

Original Contract	March 28, 2018	Administrative Approval	\$49,300.00
Amendment No. 1	June 28, 2018	Motion No. M2018-103	\$612,500.00
Amendment no. 2	February 25, 2021	Administrative Approval	\$0.00

Rebecca Huerta
City Secretary



Hazen and Sawyer
500 N. Shoreline, Suite 1102
Corpus Christi, TX 78401 • 361.500.0414

January 11, 2022

Sandra Gomez, PE
Engineer IV
City of Corpus Christi
1201 Leopard Street
Corpus Christi, TX 78401

Re: Project 18069A, Amendment No. 3, Greenwood WWTP DAFT Replacement, Odor Control and Process Improvements –Design, Bidding and Construction Phase Services

Dear Ms. Gomez:

The purpose of this project is to design improvements at the City of Corpus Christi's Greenwood WWTP in alignment with the 18069A Greenwood DAFT Replacement and Odor Control Alternatives Assessment and Conceptual Design Report to address:

- Upgrading/Replacing/Repairing aging and deteriorated infrastructures and equipment
- Addressing odors
- Improving operational redundancy and reliability

Hazen and Sawyer will be responsible for the design of the following improvements:

- Site preparation
- Storm sewer and site drainage in areas of new construction
- Repair or replace equipment in junction boxes where needed
- New flow distribution structures
- New Waste Activated Sludge (WAS) Wet Well and WAS pumps
- New yard piping including new yard piping to the drying beds from thickening building.
- New aeration basin
- New blower building and blowers
- Upgrades to Secondary Clarifier (SC) No. 1 and 2 structures and replacement of mechanisms
- New SC No. 3 and new return activated sludge (RAS) pump station
- New Aeration Basins Effluent Flow Distribution Channel
- Conversion of Primary Digester No. 2 and 3 to aerated WAS holding tanks
- New Aeration Blowers for WAS holding tanks with canopy
- New Dewatering Feed Pump Building
- One new electrical building (near existing Blower Building) and miscellaneous electrical improvements
- Miscellaneous programmable logic controller and instrumentation improvements

Job no

- Partial demolition of sludge drying beds for removal from the floodplain and to make room for process units (removal of approximately 30 drying beds) and associated modification of drying bed yard piping.
- Rehabilitation of the existing aeration basins including the aeration equipment

This contract amendment will include Design, Bidding, Construction and Additional Services for a total amount of \$3,214,130.

Very truly yours,



Brandt Miller, PE
Senior Associate

Enclosure: Exhibit A: Scope of Services; Exhibit B: Summary of Fee

cc: Jiangang Deng, Chamindra Dassanayake, Logan Burton

**EXHIBIT A
CONTRACT AMENDMENT NO. 3
SCOPE OF WORK**

**CITY OF CORPUS CHRISTI
Greenwood Wastewater Treatment Plant DAFT Replacement,
Odor Control and Process Improvements
CITY PROJECT NO. 18069A
January 11, 2022**

PROJECT DESCRIPTION:

Condition of aging infrastructure in need of rehabilitation or replacement, nuisance odors, and treatment reliability are drivers for the City of Corpus Christi (City) Greenwood Wastewater Treatment Plant (WWTP) Improvements Project. Hazen and Sawyer (Hazen) was retained by the City to evaluate alternatives, to address deficiencies at the existing facilities, and to address all the drivers for this project (condition, odors and reliability). The selected alternative includes converting the anaerobic digesters to aerated WAS holding tanks, removing primary clarifiers from service, addressing the condition of infrastructure for the 30-year planning period, and providing redundancy and reliability in the secondary treatment process. The complete analysis is documented in the "18069A Greenwood DAFT Replacement and Odor Control Alternatives Assessment and Conceptual Design Report".

The purpose of this project is to design process improvements at the Greenwood WWTP in alignment with the previous evaluation to address:

- Upgrading/Replacing/Repairing aging and deteriorated infrastructures and equipment
- Addressing odors
- Improving operational redundancy and reliability

Hazen and Sawyer (ENGINEER) will be responsible for the design of the improvements. The following improvements are included in this design package:

- Site preparation
- Storm sewer and site drainage in areas of new construction
- Repair or replace equipment in junction boxes where needed
- New flow distribution structures
- New Waste Activated Sludge (WAS) Wet Well and WAS pumps
- New yard piping including new yard piping to the drying beds from thickening building.
- New aeration basin
- New blower building and blowers
- Upgrades to Secondary Clarifier (SC) No. 1 and 2 structures and replacement of mechanisms

- New SC No. 3 and new return activated sludge (RAS) pump station
- New Aeration Basins Effluent Flow Distribution Channel
- Conversion of Primary Digester No. 2 and 3 to aerated WAS holding tanks
- New Aeration Blowers for WAS holding tanks with canopy
- New Dewatering Feed Pump Building
- One new electrical building (near existing Blower Building) and miscellaneous electrical improvements
- Miscellaneous programable logic controller and instrumentation improvements
- Partial demolition of sludge drying beds for removal from the floodplain and to make room for process units (removal of approximately 30 drying beds) and associated modification of drying bed yard piping.
- Rehabilitation of the existing aeration basins including the aeration equipment

Task 1: Alternatives Assessment and Conceptual Design Services for this project was completed in March 2020. This task included preparation of the Alternative Assessment and Conceptual Design Report, development of phased improvement options, considered future expansion, site layout including space for expansion and provided planning level capital cost estimates. The subsequent design will further develop the conceptual design from Task 1.

This contract amendment will include design and construction services of improvements outlines above

Task 2 –Preliminary Design Services

Task 3 - Design Services

Task 4 - Bid Services

Task 5: Construction Phase Services

Task 9: Additional Services

SCOPE OF SERVICES

1. Alternatives Assessment and Conceptual Design Services – COMPLETE

The alternatives assessment and conceptual design accomplished the following:

- Validated condition of existing assets and remaining useful life
- Development of a calibrated whole plant process model for alternatives assessment and can be used for future analysis
- Determined flow projections and anticipated expansion timeline
- Filtered the multitude of process and solids handling technologies to the most feasible and cost-effective alternatives.
- Developed more details analysis of feasible alternatives to improve accuracy of the capital and life-cycle cost assessment for decision-making
- Completed a conceptual (10%) level design for the selected alternative including phasing options for the City to consider beyond the initial improvements

2. Preliminary Design Services

Preliminary design services will be developed for scope items described in the project description above. The preliminary design services will develop upon the conceptual design to a 30% level by supplementing the conceptual design report. The preliminary design report will document initial improvements and discipline requirements that were not addressed in detail during conceptual design.

2.1 Project Progress Meetings, Reporting, and Management

ENGINEER will coordinate the kick-off meeting progress meetings. These meetings shall be used to coordinate ongoing issues, discuss project status and obtain input from the City. ENGINEER will prepare meeting agendas prior to each meeting and shall prepare draft meeting minutes after each meeting and will finalize and distribute meeting minutes after review by the City's staff. ENGINEER will prepare monthly invoices with an activities summary

Scope Item Assumptions:

- Meetings will be held at the Corpus Christi Utilities building
- Utilities and Engineering Services Staff will attend progress meetings.
- ENGINEER's staff working on the project remotely will attend virtually as necessary

Meetings:

- One (1) two-hour kickoff meeting
- One(1) one-hour progress meeting with City staff for critical decisions prior to submitting the 30% design

Deliverables:

- Meeting agenda, sign-in sheet, and meeting minutes
- Project invoicing and activities update

2.2 Project Schedule and Updates

ENGINEER will prepare a project schedule that summarizes all of the major tasks of the project and the critical path of the project. ENGINEER will provide the updated project schedule as needed if schedule changes.

Scope Item Assumptions:

- The City staff will provide feedback on project schedule.

Meetings:

- None.

Deliverables:

- One (1) project schedule at the kickoff meeting

- Updated project schedule with monthly invoices

2.3 Geotechnical Investigation

ENGINEER will define scope and requirements for the geotechnical investigation, review, and approve proposal from the geotechnical engineering firm. The ENGINEER will assist the City in identifying the scope of additional geotechnical evaluations to be performed by a geotechnical engineering firm under a separate contract. ENGINEER will review geotechnical findings, request clarifications or additional information as needed to complete the design.

Scope Item Assumptions:

- Effort does not account for ENGINEER to perform geotechnical investigation.
- Geotechnical engineering firm selected by the City will perform geotechnical investigation.
- City will provide geotechnical investigation report to ENGINEER.

Meetings:

- Two (2) one-hour phone conference calls with the geotechnical engineering firm to review the project requirements and results.

Deliverables:

- Bore location exhibit

2.4 Preliminary Design

ENGINEER will further develop the conceptual design to 30% level of design development of the Greenwood WWTP plant improvements detailed in the “**18069A Greenwood WWTP DAFT Replacement and Odor Control Alternatives Assessment and Conceptual Design Report**”, refining the site layouts, and operating parameters. Design documents and list of specifications will be prepared and submitted to the City with certain disciplines advanced beyond others, to meet a 30% completion overall. ENGINEER will prepare preliminary civil, process, mechanical, electrical, and instrumentation and control drawings and present them in as a supplement to the conceptual design report. The structural, architectural and HVAC/plumbing portions of the project will be described in the preliminary engineering report with the design criteria defined. The Preliminary Engineering Report will include the following:

- Summary of the final process, modifications to existing facilities, and the major equipment functions included in the project. Unit sizing, unit quantities, and redundancy will be addressed. The unit and equipment sizing will be based on design criteria presented in the Conceptual Design Report
- Process flow diagrams (PFD) and description of proposed facilities
- General facility arrangement layout drawings. These drawings will present area requirements for process equipment, tanks, and support areas.

- General civil site plan presenting the arrangement of the new facilities on the site and major yard piping modifications.
- Description of construction for the structures that will house the new equipment. General architectural features of the facility facade and materials will be described.
- Construction sequencing and connections to existing facilities will be established.
- Design criteria for heating and ventilating for all facility areas.
- Description of proposed fire protection systems for all facility areas.
- Preliminary instrumentation block diagram drawing presenting the general instrumentation system architecture and philosophy for automatic and manual controls.
- Description of the interface between the existing instrumentation system and the proposed facilities, along with upgrades to the existing SCADA.
- Estimate of construction costs AACE Class 4 cost estimate.
- Schedule for permitting, final design, bidding and award, construction, and start-up.

Scope Item Assumptions:

- The City staff will provide feedback to the ENGINEER on the Preliminary Engineering Report and 30% design plans and list of specifications.

Meetings:

- One (1) two-hour meeting to review and confirm design assumptions in Preliminary Engineering Report

Deliverables:

- Preliminary Engineering Report (PER) and 30% design drawings (PDF) and list of specifications (PDF).
- Opinion of probable construction costs
- Project schedule
- Comment log with responses to City comments

2.5 30% QA / QC

ENGINEER will document internal Quality Assurance and Quality Control review comments on the preliminary design layout drawings and specifications and Preliminary Engineering Report. ENGINEER will address internal Quality Assurance and Quality Control review comments.

Scope Item Assumptions:

- The ENGINEER will provide a Quality Assurance and Quality Control review of Preliminary Engineering Report in accordance with Hazen QA/QC standards.

Meetings:

- None

Deliverables:

- QA/QC documentation upon request by the City

2.6 Preliminary Design Submittal Workshop

ENGINEER will lead Preliminary Design Submittal Workshop to discuss the Preliminary Engineering Report. ENGINEER will display on large screen the Preliminary Engineering Report document and go through it with City staff during the Design Submittal Workshop. ENGINEER will incorporate comments from the City into the final Preliminary Engineering Report, as detailed in 2.5 Preliminary Design.

Scope Item Assumptions:

- The City staff will provide comments to the ENGINEER on the Preliminary Engineering Report.
- The City staff will attend the Preliminary Design Submittal Workshop

Meetings:

- One (1) four-hour Preliminary Design Submittal Workshop

Deliverables:

- Meeting agenda, sign-in sheet, and meeting minutes

3. Design Services**3.1 Project Progress Meetings and Minutes**

ENGINEER will coordinate regular progress meetings. These meetings shall be used to coordinate ongoing issues, discuss project status and obtain input from the City. ENGINEER will prepare meeting agendas prior to each meeting and shall prepare draft meeting minutes and will finalize and distribute meeting minutes after review by the City's staff. The ENGINEER will prepare activity summaries to support monthly invoicing.

Scope Item Assumptions:

- Meetings will be held at the Corpus Christi Utilities building
- Utilities and Engineering Services Staff will attend progress meetings.
- ENGINEER's staff working on the project remotely will attend virtually, as necessary.

Meetings:

- Two (2) two-hour progress meetings outside milestone review workshops with Utility and Engineering Services staff

Deliverables:

- Meeting agenda, sign-in sheet, and meeting minutes

- Project progress reporting and invoicing

3.2 Project Schedule and Updates

ENGINEER will prepare a project schedule that summarizes all the major tasks of the project, provides proposed construction sequencing, and the critical path of the project. ENGINEER will update the project schedule as the project progresses or changes occur.

Meetings:

- None.

Deliverables:

- Updated project schedule with each deliverable

3.3 60%, Pre-final (90%), and Final (100%) Design

The design will involve development of a set of contract documents, which will include construction plans, details, specifications, and other documents to establish and depict the size, character, and extent of the entire project with respect to architectural, structural, site work, mechanical, instrumentation and electrical systems, and such other elements as may be appropriate.

The contract plans will be prepared using 3D CAD software (Revit) for new facilities. 3D models will be generated and used for design review workshops. 2D sheet files will be created from the 3D models. Drawings such as civil discipline, electrical one lines and panel schedules, P&IDs, existing facilities, etc. will be developed using AutoCAD 2D. As part of the final design, the ENGINEER will develop contractual conditions and instructions to bidders and will also update the project cost estimates and construction schedule, to reflect the level of design completion.

As part of preparing the final design, the ENGINEER will conduct an internal constructability review. This review will focus on the ease with which the facility can be constructed at the selected site, be integrated with existing facilities, and avoid interferences and other obstacles that could cause construction delays or difficulties while maintaining plant operations. The ability to maintain existing facilities in service throughout construction will also be examined as part of the constructability review.

Design documents will be submitted to the City at various stages during final design. The following deliverables have been established for design, which will be provided at the 60% and 90% design completion points, respectively:

Deliverables for 60% Design Completion

- Technical specifications
- Plans, sections and details for all disciplines
- Updated cost estimate and schedule

Deliverables for 90% Design Completion

- Updated front end items such as bid item descriptions, summary of work, etc.
- Updated Plans, Sections and details for all disciplines

- Complete specifications
- Updated cost estimate and schedule

The 60% and 90% documents will be submitted to the City for approval. Upon receipt of the City's comments on the 60% and Pre-final (90%) deliverables, the ENGINEER will revise the set and issue Final, signed and sealed bid-ready (100% complete) documents.

Scope Item Assumptions:

- The City standard front end (general and supplemental conditions and Division 1 specifications) documentation for inclusion into the contract documents will be obtained from <https://www.cctexas.com/promo/standards-contracts>
- The City staff will provide comments to the ENGINEER on the drawings and specifications at each design milestone. Turnaround time on comments is assumed to be no more than 3 weeks.
- The City staff will attend the 60%, 90% and Final submittal workshops.
- All permitting fees will be paid by the City
- It is assumed that there are no known hazardous waste contaminated areas, wetlands, endangered species, or other environmentally sensitive flora or fauna which may require additional efforts during design, permitting or construction management.
- The City will obtain any necessary easements and rights-of-way. The City will also obtain any necessary agreements to ensure power supply increases are obtained in time for this project. The ENGINEER shall assist the City with development of the agreement from a technical perspective.
- Submittals shall include one PDF electronic copy of entire bid set, one (1) electronic copy of CAD files for final submittal only. No hard copies will be provided unless expenses approved by the City under Additional Services.
- Prepare letter and design submittal package to TCEQ providing notification for the recommended improvements to be performed at Greenwood WWTP.
- Address TCEQ comments from the plan review process and incorporate them into the contract documents.

Meetings:

- Included under Subtask 3.1.

Deliverables:

- 60% design review submittal
- 90% (pre-final) design review submittal
- 100% signed and sealed design submittal
- TCEQ design submittal letter and package for review (one submittal at 90%)
- Comment log with responses to City comments

3.4 60%, 90%, and 100% QA / QC

ENGINEER will document internal Quality Assurance and Quality Control review comments on the 60%, pre-final (90%), and 100% drawing and specifications. ENGINEER will address internal Quality Assurance and Quality Control review comments.

Scope Item Assumptions:

- The ENGINEER will provide a Quality Assurance and Quality Control review of all drawings and specifications in accordance with Hazen QA/QC standards.

Deliverables:

- QA/QC log upon request by the City

3.5 60%, Pre-final (90%) and Final (100%) Design Workshops

ENGINEER will prepare a PowerPoint presentation and 3D model views for the 60%, Pre-final (90%), and Final (100%) Design workshops. ENGINEER will prepare meeting agendas prior to each meeting and prepare draft meeting minutes after each meeting. ENGINEER will finalize and distribute meeting minutes after review by the City's staff.

ENGINEER will lead workshops to discuss the drawings and specifications. ENGINEER will incorporate comments from the City into the 60%, Pre-final (90%), and Final (100%) Design.

Scope Item Assumptions:

- The City staff will provide comments to the ENGINEER on the drawings and specifications within 3 weeks after submission.

Meetings:

- One (1) four-hour 60% Design Review Workshop
- One (1) four-hour Pre-final (90%) Design Review Workshop
- One (1) two-hour Final (100%) Design Review Workshop

Deliverables:

- PowerPoint presentation for each of the Workshops
- Meeting agendas, sign-in sheets, and meeting minutes

4. Bid Services

The ENGINEER will provide necessary information to the OWNER to develop bid documents. The ENGINEER will assist the City during the bid period by performing the following tasks:

- Attend a Pre-Bid Meeting
- Respond to Bidder Inquiries
- Preparing of technical content for Addenda
- Review bids and bidder references for completeness, balance of bid items, and responsiveness. ENGINEER will prepare a tabulation of bid prices.

- Recommend contract award, based on the lowest responsive and responsible bidder.

Scope Item Assumptions:

- The City will provide the City's updated standard and special provisions and forms for required bid documents.
- The City will arrange for all documents and addenda to be distributed to prospective bidders.
- The City will advertise the projects for bidding, maintain the list of prospective bidders, receive and process deposits for all bid documents, issue (with assistance of ENGINEER) any addenda, and conduct bid opening.
- The ENGINEER will prepare and supply bid tabulation forms.
- The City will receive the ENGINEER's recommendation concerning bid evaluation and recommendation and prepare agenda materials for the City Council concerning bid awards.
- The City will prepare, review, and provide copies of the contract for execution between the City and the Contractor.
- This Scope of Services does not include time for the ENGINEER to assist the City in the event of bid protests.
- Production and distribution of bid documents to interested bidders will be provided by the City.

Meetings:

- One (1) two-hour Pre-bid Meeting
- Two (2) one-hour meetings to discuss bids with the City

Deliverables:

- Bid Documents and Addenda
- Agenda and meeting minutes for pre-bid conference
- Bid Review Form and recommendation for contract award

5. Construction Phase Services

5.1 Engineering Services During Construction

The ENGINEER will assist the City during the construction phase, by providing the following engineering services:

- Attend a pre-construction meeting with the City and the Contractor.
- Attend monthly progress meetings to update on construction progress with City and prepare meeting minutes.
- Review and approve submittals and maintain the submittal log using Procore.
- Provide interpretations and clarifications of the contract documents based on the contractor's requests for information (RFIs) and review required changes. Maintain RFI log using Procore.

- Review contractor pricing for change order requests.
- Manage and review the O&M Manual deliverables required by construction contracts and by equipment suppliers.
- Review the Contractor's requirement of providing electronic record drawings.
- Make visits to the site of the project (monthly) to confer with the City project inspector and contractor to observe the general progress and quality of work.
- Make final inspections with the City Staff and provide the City with a letter of substantial completion and letter of final completion for the project.
- Review construction "red-line" drawings, prepare record drawings of the Project as constructed (from the "red-line" drawings, inspections and the contractor provided plans) and deliver to the Engineering Services a reproducible set and electronic file of the record drawings within two (2) months of final acceptance of the project.
- The ENGINEER will provide monthly progress reports with invoices.
- The ENGINEER will maintain the punch-list of final construction items for each discipline

Scope Item Assumptions:

- Expected construction duration is 28 months.
- City to arrange for a site inspector to continuously monitor the progress of construction
- Total number of submittals is estimated at 200. Submittal review assumes 30% resubmittal (for a total of 260 submittal reviews).
- Number of RFIs is estimated at one per drawing.
- The City will process applications/ estimates for payments to Contractor. The ENGINEER will review the pay applications and provide signature as required.
- The City will conduct the substantial completion inspection and final complete inspection with the ENGINEER.
- This task does not include resident project engineer, special inspection, or shop/witness testing equipment.

Meetings:

- One (1) two-hour pre-construction meeting
- Twenty-eight (28) monthly progress meetings
- Twenty-eight (28) one-hour site visits (monthly and can be conducted following monthly progress meetings).
- Two (2) two-hour punch list walkthrough meetings
- Procore software will be utilized for document management and response logging

Deliverables:

- RFI responses, change order comments, submittal review dispositions.

- Record Drawing files
- Meeting agenda, sign-in sheet, and meeting minutes
- Project progress reporting and invoicing

5.2 SCADA & Controls Integration Assistance

The ENGINEER shall provide assistance to the City and the Contractor to ensure the appropriate control strategies are functioning properly prior to start up and commissioning. The ENGINEER will perform the following:

- Assist the City in implementing the control strategies and assist Greenwood WWTP staff with system integration. The control strategies will build on the existing monitoring and control logic.
- Review PLC cutover checklist.
- Witnessing of signal loop testing including electrical and instrumentation terminations.
- Coordination of new signals with existing SCADA system.
- Oversee process tuning during startup.

Scope Item Assumptions:

- None

Meetings:

- One (1) forty-hour site visits (full week) to test and/or troubleshoot control strategies, signals, and SCADA operations
- Two (2) eight-hour site visits to coordinate PLC cutover checklist.

9. Additional Services

Additional services shall be authorized by the City in writing prior to commencing the Work.

9.1 Expense Allowance (Time and Materials to be authorized by project manager)

ENGINEER will request approval for project expenses such as staff travel (flights, hotel, meals and transportation), reproduction of deliverables and any other expenses that may arise directly related to delivery of the project or requested by the City.

9.2 Site Survey, Coordination and Subsurface Utility Engineering (Level A)

ENGINEER will review historical drawings and perform additional surveying activities to obtain field data needed for design. The ENGINEER will also identify aboveground and underground utilities to identify easements and conflicts.

Subsurface Utility Engineering (SUE) services are divided into four (4) levels (Level A through Level D). Level A Services involve physically locating the utility by different geophysical methods. ENGINEER will provide Level A SUE services. Once ENGINEER locates the utility, ENGINEER will note its coordinates by survey measurements.

The purpose of performing Level A SUE services for the Greenwood WWTP Process Improvements project is to ensure no conflicts occur between the proposed construction

and existing utilities at the Greenwood WWTP. ENGINEER will coordinate the field surveying to help locate subsurface utilities using geophysical methods in the proposed construction area. ENGINEER will record the vertical and horizontal location, size, pipe material and configuration of the utility line. ENGINEER will transfer the data obtained from the field to update utility base maps and project design plans. ENGINEER will also coordinate with the City regarding potential utility crossings and conflicts.

Subsurface Utility Location and Data Recording

- Coordinate with Texas 811 and City to determine the approximate location of underground utilities to be exposed.
- Utilize Hydro Vac Methods to expose underground utilities and survey to record exact horizontal and vertical location. Once the survey work is complete, each SUE test hole will be backfilled.
- Collect and record field data.

Subsurface Utility Data Review and Coordination

- Review SUE field data obtained during on-site survey and utility location
- Update base maps and project construction plans with
- Coordinate with City during field survey and data management.

Assumptions

- SUE work is limited to a maximum of 3 days of field work at 8 hours per day. If additional field work is anticipated, a supplemental contract will be requested from the City.
- The City will provide the following:
 - Staging area for equipment on site (Hydro Vac Unit(s), backfill trailer)
 - Area for disposal of sludge waste (from Hydro Excavation)
 - Area for excavated material to be left on site
 - Access to on site water source equivalent to a fire hydrant
 - Backfill material (for unpaved surfaces)
 - Survey control points with a description of location and type of control point
- The SUE level of effort is based on 10 locates or greater involving trenching and hydro excavating to a depth of 10 feet.
- Hydro Vac method will be utilized for locating subsurface utilities. The potholes will be temporarily barricaded. Once the work is complete, the crew will backfill the utility potholes.
- In the event that work cannot be performed or is limited by inaccessibility due to weather, City to provide means of accessibility (i.e. rig mats)
- Exclusions:
 - Identifying exact point of underground utility intersection and/or elbows and turns (this service can be performed at an additional cost if requested by City).

- Transfer of material directly into containers such as vacuum boxes or related containers.
- Backfill limited to native material or sand.

Meetings:

- None.

Deliverables:

ENGINEER will provide the City with a report containing data obtained from field survey along with exhibits showing subsurface utilities located in the field.

9.3 Conformed Documents

The Engineer shall incorporate all contract document changes resulting from addenda during the Bid Phase and issue the construction conformed documents to the City.

Meeting:

- None.

Deliverables:

- Complete Conformed Contract Documents including one (1) electronic copy of CAD files. Hard copy reproduction shall be approved by the City as part of the project expenses allowance.
- Two sets of conformed plans and specifications delivered to Construction Inspections (11x17)

9.4 Start-up Services

The ENGINEER shall monitor startup activities and participate during the startup phases of the project. The ENGINEER shall perform the following:

- Review CONTRACTOR startup plan and make recommendations, as necessary.
- Review CONTRACTOR's start-up checklist
- Observe the start-up testing and equipment troubleshooting.
- Confirm system operation baseline performance meets the specified conditions.
- Develop an Operations and Maintenance Process Manual. The O&M manual will be incorporated into the City's existing overall Greenwood WWTP electronic O&M and will only address the new systems installed under this contract. The electronic O&M will:
 - Make sure the content is correct and current.
 - Develop good interface aesthetics and graphics to provide a pleasing user experience.
 - Make the manual usable through attention to proper organization and coherent navigation.
 - Provide a system that can be easily modified and/or expanded.

- Make technology decisions that allow for integration of new technologies, without an excessive technology-maintenance burden on the City.
- Contain links to vendor supplied O&M manuals for reference and troubleshooting
- Be web-based to facilitate multiple users and allow for periodic updates
- Review and manage operations and maintenance manuals required under the construction contract and provided by equipment suppliers
- VVT (Verification, Validation, and Testing) plan for the entire system
- Preparation of acceptance checklist and sign-off forms
- Quality Assurance and quality control of all contractor's start-up activities and sequencing.
- Review CONTRACTOR's training plan and instruction materials for compliance with the Contract Documents

Scope Item Assumptions:

- Contractor is responsible for preparing, testing, and cleaning equipment prior to start-up as detailed in the project specifications.
- CONTRACTOR to maintain start-up checklist
- One (1) start-up phases included in construction contract

Meetings:

- Five (5) eight hour (full day) site visits to assist in calibration, testing, and troubleshooting
- Three (3) eight-hour start-up days
- One (1) four-hour O&M Workshop to review new electronic O&M manual

Deliverables:

- Compiled Operations and Maintenance Manuals and Electronic O&M Process Manual (all electronic format)
- MOPO Document
- Start-up Checklist

9.5 Warranty Phase

The Engineer will provide services during the 12-month warranty period for observing and reporting discrepancies under guarantees called for in the construction documents. ENGINEER services to resolve defects identified to be corrected under warranty are not included in this task. The correction of any defects observed in the inspections is the responsibility of the Contractor and their subcontractors and suppliers.

Meeting:

- The Engineering team will conduct a site walkthrough during month 11 of the warranty period.

- A multi-disciplinary team of up to four (4) will attend a one-day site walk with plant staff to document any deficiencies.

Deliverables:

- Letter summarizing deficiencies for the Owner's use in communicating with the Contractor.

9.6 Windstorm Certification

The ENGINEER will perform the following:

- Prepare and submit the WPI-1 form in accordance with the requirements of the Texas Department of Insurance (TDI) for Windstorm for the project WORK.
- Review all necessary submittals required for the WORK, including but not limited to; reinforcing shop drawings, anchor rods, concrete mix design, backfill materials, steel shop drawings and all other project-specific items, to ensure conformance with the sealed project Construction Documents and for compliance with TDI.
- Perform required inspections and prepare the required reports during the construction phase to visually verify all WORK is constructed as designed and detailed on the sealed Construction Documents.
- Prepare and submit WPI-2 form to the TDI upon completion of construction.

Scope Item Assumptions:

- The Contractor shall provide at a minimum, 48-hour notice to the Windstorm ENGINEER / Inspector to schedule all required inspections for the project.
- The ENGINEER is not responsible for failure by the Contractor to abide by the provisions and/or design and inspection requirements set forth on the construction documents.
- Approval in writing must be provided by the Windstorm ENGINEER prior to any modifications, substitutions or alterations from the contract documents that may be proposed during construction.
- The Contractor shall provide notification for re-inspection or documentation verifying all noted deficiencies have been brought into compliance, as may be required by the Windstorm ENGINEER.

Meetings:

- Thirty (30) two-hour site visits to perform inspections

Deliverables:

- WPI-1 & 2 forms

SCHEDULE

The following table summarizes the planned project schedule. Task 1: Preliminary Design Services was completed in March 2020. The following proposed schedule is provided to delineate the critical path tasks. The delivery assumes review comments are received by the City within 1 week of a deliverable to maintain the schedule.

Date	Activity
-	A/E Contract NTP
3 months after NTP	30% Submittal Package
7 months after NTP	60% Submittal Package
11 months after NTP	90% Submittal Package (Pre-Final)
12 months after NTP	Bid Ready Submittal
28 months after Contractor NTP	Construction Complete
Assumes City review comments provided within one week of submittal to maintain schedule.	

FEE

The proposed fee is per the attached fee sheet and will be based on a LSUM contract basis except for Task 9.0 Expense Allowance, which will be Time and Material.

**GREENWOOD WWTP PROCESS IMPROVEMENTS
CITY PROJECT NO. 18069A
SUMMARY OF FEES**

	Amendment No. 1	Amendment No. 2	Amendment No. 3	Total Contract
Original Contract				
\$49,300.00	\$612,500.00	\$0.00	\$499,785.00	\$1,161,585.00
\$0.00	\$0.00	\$0.00	\$1,857,253.00	\$1,857,253.00
\$0.00	\$0.00	\$0.00	\$18,289.00	\$18,289.00
\$0.00	\$0.00	\$0.00	\$563,311.00	\$563,311.00
\$49,300.00	\$612,500.00	\$0.00	\$2,938,638.00	\$3,600,438.00
\$0.00	\$0.00	\$0.00	\$30,000.00	\$30,000.00
\$0.00	\$0.00	\$0.00	\$58,534.00	\$58,534.00
\$0.00	\$0.00	\$0.00	\$35,380.00	\$35,380.00
\$0.00	\$0.00	\$0.00	\$129,444.00	\$129,444.00
\$0.00	\$0.00	\$0.00	\$5,309.00	\$5,309.00
\$0.00	\$0.00	\$0.00	\$16,825.00	\$16,825.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00	\$275,492.00	\$275,492.00
\$49,300.00	\$612,500.00	\$0.00	\$2,938,638.00	\$3,600,438.00
\$0.00	\$0.00	\$0.00	\$275,492.00	\$275,492.00
\$49,300.00	\$612,500.00	\$0.00	\$3,214,130.00	\$3,875,930.00
Admin Approval 3/26/2018	Council Approval 6/19/2018	Admin Approval 2/25/2021	Council Approval PENDING	

Basic Services:

Preliminary Phase
Design Phase
Bid Phase
Construction Admin Phase
Subtotal Basic Services

Additional Services:

Expense Allowance
Topographic Survey and Coordination
Preparation of Conformed Contract Documents
Start-up Services
Warranty Phase
Windstorm Certification

Subtotal Additional Services

Summary of Fees:

Basic Services Fees
Additional Services Fees
Total Authorized Fees



SUPPLIER NUMBER _____
TO BE ASSIGNED BY CITY
PURCHASING DIVISION

CITY OF CORPUS CHRISTI DISCLOSURE OF INTEREST

City of Corpus Christi Ordinance 17112, as amended, requires all persons or firms seeking to do business with the City to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA". See reverse side for Filing Requirements, Certifications and definitions.

COMPANY NAME: Hazen and Sawyer, DPC _____

P. O. BOX: NA _____

STREET ADDRESS: 500 N. Shoreline, Blvd., Suite 1102 **CITY:** Corpus Christi **ZIP:** 78401

FIRM IS: 1. Corporation ☒ 2. Partnership ☐ 3. Sole Owner ☐
4. Association ☐ 5. Other ☐

DISCLOSURE QUESTIONS

If additional space is necessary, please use the reverse side of this page or attach separate sheet.

1. State the names of each "employee" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Job Title and City Department (if known)
NA	

2. State the names of each "official" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Title
NA	

3. State the names of each "board member" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Board, Commission or Committee
NA	

4. State the names of each employee or officer of a "consultant" for the City of Corpus Christi who worked on any matter related to the subject of this contract and has an "ownership interest" constituting 3% or more of the ownership in the above named "firm."

Name	Consultant
NA	

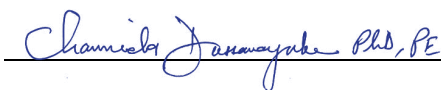
FILING REQUIREMENTS

If a person who requests official action on a matter knows that the requested action will confer an economic benefit on any City official or employee that is distinguishable from the effect that the action will have on members of the public in general or a substantial segment thereof, you shall disclose that fact in a signed writing to the City official, employee or body that has been requested to act in the matter, unless the interest of the City official or employee in the matter is apparent. The disclosure shall also be made in a signed writing filed with the City Secretary. [Ethics Ordinance Section 2-349 (d)]

CERTIFICATION

I certify that all information provided is true and correct as of the date of this statement, that I have not knowingly withheld disclosure of any information requested; and that supplemental statements will be promptly submitted to the City of Corpus Christi, Texas as changes occur.

Certifying Person: Chamindra Dassanayake **Title:** Vice President
(Type or Print)

Signature of Certifying Person:  **Date:** 1/24/2022

DEFINITIONS

- a. "Board member." A member of any board, commission, or committee appointed by the City Council of the City of Corpus Christi, Texas.
- b. "Economic benefit". An action that is likely to affect an economic interest if it is likely to have an effect on that interest that is distinguishable from its effect on members of the public in general or a substantial segment thereof.
- c. "Employee." Any person employed by the City of Corpus Christi, Texas either on a full or part-time basis, but not as an independent contractor.
- d. "Firm." Any entity operated for economic gain, whether professional, industrial or commercial, and whether established to produce or deal with a product or service, including but not limited to, entities operated in the form of sole proprietorship, as self-employed person, partnership, corporation, joint stock company, joint venture, receivership or trust, and entities which for purposes of taxation are treated as non-profit organizations.
- e. "Official." The Mayor, members of the City Council, City Manager, Deputy City Manager, Assistant City Managers, Department and Division Heads, and Municipal Court Judges of the City of Corpus Christi, Texas.
- f. "Ownership Interest." Legal or equitable interest, whether actually or constructively held, in a firm, including when such interest is held through an agent, trust, estate, or holding entity. "Constructively held" refers to holdings or control established through voting trusts, proxies, or special terms of venture or partnership agreements."
- g. "Consultant." Any person or firm, such as engineers and architects, hired by the City of Corpus Christi for the purpose of professional consultation and recommendation.