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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

**10" Water Main Upgrade
Behind RK Diplomat Shopping Center**

Scope of Services: December 22, 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 water distribution system within the CITY corporate limits.

The CITY has requested KCI Technologies, Inc. (KCI) provide professional engineering services to upgrade approximately 3,000 LF of existing 10" water main to 12" from NE 14 Ave. to Diplomat Parkway along the north side of the Diplomat Mall Shopping Center and south of Duo Condominiums.

SCOPE OF SERVICES

Task 1: Topographic Survey

KCI shall prepare a Topographic Survey of a portion of the property with address numbers 1401 – 1995 Hallandale Beach Blvd. for the use of a watermain replacement. The project limits being from the north face of the existing building(s), extending north to cover the area of the existing 10" watermain, as shown in **Attachment "A"**. Services include the location of above ground permanent improvements such as buildings, asphalt, concrete, fences, and surface features of utilities. 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 gravity utility lines (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. Native trees larger than 4" Diameter at Breast Height (DBH) will also be located. Generic tree type (if able to identify in the field) and diameter shall be noted on the Survey. *Services include the location of the Quality Level B utility designates marked on the ground as described in this proposal.*

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.

Lump sum fee for this task shall be.....\$25,000.00

Sketch and Description (For Water Main Easement)

KCI shall prepare Sketch and Description of the proposed watermain (and laterals) based on the location provided by the engineer. The purpose of this document is aid in obtaining an easement.

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.

Lump sum fee for this service shall be.....\$3,500.00

Task 2: Water Main and Utility Locates (SUE)

SUBSURFACE UTILITY ENGINEERING (LEVEL B)

KCI will perform Quality Level B - Utility Designation services within the topographic survey limits (shown in **Attachment "A"**) which entails the utilization of geophysical equipment to designate and mark traceable underground utilities to determine the approximate horizontal location of existing utilities. Traceable utilities detected in the specified area will be marked on the surface with paint & flags using geophysical equipment which may include electromagnetic and ground penetrating radar (GPR) technologies. This work will be supplemented by existing facility records provided by the client or the facility owner prior to the start of the marking process. The combination of the record information and the use of the outlined approach and technology create the greatest opportunity for the existing utilities to be designated within the requested work areas. Gravity sewer lines (Sanitary & Storm) are not included with Utility Designating Services. Materials such as PVC, HDPE, Transite or Asbestos Cement pipes are not traceable with electronic locators and require Ground Penetrating Radar to detect subsurface anomalies to designate & mark. Ground Penetrating Radar can be affected by the subsurface water table, very wet sandy conditions, or clay soils and not able detect subsurface anomalies needed to designate plastic or non-traceable utilities. A field sketch will be provided depicting the utilities designated and marked including any utilities shown on records that could not be designated with electronic locators or Ground Penetrating Radar.

Please Note: Use of this service does not relieve the client of their responsibility to notify local One Call services prior to construction.

All S.U.E. Technicians involved in the completion of the requested utility designation services are UTA certified Professional Utility Locators and hold OSHA certifications for jobsite safety, maintenance of traffic and confined space entry.

Lump Sum Fee for this task shall be.....\$6,600.00

SUBSURFACE UTILITY ENGINEERING (LEVEL A)

KCI will provide Quality Level A - Vacuum Excavation services within the project limits as specified by the client prior to commencement of work. This process will be done by using compressed air to break up the soil above existing utilities and then removing the soil with a 4" vacuum hose. These locations will be selected by the client to identify target utilities that require accurate depth measurements prior to the proposed construction. Test hole report forms will be provided which indicate the depth to the top of utility, utility type, apparent size and material as well as a tie in sketch for location recovery. Restoration of the site will include compacting the material removed from the hole in six-inch lifts. Any paved surface will be repaired with cold patch asphalt, tamped in place. KCI will establish a coordinate value and elevation for each location to be included in the report.

Please Note: Use of this service does not relieve the client of their responsibility to notify local One Call services prior to construction.

All S.U.E. Technicians involved in the completion of the requested utility designation services are UTA certified Professional Utility Locators and hold OSHA certifications for jobsite safety, maintenance of traffic and confined space entry.

Unit fee for these services shall be.....\$850.00/Test Hole*

*4 Test hole minimum required and test holes that exceed 6' in depth will incur a charge of \$70/foot for each foot of excavation beyond 6'

For budgetary purposes will have assumed 10 locations that may require test holes

Lump Sum Fee for this task shall be (assumed 10 test holes)\$8,500.00

Task 3: 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 eight (8) Standard Penetration Test borings to a depth of 15' including Engineer's signed SPT logs.
2. Mobilization and Demobilization
3. Temporary asphalt patches (as applicable)
4. Exclusions: Engineering Remediation Recommendation Report

Maintenance of Traffic (MOT) , i.e., cones, barricades, flaggers, MOT Plan , etc. to provide FE&T safe space for testing on roadway

The SPT boring will be performed down to the above stated depth or to refusal (which is defined as blow counts of fifty (50) blows or greater). Rate includes soil sampling performed per standard ASTM D-1586. FE&T will call in public underground utilities locating with Sunshine Locates but client is responsible for locating all private underground utilities prior to commencement of testing services.

Lump Sum Fee for this task shall be.....\$4,200.00

Task 4: Data Collection (Review As-builts and City Provided Documents)

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.

Lump Sum Fee for this task shall be.....\$3,440.00

Task 5: Public Outreach with Diplomat Mall and DUO Condominium

If requested by the CITY, KCI representatives will prepare necessary progress coordination meetings with the Diplomat Mall and DUO Condominium representatives to discuss the proposed location of the proposed water main routing and potential impacts with their respective operations. KCI will attend up to five (5) meetings. If additional meetings are required a supplemental work order will be prepared.

Lump Sum Fee for this task shall be.....\$5,200.00

Task 6: Water Main Design Plans

KCI will provide design services to upgrade to 12" or replace approximately 3000 LF of existing 10" water main behind the RK Diplomat Shopping Center. Plans to also indicate the reconnection of all existing water service lines, fire lines, backflow preventors, fire department connections and fire hydrants to the new upgraded water main. Design plans will consist of CADD generated plan and profile sheets at 1' = 30' scale.

Currently there are no as-builts drawings available. KCI will provide SUE services to identify the location of the existing water distribution line and any crossing utilities. SUE services and location coordination are part of separate tasks defined within this agreement.

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 drawings will include the following:

- Cover Sheet
- General Notes
- Demolition Plan
- Existing Conditions Plan
- Water Distribution Plan and Profile (estimated 6 sheets)
- Pavement and Pavement Marking Restoration Plans (estimated 6 sheets)
- Standard Details

- Provide MOT Plan
- Erosion Control Plans
- Opinion of Probable Construction Cost
- Bid documents (front end, technical specs, standard details, to be provided by the CITY)

Lump Sum Fee for this task shall be.....\$90,930.00

Task 7: Pavement and Marking Restoration Plans

KCI will provide pavement and pavement marking restoration plans for portions of roadway disturbed by the new water main routing and reconnection of services to the new water main.

Lump Sum Fee for this task shall be.....\$7,960.00

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 (permit application submittal and water review)
- City of Hallandale Beach Dept. of Public Works (water review)

Lump Sum Fee for this task shall be.....\$11,960.00

Task 9: Bid Assistance

KCI will 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.

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

Task 10: Pre-Construction Services

KCI will attend a Pre-Construction Meeting, review shop drawings.

Lump Sum 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. KCI will respond to up to eight (8) RFIs. If additional RFI responses are required a supplemental work order will be prepared.

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

Task 12: Construction Observation

It is understood that the City will have full time on-site representation and will provide KCI with daily reports, progress photos, test results for the EOR's review. KCI 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
 - Tapping of existing water mains
 - Reconnections of existing services, fire lines, fire hydrants, backflow preventers, DDCVs, FDCs, etc.
 - Pavement and pavement marking restoration
- 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
- Pressure tests
- Bacteriological tests
- 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 4-month duration (17 weeks) construction schedule. If additional site inspections are necessary, a contract amendment for the additional services will be provided.

Lump Sum Fee for this task shall be.....\$28,560.00

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:

- Routing of all water main and service reconnections
- Top of newly installed pipe prior to backfilling

Lump Sum 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 the City and FDEP for reviews.

KCI shall attend up to five (5) meetings.

Lump Sum 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, standard details, 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.
- Survey scope includes fees for developing sketch and legal descriptions for water main easement (existing water main does not include existing easement)
- Utility locates assume that Level A (test holes) and Level B will be required

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	Water Main & Util. Locates (SUE)	30	30
3	Geotechnical Services (FE&T)	30	30
4	Data Collection	10	30
5	Public Outreach w/Mall & Duo Condo.	30	60
6	Water Main Design	90	150
7	Pavement & Marking Rest. Design	30	180
8	Permit Applications	90	240
9	Bid Assistance	60	300
10	Pre-Construction Services	30	330
11	Contract Administration	120	450
12	Construction Observation	120	450
13	Final Certification	30	480
14	Civil Related Coordination Meetings		

SCHEDULE OF COMPENSATION

Compensation shall be made to KCI not to exceed the total of **\$227,310.00**. 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 (incl. sketch & legal)	\$28,500.00
2	WM&Util. Locates (SUE) (Level A and B)	\$15,100.00
3	Geotechnical Services (FE&T)	\$4,200.00
4	Data Collection	\$3,440.00
5	Public Outreach w/Mall & Duo Condo.	\$5,200.00
6	Water Main Design	\$90,930.00
7	Pavement & Marking Restoration Design	\$7,960.00
8	Permit Applications	\$11,960.00
9	Bid Assistance	\$5,520.00
10	Pre-Construction Services	\$6,020.00
11	Contract Administration	\$7,280.00
12	Construction Observation	\$28,560.00
13	Final Certification	\$7,520.00
14	Civil Related Coordination Meetings	<u>\$5,120.00</u>
	PROJECT TOTAL (Not to Exceed)	\$227,310.00

10" Water Main Upgrade -Behind RK Diplomat Shopping Center

Engineer's Opinion of Probable Construction Cost Order of Magnitude Estimate (-50% to +100%)	
Description	Amount
Mobilization/ Demobilization	\$75,000
Abandon and Decommission Existing Water Main	\$50,000
New Water Main Construction:	
10" Water Main	\$750,000
Reconnect Existing Service Lines	\$75,000
Pavement and Marking Restoration	\$150,000
Maintenance of Traffic	\$75,000
Erosion Control and Inlet Protection	\$40,000
Brick Paver Restoration (DUO Condominium)	\$25,000
Subtotal	\$1,240,000
Contingency (15%)	\$186,000
Contractor O&P (15%)	\$186,000
GRAND TOTAL	\$1,612,000

Authorization KCI Technologies, Inc

 Bruce Reed, RLA
 Regional Practice Leader

 Date

