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ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

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CITY OF HALLANDALE BEACH

FY 2018-2019-012 Continuing Professional Architectural and Engineering Services and Other Services

Discipline: Water Resources/Stormwater Design/Wastewater Engineering

KCI TECHNOLOGIES, INC.

WORK AUTHORIZATION No. TBD

Lift Station No. 4 - Rehabilitation

Scope of Services: July 15, 2021

In accordance with Resolution No. 2020-054, RFP #FY 2018-2019-012 Continuing Professional Architectural and Engineering Services and Other Services, the following scope of services is provided by KCI TECHNOLOGIES INC. (CONSULTANT) (KCI) as requested by the City of Hallandale Beach (CITY) to provide Water Resources, Stormwater Design and Wastewater Engineering.

BACKGROUND

The City of Hallandale Beach (CITY) owns, operates, and maintains the existing wastewater system of gravity sewers, force mains and lift stations within the CITY corporate limits. The CITY has fifteen (15) lift stations that are owned, operated and maintained by the CITY. The CITY also maintains a network of approximately 12 miles of force mains, 57 miles of gravity sewer and nearly 1,200 manholes.

The CITY has requested KCI Technologies, Inc. (KCI) provide professional engineering services to upgrade existing Lift Station No. 4 by replacing/rehabilitating the existing can lift station with a dual submersible lift station.

SCOPE OF SERVICES

Task 1: Topographic Survey

KCI shall prepare a Topographic Survey of a portion of the property located at the northeast corner of the intersection of Parkview Drive and Leslie Drive in the City of Hallandale and as shown in Exhibit "A". Services include the location of above ground permanent improvements such as buildings, asphalt, concrete, fences, landscaping, and surface features of utilities. Native trees with diameter 4" and above at Diameter at Breast Height (DBH) shall be located and shown on the survey with common species name, diameter, height, and canopy. Elevations shall be obtained throughout the site on an approximate twenty-five-foot (25') grid, with intermediate highs and lows also obtained. As-Builts of any included gravity utility lines on the subject site (storm, sanitary sewer) to include rim and pipe size, direction, material, and invert elevations shall also be obtained. Elevations shall be relative to the North American Vertical Datum of 1988 (NAVD '88), being established by global positioning system (GPS) - real time kinematic (RTK) methods using the Florida Department of Transportation (FDOT), Florida permanent reference network (FPRN), applying the Geoid 12b model; with an absolute accuracy of +/- 0.5 feet.

All survey work shall be performed in accordance with the Standards of Practice as set forth by the Board of Surveyors and Mappers pursuant to Rule 5J-17 of the Florida Administrative Code, pursuant to Section 472.027 Florida Statutes.

Fee for this task shall be.....\$3,800.00

Task 2: Geotechnical Services (Florida Engineering and Testing, Inc)

KCI's subconsultant Florida Engineering & Testing, Inc. (FE&T) will provide geotechnical engineering services as follows:

1. Perform two (2) Standard Penetration Test borings to a depth of 15' and 25' including Engineer's signed SPT logs.
2. One (1) Exfiltration / Hydraulic Conductivity Test with Engineer's Report (including "k" value & 15' auger boring)
3. Mobilization and Demobilization

Lump Sum Fee for this task shall be.....\$2,130.00

Task 3: Data Collection/Review Pending Updated Model

KCI will perform data collection services by researching existing permits, as-builts, reports and any other pertinent documents available to be provided by the CITY. KCI was provided with the City of Hallandale Beach Wastewater Master Plan report dated March 2018, prepared by Hazen and Sawyer consultants.

Lump Sum Fee for this task shall be.....\$4,520.00

Task 4: Public Outreach with Condo HOA

If requested by the CITY, KCI representatives will prepare necessary sketch and meet with the Towers of Ocean View South Condominium HOA, along with CITY representative(s) to discuss leasing space to the CITY for vehicular access to maintain the proposed upgraded Lift Station #4.

Lump Sum Fee for this task shall be.....\$2,600.00

Task 5: Landscape Architectural Services

5.01: Planting Plan

KCI shall prepare planting plans, based on the lift station base plan and survey (including survey of existing trees) proposed in this document or supplied by CITY in electronic Cad file format (AutoCAD, MicroStation or Cad DXF), as showing trees, shrubs, sod and ground cover, details, technical specifications and notes necessary for planting plan submission to the City of Hallandale Beach. CITY shall provide KCI with any property and lease encumbrances. Revisions to the plan after work has started will be considered additional services.

Fee for this task shall be.....\$3,000.00

5.02: Irrigation Modification Plan

KCI shall prepare an irrigation modification plan based on the lift station base and planting plans previously described. The plan will show all piping, sleeving, details and technical specifications necessary for construction. The water source is to be municipal water. Electrical drawings may be required from CITY'S electrical engineer for controllers and pumps. Revisions to the plan after work has started will be considered additional services.

Fee for this task shall be\$2,000.00

5.03: Tree Preservation / Removal Schedule

KCI shall prepare the tree preservation/removal schedule for the existing trees based on the tree survey, site, grading and planting plans for submission to City of Hallandale Beach. KCI shall prepare a tree inventory using the tree survey supplied by CITY in Cadd DXF format. The tree preservation/removal schedule will be developed in conjunction with Tower site plan. Trees requiring Commission approval and revisions after work has started will be additional services.

The CITY shall provide KCI with the following:

1. Proof of ownership of property documentation as required by City of Hallandale Beach
2. Tree Survey signed and sealed by a registered surveyor
3. All review related fees
4. Additional information required by City of Hallandale Beach

Fee for this task shall be.....\$1,600.00

5.04: Landscape Related Meetings

Meetings with municipal plan reviewers, plan review committees, commission and CITY as requested by CITY or required by the approval process. KCI will attend up to five (5) meetings.

Fee for this task shall be\$1,300.00

Task 6: Electrical Engineering Services (Smith Engineering Consultants, Inc.)

KCI's subconsultant, Smith Engineering Consultants, Inc. (SEC), shall provide engineering services as follows:

1. Initial site visit and review of preliminary project documents.
2. Electrical design, including power, control, lighting, instrumentation, and SCADA/telemetry for the replacement of the existing lift station electrical system. The electrical replacement will include, but not be limited to, the electrical service, pump control panel, RTU, conduits and wiring. A permanent generator installation will be designed to provide backup power to the site. New site features will also include a light pole, odor control system, and pressure and flow meter (mag-meter).
3. Submit 30%, 60%, 90%, and 100% plans, specifications, and cost estimate.

4. Submit plans for an electrical permit dry run, respond to review comments, and revise the plans accordingly.

SEC will prepare contract documents suitable for bidding, permit, and construction. SEC will furnish AutoCAD drawings using lift station base plan drawings provided by KCI.

Fee for this task shall be.....\$14,370.00

Task 7: Lift Station Design Services

KCI will provide design services to convert the CITY's existing "can-type" Sanitary Lift Station #4 to a dual pump submersible lift station. Lift Station #4 Observed Conditions and Recommendations were presented in the Master Plan provided by the CITY and are to be used as a basis for this scope of work as it relates to the rehabilitation of the existing lift station. KCI was informed that Hazen and Sawyer will be providing an updated model which KCI will use to prepare construction working drawings for the pump design of the upgraded lift station.

The design plans will consist of the following completion/client review phases:

Schematic Phase	30% Complete
Design Development Phase	60% Complete
Construction Document Phase	90% Complete
Final Bid Documents Phase	100% Complete

The design will include or address the following scope items:

- Temporary bypass plan to be implemented before construction activities commence
- Demolition plan
- General Notes
- Existing conditions plan
- New submersible pumps, motors and accessories within new wet well.
- Check 100 yr. flood level and sea level rise protection
- Add grinder
- Provide security fencing and gate
- Replace corroded equipment, pump starter panels, float switches, disconnect switch
- Provide site lighting upgrade
- Erosion control plans

- Access point for maintenance
- Landscape screening / replacement plans
- Opinion of probable construction cost
- Bid documents (front end, technical specs, standard details (to be provided by the CITY)

Fee for this task shall be.....\$82,550.00

Task 8: Permit Applications

KCI will provide technical criteria, written description and design data for use in filing applications for permits relative to KCI's scope of services with the governmental agencies having jurisdiction to review the design of the project. Application and permit fees are the responsibility of the CITY and are not included within this agreement. The following regulatory agencies' permit applications or informational submittals will be provided for the design:

- FDEP – Sanitary Lift station review
- Broward County Water and Wastewater Services (BCWWS)
- Broward County Highway Construction and Engineering (BCHCED) Paving and Drainage Review (connection to existing force main/pavement restoration)
- City of Hallandale Beach Building Dept.- Electrical review

Fee for this task shall be.....\$15,000.00

Task 9: Bid Assistance

KCI will and SEC, Inc. attend a Pre-Bid Meeting with prospective bidders to describe the scope of work and clarify any concerns the contractors may have. Subsequent to the Pre-Bid Meeting, KCI will respond to contractor's request for information (RFIs) during the bid preparation period, prior to the submittal of bids.

Fee for this task shall be.....\$5,520.00

Task 10: Pre-Construction Services

KCI and SEC, Inc. will attend a Pre-Construction Meeting, review civil and electrical shop drawings.

Fee for this task shall be.....\$6,020.00

Task 11: Contract Administration

KCI shall provide construction administration services including: respond to contractor's RFI's, review of contractor's pay requests, review contractor's record drawings.

Fee for this task shall be.....\$7,280.00

Task 12: Construction Observation

KCI and SEC, Inc. shall provide limited construction observation services to certify to the regulatory agencies that the construction work has been completed in substantial compliance with the plans and permits included in this item are described as follows:

- a. Site Visits: KCI shall make visits to the site at intervals appropriate to the various stages of construction as KCI deems necessary in order to observe the progress of the various aspects of the contractor(s)'s work. Minimum observations shall include:
 - Earthwork/trenching operations
 - Periodic backfilling and compaction operations
 - Sodding installation
- b. Inspection Testing: The Contractor shall provide to KCI certified testing reports as required by the FDEP. Certified testing reports shall confirm installations are in accordance with FDEP's minimum testing requirements. Minimal observations shall include:
 - Density tests for backfill material compaction
 - Pump station startup and substantial punch list
 - Generator and load bank test
 - Final walkthrough and prepare final punch list

NOTE: The fee noted above is based on attendance at a pre-construction kickoff meeting and two (2) periodic inspections per week for a 6 month duration (26 weeks) construction schedule. If additional site inspections are necessary, a contract amendment for the additional services will be provided.

Fee for this task shall be.....\$40,080.00

Task 13: Final Certification

KCI shall prepare the final certification for submittal to the jurisdictional agencies and the CITY and process with record drawings provided by the contractor or by other means agreed upon by both KCI and the CITY.

NOTE: It is the contractor's responsibility to schedule with the jurisdictional agencies for inspections and to notify KCI of all inspections and testing. KCI shall represent the CITY to observe construction and to advise if the construction is in accordance with the approved plans. The contractor must obtain agency approval and forward this information to the KCI for final certification. CITY and contractor shall process and prepare documents (as-builts) for dedication of improvements to the agencies (if applicable).

We anticipate the following items requiring as-built certification:

- Compacted backfill material
- Sodding installation (if disturbed during construction activities)
- Pump Startup
- Electrical (Pumps and generator)

Fee for this task shall be.....\$7,520.00

Task 14: Civil Related Coordination Meetings

KCI shall attend team meetings required to review the work tasks associated with this proposal.

KCI shall also attend requested meetings with the CITY’s designated Project Manager, contractor, and meetings with Broward County and FDEP for reviews.

KCI shall attend up to five (5) meetings.

Fee for this task shall be.....\$5,120.00

ASSUMPTIONS

The following assumptions were made in preparation of the above scope:

- CITY is responsible for providing Front End documentation, standard specifications, including preparation of specific forms required for web based bid service.
- All permit fees shall be paid by CITY
- This scope of services does not include time for KCI to assist CITY in the event of a bid protest.

PURSUANT TO SECTION 558.0035, FLORIDA STATUTES, A DESIGN PROFESSIONAL WHO IS AN INDIVIDUAL EMPLOYEE OR AGENT OF CONSULTANT MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE OCCURRING WITHIN THE COURSE AND SCOPE OF THIS CONTRACT.

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SCHEDULE OF COMPLETION

The anticipated duration for the major work tasks is summarized in the table below:

TASK	Description	Task Duration (days)	Completion from *NTP (days)
1	Topographic Survey	30	30
2	Geotechnical Services (FE&T)	30	30
3	Data Collection Review Updated Model	60	60
4	Public Outreach with Condo HOA	10	100
5	Landscape Architectural Services	60	150
6	Electrical Engineering (SEC)	90	180
7	Lift Station Design	120	180
8	Permit Applications	90	240
9	Bid Assistance	60	300
10	Pre-Construction Services	30	330
11	Contract Administration	180	510
12	Construction Observation	180	510
13	Final Certification	30	540
14	Civil Related Coordination Meetings		

***Upon receipt of updated model (to be provided by others).**

SCHEDULE OF COMPENSATION

Compensation shall be made to KCI not to exceed the total of \$204,410.00. KCI shall bill the CITY on a monthly percent complete by task basis as indicated in the table below.

TASK	Description	Fee By Task (To be billed by Percent Complete)
1	Topographic Survey	\$3,800.00
2	Geotechnical Services (FE&T)	\$2,130.00
3	Data Collection Review Updated Model	\$4,520.00
4	Public Outreach with Condo HOA	\$2,600.00
5	Landscape Architectural Services	\$7,900.00
6	Electrical Engineering (SEC)	\$14,370.00
7	Lift Station Design	\$82,550.00
8	Permit Applications	\$15,000.00
9	Bid Assistance	\$5,520.00
10	Pre-Construction Services	\$6,020.00
11	Contract Administration	\$7,280.00
12	Construction Observation	\$40,080.00
13	Final Certification	\$7,520.00
14	Civil Related Coordination Meetings	<u>\$5,120.00</u>
	PROJECT TOTAL (Not to Exceed)	\$204,410.00

Hallandale Beach Lift Station No. 4 Rehabilitation/ Upgrade

Engineer's Opinion of Probable Construction Cost Order of Magnitude Estimate (-50% to +100%)	
Description	Amount
Mobilization/ Demobilization	\$35,000
Demolition of Existing Can Lift Station	\$50,000
New Lift Station Construction:	
Mechanical	\$200,000
Structural	\$270,000
Electrical/I&C	\$200,000
Site/Civil	\$25,000
Yard Piping	\$35,000
Landscaping	\$35,000
Fencing/Gate	\$10,000
Site Lighting	\$10,000
Temporary Bypass Pumping	\$250,000
New Force Main Construction	
Piping	\$35,000
Site Civil	\$35,000
Subtotal	\$1,190,000
Contingency (15%)	\$178,500
Contractor O&P (15%)	\$178,500
GRAND TOTAL	\$1,547,000

Authorization KCI Technologies, Inc



Bruce Reed, RLA
Regional Practice Leader

10/05/2021

Date

Exhibit A
Survey Limits

Legend
Lift Station #4 - Survey Limits

