

REQUESTED COMMISSION ACTION:

Consent     Ordinance     Resolution     Consideration     Workshop     Initiative

**SHORT TITLE OR MOTION:** A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE WORK AUTHORIZATION NO. 7 IN THE AMOUNT OF \$78,500.00 FOR ENGINEERING DESIGN SERVICES FOR FLOW METER REPLACEMENT PURSUANT TO THE AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND MCCAFFERTY BRINSON CONSULTING, LLC FOR WATER AND RECLAIMED WATER TREATMENT PLANT PROJECTS; PROVIDING AN EFFECTIVE DATE.

Summary of Purpose and Why:

The Utilities Department intends on replacing a total of eleven (11) existing flow meters which are located both at the water and reuse water treatment plants which was approved in the 2015 CRP. It is a regulatory mandate that we have flow meters to ensure permit compliance and they must be certified for accuracy annually. Due to the advanced age of the meters, they require frequent calibration, and replacement parts are difficult to find and procure. The City intends on replacing these meters and exploring alternative installation configurations to improve accessibility by operation and maintenance personnel, improve meter accuracy, as well as facilitate future re-calibration and maintenance activities. This work order provides for engineering plans and specifications, permitting, and bidding services for the replacement of eleven (11) flow meters. In addition to this, to maximize the benefit of the field locates data required for meter replacements, our existing piping record drawings can then be verified and updated by Consultant into one comprehensive schematic.



Accomplishing this item supports achieving the following identified in the City's Strategic Plan: Superior Capacity, Goal 2.0, Initiative 2.2, **"Expand conservation efforts and other water efficiency efforts"** and Quality and Affordable Services, Goal 1.0, Objective 1.7.2 **"Increase reuse by 5% per year"**.

QUESTIONS TO BE ANSWERED BY ORIGINATING DEPARTMENT:

- (1) Origin of request for this action: Utilities Department
- (2) Primary staff contact: A. Randolph Brown /John Sfiropoulos Ext 7044/7009
- (3) Expiration of contract, if applicable: N/A
- (4) Fiscal impact and source of funding: \$78,500 total from CIP 05-886 Water Treatment Plant Maintenance and CIP 05-887 Reclaimed Water Treatment Plant Maintenance

DEPARTMENTAL COORDINATION	DATE	DEPARTMENTAL RECOMMENDATION	DEPARTMENTAL HEAD SIGNATURE
Utilities Director	<u>3/16/15</u>	APPROVE	
Attorney	<u>3/26/15</u>	APPROVE	
Finance	<u>3/24/15</u>	APPROVE	
Budget	<u>3-25-15</u>	APPROVE	

Advisory Board  
 Development Services Director  
 City Manager

ACTION TAKEN BY COMMISSION:

Ordinance	Resolution	Consideration	Workshop
1st Reading	1st Reading	Results:	Results:
_____	_____	_____	_____
2nd Reading	_____	_____	_____
_____	_____	_____	_____



**City Attorney's Communication #2015-661**

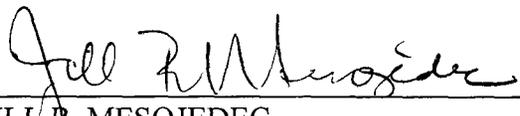
March 5, 2015

**TO:** John Sfiropoulos, P.E., Civil Engineer III  
**FROM:** Jill R. Mesojedec, FRP, Paralegal  
**VIA:** Gordon B. Linn, City Attorney   
**RE:** McCafferty Brinson Consulting, LLC – Work Authorization No. 7

Pursuant to your memorandum dated March 5, 2015, Engineering Department Memorandum No. 15-92, I have prepared and attached the following form of Resolution:

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE WORK AUTHORIZATION NO. 7 IN THE AMOUNT OF \$78,500.00 FOR ENGINEERING DESIGN SERVICES FOR FLOW METER REPLACEMENT PURSUANT TO THE AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND MCCAFFERTY BRINSON CONSULTING, LLC FOR WATER AND RECLAIMED WATER TREATMENT PLANT PROJECTS; PROVIDING AN EFFECTIVE DATE.**

Please feel free to contact me if I may be of further assistance.

  
\_\_\_\_\_  
JILL R. MESOJEDEC

/jrm  
l:cor/engr/2015-661

Attachment

**CITY OF POMPANO BEACH**  
**Broward County, Florida**

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING AND AUTHORIZING THE PROPER CITY OFFICIALS TO EXECUTE WORK AUTHORIZATION NO. 7 IN THE AMOUNT OF \$78,500.00 FOR ENGINEERING DESIGN SERVICES FOR FLOW METER REPLACEMENT PURSUANT TO THE AGREEMENT BETWEEN THE CITY OF POMPANO BEACH AND MCCAFFERTY BRINSON CONSULTING, LLC FOR WATER AND RECLAIMED WATER TREATMENT PLANT PROJECTS; PROVIDING AN EFFECTIVE DATE.**

**BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA:**

**SECTION 1.** That a work authorization between the City of Pompano Beach and McCafferty Brinson Consulting, LLC for engineering design services for flow meter replacement, a copy of which work authorization is attached hereto and incorporated by reference as if set forth in full, is hereby approved.

**SECTION 2.** That the proper City officials are hereby authorized to execute said work authorization between the City of Pompano Beach and McCafferty Brinson Consulting, LLC.

**SECTION 3.** This Resolution shall become effective upon passage.

**PASSED AND ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

\_\_\_\_\_  
**LAMAR FISHER, MAYOR**

**ATTEST:**

\_\_\_\_\_  
**ASCELETA HAMMOND, CITY CLERK**

**Work Authorization No. 7**  
**Contract for Consulting/Professional Services Between the**  
**City of Pompano Beach and McCafferty Brinson Consulting, LLC**  
**Flow Meter Replacement at Water Treatment Plant and Reclaimed Water**  
**Treatment Plant**

**Scope of Work**

**I. Background and General Description of Services**

The City of Pompano Beach owns and operates a 50 mgd capacity Water Treatment Plant (WTP) for production of drinking water for the City's customers, as well as a 7.5 mgd Reclaimed Water Treatment Plant (RWTP) which produces reclaimed wastewater for reuse irrigation. Both facilities utilize magnetic flow meters in various flow streams within the treatment processes. These flow meters require periodic re-calibration, maintenance, and/or repair, as well as replacement when the individual units reach their useful service lives. Most of the meters are currently in need of replacement. Due to the advanced age of the meters, they require frequent calibration, and replacement parts are difficult to find and procure. The City desires to replace these meters and explore alternative installation configurations to improve accessibility by operation and maintenance personnel, improve meter accuracy, as well as facilitate future re-calibration and maintenance activities. This scope of work is for engineering design services necessary to replace and upgrade the seven (7) large flow meters on the WTP site and the four (4) meters on the RWTP site. The meters to be replaced include the following:

Water Treatment Plant

1. Discharge High Service Pumps 1 through 4
2. Discharge High Service Pumps 5 and 6
3. Nanofiltration Concentrate
4. East Wellfield
5. West Wellfield
6. Plant Use Water
7. Nanofiltration Permeate

Reclaimed Water Treatment Plant

1. Plant Influent
2. Reclaimed Water Flow to Golf Course
3. Reclaimed Water to City
4. Reject Water

Design of the modifications to the meter installations will require field-location of certain underground piping on the WTP and RWTP sites during the design phase. This scope of work also includes coordination of these activities by

the Engineer. To maximize the benefit of the field location efforts, the City also desires that an updated overall yard piping record drawings for the WTP be produced by the Engineer during the design phase of the project. This scope of services also provides for the coordination of field-location of selected underground piping (field labor to be provided by City personnel), and production of an overall updated yard piping drawing of the WTP site.

## **II. Scope of Work**

### **Task 1.0 – Kick-Off Meeting, Site Visit, and Review of Record Documents**

CONSULTANT shall visit the water treatment plant and reclaimed water treatment plant sites and meet with City utility staff to confirm the scope of proposed improvements, discuss design options, and discuss any issues associated with maintenance of facility operations and coordination during completion of the work. CONSULTANT shall also review record drawings of the existing yard piping and flow meter installations, and confirm the configuration of the piping, pipe size and materials, etc.

### **Task 2.0 – Preliminary Design Memorandum**

Following the kick-off meeting, site visit, and CONSULTANT's review of available record drawings and other related data provided by the City, CONSULTANT shall prepare a Preliminary Design Memorandum (PDM) for the proposed improvements. The PDM shall include the following:

- A description, schematics, and or drawing of each existing meter installation, including pipe sizes and materials, existing meter description and location.
- A summary of the applicable design criteria for each meter installation, including a description of the metered flow stream, any regulatory requirements applicable to the metered flow stream (e.g., flow reported on Monthly Operating Reports), maximum and minimum flow rates, minimum required upstream and downstream straight pipe lengths, required and expected meter accuracy, any SCADA requirements and related process-control functions of the meter, and recommended maintenance/by-pass design features.
- Preliminary design layouts, sizing, meter selections, etc. for each meter installation. For existing underground installations (in vaults), CONSULTANT shall present two alternative designs. The first alternative shall be replacement "in kind" of the existing meter in its existing location. The second alternative shall be replacement of the existing meter installation with an above-ground installation on a concrete pad to improve accessibility by operation and maintenance

personnel, improve meter accuracy, as well as facilitate future re-calibration and maintenance activities. CONSULTANT shall provide opinions of probable construction cost for each alternative and discuss the pros and cons of each alternative in the PDM.

- A discussion of any regulatory and permitting requirements applicable to the proposed improvements (including a list of design-phase permits required for the project).
- A discussion of the electrical and instrumentation and control design requirements relative to the proposed improvements.
- A preliminary opinion of construction cost for the proposed improvements for both alternative designs.
- A preliminary project implementation schedule for both alternative designs.
- A preliminary list of construction drawings and technical specifications for the improvements.

CONSULTANT shall prepare and submit five (5) hardcopies and one electronic (.pdf file) copy of the PDM. Following submittal of the PDM, CONSULTANT shall schedule a meeting with the City to review the memorandum and discuss any comments or questions from the City. Following this review and decisions made by the City based on the alternatives presented in the PDM, CONSULTANT shall proceed with the final design phase of the project (preparation of the Construction Drawings and Technical Specifications).

### **Task 3.0 – Construction Drawings**

CONSULTANT shall prepare construction drawings of the proposed improvements which shall show the location, size, and spatial relationships between the existing piping and structures and the proposed modifications and improvements. The level of detail and information to be shown on the drawings shall be in conformance with generally accepted standards of the engineering and construction industries. Drawings shall be prepared using AutoCAD Release 2013. It is anticipated that the drawing set may include the following engineering disciplines:

- General
- Mechanical
- Electrical
- Instrumentation

Progress submittals of construction drawings will be submitted at the 50%, 90% and 100% complete stages of design development.

#### **Task 4.0 – Technical Specifications**

CONSULTANT shall prepare technical specifications for the proposed improvements. The technical specifications shall be based on the CSI 16-division, three-part MASTERFORMAT and consist of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applicable for this project. The level of detail and information to be included in the technical specifications shall be sufficient to allow competitive bidding of the project from qualified general contractors, and consistent with generally accepted standards of the engineering and construction industries. Progress submittals of technical specifications will be submitted at the 50%, 90% and 100% complete stages of design development.

#### **Task 5.0 – Permitting**

CONSULTANT shall prepare the necessary construction permit application for obtaining a Public Drinking Water Facility Construction Permit from the Broward County Health Department (BCCHD) which has been delegated authority for permitting water treatment plant modifications in Broward County. CONSULTANT shall prepare this application, with the assistance from the City with respect to historical data, and submit it to the BCHD with the necessary support documentation. The City shall issue a check for the permit application fee. This scope of work anticipates the preparation of up to two (2) responses to requests for additional information, as necessary to clarify the original application.

CONSULTANT will also provide certified sets of construction documents for submittal to the City of Pompano Beach Building Department.

#### **Task 6.0 – Bidding Services**

The CONSULTANT will assist the CITY in obtaining competitive bids from contractors. The CITY shall be responsible for setting the bid opening date, advertisement of the bid, producing and distributing bid documents, and scheduling the pre-bid meeting. The CONSULTANT will deliver to the CITY electronic copies of the Contract Documents for the CITY to post on the CITY's web site. The CONSULTANT will attend the pre-bid meeting with the CITY. The CONSULTANT shall prepare written responses to written questions from registered holders of bidding documents during the bid phase. CONSULTANT's responses shall be provided to the CITY Utility and Purchasing Departments. The CONSULTANT will prepare written addenda (up to two assumed) and will furnish for posting on the CITY's web site. After bids are received, the CITY will prepare a bid tabulation and the

CONSULTANT will assist the CITY in determining the lowest, responsive, responsible bidder and make a recommendation to the CITY on award of the contract.

### **Task 7.0 – Coordination of Field Locations of Underground Piping**

Based on a review of the available record drawings, existing above-grade site conditions, and the proposed modifications to each flow meter installation, CONSULTANT will provide a list of pipes and locations for field locations (soft-digs). Following completion of the field locates, CONSULTANT shall develop the final design of each meter installation based on the information collected with the field locations.

### **Task 8.0 – Yard Piping Record Drawings**

CONSULTANT shall develop an overall record drawing (CAD file) of the water treatment plant underground yard piping based on the following sources:

- Previous record drawing sets, including
  - 1959 Plant Yard Piping Plans
  - *Water Treatment Plant Improvements*, CH2M Hill, May 31, 1981
  - *10 mgd Membrane Softening Water Treatment Plant*, Hazen and Sawyer, June 2013
  - *Enclosure of Ammonia Bulk Storage Tanks, New Bulk Sodium Hypochlorite Feed System and Finished Water Yard Piping Improvements*, CDM, October 2009
- GIS files provided by the City
- Field locate data collected by the City during the design phase.

The overall yard piping drawing of the WTP site will be provided to the City as an AutoCAD file.

### **III. Assumptions and Assistance to be Provided by City**

Services and/or materials to be provided by the City and other related key assumptions include:

1. The City will provide pdf record drawings of the projects listed under Task 8 as well as available GIS files for the water treatment plant site.
2. The City will be responsible for bid advertisement, distribution of bidding documents, and issuing addenda during the bidding phase.
3. The City will be responsible for all permit fees.

#### IV. Budget

Consultant shall perform the professional services provided herein for a not-to-exceed fee of \$78,500. Consultant will invoice City monthly. City shall provide a written Notice to Proceed. The basis for proposed compensation is presented in Exhibit A.

#### IV. Completion Time

The proposed schedule is based on days from issuance of a written Notice to Proceed (NTP) from the City.

Project Milestone	Duration (Days)	
	From Previous Task	From NTP
Project Kick-off Meeting	14	14
Preliminary Design Memorandum Submittal	45	59
50% Document Submittal	60	119
90% Submittal*	60	179
100% Submittal*	60	239
Bid Set Submittal*	14	153
Record Yard Piping Drawing		153

\*Preliminary schedule assumes comments on previous progress submittal are received within 30 days of the submittal date.

Exhibit A  
City of Pompano Beach  
Work Authorization No. 7  
Flow Meter Replacement at Water Treatment Plant and Reclaimed Water Treatment Plant  
Engineering Budget Estimate

Task Description	Principal Engineer \$150 per hour		Staff Engineer \$80 per hour		Clerical \$45 per hour		Total Labor		Reimbursables	Total Budget
	hours	budget	hours	budget	hours	budget	hours	budget		
1.0 Kick-off Meeting, Site Visit, and Review of Record Documents	12	\$1,800	16	\$1,280	0	\$0	28	\$3,080	\$0	\$3,080
2.0 Preliminary Design Memorandum										
a. Preparation of PDM	20	\$3,000	60	\$4,800	0	\$0	80	\$7,800	\$0	\$7,800
b. Review meeting	4	\$600	8	\$640	0	\$0	12	\$1,240	\$0	\$1,240
3.0 Construction Drawings	50	\$7,500	80	\$6,400	0	\$0	130	\$13,900	\$0	\$13,900
4.0 Technical Specifications	30	\$4,500	40	\$3,200	20	\$900	90	\$8,600	\$0	\$8,600
5.0 Permitting	4	\$600	16	\$1,280	6	\$270	26	\$2,150	\$0	\$2,150
6.0 Bidding Services	8	\$1,200	16	\$1,280	8	\$360	32	\$2,840	\$0	\$2,840
7.0 Coordination of Field Locations of Underground Piping	8	\$1,200	16	\$1,280	0	\$0	24	\$2,480	\$0	\$2,480
8.0 Yard Piping Record Drawings	30	\$4,500	40	\$3,200	0	\$0	70	\$7,700	\$0	\$7,700
<b>Total Labor and Expenses:</b>	166	\$24,900	292	\$23,360	34	\$1,530	492	\$49,790	\$0	\$49,790

**Subconsultants**

Scope Description	Raw	Markup		
Electrical, Instrumentation and Controls (Hillers Electrical Engineers):	\$ 25,000	x	1.15	= <u>\$28,750</u>

**TOTAL LUMP SUM FEE, USE: \$78,500**

"CITY":

Witnesses:

**CITY OF POMPANO BEACH**

\_\_\_\_\_

By: \_\_\_\_\_  
LAMAR FISHER, MAYOR

\_\_\_\_\_

By: \_\_\_\_\_  
DENNIS W. BEACH, CITY MANAGER

Attest:

\_\_\_\_\_  
ASCELETA HAMMOND, CITY CLERK

(SEAL)

Approved As To Form:

\_\_\_\_\_  
GORDON B. LINN, CITY ATTORNEY

**I. STATE OF FLORIDA**

COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2015 by **LAMAR FISHER**, as Mayor, **DENNIS W. BEACH** as City Manager and **ASCELETA HAMMOND**, as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

\_\_\_\_\_  
NOTARY PUBLIC, STATE OF FLORIDA

\_\_\_\_\_  
(Name of Acknowledger Typed, Printed or Stamped)

\_\_\_\_\_  
Commission Number

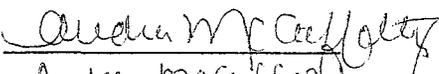
**"CONSULTANT":**

Witnesses:

**McCafferty Brinson Consulting, LLC**  
CONSULTANT Name

  
Chris CUS

  
Signature

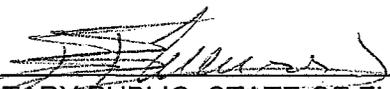
  
Andrea McCafferty

Frank A. Brinson, Vice President  
Title

**STATE OF FLORIDA**  
**COUNTY OF BROWARD**

The foregoing instrument was acknowledged before me this 3<sup>rd</sup> day of MARCH, 2015 by FRANK BRINSON, as Vice-President of McCAFFERTY BRINSON CONSULTING, on behalf of the corporation. He/she is personally known to me or has produced \_\_\_\_\_ (type of identification) as identification.

NOTARY'S SEAL:

  
NOTARY PUBLIC, STATE OF FLORIDA



EELHARD MENESES  
(Name of Acknowledger Typed, Printed or Stamped)

EE 143267  
Commission Number