

APPENDIX A – SCOPE OF SERVICES

Webb County Wastewater Treatment Plant Upgrades – Engineering Services

1. Introduction

The Webb County Utilities Department (Owner) consists of the operation of the Rio Bravo Water Treatment Plant and the Rio Bravo Wastewater Treatment Plant (WWTP) in Rio Bravo, Texas. These facilities provide the water and sewer services inclusive of the water distribution and wastewater collection systems for approximately 2,000 connections and serving communities of Rio Bravo, El Cenizo, Core Civic (Detention Center), G.E.O. (Detention Center), three UISD schools, and Step Academy for an approximately 6,600 customers.

The Webb County WWTP was put online in 2006, the facility operates on 1.5 million gallons per day (MGD). The Webb County WWTP was a complete SCADA operated unit, currently it is being ran manually by operators.

The City of Laredo is also currently undergoing a major subdivision development north of (Rio Bravo) projecting 1,500 new lots and it is anticipated that development will take place in multiple phases. This development may require future Water and Wastewater Plant Expansions as required by TCEQ to ensure the proper infrastructure is in place and the Owner's capabilities to provide services for increased demand in water and wastewater treatment operations.

2. General

Owner has selected Garver (Engineer) to perform engineering services for upgrades and plant rehab at the WWTP. The most recent study of the WWTP, completed by Garver in 2018, identified an extensive list of improvements for the facility that included repair or upgrades to the following facilities:

- Headworks
- Sequencing Biological Reactors
- Blower System
- Chlorine Contact Basin
- Non-potable Water System
- Solids Dewatering and Digestion
- SCADA System

The Owner has requested that Garver provide Engineering Services required to improve plant performance, and that the services be broken into the following phases:

- Planning/Preliminary Engineering
- Detailed Design
- Tendering
- Construction Administration
- Post Construction/Close Out

Beyond the work that will be described for each phase, the Owner has requested that Garver shall work with Owner to ensure that all TCEQ items related to TCEQ Docket No. 2016-0612-MLM-E have been

addressed. Owner has also requested Garver to participate in public workshops and answer questions from Webb County Constituents when required.

3. Scope Assumptions

Garver has made the following assumptions in development of this scope and fee.

3.1. Surveys

Survey is anticipated for the completion of the project, assumed provided by Owner and not included in this scope of services, but can be added by amendment. Any design information provided by Owner to Garver is assumed as correct.

3.2. Geotechnical Services

Geotechnical is anticipated for the completion of the project, assumed provided by Owner and not included in this scope of services, but can be added by amendment. Any information provided by Owner to Garver is assumed as correct.

3.3. Environmental Services

Environmental Services are not anticipated for the completion of the project, assumed provided by Owner and not included in this scope of services, but can be added by amendment. Any information provided by Owner to Garver is assumed as correct.

3.4. Utility Coordination

Garver will furnish plans to all known utility owners potentially affected by the project at each stage of development. Garver shall conduct coordination meetings among all known affected utility owners to enable them to coordinate efforts for any necessary utility relocations. Garver will include the surveyed locations of the observable and marked utilities in the construction plans. Garver will also include proposed and/or relocated utility information in the construction plans as provided by the utility companies.

3.5. Property Acquisition Documents

Garver assumes that all improvements will be constructed within Owner's existing property at the Facility. Although no property acquisition services are included in this scope of work, Garver can perform the services through an amendment if needed.

4. Project Administration and Management Services

Throughout the project Garver will perform project management services. The following services shall be provided during each of the Tasks:

- I. Project tracking, invoicing, coordination meetings and project updates. It is assumed that the project will be invoiced monthly and on a lump sum basis based on percent of tasks completed.
- II. Preparation of a Project Management Plan (PMP) and Quality Control Plan (QCP), and implementation of the PMP/QCP throughout the project.
- III. Conduct QC reviews of each deliverable prior to delivery to Owner, in accordance with the QCP.

5. Project Tasks

Garver will perform the following task-based services.

5.1. Task 1. Planning and Preliminary Services

Garver will perform a study to evaluate plant rehab and upgrade options. Findings will be organized into a technical memorandum for Owner. The work will include the following:

- I. An on-site kickoff meeting at the Facility.
- II. Review of Owner supplied design, operation, and water quality data.
- III. Development of design calculations and process models as required to evaluate plant capacity and support system performance.
 - A. Evaluation of treatment process improvement alternatives, including those improvements recommended in the original study.
 - B. Evaluation of flow and loading data to develop a phasing plan.
 - C. Evaluation of the plant electrical and SCADA system.
- IV. Development of a technical memo, with internal QAQC and draft review by Owner prior to memo finalization.
- V. Development of a conceptual (Class 5) cost estimate for planning purposes.
- VI. Design and Construction phasing plans will be developed if required for funding reasons.

5.2. Task 2. Preliminary (30%) Design

Garver will perform preliminary design services to prepare a preliminary design for Owner input. The preliminary design services shall include:

- II. Development of a preliminary engineering report. The report will include design information manuals (DIMs) that include a basic description of the facilities being rehabbed, identification of regulatory requirements and basic control descriptions.
- III. Development of Design Documents:
 - A. Development of a 30% Plan Set. The set is planned to be approximately 60 sheets.
 - B. Development of a specification table of contents.
 - C. Refinement of the opinion of probable construction costs (OPCC), which will still be Class 5 estimate due to the completion of the design. Owner-provided budget of \$8 million will be considered the upset limit for base bid proposal items, including contingencies.
- IV. Participation in a 30% design package workshop within 1 week from submission of the draft 30% design package to Owner. This workshop will be remotely hosted through Teams and remotely attended by the design team. The project manager will attend in person.

5.3. Task 3. Detailed Design (60%, 90% and 100%)

Once Garver receives written approval from Owner on Preliminary Design, Garver will begin Final Design. During the final design phase of the project, Garver will perform the following tasks:

- I. Refinement of the Design Documents and development of 60%, 90% and 100% design

review packages. The 100% package is intended to be used for permit review.

- A. Development of a Plan Set. The 30% plan set will be updated and released at each design milestone for Owner review. The final design package is assumed to be approximately 100 sheets and will include a standard detail book.
 - B. Development of a specification package. Project specifications will be developed for review at the 60% milestone. The 60% spec package will include Garver's EJCDC based front end documents. Owner front ends can be substituted if available prior to the 60% milestone. Incorporation of Owner front ends after 60% will impact project schedule and may require a fee adjustment. Following the 60% submittal, the spec package will be updated and resubmitted during the 90% and 100% milestones.
 - C. Refinement of the opinion of probable construction costs (OPCC) will occur at each major milestone. The level of accuracy will improve and is anticipated to be a Class 3 cost estimate during the 100% submittal. Improvements included in the base bid of the bid proposal will be capped at the \$8 million limit, including contingencies, as provided by the Owner. Improvements not included in the base bid of the proposal will be included in additive alternate bid proposal line items.
- II. Upon completion of each design package, Garver will participate in a design package workshop, which will occur within 1 week from submission of the draft design package to Owner. This workshop will be remotely hosted through Teams and remotely attended by the design team. The project manager will attend in person.
 - III. Participation in site visits required by Garver to coordinate the design, owner supplied information and existing conditions.
 - IV. If required or identified during preliminary design, Garver shall perform permit services required for TPDES permit amendment including:
 - A. Development of summary transmittal letter to TCEQ including project description, sealed statement of project compliance with regulations, and facility map.
 - B. Development of supporting materials if a full technical review is required for the permit amendment.

5.4. Task 4. Tendering Services

During the bidding phase of the project, Garver will:

- I. Prepare and submit Advertisement for Bids to newspaper(s) for publication as directed by the Owner. Owner will pay advertising costs outside of this contract.
- II. Dispense construction contract documents to prospective bidders (at the approximate cost of reproduction and handling).
- III. Support the contract documents by preparing addenda as appropriate.
- IV. Participate in a pre-bid meeting if necessary.
- V. Attend the bid opening.
- VI. Prepare bid tabulation.
- VII. Evaluate bids and recommend award.
- VIII. Prepare construction contracts.
- IX. Prepare conformed project documents.

5.5. Task 5. Construction Administration Services

During the construction phase of work, Garver will accomplish the following:

- I. Issue a Notice to Proceed letter to the Contractor and attend preconstruction meeting.
- II. Prepare for and attend utilities coordination meeting.
- III. Attend progress/coordination meetings with the Owner/Contractor.
- IV. Evaluate and respond to construction material submittals and shop drawings. Corrections or comments made by Garver on the shop drawings during this review will not relieve Contractor from compliance with requirements of the drawings and specifications. The check will only be for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor will be responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of all other trades, and performing his work in a safe and satisfactory manner. Garver's review shall not constitute approval of safety precautions or constitute approval of construction means, methods, techniques, sequences, procedures, or assembly of various components. When certification of performance characteristics of materials, systems or equipment is required by the Contract Documents, either directly or implied for a complete and workable system, Garver shall be entitled to rely upon such submittal or implied certification to establish that the materials, systems or equipment will meet the performance criteria required by the Contract Documents.
- V. Issue instructions to the Contractor on behalf of the Owner and issue necessary clarifications (respond to RFIs) regarding the construction contract documents.
- VI. Review the Contractor's progress payment requests, based on the actual quantities of contract items completed and accepted, and will make a recommendation to the Owner regarding payment. Garver's recommendation for payment shall not be a representation that Garver has made exhaustive or continuous inspections to (1) check the quality or exact quantities of the Work; (2) to review billings from Subcontractors and material suppliers to substantiate the Contractor's right to payment; or (3) to ascertain how the Contractor has used money previously paid to the Contractor.
- VII. When authorized by the Owner, prepare change orders for changes in the work from that originally provided for in the construction contract documents. If redesign or substantial engineering or surveying is required in the preparation of these change order documents, the Owner will pay Garver an additional fee to be agreed upon by the Owner and Garver.
- VIII. Prepare and present routine updates to the Commissioners Court to report progress on the upgrades and construction phase activities.
- IX. Participate in final project inspection, prepare punch list, review final project closing documents, and submit final pay request.

The proposed fee for Construction Phase Services is based on a 365-calendar-day construction contract performance time. If the construction time extends beyond the time established in this agreement, and the Owner wants Garver to continue the applicable Construction Phase Services, the Owner will pay Garver an additional fee agreed to by the Owner and Garver.

In performing construction observation services, Garver will endeavor to protect the Owner against defects and deficiencies in the work of the Contractor(s); but Garver cannot guarantee the performance of the Contractor(s), nor be responsible for the actual supervision of construction operations or for the safety measures that the Contractor(s) takes or should take. However, if at any time during construction Garver observes that the Contractor's work does not comply with

the construction contract documents, Garver will notify the Contractor of such non-compliance and instruct him to correct the deficiency and/or stop work, as appropriate for the situation. Garver will also record the observance, the discussion, and the actions taken. If the Contractor continues without satisfactory corrective action, Garver will notify the Owner immediately, so that appropriate action under the Owner's contract with the Contractor can be taken.

5.6. Task 6. Post Construction/Close Out Services

Following completion of the construction phase, Garver will perform the following:

- I. Prepare and furnish record drawings based on redlines prepared by Contractor during construction.
- II. Engineer shall coordinate construction matters with the County Engineer.
- III. Engineer shall prepare a final report to Commissioners Court.

6. Project Deliverables

The following will be submitted to the Owner, or others as indicated, by Garver:

- I. Three (3) printed copies of the Preliminary Engineering Technical Memo.
- II. Three copies of the Preliminary Design with opinion of probable construction cost.
- III. One copy of the Preliminary Plans to each potentially affected utility company.
- IV. Three copies of the Final Design with opinion of probable construction cost.
- V. Three copies of the revised Final Design with opinion of probable construction cost.
- VI. One copy of the revised Final Plans to each potentially affected utility company.
- VII. Three copies of the Final Plans and Specifications to the Contractor.
- VIII. Three copies of the right-of-way and/or easement acquisition documents.
- IX. Two copies of approved shop drawings/submittals from the Contractor.
- X. One hard copy set of Record Drawings.
- XI. Electronic files as requested.

7. Extra Work

The following items are not included under this agreement but will be considered as extra work:

- I. Redesign for the Owner's convenience or due to changed conditions after previous alternate direction and/or approval.
- II. Submittals or deliverables in addition to those listed herein.
- III. Pavement Design.
- IV. Design of any utility relocation other than water and sewer.
- V. Retaining walls or other significant structural design beyond that required for the plant improvements.
- VI. Street lighting or other electrical design beyond that required for new portions of the plant.
- VII. Preparation of a Storm Water Pollution Prevention Plan (SWPPP). The construction contract documents will require the Contractor to prepare, maintain, and submit a SWPPP to TCEQ.

- VIII. Construction materials testing.
- IX. Environmental Handling and Documentation, including wetlands identification or mitigation plans or other work related to environmentally or historically (culturally) significant items.
- X. Coordination with FEMA and preparation/submittal of a CLOMR and/or LOMR.
- XI. Services after construction, such as warranty follow-up, operations support, etc.
- XII. Surveys and Geotechnical evaluation are required during the project. They are assumed to be provided by Owner with Garver input on extent of survey and location of borings.

Extra Work will be as directed by the Owner in writing for an addition fee as agreed upon by the Owner and Garver.

8. Schedule

Garver shall begin work under this Agreement within ten (10) days of a Notice to Proceed and shall complete the work in accordance with the schedule below:

Phase Description	Calendar Days
Planning and Preliminary Engineering	45 days from start date (or Owner-provided data)
Preliminary Design (30%)	30 days from approval of Conceptual Design
Final Design (60%, 90% and 100%)	270 days from approval of Preliminary Design
Permit Approval (After 100% Milestone)	90 days from approval of Final Design
Tendering Services	30 days from Permit Approval
Construction Administration	To be determined upon completion of preliminary engineering.
Post Construction/Close Out	To be completed with 90 days from completion of construction.

9. Fee

The proposed Lump Sum fee for these services, \$ 977,124.00, is summarized in the following table. Garver shall receive individual task authorizations from Owner before providing the task-based services.

Task Number	Task Description	Fee
0	Project Administration and Management	\$73,032.00
1	Planning and Preliminary Engineering	\$54,368.00
2	Preliminary Design (30%)	\$134,996.00
3	Detailed Design (60%, 90% and 100%)	\$408,356.00
4	Tendering Services	\$32,188.00
	Subtotal for Basic Services Section	\$702,940.00
5	Construction Phase Services	\$221,392.00
6	Post Construction Phase Services	\$52,792.00
	Subtotal for Additional Services Section	\$274,184.00
	Total for All Services	\$977,124.00