 TABLE 1 – OBSERVATIONS OF TANK SYSTEM

Tank System	Method/Observation
Coating Systems	
Tank Exterior Coating System	<ul style="list-style-type: none"> The condition of the tank exterior coating systems, where applicable, including piping and valves in vaults will be evaluated.
Tank Interior Coating System	<p>The condition of the tank interior coating systems will be evaluated by the Video captured by the professional divers and/or Remotely Operated Vehicle (ROV) inspection if it is unsafe to access/enter the tank</p> <ul style="list-style-type: none"> Observation of the coating, where access permits Visual assessment of corrosion pitting or general corrosion.
Structural	
Tank Exterior Structural and Appurtenances	<p>Perform an exterior observation to assess the condition of the following:</p> <ul style="list-style-type: none"> Tank foundation (limited to visual assessment of exposed foundation), column or pedestal foundation and anchor bolts, if visible. Structural steel, roof plates, shell plates, where access permits Access ladders Roof accessories, vents, roof hatches, obstruction lights, and railings Exterior valves and piping connected to the tank, inlet/outlet piping, tank drain, overflow pipe, flap valve and containment structure
Tank Interior Structural and Appurtenances	<p>The condition of the tank interior structural systems will be evaluated by observing the video captured by the professional divers and/or Remotely Operated Vehicle (ROV) inspection if it is unsafe to access/enter the tank:</p> <ul style="list-style-type: none"> Roof plates, roof framing, and portions of the shell Visible portions of the tank and appurtenances at floor level Overflow weir and pipe Ladder
Safety & Security	
Safety and Security Features	<p>Perform an observation of safety and security features at each tank site to assess the condition of the following:</p> <ul style="list-style-type: none"> Fall protections systems Ladders, platforms, walkway and railings constructed to OSHA requirements Locking ladder guards if applicable Alarm and intrusion alarm FAA Warning Lights Fencing, gates, lighting, and access points
Operational	
Pipe and Valve Vaults	<p>Perform an observation of pipe and valve vaults at each tank site to assess the condition of the following:</p> <ul style="list-style-type: none"> Vault structure, sump pump and drains Access hatch, manhole cover, ladders, safety railing and platforms Pipe and valve leak and corrosion. Pipe and valve support thrust restrain system

Tank System	Method/Observation
Tank Site Evaluation	Perform an observation of the tank site to assess the condition of the following: <ul style="list-style-type: none"> • Paved areas including access drive and parking • Overflow splash pads or catchment structures. • Site grading, drainage, and vegetation
Electrical, Instrumentation and Control Systems	Perform a visual observation of electrical, instrumentation and control systems to access the condition of the following (No testing will be performed): <ul style="list-style-type: none"> • Field examination of the existing electrical (incl. cathodic protection system), instrumentation and controls installation shall be performed and identify items for improvement and compliance with current safety code requirements. • The inspection performed will be visual only. No testing or monitoring will be performed. • The electrical system will be evaluated from the electric service equipment down to the loads. Visual inspection of the electrical equipment will be performed to determine the overall condition, the remaining life of the equipment based on the age, maintenance performance, corrosion, safety and code violations, proper installation, and potential improvements. • The instrumentation and controls will be inspected for the overall condition, functionality, maintenance performance, and installation standards. • In addition, the City's Operations and Maintenance personnel will be interrogated to determine functionality flaws of the system as well as places for improvements such as additional instruments, SCADA system, monitored points, automation, etc.

The City's responsibilities include:

- Provide access to both 2.0 MG EST for Kleinfelder staff. Kleinfelder's tank inspection team will require support from one City maintenance staff person, from the time of arrival to completion of the assessment.
- Fill the tank to highest operational level as per the agreed schedule and be ready to isolate the tank from the distribution system during the assessment of the tank if needed.
- Opening electrical panels, guards, or hatches for Kleinfelder to visually evaluate electrical and vault components.
- Disinfection Residual Data of the system, if needed.
- Dewater vaults to observe piping if vaults contain water.
- Providing the record drawings, as well as any existing information on the tank.
- Notify local residents for the tank assessments (if required).

TASK 3 – PRELIMINARY ENGINEERING ASSESSMENT REPORT (PEAR)

Kleinfelder will analyze the condition assessment findings and develop a list of proposed repairs and operation and maintenance actions in order of priority. Kleinfelder will develop preliminary planning-level opinions of probable cost for design and construction of recommended tank repair/refurbishment projects. Planning-level opinions of probable cost will be based upon recently awarded Contracts in the area.

Kleinfelder will present the prioritized list of rehabilitation projects in a tabular format for each tank, including opinions of probable construction, rehabilitation, and repair costs.

Task 3.1 Preparation of Tank Evaluation Report for both 2.0MG EST

Kleinfelder will provide a final evaluation report for both of the 2.0 MG EST to be evaluated, after the completion of all the field assessment activities on all the tanks. The report will include the following information:

- Project background
- Existing site and facility information
- Summary of observations of coating, structural, safety & security, and operational assets.
- Summary of deficiencies and further recommended improvements.
- Opinion of probable construction cost (OPCC) for the proposed improvements

Kleinfelder will meet with the City staff to discuss assessment work findings and receive comments on draft reports. Following receipt of comments, Kleinfelder will finalize the reports.

PRINTED AND ELECTRONIC DELIVERABLES

One complete copy of the evaluation report, signed and sealed by the Engineer registered in the State of Texas, will be provided. Electronic copies of these reports will also be provided in pdf format.

ADDITIONAL SERVICES

The following services are not included in the *Scope of Basic Services* and will be considered as *Additional Services*, if and when they are required or requested:

- Package to TCEQ for any exception.
- The services of specialty sub-consultants or other special outside services other than those described in the above Scope.
- Topographic Survey & boundary work or property delineation is not included as a project scope.
- Assessment of third-party communication systems installed on the tanks.
- Any construction material testing.
- Coating adhesion test in accordance with ASTM D 3359, Standard Test Method for Measuring Adhesion by Tape Test, Method A, if required.
- Thickness measurements on tanks, if required.
- Heavy metal tests on coatings to be coordinated with Owner or as required
- Costs, including equipment replacement, associated with decontamination of personnel/equipment as a result of encountering hazardous/toxic materials at site.

- No Hydraulic modeling is included in this proposal.
- Additional report copies or submittals; or report revisions after final submission.
- Additional or increased insurance coverage (if available) other than described in the Services Agreement.
- No Subsurface Utility Engineering (SUE) work is included.

If Kleinfelder is obligated to prepare for or appear in litigation or arbitration proceedings on behalf of the Owner, Kleinfelder shall receive additional compensation to be mutually agreed upon.

SCHEDULE

Kleinfelder anticipates the following schedule which is dependent on weather and timely review by the City:

- Kick-off/Tank Assessment preparation – 3 to 4 weeks from the notice to proceed
- Mobilization/Field work – 1 to 2 weeks
- Tank Assessment Report Preparation – 8 to 12 weeks after completion of field work

COMPENSATION

Kleinfelder proposes to perform Tasks 1 to 3 for a total lump sum fee in the amount of **\$59,500**. The lump sum fees include applicable labor, overhead, and expenses. The fee breakdown by Task is listed below.

Task 1 – Project Management Services	\$6,500
Task 2 – Conditional Assessment	\$10,500
Task 3 – Preliminary Engineering Report	\$42,500
Total Estimated Project Fee	\$59,500

The above fee will not be exceeded without prior approval.

Invoices will be issued on a periodic basis, or upon completion of the project, whichever is sooner. The net cash amount of this invoice is payable on presentation of the invoice. The City and Kleinfelder may subsequently agree in writing to provide for additional services to be rendered under this agreement for additional, negotiated compensation.

LIMITATIONS

Our work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder’s profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This proposal is valid for a period of forty-five (45) days from the date of this proposal, unless a longer period is specifically required by the Owner in which case that time frame will apply. This proposal was prepared specifically for The Owner and its designated representatives and may not be provided to others without Kleinfelder’s express permission.

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We appreciate the opportunity to provide you with this proposal and look forward to working with you on this project. If you have any questions or wish to discuss, please contact us at 972.868.5900.

Sincerely,

KLEINFELDER, INC.

Texas Registered Engineering Firm F-16438



Chanakya Sah, P.E., CFM
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