

Loxahatchee River District

Water Reclamation | Environmental Education | River Restoration

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D. Albrey Arrington, Ph.D., Executive Director

MEMORANDUM

TO: D. ALBREY ARRINGTON, Ph.D.
Executive Director

FROM: CLINTON R. YERKES *CRY*
Deputy Executive Director

DATE: MARCH 3, 2015

SUBJECT: LOXAHATCHEE RIVER ROAD RECLAIMED WATER MAIN REPLACEMENT
ENGINEERING SERVICES CONTRACT – AWARD

In January, the Governing Board approved the selection of Engineering firms that had been evaluated through the Consultants Competitive Negotiations Act (CCNA) process. Holtz Consultant Engineers, Inc. was selected through this process and is a new firm to the District.

District staff has been working with the firms to complete the Continuing Contracts and obtain proposals for specific projects. In particular this project is a replacement to an IQ water line on Loxahatchee River Road, just north of Eagles Nest. The line currently crosses a small tributary by overhead piping. The supports for the line have eroded. With new technology available, since the line was originally constructed, we are proposing to replace this line with a sub-aqueous crossing which will avoid further undermining concerns and construction issues.

Holtz will prepare the design, obtain the necessary permits, bid and oversee the construction under this contract. Staff has worked with HCE on the scope and fees and recommends award.

The following motion is suggested for approval of this item:

“THAT THE DISTRICT GOVERNING BOARD authorize award of contract to Holtz Consultant Engineers, Inc. for the Loxahatchee River Road Reclaimed Water Replacement contract, in an amount not to exceed \$42,185.00, in accordance with their proposal dated February 25, 2015.”

Please contact me if you have any questions.

V://cip/proj/misc/IQ/lox_rvr_rd

Gordon M. Boggie
Board Member

Dr. Matt H. Rostock
Board Member

Stephen B. Rockoff
Chairman

Harvey M. Silverman
Board Member

James D. Snyder
Board Member

**AGREEMENT BETWEEN
LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT AND
HOLTZ CONSULTING ENGINEERS, INC.
FOR PROFESSIONAL ENGINEERING SERVICES**

**LOXAHATCHEE RIVER ROAD
RECLAIMED WATER MAIN REPLACEMENT
WORK AUTHORIZATION: 2015-01**

BACKGROUND

This Agreement is for the performance of engineering services by Holtz Consulting Engineers, Inc. (HCE) pursuant to the Continuing Contract for Professional Engineering Services between Loxahatchee River District (District) and HCE dated February 4, 2015, hereafter referred to as the Contract.

This project includes the replacement of an existing 16-inch reclaimed water main along Loxahatchee River Road that is installed as an aerial crossing adjacent to a bridge over a creek off of the Loxahatchee River. The aerial crossing will be replaced with a new 18-inch reclaimed water main to be installed via horizontal directional drilling (HDD) methods under the creek. The existing aerial crossing pipe, concrete support and pilings will be removed and disposed of after the new reclaimed water pipeline is in service.

The design elements are assumed to include the following:

- Approximately 300 linear feet of 18-inch reclaimed water main installed via HDD methods. Final pipeline lengths may increase or decrease due to field conditions.
- The abandonment and removal of the existing 16-inch reclaimed water main, concrete support structure and pilings.
- Restoration of all affected areas to existing conditions or better.

SCOPE OF WORK

The District has requested comprehensive engineering services from HCE to provide surveying and geotechnical site investigations, engineering design, environmental assessment and permitting, bidding assistance, and services during construction related to the Loxahatchee River Road Reclaimed Water Main Replacement project. Specific tasks include the following:

1. Task 1 – Surveying Services
2. Task 2 – Geotechnical Engineering Services
3. Task 3 – Environmental Assessment Services
4. Task 4 – Engineering Design Services

5. Task 5 – Permitting Services
6. Task 6 – Bidding Services
7. Task 7 – Engineering Services during Construction
8. Task 8 – Utility Locates Allowance

TASK 1 – SURVEYING SERVICES

HCE shall furnish the services of Lidberg Land Surveying, Inc. to provide survey services consisting of field topography and horizontal locations referenced by baseline stationing. Lidberg Land Surveying will prepare a route survey for the proposed reclaimed water main in the Loxahatchee River Road right-of-way, running from the south line of 18920 Loxahatchee River Road, north to the north line of 18990 Loxahatchee River Road. The west limit of the survey will be the west toe of slope of the roadway embankment and the east limit will extend 10-feet east of the east right-of-way line. The survey will be in State Plane Coordinates, North American Datum of 1983 and will include the adjacent plat of The Eagles Nest right-of-way lines based in Road Plan Book 5, Page 71, deed ownership lines and house addresses. The survey will depict the location of pavement, driveways, sidewalks, curbs, walls, visible above-ground utilities, large specimen trees, the bridge and culverts for the creek crossing. Cross sections will be obtained at 50-foot intervals, with additional elevations at any intermediate changes in grade, and will be referenced to National Geodetic Vertical Datum of 1929 (NGVD 29). The survey will include the top and invert elevations for any storm drainage structure, along with the respective pipe sizes and materials. A cross section of the creek on the east side of Loxahatchee River Road near the reclaimed water aerial crossing will be obtained and depicted on the survey. Three permanent benchmarks and a survey baseline will be established for this project.

TASK 2 – GEOTECHNICAL ENGINEERING SERVICES

This task will include performing subsurface explorations and geotechnical studies to obtain subsurface soil information necessary for the proper design of the horizontal directional drill. The work includes two standard penetration tests to a depth of 50 feet by Anderson Andre Consulting Engineers, Inc. near the location of the proposed reclaimed water main. One boring will be performed at the north end of the project site and one at the south end of the project site. Both bores will be grouted full upon completion to prevent potential frac-outs in the future. The borings will be performed in general accordance with procedures recommended in ASTM D-1586, using a truck-mounted drilling rig. A geotechnical report summarizing the results of the boring will be provided and incorporated into the Contract Documents. The report will include the location and depth of the borings, visual classification of the recovered samples, and compressive strength test results on rock as necessary.

TASK 3 – ENVIRONMENTAL ASSESSMENT SERVICES

HCE will subcontract with EW Consultants to assemble aerial photographs, resource maps and other relevant information covering the assessment area. EW Consultants will conduct a detailed resource survey including in-water assessment of the proposed work area and surrounding area.

EW Consultants will also identify natural resources including upland, emergent, and submerged vegetation and wildlife resources and will use this information to prepare a report that will include narrative text, maps and graphics to document the results of the assessment.

TASK 4 – DESIGN SERVICES

HCE shall prepare detailed drawings and specifications depicting the installation of the new 18-inch HDPE reclaimed water piping via HDD methods, connections to the existing reclaimed water main, and the abandonment and/or removal of the existing reclaimed water main, including the existing aerial crossing. Work will include the preparation of drawings and specifications for the construction of the new reclaimed water main and abandonment of the existing reclaimed water main to be replaced and associated site work. HCE will coordinate a design kick-off meeting, conduct site visits, review information provided by LRD about the existing reclaimed water main and other utilities in the area, and attend meetings as necessary. HCE will prepare an engineer's estimate of the probable cost of construction at the 30% submittal and at the completion of the design.

Approximately seven (7) design drawings will be provided for this project. The preliminary drawing list is as follows:

- G-1 Cover and Index
- G-2 Legend and General Notes
- P-1 Demolition of Existing Reclaimed Water Main
- P-2 Reclaimed Water Main Plan and Profile 1
- P-3 Reclaimed Water Main Plan and Profile 2
- D-1 Details Sheet 1
- D-2 Details Sheet 2

Engineer shall prepare the following submittals:

- 30% site plan and pipe layout, including proposed bore profile for review by LRD staff and approval of the pipe layout plan and profile.
- 90% plans and specifications incorporating LRD's comments on the 30% submittal.
- 100% plans and specifications incorporating LRD's comments on the 90% submittal for public bidding.
- Engineer's opinion of probable construction cost at the 30% submittal and at the 100% submittal based on the final bidding documents.

TASK 5 – PERMITTING SERVICES

HCE shall prepare and submit permit applications for construction of the reclaimed water main to the following agencies at the same time as the 90% design submittal after incorporation of comments on the 30% design submittal. Permit fees will be paid by LRD. HCE will respond to requests for information (RFIs) from the permitting agencies:

- Palm Beach County Engineering – Right-of-Way Permit Application.
- Florida Department of Environmental Protection – Submerged Land Lease.

HCE will coordinate with the permitting agencies during the review process on a regular basis in an effort to keep the project on schedule and respond to their review comments.

TASK 6 – BIDDING SERVICES

HCE will perform, as required by LRD, the following services during the bidding or negotiating phase of the Project:

1. Prepare bid documents.
2. Conduct a pre-bid meeting and site visit and issue meeting minutes to all plan holders.
3. Respond to questions bidders may have concerning the bid documents and issue addenda as necessary to clarify the bid documents.
4. Attend the bid opening and prepare the bid tabulation form.
5. Evaluate bids and prepare a recommendation of award.

TASK 7 – ENGINEERING SERVICES DURING CONSTRUCTION

During the construction phase of the Project, HCE will provide the following services:

1. Conduct the pre-construction meeting with the Contractor, and other interested parties, and issue meeting minutes.
2. Review and comment on submittals submitted by the Contractor. Assumed a total of 14 submittals by the Contractor (Preconstruction video, PVC reclaimed water main, HDPE reclaimed water main, gate valves, fittings, MJ couplings, restraints, pipe markers, HDPE adapters, valve boxes, schedule of values, directional drills, frac-out and MOT plan).
3. Provide the Contractor with clarifications concerning questions about the Contract Documents and respond to requests for information.
4. Review the Contractor's monthly pay application and recommend payment or request that they be revised by the Contractor. A total of three pay requests are assumed.
5. Review contractor's claims and prepare change orders as necessary.
6. Review and comment on the Record Drawings submitted by the Contractor.
7. Provide periodic visits to the project site to determine that the project is being constructed in substantial conformance with the permitted drawings to certify completion of construction to the FDEP and evaluate the Contractor's compliance with the Contract

Documents (approximately 6 weeks of actual construction and an average of 5 hours per week of site visits by the Engineer to monitor compliance with the design intent, permit, and contract requirements).

8. Verify that the work has progressed to the substantial completion point in accordance with the Contract Documents. The Engineer will inspect the completed work in a project walk-through and prepare a punch list of items remaining to be completed which will be attached to the certificate of substantial completion.
9. Verify that the work items identified on the punch list prepared under Item 9 above and all other Work identified as being incomplete have been completed in accordance with the Contract Documents. The Engineer will ensure all final punch lists are satisfactorily completed prior to approval of the Contractor's Final Payment Request.
10. Submit the required information for the closing out of the permits.

TASK 8 – UTILITY LOCATES ALLOWANCE

Lidberg Land Surveying will contract with Ground Hound Detection Services for locating and flagging of the existing buried utilities. Up to five surface excavations have been included in order to obtain depth, diameter and material information of the existing buried utilities.

DELIVERABLES

TASK	DELIVERABLE	QUANTITY
Task 2 – Geotechnical Engineering Services	Geotechnical Report	2 Signed-and-Sealed Copies
Task 3 – Environmental Surveying Services	Environmental Survey Report	2 Copies
Task 4 – Engineering Design Services	30% Plans 90% Plans & Specifications 100% Plans & Specifications Construction Cost Estimates	2 Sets (24" x 36" Plans) 2 Sets (24" x 36" Plans) 2 Sets (24" x 36" Plans) 2 Copies
Task 5 – Permitting Services	Permit Applications (PBC and FDEP)	2 Sets of each Permit Application
Task 6 – Bidding Services	Bidding Documents Addenda, if necessary	2 Sets (24" x 36" Plans) and Full Size PDF. Work and PDF of Contract Documents As Required
Task 7 – Engineering Services during Construction	Contract Documents	2 Sets (24" x 36" Plans) and PDF for LRD 3 Sets (24" x 36" Plans) and PDF for the Contractor

TIME OF COMPLETION

HCE shall complete the project as outlined below in the project schedule.

- Task 1 – Surveying Services – 4 weeks from Notice to Proceed (NTP)
- Task 2 – Geotechnical Engineering Services – 5 weeks from NTP
- Task 3 – Environmental Surveying Services – 4 weeks from commencement of survey
- Task 4 – Engineering Design Services
 - 30% plans – 3 weeks from receipt of Survey.
 - 90% plans and specifications – 5 weeks from receipt of comments from LRD staff on the 30% submittal.
 - 100% plans and specifications – 2 weeks from receipt of comments from LRD staff on the 90% submittal.
- Task 5 – Permitting Services – 5 weeks from receipt of comments from LRD staff on the 30% submittal.
- Task 6 – Bidding Services – 2 months from advertisement.
- Task 7 – 6 weeks from Contractor’s NTP.

SCHEDULE OF FEES

Proposed labor costs for engineering services (Lump Sum) are tabulated below and detailed in Attachment A.

TASK	ENGINEERING FEE
Task 1 – Surveying Services	\$4,316
Task 2 – Geotechnical Engineering Services	\$5,113
Task 3 – Environmental Surveying Services	\$3,485
Task 4 – Engineering Design Services	\$11,560
Task 5 – Permitting Services	\$2,755
Task 6 – Bidding Services	\$2,041
Task 7 – Engineering Services during Construction	\$10,605
Task 8 – Utility Locates Allowance	\$2,310
TOTAL LUMP SUM	\$42,185

ASSUMPTIONS

1. All permit fees will be paid for by LRD.
2. Construction compaction and materials testing shall be the responsibility of the Contractor.
3. No hydraulic modeling efforts are included as part of this project.

This Authorization is accepted, subject to the terms, conditions and obligations of the
aforementioned Contract.

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT

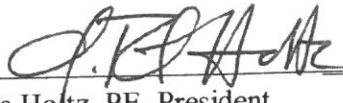
By: _____
D. Albrey Arrington, Ph.D., Executive Director

Date

By: _____
Clinton R. Yerkes, Deputy Executive Director

Date

HOLTZ CONSULTING ENGINEERS, INC.

By:  _____
Andrea Holtz, PE, President

2/25/15
Date