

Loxahatchee River District

Water Reclamation | Environmental Education | River Restoration

2500 Jupiter Park Drive, Jupiter, Florida 33458

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



MEMORANDUM

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

FROM: CLINTON R. YERKES
Deputy Executive Director

DATE: MAY 16, 2016

SUBJECT: LOXAHATCHEE RIVER RD. 4" FORCE MAIN EXTENSION
Award of Construction Contract

In order to provide sewer service to the Whispering Trails subdivision in the future the District will need a larger force main extended to areas north of Eagles Nest on Loxahatchee River Road.

The District is currently in the process of obtaining permits for the replacement of the 16" force main across a creek north of Eagles Nest. The permit to cross the creek has taken much longer than anticipated to obtain and construction was expected to be completed this fiscal year. With the upcoming sewerage of Whispering Trails and need to cross the creek again it appears to be an advantageous time to amend the current permit application(s) and combine these projects.

This will be budgeted for construction next fiscal year.

Holtz Consulting is also providing engineering services for the IQ Main repair project. The attached proposal for additional engineering services has been reviewed by staff and found to be acceptable.

The following motion is suggested for approval:

“THAT THE DISTRICT GOVERNING BOARD authorize award of contract to Holtz Consulting Engineers Inc., for the Loxahatchee River Road 4" Force Main Extension, in accordance with their proposal dated May 12, 2016, in the amount of \$52,527.00.

and

The Board authorizes a Contingency Amount of \$2,600.00.”

Thank you for your consideration of this matter and should you have any questions please contact me or Kris Dean.

V:/cip/proj/Lox RRd 4" FM/Eng/Board Awrd memo

Stephen B. Rockoff
Board Member

Dr. Matt H. Rostock
Board Member

Gordon M. Boggie
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
4" FORCE MAIN EXTENSION**

WORK AUTHORIZATION: 2015-07

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 (LRD) and HCE dated February 4, 2015, hereafter referred to as the Contract.

This project includes the extension of a new 4-inch force main along Loxahatchee River Road, from an existing 8-inch stub-out at the entrance of Eagles Nest north to connect to the existing force main system at Whispering Trails. The force main extension will provide a backup and alternative routing of wastewater flows in the sewage conveyance system. Installation of the new force main along Loxahatchee River Road is proposed to be via open-cut method with the exception of the portion that crosses under the bridge over a tributary of the Loxahatchee River, which is proposed to be installed via horizontal directional drilling (HDD) methods. This HDD installation of the force main is proposed to be done concurrently with a proposed 18-inch reclaimed water main crossing at the same location. The crossings from the west side of Loxahatchee River Road to the east side of Loxahatchee River Road are proposed to be installed via open-cut methods. No geotechnical investigation is included at this time, as it was included in the project to install the reclaimed water line.

The design elements are assumed to include the following:

- Approximately 3,700 linear feet of 4-inch PVC/HDPE force main per LRD standards to be installed via open-cut/directional bore methods along the east side of Loxahatchee River Road from the entrance of Eagles Nest neighborhood to connect to the existing force main at the entrance of Whispering Trails neighborhood (Wood Lake Road). Final pipeline lengths may increase or decrease due to field conditions.
- Restoration of all affected areas to existing conditions or better.

SCOPE OF WORK

LRD has requested comprehensive engineering services from HCE to provide surveying, engineering design, permitting, bidding assistance, and services during construction related to the Loxahatchee River Road Force Main Extension project. Specific tasks include the following:

1. Task 1 - Surveying Services
2. Task 2 - Engineering Design Services
3. Task 3 - Permitting Services
4. Task 4 - Bidding Services
5. Task 5 - Engineering Services during Construction

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 force main extension along Loxahatchee River Road running between the entrance to Eagles Nest subdivision and terminating at the entrance to the Whispering Trails subdivision. The base file will include the adjacent recorded plats, right-of-way map for Loxahatchee River Road and adjacent deeds. The survey will be in State Plane Coordinates, North American Datum of 1983 and will locate the necessary pavement, driveways, sidewalks, curbs, walls, visible above ground utilities and large trees. Cross sections will be obtained at approximate 50 foot intervals, with additional elevations at any intermediate changes in grade, and will extend 15 feet beyond the right-of-way lines where possible. Permanent benchmarks will be established at approximate 600 foot intervals 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 and sanitary sewer structure, along with their respective pipe sizes and materials. Lidberg Land Surveying will contract with and coordinate having the existing utilities marked by Ground Hound Detection Services, Inc. This survey will incorporate the work previously performed by Lidberg for the Loxahatchee Creek crossing.

TASK 2 – ENGINEERING DESIGN SERVICES

HCE shall prepare detailed drawings and specifications depicting the installation of the proposed 4-inch force main system to be installed via open-cut, the crossing of Loxahatchee River Road, the proposed directional bore under the Loxahatchee tributary creek crossing, and the connection of the new force main to the existing force main system at Eagles Nest and Whispering Trails. Work will include the preparation of drawings and specifications for the construction of the work. HCE will coordinate a kick-off meeting, make site visits, and attend meetings as required. HCE shall prepare an engineer's opinion of probable cost of construction at the 30% submittal and at the completion of the design.

Approximately twelve (12) design drawings will be provided for this project. Plan and profile sheets will be prepared at a 1"= 20' scale. The preliminary drawing list is as follows:

- G-1 Cover and Index (Will Modify Loxahatchee River Road Reclaimed Water Main Replacement Cover and Index Sheet to include new force main)

- G-2 Legend and General Notes (Will Modify Loxahatchee River Road Reclaimed Water Main Replacement Legend and Notes to include new force main)
- P-1 Force Main Plan and Profile View 1
- P-2 Force Main Plan and Profile View 2
- P-3 Force Main Plan and Profile View 3 (Will Modify Loxahatchee River Road Reclaimed Water Main Replacement Proposed Site Plan to include new force main)
- P-4 Force Main Plan and Profile View 4
- P-5 Force Main Plan and Profile View 5
- P-6 Force Main Plan and Profile View 6
- P-7 Force Main Plan and Profile View 7
- D-1 Details Sheet 1 (Will Modify Loxahatchee River Road Reclaimed Water Main Replacement Proposed Site Plan to include new force main applicable details)
- D-2 Details Sheet 2 (Will Modify Loxahatchee River Road Reclaimed Water Main Replacement Proposed Site Plan to include new force main applicable details)
- D-3 Details Sheet 3

Engineer shall prepare the following submittals:

- 30% site plan and pipe layout plan for approval by LRD staff.
- 90% plans and specifications incorporating LRD's comments on the 30% submittal and including the force main profile.
- 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 3 – PERMITTING SERVICES

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

- Palm Beach County Health Department – Notification / Application for Constructing a Domestic Wastewater Collection / Transmission System
- Palm Beach County Engineering – Right-of-Way Permit Application. The existing permit for the Loxahatchee River Road Reclaimed Water Main will be modified to include the force main improvements.
- Florida Department of Environmental Protection – Notice of Intent to Use an Environmental Resource General Permit

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 4 – BIDDING SERVICES

HCE will perform, as required by LRD, the following services during the bidding or negotiating phase of the Project. These services are for additional bidding items that relate to the force main portion of the project and do not duplicate any efforts previously authorized under the Loxahatchee River Road Reclaimed Water Main Improvements.

1. Respond to questions related to the force main bidders may have concerning the bid documents and issue addenda as necessary to clarify the bid documents.

TASK 5 – ENGINEERING SERVICES DURING CONSTRUCTION

During the construction phase of the Project, HCE will provide the following services. These tasks are for additional services during construction items that relate to the force main portion of the project and do not duplicate any efforts previously authorized under the Loxahatchee River Road Reclaimed Water Main Improvements.

1. Review and comment on shop drawings and other documents submitted by the Contractor related to the force main. A total of 5 additional submittals by the Contractor (PVC force main, HDPE force main, pipe markers, directional drills, and MOT plans) are anticipated to be submitted for review and approval.
2. Provide the Contractor with clarifications concerning questions about the Contract Documents and respond to requests for information.
3. Review quantities and payment application after review and approval by the field inspector and make the recommendations necessary for the approval or rejection of the Contractor's monthly payment applications. A total of six requests are assumed, three of which are covered in the Reclaimed Water Main Authorization.
4. Review contractor's claims and prepare change orders as necessary.
5. Review and comment on the Record Drawings submitted by the Contractor.
6. 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 PBCHD and evaluate the Contractor's compliance with the Contract Documents (approximately 8 additional weeks of actual construction and an average of 10

hours per week of site visits by the field inspector and two hours per week by the Engineer to monitor compliance with the design intent, permit, and contract requirements).

7. 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.
8. Verify that the work items identified on the punch list prepared under Item 7 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.
9. Submit the required information for the closing out of the permits.

DELIVERABLES

TASK	DELIVERABLE	QUANTITY
Task 2 – Engineering Design Services	30% Plans 90% Plans & Specifications 100% Plans & Specifications Construction Cost Estimates	2 Sets or each (24” x 36” Plans) 2 Sets (24” x 36” Plans) 2 Sets (24” x 36” Plans) 2 Copies
Task 3 – Permitting Services	Permit Applications (PBC, FDEP, and PBCHD)	2 Sets of each Permit Application
Task 4 – Bidding Services	Bidding Documents Addendum	Provided under reclaimed water main project As Required
Task 5 – Engineering Services during Construction	Contract Documents	Provided under reclaimed water main project

TIME OF COMPLETION

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

- Task 1 – Surveying Services – 6 weeks from Notice to Proceed (NTP)
- Task 3 – Engineering Design Services
 - 30% plans – 3 weeks from receipt of Survey.
 - 90% plans and specifications – 6 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 4 – Permitting Services – 4 weeks from receipt of comments from LRD staff on the 30% submittal to submit the permit applications.

- Task 5 – Bidding Services – 2 months from advertisement.
- Task 6 – 24 weeks from Contractor’s NTP (8 weeks of actual construction time).

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	\$14,711
Task 2 – Engineering Design Services	\$18,826
Task 3 – Permitting Services	\$4,595
Task 4 – Bidding Services	\$595
Task 5 – Engineering Services during Construction	\$13,800
TOTAL LUMP SUM	\$52,527

ASSUMPTIONS

1. All permit fees will be paid for by LRD.
2. Construction compaction and materials testing shall be the responsibility of the Contractor.

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

HOLTZ CONSULTING ENGINEERS, INC.

By: David Holtz
David Holtz, PE, Vice President

5-12-16
Date