

CONSULTING SERVICES WORK AUTHORIZATION

DATE: _____

CONSULTANT: R.J. Behar & Company, Inc.

WORK AUTHORIZATION NO. 5 FOR CONSULTING SERVICES

This Work Authorization, when executed, shall be incorporated in and become an integral part of the "Agreement between City of Coconut Creek ("CITY") and R.J. Behar & Company, Inc. for General Professional Engineering Services RFQ 11-19-14-10" dated January 22, 2015.

I. PROJECT DESCRIPTION

The CITY desires to have R.J. Behar & Company, Inc. ("CONSULTANT"), provide professional engineering design services to design a new force main between Lift Station 12 and Broward County force main located on Sample Rd., including design analysis, plans preparation, permitting, bidding assistance, construction/post design assistance, surveying, subsurface utility engineering, and geotechnical consulting.

II. SCOPE OF SERVICES AND COSTS

See Proposal from R.J. Behar & Company, Inc. dated April 17, 2017, attached hereto and incorporated herein as Exhibit "A". Also attached is a "Fee Proposal Summary"; same shall not be exceeded unless prior written approval of CITY is obtained.

III. COMPLETION DATE

This Work Authorization is approved contingent upon the CITY'S acceptance of and satisfaction with the completion of the services rendered with a projected completion date of 325 calendar days from the date of "notice to proceed" issued by CITY, unless otherwise authorized by the CITY. If the CITY, in its sole discretion, is unsatisfied with the services provided pursuant to the Work Authorization, the CITY may terminate the Agreement without incurring any further liability. The CONSULTANT shall commence work after issuance of the notice to proceed.

IV. NOT A DESIGN-BUILD AGREEMENT

CONSULTANT shall not bid for any construction components associated with this Project.

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CITY OF COCONUT CREEK, FLORIDA

By: _____
Mary C. Blasi, City Manager

Approved as to Legal Sufficiency
and Form:

By: _____
Terrill C. Pyburn, City Attorney

ATTEST:

By: _____
Leslie Wallace May, City Clerk

CONSULTANT:

R. J. Behar & Company, Inc

By: [Signature]
Signature of President/Owner

ATTEST:

[Signature]
(Corporate Secretary)

Juan H. Vazquez
Type/Print Name of President/Owner

Dereth Behar
Type/Print Name of Corporate Secretary

(CORPORATE SEAL)



EXHIBIT A

Consultant Work Order Proposal – City of Coconut Creek

**COPANS ROAD WASTEWATER TRANSMISSION SYSTEM
DESIGN**

R J Behar & Company, Inc. (the “Consultant”) proposes to provide professional engineering design services as identified below for the project entitled “**Copans Road Wastewater Transmission System Design**”, pursuant to its General Professional Services Agreement with the **City** of Coconut Creek, Florida, for RFQ 11-19-14-10 issued on January 22nd, 2015.

I. PROJECT DESCRIPTION:

The proposed scope of work is the effort required for the preparation of plans for the Copans Road Wastewater Transmission System design. The design will be based on the results of the Feasibility Study for Copans Road Wastewater Transmission System Alternatives Study dated January 2017.

The existing transmission force mains within the project limits presently convey flows discharged from Lift Station (“LS”) No.12 via a 20” diameter piping system containing both Ductile Iron Pipe (“DIP”) and Cast Iron Pipe (“CIP”) east along Copans Road where it picks up flows from LS No. 13 and LS No. 14. Then flows continue to the **City’s** eastern boundary (where it intersects with the Florida Turnpike) and meets the **City** of Pompano Beach. At this location additional flow from an 18” diameter force main, conveying the discharge flow transmitted from LS No.10 is added. LS No 10A and LS No.10B are satellites to LS No. 10. The cumulative flows are then conveyed in a 24” CIP force main east along Copans Road to its termination point within the Broward County North Regional Wastewater Treatment Plant (NRWWTP).

Lift Station No. 12 (LS 12) is one of three Master Stations which pump sewage flows generated within the **City**. The station is located in a highly visible location on Copans Road just east of the intersection with Lyons Road. Generally, LS No.12 receives wastewater from the Township Development and re-pumps flows generated from Lift Stations 12A, 12B, 12C, 12D, 12E, 12F and 12G. Lift Station No. 10 (LS 10) is also one of the **City’s** Master Pump Stations, which receives wastewater from Lift Station 10A and LS No. 10B. Lift Station No. 10 is located within the Wynmoor Community. LS No. 13 and LS No. 14 from Tradewinds Park, feeds into the 20” pipe between LS No. 12 and LS No. 10 with a tee connection.

The existing force mains **cannot** be taken out of service for long periods of time due to the numerous connections and upstream pumping stations. The referenced force main system presently conveys approximately 2.0 million gallons of wastewater per day (2.0 MGD) of the **City’s** wastewater to the destination plant. For this reason, the age of the



system, and the uncertainty of the materials used for its construction, the **City** has concluded to replace and upgrade the system as necessary from Lift Stations 10 and 12 to the NRWTP. This phase will include a new force main between LS 12 and the existing Broward County 54" diameter force main which conveys flows east along Sample Road to a termination point at the NRWTP, and a new force main from LS 12 to the connection from the Wynmoor Community, just west of the Florida Turnpike.

It is anticipated that upon the **City's** completion of the recommended improvements, the **City** will have a looped wastewater system in place to facilitate any future recommended maintenance and operations or expansion requirements.

II. SCOPE OF WORK:

A. Design Analysis

1. Field Review

Field visits will be required to refine the scope of the improvements. This task will consist of a review of the site and documenting existing conditions with photos and notes. Two field reviews are anticipated, one with the completed survey in hand to review that the survey is not missing items, and one with plans in hand prior to the final plans submittal.

2. Route Analysis

Based on the field reviews, review of location of all existing utilities, and other improvements, the location of the proposed lines will be determined.

3. Connection to Existing Systems

Several connections are needed including at Sample Road, at Copans Road with LS 12, and at Copans Road and the system from Wynmoor Community from LS 10. The new connections have to be designed to minimize the time the system is out of service. The pump system storage has to be reviewed to determine out of service time frames to be included in the plans.

4. Hydraulic Analysis

This analysis will be used to verify the size of the new lines. It will be using standard hydraulic analysis (Hazen-Williams) and based on the **City's** provided flows. No master system modeling is included.

B. Plans Preparation

Final designs and plans will be prepared based on the results of field reviews, analyses, and discussions with the **City's** Staff. **RJ Behar** shall prepare preliminary plans 60%,



90% and final plans (100%) of the proposed improvements and submit to the **City** for review and approval.

The following is a preliminary list of drawings:

- Key Sheet
- Control Sheet/Key Map
- General Notes
- Summary of Quantities
- Plan and Profiles
- Pavement Restoration Details
- Summary of Verified Utilities
- Force Main Details
- Construction Phasing
- Maintenance of Traffic Notes
- Stormwater Pollution Prevention Plan (SWPPP)

Roadway Restoration: **RJ Behar** shall incorporate into the design all necessary components of roadway and swale restoration. The **City** of Coconut Creek, Florida Department of Transportation (FDOT) and Broward County Minimum Standards will be used as guidelines.

1. Utility Coordination and Utility Meeting

- a. Utility Contacts: A design ticket will be requested by Consultant from Sunshine One Call. All of the utilities identified on the ticket will be contacted and atlases for the utilities' facilities in the area will be solicited. The information from the utilities will be included in the drawings. The possible locations for soft digs will be determined at identified possible conflicts.
- b. Utility Meeting: Schedule and attend one utility coordination meeting with all utilities to review conflicts and relocations. This task includes follow up with the utility companies to coordinate and resolve any possible conflicts.

2. Estimates of Probable Cost

RJ Behar will provide an Engineer's Opinion of Probable Cost at 60% and another one with the final signed and sealed plans to use for comparison with the bids from contractors. The cost estimate shall include a detailed tabulation of all portions of the project. A spreadsheet will be developed summarizing the results and identifying estimated quantities and anticipated unit prices.

3. Technical Specifications

RJ Behar shall prepare technical specifications in relation to the final design components. Erosion and sediment control methods, pollution prevention precautions



and road restoration construction will be included by standard specifications. The specifications package will follow either the Construction Specifications Institute (CSI) format or FDOT Standard Specifications with modifications necessary to convey requirements for the materials and products selected.

Quality Control

All deliverables will undergo in-house Quality Control reviews and certified by the firm's quality assurance officer and will be utilized during the design phase to avoid and/or minimize conflicts.

4. Progress Meetings/Phase Reviews

Three progress meetings are expected for the project; the kick-off meeting and at each major submittal to discuss scope, progress and **City** comments. Minutes will be prepared outlining the major items and decisions discussed at the meetings and provided to the **City**.

C. Permitting

RJ Behar shall be responsible for preparing and processing documents for permitting and assisting in obtaining approval from agencies having jurisdiction. It is recognized by the **City** that the period for obtaining permits is beyond the control of **RJ Behar** except for issues concerning **RJ Behar's** ability to respond to permitting agency requests for information.

Permits expected include:

- Broward County Wastewater License
- FDEP Construction Permit for Constructing a Domestic Wastewater Collection/Transmission System (DEP Form 62-604.300(8)(a))
- FDOT Utility Permit
- **City** of Coconut Creek Permit
- Broward County Highway Construction and Engineering

This task also includes pre-application meetings with the appropriate Agencies to review requirements prior to submitting the permit applications.

D. Bidding Assistance

RJ Behar shall provide electronic version of plans and specifications to the **City** for distribution to contractors. The **City** will provide the front end documents. These will be reviewed for consistency with the technical specifications. **RJ Behar** shall respond to requests for information (RFI's) and review all bids for competency as requested by the **City**. RFI responses will be provided to the Purchasing Department.



- a. Meetings: Pre-bid meeting(s) to be scheduled by the **City** will be attended.
- b. Addendums: **RJ Behar** shall prepare all necessary responses to RFI's and Purchasing Department will answer questions posed by contractors.
- c. Prepare Conformed Contract Documents (Issued for Construction set). **RJ Behar** will provide three (3) copies of both full-sized conformed construction plans plus there (3) sets of half-sized (11"x17") plans.
- d. Bid Review and Analysis: **RJ Behar** shall review all bids for competency as requested by the **City** and provide recommendations, including the basis for the recommendations.

E. Construction/Post Design Assistance

1. Respond to Request For Information (RFI)

Provide responses to RFI's during construction in an expeditious manner to clarify questions from the Construction Management team or the contractor. A spreadsheet will be kept to track RFI's and responses and provided to the **City**.

2. Pre Construction Meeting

Pre-construction meeting(s) will be scheduled and attended.

3. Site Visits

Attend site visits during the construction as requested by the CM team. Four (4) visits are included in this proposal.

4. Progress meeting

Attend progress meetings during the construction as requested by the CM team. Four (4) visits are included. These meetings may include, but are not limited to, construction progress meetings, neighborhood association meetings and individual resident meetings.

5. Shop Drawings Reviews

RJ Behar shall review and approve applicable shop drawings during construction. Pipe Materials, Appurtenances and Pavement Designs submittals are expected. The review and approval of Shop Drawings and samples shall be within the time specifications set forth in the Contract Documents

6. Project Closeout and Certification

RJ Behar shall receive as-built drawings prepared by the Contractor, reflecting conditions based upon actual construction, including final sign and sealed copies at project completion. These drawings shall be reviewed for general completeness of information and shall be submitted to and be the property of **City**. **RJ Behar** will also



compile the project manuals, approved shop drawings, and revisions. **RJ Behar** shall certify the project upon final completion for regulatory and **City** purposes.

7. Record Drawings

RJ Behar shall provide Record Drawings prepared by revising the construction documents utilizing the as-built information provided by the contractor at project completion. All survey fieldwork required to locate the required appurtenances will be the responsibility of the contractor.

8. Final Inspection

RJ Behar will prepare a punch list of incomplete items during substantial completion review and approve completed items before final completion or project certification.

F. Survey

Survey will be performed by subconsultant Aylward Engineering, Inc.

G. Subsurface Utility Engineering (SUE)

Subsurface Utility Engineering will be performed by subconsultant Inframap Corp, Inc. This task will be used on an as-needed basis and invoiced on a per test hole basis.

H. Geotechnical

Geotechnical exploration and report will be performed by subconsultant Tierra South Florida, Inc.

III. COMPENSATION:

TASK	FEE	PHASE TOTAL
Copans Road Wastewater System	\$ 173,105.00	\$ 173,105.00
Direct Reimbursable		\$ 1,727.50
GRAND TOTAL (Amount Not to Exceed)		\$174,832.50

See attached fee proposal summary.

IV. SCHEDULE:

The project's design schedule is 325 calendar days and the project will be complete 325 calendar days after the City issues notice to proceed.



V. CLOSURE:

If the **City of Coconut Creek** concurs with the foregoing and wishes to direct **RJ Behar** to proceed with the aforementioned work, please execute the enclosed copy of this agreement in the space provided and return same to the undersigned.

Sincerely,

R.J. BEHAR & COMPANY, INC.

CITY OF COCONUT CREEK

Juan H. Vazquez, P.E.
Vice President

Mary C. Blasi
City Manager

4/17/17
Date

Date

FEE PROPOSAL SUMMARY

R.J. BEHAR & COMPANY
 PROJECT DESCRIPTION: COPANS ROAD WASTEWATER TRANSMISSION SYSTEM

ACTIVITY	PRINCIPAL		PROJECT MANAGER		SENIOR ENGINEER		ENGINEER		CADD TECHNICIAN		MANHOURS BY ACTIVITY	TOTAL COST BY ACTIVITY
	MAN HOURS	HOURLY RATE	MAN HOURS	HOURLY RATE	MAN HOURS	HOURLY RATE	MAN HOURS	HOURLY RATE	MAN HOURS	HOURLY RATE		
DESIGN ANALYSIS	1	\$ 200.00	2	\$ 280.00	7	\$ 980.00	13	\$ 1,495.00	10	\$ 850.00	33	\$ 3,805.00
CONSTRUCTION DOCUMENTS.	10	\$ 2,000.00	25	\$ 3,500.00	99	\$ 13,860.00	198	\$ 22,770.00	164	\$ 13,940.00	496	\$ 56,070.00
PERMITTING	2	\$ 400.00	6	\$ 840.00	25	\$ 3,500.00	49	\$ 5,635.00	41	\$ 3,485.00	123	\$ 13,860.00
BIDDING ASSISTANCE	0	\$ -	1	\$ 140.00	5	\$ 700.00	10	\$ 1,150.00	8	\$ 680.00	24	\$ 2,670.00
CONSTRUCTION ASSISTANCE (POST DE	2	\$ 400.00	4	\$ 560.00	18	\$ 2,520.00	35	\$ 4,025.00	29	\$ 2,465.00	88	\$ 9,970.00
TOTAL	14	\$ 2,800.00	36	\$ 5,040.00	147	\$ 20,580.00	292	\$ 33,580.00	242	\$ 20,570.00	731	\$ 86,375.00
LABOR FEE												\$ 86,375.00
EXPENSES (@ 2%):												\$ 1,727.50
SUBCONSULTANTS:												
SURVEY												\$ 61,950.00
GEOTECHNICAL												\$ 9,780.00
SUE (Budgeted)												\$ 15,000.00
TOTAL:												\$ 174,832.50