

EXHIBIT "A"
CITY OF CORPUS CHRISTI, TEXAS

CR 73 LIFT STATION AND FORCE MAIN
Northwest Blvd Wastewater Infrastructure Rehabilitation
PROJECT NO. 24106

I. SCOPE OF SERVICES

REV2

DCCM will provide engineering services for the following improvements developed in the Engineering Letter Report (ELR) for the Northwest Blvd. Wastewater Infrastructure Rehabilitation (City Project No. 24106, MSA 6128) and as summarized in the following and shown on attached exhibit:

1. New CR 73 Lift Station (LS)
2. New 8" force main from CR 73 Lift Station to the existing Lakes Northwest Lift Station
3. New 2" fiber optics conduit along CR 73 from the new CR 73 LS site to FM 624
4. New 2" fiber optics conduit to serve existing Lakes Now LS, either along FM 1889 from the existing Lakes NW LS to CR 52 or parallel with the new force main from new CR 73 LS to existing Lakes NW Ls (route to be determined during preliminary phase)
5. Associated permits and easements as necessary to complete the subject project

DCCM will provide recommendations for the following features that the new lift station would generally have:

1. Above ground piping and valves with bypass quick connection.
2. FRP or reinforce concrete wet well.
3. Submersible pumps.
4. Flow meter.
5. Water service adequate to serve the lift station.
6. Dedicated space for future Odor Control System
7. SCADA facilities.
8. Electrical and controls and canopy shelter.
9. Standby backup power generator.
10. Site perimeter security fence and entrance gate.
11. Other typical lift station recommendations.

A. BASIC SERVICES

For the purpose of this Contract, Preliminary Phase may include Schematic Design and Design Phase services may include Design Development as applicable to Architectural/Engineering services.

1. Preliminary Phase.

The Architect/Engineer (A/E), also referred to as Consultant, will:

- a) Attend Project Kick-off Meeting and distribute meeting minutes to attendees within 10 working days of the meeting.
- b) Request and review available reports, record drawings, utility maps and other information provided by the City pertaining to the project area.
- c) Review record drawings for existing Lakes Northwest Lift Station and re-visit the site with CCW to update existing condition and proposed improvements.
- d) Request and review record drawings and/or construction plans from the County and from TxDOT for existing CR 73 and FM 1889.

- e) Request and review route study and engineering design documents and provide coordination, if needed, with the new City Groundwater Wells to the ON Stevens WTP project.
- f) Develop preliminary requirements for utility relocations, replacements or upgrades. Coordinate with the City's Project Manager and identify Operating Departments potential Project needs.
- g) Verify new utility and temporary construction easement requirements for the lift station site and new force main.
- h) Identify existing public, private and electric and communication utility companies that may have existing facilities in the location of the new lift station and along the proposed force main route and their impact on the proposed improvements.
- i) The AE will participate in discussions with the Operating Department; Development Services and other agencies (such as the Texas Department of Transportation (TXDOT) as required to satisfactorily complete the Project. Any directions or changes to scope provided by the Operating Department or other agencies shall be reviewed with the City Engineering Department PM prior to including/excluding from the scope of work.

City staff will provide electronic copies of the following information (as applicable and requested through the City PM):

- a) Electronic index and database of City's Record Drawing and record information.
- b) Record Drawings and record information as available from City Engineering files.
- b) The preliminary budget, specifying the funds available for construction.
- c) A copy of existing studies and plans (as available from City Engineering files).
- d) Copy of Geotechnical Investigation Report.

Note: Applicable Master Plans and GIS mapping are available on the City's website. **The records provided for A/E's use under this Contract are proprietary, copyrighted, and authorized for use only by A/E, and only for the intended purpose of this project. Any unauthorized use or distribution of the records provided under this Contract is strictly prohibited.**

2. **Design Phase.**

Upon approval of the preliminary phase, designated by receiving authorization to proceed from the City Project Manager, the A/E will:

- a) Coordinate with AEP to identify location of power for service to the new lift station.
- b) Prepare Construction Documents in City standard format for the work identified in the approved Engineer Letter Report (ELR). Include standard City of Corpus Christi detail sheets and specifications as applicable to the Project.
- c) Prepare construction plans in compliance with CPPSCF using English units on 11"x 17".
- d) Submit PDF of **interim plans** (60% submittal) electronically to City staff for review and approval purposes with 60% estimates of probable construction costs. Identify distribution list for plans and bid documents to all affected franchise utilities and stakeholders.
 - 1. **Required** with the interim plans is:
 - a. Design Submittal Packet Checklist
 - b. Executive Summary of the 60% submittal," which will identify and briefly summarize the Project by distinguishing key elements of the Project, decisions made, outstanding issues, items TBD, Opinion of Probable

- Construction Costs (OPCC) compared to construction budget and the schedule with changes identified.
- c. Project Submittal Checklist
 - d. Drawing Review Checklist
 - e. OPCC
 - f. Drawings
 - g. Draft Table of Contents with specification list
2. **Initiate** 60% submittal discussion with City PM to brief PM on any concerns or issues prior to distribution of 60% submittal.
- e) Participate in Project 60%/90% review meeting. Prepare and distribute meeting meetings to attendees within five working days of the meeting. Assimilate all review comments, as appropriate, and and proceed to the pre-ATA submittal
 - f) Submit PDF of the **pre-final plans and bid documents** (90% submittal) electronically and using City Standards as applicable to City staff for review and approval purposes. Include the 90% estimate of probable construction costs, 90% submittal Executive Summary, Submittal Packet, Project, and Drawing Checklists, responses to previous review comments and the Contract Document Book with in-line Track Changes in red to identify all proposed edits to the City Construction Contracts.
 - g) Participate in Project 60%/90% review meeting. Prepare and distribute meeting meetings to attendees within five working days of the meeting. Assimilate all review comments, as appropriate, and proceed to the pre-ATA submittal.
 - h) Provide written responses to all City questions and comments before proceeding to the next phase design.
 - i) Provide PDF of the **pre-ATA** plans (100% unsealed and unstamped) electronically using City Standards as applicable for City's Pre-ATA review. Include the pre-ATA OPCC and written responses to previous review comments. The pre-ATA (100%) submittal will not include a full distribution and review unless in the opinion of the City Project Manager the questions from the previous review have not been adequately addressed or resolved in the pre-ATA submittal. If this occurs, the PM may request additional distribution, meeting, review and related revisions at no additional cost to the City. See item (j) below.
 - j) Assimilate all pre-ATA comments, as appropriate, and provide a PDF set of the **final plans and contract documents** (signed and sealed) suitable for reproduction. Said bid documents henceforth become the shared intellectual property of the City of Corpus Christi and the Consultant. The City agrees that any modifications of the submitted final plans (for other uses by the City) will be evidenced on the plans and be signed and sealed by a professional engineer prior to re-use of modified plans.
 - k) Provide Quality Assurance/Quality Control (QA/QC) measures to ensure that all submittals accurately reflect the percent completion designated and do not necessitate an excessive amount of revision and correction by City. Additional revisions or design submittals are required (and within the scope of Consultant's duties under this Contract) if, in the opinion of the City Engineer or designee, Consultant has not adequately addressed City-provided review comments or provided submittals in accordance with City standards.
 - l) Prepare and submit Monthly Status Reports to the Project Manager no later than the last Wednesday of each month with action items developed from monthly progress and review meetings.

The City staff will:

- a) Designate an individual to have responsibility, authority, and control for coordinating activities for the Project.
- b) Provide the budget for the Project specifying the funds available for the construction contract.
- c) Provide electronic copy the City's Standard Specifications, Standard Detail sheets, Front End Contract Documents, and forms for required bid documents.

3. **Bid Phase.**

The A/E will:

- a) Participate in the pre-bid conference and submit agenda for critical construction activities and elements impacting the Project to PM prior to pre-bid conference.
- b) Assist the City in solicitation of bids by identification and notification of prospective bidders.
- c) Review all pre-bid questions and submissions concerning the bid documents and prepare, in the City's format for Engineering Services' approval, any addenda or other revisions necessary to inform Contractors of approved changes prior to bidding.
- d) Attend bid opening, analyze and evaluate bids, and prepare bid tabulation in City format.
- e) AE shall review Statement of Experience and confirm it meets Contract requirements. If necessary, AE shall contact three (3) lowest bidder's references for review and evaluation. Provide signed recommendation concerning award of the Contract on Company letterhead.
- f) In the event the lowest responsible bidder's bid exceeds the construction budget provided by the Engineering Services in accordance with the A/E's design phase OPCC estimate required above, the Engineer will confer with City staff and provide recommendations for potential remedy options to reconcile scope and/or budget, and if necessary, make such revisions to the bid documents as the City staff deems necessary to re-advertise the Project for bids.
- g) Provide two (2) hard copy sets and one (1) electronic set of **conformed drawings and conformed Contract Documents** (PDF and original format {CAD/word/etc.}) to the City.

The City staff will:

- a) Advertise the Project for bidding, maintain the list of prospective bidders, issue (with the assistance of the A/E) any addenda, supply bid tabulation forms, and conduct bid opening.
- b) Receive the Engineer's recommendation concerning bid evaluation and recommendation and prepare agenda materials for the City Council concerning bid awards.
- c) Prepare, review and provide copies of the Contract for execution between the City and the Contractor.

4. **Construction Administration Phase.**

The A/E will perform contract administration to include the following:

- a) Participate in pre-construction meeting conference and provide a recommended agenda for critical construction activities and elements impacting the project.
- b) Review Contractor submittals and operating and maintenance manuals for conformance to Contract Documents.
- c) If requested by the City, review and interpret field and laboratory tests.

- d) Provide interpretations and clarifications of the Contract Documents for the Contractor and authorize required changes, which do not affect the Contractor's price and are not contrary to the general interest of the City under the Contract as requested by the Owner's Authorized Representative (OAR).
- e) Make periodic visits to the site of the Project to confer with the City Project Inspector and Contractor to observe the general progress and quality of work, and to determine, in general, if the work is being done in accordance with the Contract Documents. This will not be confused with the project representative observation or continuous monitoring of the progress of construction.
- f) Provide interpretations and clarifications of the plans and specifications for the Contractor and recommendations to the City for minor changes which do not affect the Contractor's price and are not contrary to the general interest of the City under the Contract as requested by the OAR
- g) When requested by the OAR, assist in addressing Request for Information (RFI) submitted by the Contractor.
- h) Attend final inspection with City staff, provide punch list items to the City's Construction Engineers for Contractor completion, and provide the City with a Certificate of Completion for the Project upon successful completion of the Project.
- i) Review Contractor-provided construction "red-line" drawings. Prepare Project Record Drawings and provide a reproducible set and electronic file (both PDF and AutoCAD r.14 or later) within one (1) month of receiving the Contractor's red-line drawings. All drawings shall be CADD drawn using dwg format in AutoCAD, and graphics data will be in .dxf format with each layer being provided in a separate file. Attribute data will be provided in ASCII format in tabular form. All electronic data will be compatible with the City GIS system. The Record Drawings should incorporate the Contractor's red-lines and identify all changes made during construction. The Drawing Cover and each sheet should be clearly identified as the Record Drawing and should indicate the basis and date.

The City staff will:

- a) Prepare applications/estimates for payments to Contractor.
- b) Conduct the final inspection with the Engineer.

B. ADDITIONAL SERVICES

1. **Permit Preparation.** Furnish the City all engineering data and documentation necessary for all required permits. The A/E will prepare this documentation for all required signatures. The A/E will prepare and submit identified permits **as applicable** to the appropriate local, state, and federal authorities, including:
 - 1.a FM 1889 - TxDOT utility and environmental permits, multiple use agreements
 - 1.b CR 73 - Nueces County Driveway and Utility Permits
2. **Topographic Survey/Field Investigation.** All work must comply with Category 1-A, Condition I specifications of the *Texas Society of Professional Surveyors' Manual of Practice for Land Surveying in the State of Texas*, latest edition. All work must be tied to and in conformance with the City's Global Positioning System (GPS) control network. All work must comply with all TxDOT requirements as applicable. Include references tying Control Points to a minimum of two (2) registered NGS Benchmark Monuments in the vicinity of the Project that will not be disturbed by construction. Survey sheets shall be sealed, provided to the City and included in the bid document plan set.
 - a) Establish Horizontal and Vertical Control.

- b) Establish both primary and secondary horizontal/vertical control.
- c) Set project control points for Horizontal and Vertical Control outside the limits of area that will be disturbed by construction.
- d) Horizontal control will be based on NAD 83 State plane coordinates (South Zone), and the data will have no adjustment factor applied – i.e. – the coordinate data will remain in grid.
- e) Vertical control will be based on NAVD 88.
- f) All control work will be established using conventional (non-GPS) methods. Perform topographic surveys to gather existing condition information.
- g) Locate proposed soil/pavement core holes as drilled by the City's Geotechnical Engineering Consultant.
- h) Obtain x, y, and z coordinates of all accessible existing wastewater, storm water, water, IT and gas lines as well as any other lines owned by third-parties and locate all visible utilities, wells and signs within the apparent ROW width along project limits. Survey shall include utility marking from the Texas 811 request.
- i) Open accessible manholes and inlets to obtain information on structure invert, type, and size; and all related pipe size, type, invert, orientation, and flow direction.
- ~~j) Everything up to and including Level B subsurface engineering (SUE) is to be included in Topographic Survey. Surveying services related to Level A SUE are not included in Topographic and ROW Survey services, but shall be provided as part of the scope of work for SUE below, if needed.~~
- k) Locate existing features within the apparent ROW.
- l) Locate and identify trees, at least five inches in diameter, and areas of significant landscape or shrubs within the apparent ROW.
- m) Generate electronic planimetric base map for use in project design.
- n) Obtain finished floor elevations of critical and habitable structures along the roadway corridor as needed to certify drainage design criteria are met.
- o) The survey should not stop at the property line, but should extend beyond the property line as needed to pick up features and surface flow patterns in the vicinity of the Project that could potentially impact the design or be impacted by the construction. This includes features such as existing swales or ditches, foundations, loading docks/overhead doors, driveways, parking lots, etc.
- p) Research plats, ROW maps, deed, easements, and survey for fence corners, monuments, and iron pins within the existing ROW and analyze to establish existing apparent ROW.
- q) Provide a preliminary base map containing apparent ROW, which will be used by the A/E to develop the proposed alignment and its position relative to the existing and proposed ROW. This preliminary base map must show lot or property lines, addresses, and significant business/facility names.

3. **Utility & AEP Easement Meets & Bounds & T.C.E. Exhibits**

Provide easement meets and bounds for the following for City staff to use for negotiating and obtaining the Utility Easements and to satisfy AEP power supply requirements.:

- Utility Easement along existing farmland for new force main.
- AEP Easement on new lift station site for power supply to the lift station.
- Temporary Construction Easement (T.C.E.) Exhibits.

All work must be tied to and conform with the City's Global Positioning System (GPS) control network and comply with Category 6, Condition I specifications of the *Texas Society of Professional Surveyors' Manual of Practice for Land Surveying in the State of Texas*, latest edition.

- a) Set property corners and prepare right of way strip parcel map depicting all parcels proposed for acquisition. Metes and bounds descriptions must indicate parent tract areas based on the most accurate information available. Strip map will show entire parent tracts at a representative scale and for information only. All existing easements within the parcels to be acquired and those within adjacent parcels must be shown.
 - b) Prepare Metes and Bound Instrument with supporting exhibits as required and agreed upon, subsequent to ELR acceptance for ROW parcels, utility easements and temporary construction easements.
 - c) Prepare individual signed and sealed parcel maps and legal descriptions for the required right of way acquisition for parcels and easements. A strip map showing all parcels required will be submitted along with parcel descriptions. If boundary conflicts between Owners are identified, additional fees may be authorized if needed. A/E shall submit parcel maps and legal descriptions prior to the 60% submittal.
 - d) A/E must obtain Preliminary Title Reports from a local title company and provide copies of the title reports to the City. Preliminary Title Report shall identify title ownership and any title encumbrances to all right-of-way to be acquired.
4. **Coordination for Locating/Negotiating New Lift Station Site.** If requested, develop exhibits and meet with City staff and property owners to discuss and obtain a site for the proposed new lift station.
 5. **Property Re-plat For Lift Station Site.** If negotiation for new lift station site includes City providing a replat of the property owners property and, if requested by City staff, provide services and exhibits for re-platting of the property. Fee indicated includes services for the re-plat and for the Storm Water Quality Master Plan (SWQMP).
 6. **Coordination for Geotechnical Services.** Provide recommended geotechnical investigations scope and coordinate the investigation with the City's geotechnical consultant. Proposed sites shall be approved by the City Project Manager (PM) prior to performing geotechnical investigation. It is planned that the City will contract directly with a geotechnical consultant for the investigation and report and pay for these services.
 7. **SCADA Documentation.** Provide standardized SCADA documentation, which will include PFDs, P&IDs' loop sheets, logics, SCADA architecture, DCS I/O lists, instrument lists, tie-in lists, piping lists, equipment lists, and instrumentation specification sheets.
 8. **Warranty Phase.** Provide a maintenance guaranty inspection toward the end of the one-year period after acceptance of the Project. Note defects requiring contractor action to maintain, repair, fix, restore, patch, or replace improvement under the maintenance guaranty terms of the contract. Document the condition and prepare a report for the City staff of the locations and conditions requiring action, with its recommendation for the method or action to best correct defective conditions and submit to City Staff. Complete the inspection and prepare the report no later than sixty (60) days prior to the end of the maintenance guaranty period.

9. Subsurface Utility Investigation (Level A)

If determined to be necessary, it is proposed that the SUE investigation be provided by the City’s SUE consultant. The level and locations of existing utility and pipeline crossings will be determined as the project gets into the design phase. It is planned that the City will contract directly with the SUE consultant for the investigation and report and pay for these services.

SUE investigation for all utilities (City and third party) shall be conducted to Level B as part of Topographic Survey referenced above and in accordance with ASCE Standard “ASCE C-1, 38-02, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data”. A sealed Level A SUE report shall be provided to the City and included in the bid documents as an appendix.

a) Provide subsurface utility engineering in accordance with ASCE Standard “ASCE C-1, 38-02, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data” including, but not limited to, hydro-excavation. The proposed subsurface utility investigation will be as follows:

i) Excavation – The SUE scope includes working with a subsurface utility excavator to perform Quality Level A investigation of underground utilities in specified areas through the project limit. Quality Level A includes the use of minimally intrusive excavation equipment at critical points to determine the horizontal and vertical position of underground utilities, as well as the type, size, condition, material, and other characteristics. Utilities located at this quality level will be physically located and tied to the topographic survey control. The utility will be identified, and an elevation will be obtained to the top of the utility.

10. Construction Observation Services. To Be Determined.

II. SCHEDULE

Date	Activity
	NTP
17 Weeks from NTP	60% Design Submittal
20 Weeks from NTP	City Review
29 Weeks from NTP	90% Design Submittal
32 Weeks from NTP	City Review
36 Weeks from NTP	Final Submittal
38 Weeks from NTP	Advertise for Bids
40 Weeks from NTP	Pre-Bid Conference
42 Weeks from NTP	Receive Bids
48 Weeks from NTP	Contract Award
53 Weeks from NTP	Begin Construction
122 Weeks from NTP	Complete Construction

III. FEES

- A. Fee for Basic Services.** The City will pay the A/E a fixed fee for providing all “Basic Services” authorized as per the table below. The fees for Basic Services will not exceed those identified and will be full and total compensation for all services outlined in Section I.A.1-4 above, and for all expenses incurred in performing these services. **The fee for this project is subject to the availability of funds. The Engineer may be directed to suspend work pending receipt and appropriation of funds.** For services provided, A/E will submit monthly statements for services rendered. The statement will be based upon A/E’s estimate (and with City’s concurrence) of the proportion of the total services actually completed at the time of billing. City will make prompt monthly payments in response to A/E’s monthly statements.
- B. Fee for Additional Services.** For services authorized by the Director of Engineering Services under Section I.B. “Additional Services”, the City will pay the A/E a not-to-exceed fee as per the table below:

Summary of Fees

Fee for Basic Services		
1.	Preliminary Phase	\$23,900.00
2.	Design Phase	\$293,000.00
3.	Bid Phase	\$11,940.00
4.	Construction Phase	\$74,100.00
Sub-Total Basic Services Fees		\$402,940.00
Fee for Additional Services (Allowance)		
1.a.	FM 1889 TxDOT Utility Permit Preparation*	\$10,000.00
1.b.	CR 73 County Driveway and Utility Permit Preparation*	\$8,000.00
2.	Topographic Survey/Field Investigation*	\$40,610.00
3.	Utility & AEP Esmt Meets & Bounds & T.C.E. Exhibits *	\$10,260.00
4.	Coordination for Locating/Negotiating LS Site *	\$7,500.00
5.	Property Re-Plat for Lift Station Site (If Necessary)	\$13,030.00
6.	Coordination for Geotechnical Services*	\$1,355.00
7.	SCADA Documentation *	\$3,640.00
8.	Warranty Phase	\$5,270.00
9.	Subsurface Utility Investigation (Level A) (To be Provided by City if Necessary)	TBD
10.	Construction Observation Services	TBD
Sub-Total Additional Services Fees		\$99,665.00
Total Fee		\$502,605.00

*Additional Services authorized with the Notice To Proceed for Basic Services

NW Blvd Lift Sta. & FM

Legend

- Lakes NW LS
- NW Blvd Service Area

Approx. Location
75'x75' New CR 73 LS Site

Approx. 930 LF for
2" fiber optic
conduit in CR 73

Approx. 3500 LF 8" Force Main
along undeveloped land.

Approx. 2900 LF
Force Main in
existing St. ROW.

Existing Lakes NW
LS Site

Approx. 965 LF for 2"
fiber optic conduit in
FM 1889 ROW

NW Blvd MASTER
PLAN BOUNDARY



3000 ft

