April 16, 2025 10380749

Mr. Jeff H. Edmonds, P.E.,
Director of Engineering Services
City Of Corpus Christi
1201 Leopard Street
Corpus Christi, TX 78401

RE: Southside Water Transmission Grid (Phase 1) (Project No. 23060)

Dear Mr. Edmonds,

We appreciate the opportunity to continue collaborating with the City of Corpus Christi on the Southside Water Transmission Grid Project. This project includes abandoning and replacing the 30-inch Southside Water Transmission Main (30-inch Transmission Main) under South Padre Drive between Bear Ln/Columbia area to Rodd Field Road due to its age and continued expansion of the roadway. This project will also allow the City of Corpus Christi (CITY) to improve system redundancy, improve chlorine residuals, and move water more effectively around the city. The project will be separated into two phases. Our Phase 1 scope of services (Exhibit A) details an initial planning phase and schedule.

In summary, HDR is requesting a lump sum amount of $285,716.00 as detailed in the Fee Summary - Exhibit C for providing the services outlined in Exhibit A.

If you have any questions, don't hesitate to contact us to discuss further.

Sincerely,
HDR ENGINEERING, INC.

Samuel Saldivar, Jr., PE
Civil Group Lead

David C. Weston
Vice President

Cc: William Causey, P.E., City of Corpus Christi

Enclosure:
Exhibit A – Scope of Services
Exhibit C – Summary of Fees

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CCW Southside Water Transmission Grid

Phase 1

Project No. 23060

Exhibit A

PROJECT BACKGROUND

This project includes abandoning and replacing the 30-inch Southside Water Transmission Main (30-inch Transmission Main) under South Padre Drive between Bear Ln/Columbia area to Rodd Field Road due to its age and continued expansion of the roadway. This project will also allow the City of Corpus Christi (CITY) to improve system redundancy, improve chlorine residuals, and move water more effectively around the city. The project will be separated into two phases. The first phase (this scope of work) of the project includes hydraulic modeling, pipeline route evaluation, and identifying other capital improvements related to replacement of the 30-inch Transmission Main. Detailed design of the 30-inch Transmission Main replacement will be included in the second phase and will be added subsequently by contract amendment.

SCOPE OF SERVICES

1 Task 1 – Project Management

1.1 Project Initiation/Closeout

- 1.1.1 HDR will input the project into the accounting system, set up profit file organization, and project tracking system.
- 1.1.2 HDR will perform close out procedures to bring the project to a close with the CITY.

1.2 Project Management Plan (PMP) / Quality Management Plan (QMP)

- 1.2.1 A PMP will be developed to document project information, communication plan, change management plan, schedule expectations, and quality control requirements.

1.3 Invoicing / Status Reporting

- 1.3.1 Monthly invoices and progress reports will be generated and submitted to the CITY for review and processing.

1.4 Kickoff Meeting (1 internal / 1 external)

- 1.4.1 One internal kick-off meeting will be held with the HDR staff.
- 1.4.2 One external kick-off meeting (in-person) will be held with the CITY to verify the CITY-HDR team are on the same page prior to beginning the project effort (Meeting No. 1).
- 1.4.3 Kickoff meeting will confirm key elements of the project management plan, quality plan, project scope objectives, baseline schedule, technical items, and a general review pipeline route corridors being considered.
- 1.4.4 HDR will prepare agenda and meeting notes for the kick-off meeting. Draft meeting notes will be sent to the city within 5 business days.

1.5 **Deliverables:**

1.5.1 Draft and Final Project Management Plan
1.5.2 Draft and Final Project Kickoff Meeting Notes (Meeting No. 1)
1.5.3 Monthly Invoices and Progress Reports

2 Task 2 – Pipeline Routing Analysis & Hydraulic Modeling

2.1 Monthly Project Meetings

2.1.1 Prepare for and attend up to six (6) monthly City-HDR virtual team meetings (1 hour) during the duration of Task 2 to update the City on project progress and resolve issues that arise requiring information or clarification from the City (Meetings No. 2-7).

2.1.2 HDR will prepare an agenda. Meeting notes will be summarized in the meeting agenda and distributed to the city within 5 business days.

2.2 Data Request

2.2.1 Request most recent City data and models to facilitate HDR's modeling and analysis. HDR will review this data to determine how it can be incorporated into the modeling and pipeline route analysis.

2.2.2 The following is an estimated list of data being requested:

- City hydraulic model
- GIS shapefile of water distribution system
- GIS shapefile of existing stormwater sewers, sanitary sewers, and franchise utilities including oil and gas pipelines, fiber optic, and buried and overhead electrical.
- GIS shapefile of future Capital Improvement Program (CIP) projects within the southside water transmission grid for water, wastewater, and stormwater.
- Isolation valve locations and ID numbers
- GIS file of roadway ownership (i.e. TXDOT, County, and City)
- Record drawings for past City projects
- Residential Street Rebuild Program project list (under construction, and slated for future construction)
- Street Preventive Maintenance Program project list (under construction, and slated for future construction)
- Street Pavement Condition Index (PCI) scores (City owned only) (may need PCI scores for non-water transmission streets)
- Street Bond project list (under construction, and slated for future construction)

2.3 Transmission Corridor Evaluation

2.3.1 Research and utilize available data from online sources and agencies to identify potential pipeline corridors for the 30-inch Transmission Main.

2.3.2 Develop exhibit identifying up to three (3) corridors for plan concept evaluation. One pipeline route will be identified within each corridor resulting in three total plan concept routes evaluated. Each plan concept will consider the logistics of integrating the connection of the proposed transmission main pipeline into the existing City delivery system.

2.3.3 Perform desktop level research to identify constraints associated with each corridor (right-of-way, existing City utilities, private utilities, environmental constraints). Desktop level research does not include in field survey or ASCE QL D or better identification of utilities.

2.3.4 Perform site visit of corridors to supplement desktop level research. Collect photos and field notes to identify additional constraints. Site visit will be performed from the public right of way. Right of entry services are not included.

2.4 Review Existing Distribution System Hydraulic Model and Master Plan

2.4.1 HDR will review the existing distribution system model for functionality and suitability for transmission main relocation analysis. Any deficiencies with the hydraulic model that would prevent assessment of the Southside Grid will be communicated to the city CCW staff. Hydraulic simulations of minimum, average, and maximum day existing demand conditions will be evaluated for facility capacity utilization, pipeline flow rates and velocities, water source trace, and water age. Hydraulic model will also evaluate maximum day future demand conditions as defined in the City's masterplan. System performance metrics derived from the existing model simulations will be used as the basis of comparison for transmission main realignment alternatives performance.

2.4.2 HDR will review the City's Water Master Plan to identify existing areas of concern, proposed capital improvements, and pressure zone additions or modifications within the southside grid. Data from the Water Master Plan will be referenced to evaluate the benefits and feasibility of incorporating proposed improvements and system modifications that overlap with transmission main realignment alternatives.

2.5 Develop Transmission Main Realignment Hydraulic Model Alternative Simulations

2.5.1 HDR will develop up to three (3) alternative hydraulic model simulations based on the routes determined in Task 2.2 to evaluate the effect to service reliability, distribution system performance, adherence to state regulatory requirements, and operational resiliency of potential transmission main realignments. The simulations will compare the level of service simulated in the existing hydraulic models to proposed realignment alternatives model simulation values.

2.6 Pipeline Route Evaluation

2.6.1 The three routes identified in Task 2.2 and modeled in Task 2.4 will be evaluated. Evaluation criteria and weightings of the criteria will be developed for review and acceptance by the CITY so that each alternative can be compared and ranked. HDR will use a cost-benefit model to evaluate each route and provide a defensible recommendation to the CITY. CONSULTANT will conduct an internal quality control review of the preliminary alignment alternatives, evaluation criteria, and scoring matrix and confirm compliance with the overall objectives previously established by the CITY for implementing the project.

2.7 Alternatives Performance Evaluation Meeting

2.7.1 HDR will hold a four-hour in-person workshop (Workshop #1) with CITY staff to present the three pipeline routes, initial findings of the hydraulic analyses, and the recommended route analysis and recommendation. The purpose of the meeting will be to identify the suitability of each alternative with respect to CITY goals for distribution system level of service, performance, regulatory compliance, and possible impact to customers for each routing alternative. HDR will prepare meeting agenda and meeting notes. Draft meeting notes will be distributed to the city within 5 business days.

2.8 Transmission Main Relocation Phasing Evaluation

2.8.1 HDR will use the preferred routing alternative model simulation to evaluate the impacts to water transmission and distribution with the existing 30-inch transmission removed from service. The hydraulic evaluation will focus on system-wide and localized capacity, minimum and maximum pressures, pipeline velocities, storage tank volumes, and pump operation. HDR will use the modeling results to identify locations where additional capacity improvements beyond those necessary for the new transmission main may be necessary to facilitate relocation.

2.9 CIP Development Workshop – Review List and Project Prioritization

HDR will host an in-person workshop with development services, operations, and design stakeholders to present the draft CIP, illustrate the need and benefit of each project, evaluate the impact to system operation, redundancy, and resiliency, and identify any capital projects of opportunity that may be combined with known or planned City transportation, drainage, or other utility projects. Information and comments received from this meeting will be used to phase the proposed CIP with respect to immediate need, community impact, operational improvements, and opportunity to minimize project cost through coordination with other departments or entities.

2.10 Develop AACE Class V (-30% to +50%) OPCC for each CIP Project Identified

2.10.1 Construction unit prices will be based on available City of Corpus Christi bid tabs, City provided IDIQ pricing, and known market trends. There is no guarantee that unit prices utilized for the Opinion of Probable Construction Cost represents factors such as unforeseen material, labor, and equipment cost increases including unforeseen market trends or contractor means and methods.

2.11 HDR will prepare for and conduct one 2-hour virtual meeting with the CITY (Meeting No. 10) to review the additional capacity improvements and OPCC developed in Task 2.7 and 2.8. HDR will prepare a meeting agenda and meeting notes. Draft meeting notes will be distributed to the city within 5 business days.

2.12 Quality Review Meetings (internal)

2.12.1 Internal quarterly meetings (1 hour) will be held with a small group of subject matter experts to verify project progress and technical approach is good and track project risk items.

2.13 **Deliverables:**

2.13.1 Draft and Final Monthly Progress Meeting Notes (Meeting No. 2-7)
2.13.2 Draft and Final Workshop #1 Meeting Notes
2.13.3 Draft and Final Additional Capacity Meeting Notes (Meeting No. 10)
2.13.4 Draft and Final pipeline alignments (3 corridors, KMZ format)

3 Task 3- Southside Water Transmission Main (SWTM) Technical Memorandum (TM)

3.1 Monthly Project Meetings

3.1.1 Prepare for and attend up to two (2) monthly City-HDR virtual team meetings (1 hour) during the duration of Task 3 to update the City on project progress and resolve issues that arise requiring information or clarification from the City (Meetings No. 8-9).
3.1.2 HDR will prepare an agenda. Meeting notes will be summarized in the meeting agenda and distributed to the city within 5 business days.

3.2 Draft SWTM Technical Memorandum

3.2.1 The Draft SWTM Technical memo will capture the results of the pipeline routing, hydraulic model analysis, recommended pipeline route, recommended CIP improvements, and OPCC completed in Task 2.
3.2.2 The TM will generally include the following sections:
1. Table of Contents
2. Project Background
3. Pipeline Corridor Evaluation
4. Hydraulic Analysis
5. Pipeline Routing Analysis
6. CIP Development
7. Cost Estimates
8. Schedule of improvements
9. Summary of Recommendations

3.2.3 Maps of recommended pipeline route will include plan view only showing location of proposed pipeline. Scale of the maps may span over multiple pages in a map book format to show GIS data of existing utilities provided by the CITY. Data will be provided to CITY in GIS and .kml formats.
3.2.4 HDR will perform a quality control review of the TM prior to transmitting to the CITY.
3.2.5 HDR will submit Draft TM to CITY in electronic PDF format. No hard copies will be provided.
3.2.6 The City will be provided three weeks for review of the TM prior to Workshop #2 to provide an opportunity for an efficient effective workshop.

3.3 Draft SWTM Technical Memorandum Workshop

3.3.1 A Technical Memorandum Workshop (Workshop #2) will be held to collaborate and discuss updates to the TM. Assume a four-hour in-person meeting. HDR will prepare meeting agenda and notes. Draft meeting notes will be provided within 5 business days.
3.3.2 The CITY will document their comments in a Word or Excel file.
3.3.3 HDR will document their responses to CITY comments in a format chosen by the CITY.

3.4 Final SWTM Technical Memorandum
3.4.1 The Final TM consists of an updated technical memorandum which has addressed the CITY comments.
3.4.2 HDR will perform a quality control review of the Final TM prior to transmitting to the CITY.
3.4.3 HDR will submit City Draft TM comments/ HDR responses with the final version submittal of the TM.
3.4.4 HDR will submit five (5) hard copies and an electronic PDF of the final TM to the CITY in color format.

3.5 Quality Review Meetings (internal)
3.5.1 Internal quarterly meetings (1 hour) will be held with a small group of subject matter experts to verify project progress and technical approach is good and track project risk items.

3.6 Deliverables:
3.6.1 Draft and Final Monthly Progress Meeting Notes (Meeting No. 8-9)
3.6.2 Draft and Final Workshop #2 Meeting Notes
3.6.3 Draft and Final SWTM Technical Memorandum

ASSUMPTIONS AND EXCLUSIONS

- Survey, Subsurface Utility Engineering (SUE), cultural resource, environmental, and geotechnical services are not included.
- Pipeline material evaluation is not included.
- Developing detailed design plans for the preferred route alternative is not included.
- Validating GIS data provided by city is not included.
- Validating the CITY'S hydraulic model and assumptions are not included.

SCHEDULE

Milestone	Days / Date
NTP	TBD
Workshop #1	5 months from NTP
City Comments	3 weeks from Workshop #1
CIP Review Meeting	2 months from Workshop #1
QC Draft SWTM Tech Memo	2 months from CIP Review Meeting
Draft SWTM Tech Memo	1 week from QC

Workshop #2	3 weeks from Draft SWTM submittal
QC Final SWTM Tech Memo	1 month from Workshop #2
Final SWTW Tech Memo	1 week from QC

FEE AND PAYMENT METHOD

HDR will perform the scope of services on a lump sum basis for an estimated fee of $285,716.00.

Exhibit C
Summary of Fees

Southside Water Transmission Grid (Phase 1) (Project No. 23060)

Basic Services:	**Original Contract**	**Total Contract Fee**
1. Project Management	$ 52,780.00	**$ 52,780.00**
2. Pipeline Routing & Hydraulic Modeling	$ 139,534.00	**$ 139,534.00**
3. Southside Water Transmission Main TM	$ 93,402.00	**$ 93,402.00**
	$ -	**$ -**
Subtotal Basic Services Fees	$ 285,716.00	**$ 285,716.00**
Additional Services:		
N/A	$ -	**$ -**
Subtotal Additional Services	$ -	**$0.00**
Summary of Fees		
Basic Services Fees	$ 285,716.00	**$285,716.00**
Additional Services Fees	0	**$0.00**
Total of Fees	$ 285,716.00	**$285,716.00**