

May 21, 2019

Clece Aurelus, P.E.  
**CITY OF HOLLYWOOD**  
Department of Public Utilities  
Engineering and Construction Services Division  
Post Office Box 229045  
Hollywood, Florida 33022

Hollywood Southern Regional WWTP  
OFDB Odor Control System Replacement  
City Project No. 19-9815

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Dear Mr. Aurelus:

As requested, Hazen and Sawyer, D.P.C. (Hazen) is pleased to offer engineering services for the replacement of the Oxygenation Flow Distribution Box Odor Control System at the Hollywood Southern Regional Wastewater Treatment Plant (SRWWTP).

### **BACKGROUND**

The Oxygenation Flow Distribution Box (OFDB) receives preliminary treated sewage and apportions it among the five Oxygenation Trains. The existing OFDB chemical odor control system helps to treat the foul air released by the turbulent transfer of the flow. The City has determined that the system has reached the end of its useful life and requires replacement. The City desires a biological odor control system due to its reduced maintenance needs and has had preliminary discussions with Evoqua and data gathering on hydrogen sulfide levels. It is the scope of this project to size and site a biological odor control system and produce Contract Documents for bidding purposes.

### **SCOPE OF SERVICES**

#### **Task 1 – Odor Control System Evaluation**

Hazen will evaluate the OFDB for the purposes of implementing a biological odor control system to control odors caused by hydrogen sulfide (H<sub>2</sub>S) based on H<sub>2</sub>S data collected previously and a site visit to serve as the basis for design. A brief Technical Memorandum (TM) will be prepared to discuss biological scrubbing technologies and to present a conceptual level site plan, equipment sizing and selection, a preliminary opinion of probable construction cost, and other pertinent engineering considerations. The TM will be submitted to City staff for review and comment. Upon receipt of City comments, the TM will be finalized and submitted to the City. No meetings are envisioned.

#### **Task 2 – Detailed Design**

Hazen shall consult biological odor control system suppliers and prepare construction contract documents (plans and specifications) showing the scope, extent, and character of the work to be performed by the contractor. At the 90% design stage, five (5) sets of plans and technical specifications will be submitted for review and comment. A total of 20 drawings are estimated for the project. A preliminary list of drawings is as follows:

<u>Preliminary Drawing Description</u>	<u>No.</u>
Title Sheet, Drawing Index and Location Map	1
Abbreviations, Symbols and General Notes	1
Site Plan	1
Yard Piping Plan	1
Odor Control System Plan	2
Odor Control System Section	2
Odor Control System Details	4
Instrumentation and Controls Symbol/Legend	1
Control System Block Diagram	1
Process Schematic	1
Electrical Symbols/Legend	1
General Electrical Notes	1
Electrical Site Plan and Grounding Plan	1
Lighting Plan	1
Electrical Details	1
<b>Total</b>	<b>20</b>

Hazen shall submit 90% plans and specifications and attend one meeting during the design stage to receive final comments. City comments will be incorporated for the 100% design documents. Five sets of the final plans and specifications for construction will be provided along with the engineer's opinion of probable construction cost.

### **Task 3 – Bid Phase Services**

Hazen shall provide assistance to the City during the bidding phase for the project. Activities to be performed are as follows: attend a pre-bid conference, reply to bidders' questions, draft up to two addenda to the technical specifications and drawings for City distribution, review the Bid Proposal form, prepare a Bid Tabulation, check contractor references of the lowest responsive bidder, and issue a recommendation of award. Contract document packages will be produced and sold by the City.

### **KEY ASSUMPTIONS**

- It is anticipated that the plans will be submitted to the Hollywood Building Department for courtesy review.
- It is assumed that the existing facility has been previously granted a license or permit to operate and that the intent of the proposed work is to provide a functionally equivalent replacement. Therefore, only a modified permit through Broward County is anticipated.
- Surveying services and underground utility locates are not envisioned.
- The scope assumes the use of existing geotechnical information. If new geotechnical information is required by permitting agencies, an amendment will be processed.
- No owner-furnished / pre-purchasing of equipment is anticipated.
- Value engineering and other outside reviews (other than City staff review) are not anticipated.
- The City will competitively bid the project and enter into an agreement with an outside Contractor to complete the work. No prequalification of Contractors will be performed.
- The City will provide front end documents applicable to the project.
- The development of conformed contract documents will be performed by others.
- Services during construction will be included under a separate work order.

## **COMPENSATION**

The engineering services for this project will be performed for the lump sum amount of \$89,548. A fee breakdown is attached.

## **SCHEDULE**

Engineering services associated with the 90% submittal will be completed within 6 months from receipt of the Notice-to-Proceed and requested information from manufacturers.

Engineering services for the project will be performed as part of our Professional Services Agreement for General Engineering Hazen Services (Agreement) dated August 2017. Services provided by Hazen and Sawyer, D.P.C. shall be limited to those services specifically identified in this work order.

We look forward to your reply. In the meantime, should you have any questions, please contact us.

Very truly yours,

**Hazen AND SAWYER, P.C.**



J. Philip Cooke, P.E.  
Senior Associate

*c: File No. 4321-016/1.0*

*Attachment*

CITY OF HOLLYWOOD  
 SOUTHERN REGIONAL WASTEWATER TREATMENT PLANT  
 OFDB Odor Control System Replacement  
 Fee Breakdown

<u>Tasks</u>	Labor Hours								<u>Subtotal</u>	<u>Fee</u>
	<u>Senior Officer</u>	<u>Senior Associate</u>	<u>Senior Principal Engineer</u>	<u>Principal Engineer</u>	<u>Engineer</u>	<u>Senior Designer</u>	<u>Senior Drafter</u>	<u>Admin Assistant</u>		
LABOR										
Task 1 - Odor Control System Evaluation	0	8	0	32	24	8	8	10	90	\$ 13,091
Task 2 - Detailed Design	0	42	0	180	92	64	56	28	462	\$ 69,402
Task 3 - Bid Phase Services	0	6	0	22	8	0	0	10	46	\$ 6,955
Subtotal	0	56	0	234	124	72	64	48	598	\$ 89,448
DIRECT EXPENSES										
Out-of-pocket										\$ 100
Subtotal										\$ 100
<b>Total (Lump Sum)</b>										<b>\$ 89,548</b>
Maximum Hourly Labor Rate	274.12	261.80	181.72	166.32	123.20	151.84	95.48	73.92		