

**WORK ORDER NUMBER 5**

**WATER DISTRIBUTION PROJECT FOR NORTH COUNTY - STUDY AREA 2**

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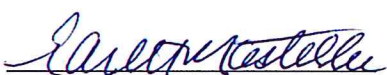
This Work Order Number 5 is entered into as of this \_\_\_ day of \_\_\_\_\_, 201\_, pursuant to that certain Extension and Amendment of Continuing Contract Agreement for Professional Services entered into as of this 4th day of November, 2014 (collectively referred to as the "Agreement") and that certain Extension of Continuing Contract Agreement for Professional Services entered into as of this 24th day of October, 2017 (collectively referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and MASTELLER & MOLER, INC. ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit 1a (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit 1b (Fee Schedule), attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit 1c (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.4 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

**CONSULTANT:**  
**MASTELLER & MOLER, INC**

**BOARD OF COUNTY COMMISSIONERS**  
**OF INDIAN RIVER COUNTY**

By:   
Earl H. Masteller, PE, BCEE  
Title: President

By: \_\_\_\_\_  
Joseph E. Flescher, Chairman

BCC Approved Date: \_\_\_\_\_

Attest: Jeffrey R. Smith, Clerk of Court and Comptroller

By: \_\_\_\_\_  
Deputy Clerk

Approved: \_\_\_\_\_  
Jason E. Brown, County Administrator

Approved as to form and legal sufficiency: \_\_\_\_\_  
Dylan T. Reingold, County Attorney

**NON-EXCLUSIVE PROFESSIONAL ENGINEERING AGREEMENT**  
**CONTINUING CONSULTING SERVICES**

**WORK ORDER NO. 5**

**“EXHIBIT 1a”**

**(Scope of Work)**

The Indian River County Department of Utility Services is recommending approval of Work Order No. 5 which provides Professional Engineering Services for Design and preparation of construction plans and permitting applications covering a proposed public potable water distribution system project. The proposed water distribution system will serve the area known as "Study Area Number 2" as designated in the "Sanitary Sewer Feasibility Study And Report For The North Sebastian Area". This project area and proposed Phased 2 water distribution system is show in red on the attached "Exhibit 2".

All of the properties to be served by this project are residential in nature with the exception of several community buildings. The majority of the residential properties obtain water from on-site private wells. A substantial number of the residences in the phase 2 project area have voiced a desire for the County to construct a public potable water distribution system at the same time as the gravity sewer project is constructed. The County Department of Utility Services has determined that the construction of a public potable water distribution system at the same time as the gravity sewers will result in substantial cost savings by not duplicating some of the construction cost items such as traffic control, street restoration, etc. In addition, it will encourage residences to connect to both water and sewer at the same time and increase the Utility's customer base. The County utility generally uses the water system usage to calculate sewer charges. Last but not least, it will provide the residences to be served with the ability to enjoy the benefits of a safe, reliable and healthy water supply along with fire hydrant protection.

This work order provides for the engineering services necessary for the design and preparation of contract plans and permitting applications covering the proposed public potable water distribution system. The addition of the water system to the Phase 2 sewer plans as proposed in this work order results in a substantial savings in the engineering design fee because the surveying and sewer system construction plans can be modified and utilized for the proposed water distribution system design.

A brief description of the scope of services and deliverables for Work Order No. 5 is provided below:

- **Scope of Services**

Masteller & Moler, Inc. will engineer the project design; prepare "bid ready" construction plans, and permitting applications for this project. Our services will include obtaining field surveying services as necessary for design purposes. Services will also include preparation of permit applications to FDEP, FDOT, and County Right-of-way Access in order to construct the project. Application fees are estimated at \$1,750.00 for permits and are not included in our project fee.

Exhibit 2 shows the proposed Phase 2 water distribution pipeline system in red. The proposed water distribution system will consist of approximately 3,750 lineal feet of 4" diameter water

main and 23,500 lineal feet of 6" diameter water main along with the necessary hydrants, valves, and fittings. It will supply potable water to approximately 284 new connections. The proposed distribution system will connect to the existing County water mains along Roseland Road, US Highway #1, and Old Dixie Highway.

The estimated total construction cost of this project is \$1,800,000.00.

A specific list of tasks and their brief description is presented as follows:

#### **Task A - Civil Engineering Services**

Masteller & Moler, Inc. will provide final design, prepare construction plans and permit applications for the project as described in the "scope of services" section of this proposal.

#### **Task B - Surveying Services**

Masteller, Moler, & Taylor, Inc. will perform surveying services for this project. Surveying information previously secured for design of the gravity sewer project can be utilized for the majority of the potable water system design. However, there are some instances where the design of the proposed water distribution system will involve some locations where surveying information will need to be obtained which was not needed for the gravity sewer system design. Task B covers the surveying services to secure the additional survey information needed to design the potable water distribution system.

The approximate length of the survey limits is 3,850 linear feet.

The scope of services for the Right-of-Way and Topographic Survey are as follows:

- 1) Project initiation, including review of existing deeds and surveys, files and field notes, preparation of work orders and field crew folders.
- 2) Find, recover and measure field ties into existing survey control along the route to establish the rights of way and baseline of survey.
- 3) Find and recover existing vertical control. Elevations shall be based upon the North American Vertical Datum of 1988 (NAVD 88).
- 4) Field locate and record vertical ground elevations sufficient to generate a center line of road profile for the main corridor and side streets and all distinct locations (inverts, retention areas, swales, ditches etc.) and changes in contour along the right-of-way corridor.
- 5) Field locate and record existing improvements and manmade features within the right-of-way, including but not limited to, roads, swales, driveways, culverts, signage and mailboxes, visible utilities, fences etc. within the existing right-of-way.
- 6) Field locate and identify limits of vegetation and trees, 4" or larger within the right-of-way limits.
- 7) Process field data and determine limits of existing rights-of-way. Prepare survey drawing in accordance with Standards of Practice for Surveying and prepare final deliverables.

**WORK ORDER NO. 5**

**“EXHIBIT 1b”**

**(Fee Schedule)**

Method and Amount of Compensation

Masteller & Moler, Inc. proposes to provide the outlined Scope of Services based on the following lump sum fees:

1. Prime Consultants Fee

- Task A - Primary Consulting Engineering Services by Masteller & Moler, Inc. \$ 63,140.00

2. Sub-Consultants Fees

- Task B - Surveying Services by Masteller, Moler & Taylor, Inc. (No Administration Multiplier) \$ 6,350.00

3. Reimbursables Expenses:

- Reimbursement for payment of direct costs, including reproduction, copies, prints, mail, Fed-Ex, etc. \$ 150.00 est.  
(See below for actual costs)

Note: est. = estimated amount. Actual cost will vary depending on quantity provided.

**Printing and Reproduction, Mail and Delivery**

The County shall make direct payment to our office for the cost of printing project plan sheets required for utility coordination and for copies of reports, drawings, specification, and other pertinent items required by federal, state, and local agencies from whom approval of the project must be obtained, material suppliers, and other interested parties, but may charge only for the actual cost of providing such copies based on EXHIBIT “2” - CONSULTANT’S BILLING RATE of the “Master Agreement” as follows:

Letter	8½” x 11”	\$ 0.25
Legal	8½” x 14”	\$ 0.35
Oversized	11” x 17”	\$ 0.50
Black Line Plans	24” x 36”	\$ 1.00
Mylar	24” x 36”	\$ 4.00

The County shall make direct payment to our office for the actual cost of mail, Fed-Ex, or similar costs for delivery of plans and documents to jurisdictional agencies, contractors, etc.

Application Fees are to be paid directly to jurisdictional agencies.

**WORK ORDER NO. 5**  
**“EXHIBIT 1c”**  
**(Time Schedule)**

Time of Performance



The estimated time frame for completion of services from the approval of this Work Order No. 5 is as follows:

<u>MILESTONE</u>	<u>COMPLETION DATE</u>
Tasks A & B	120 Calendar Days after Notice to Proceed

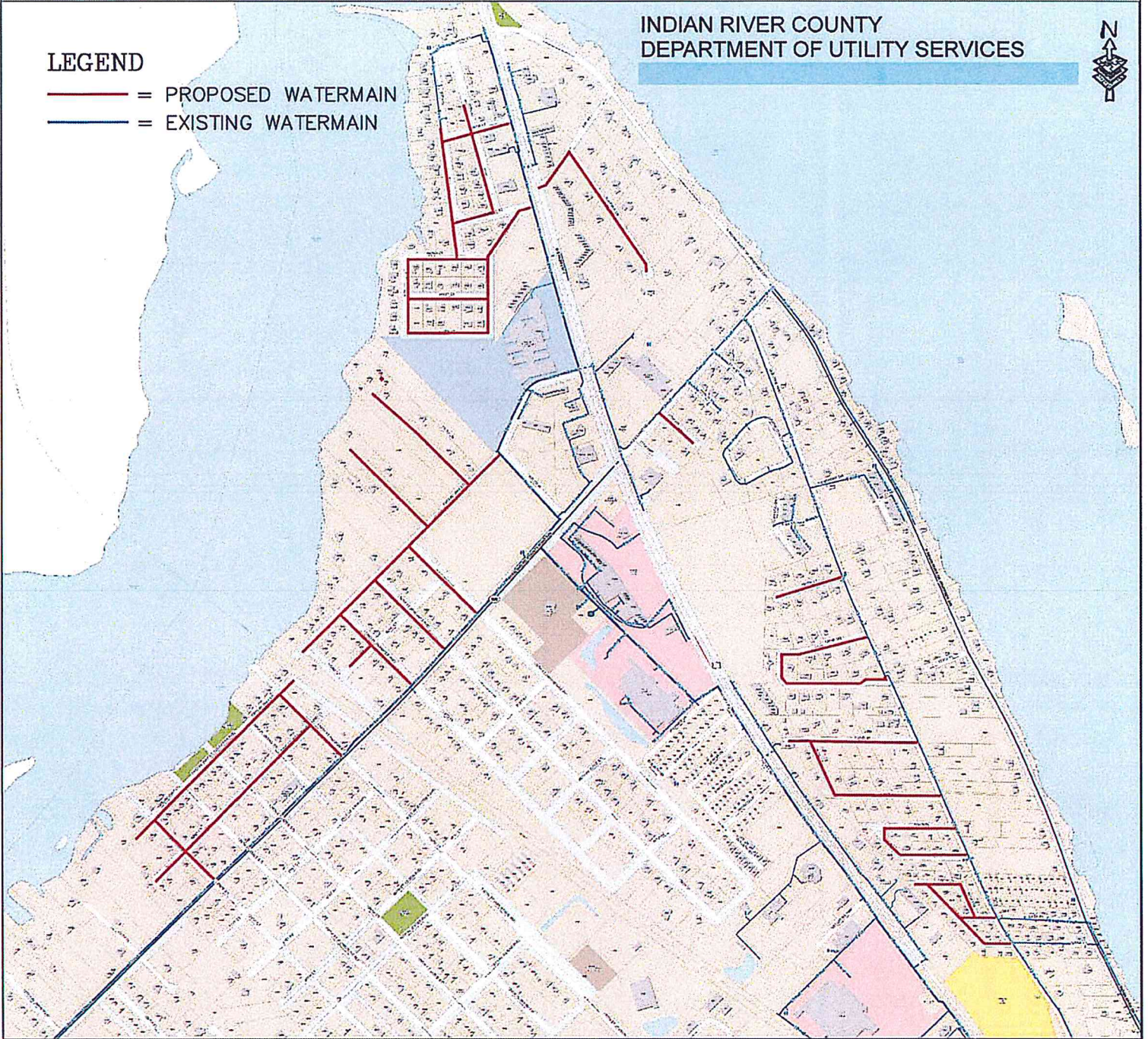
# WORK ORDER NO. 5 - EXHIBIT 2

## PROPOSED PHASE 2 WATER DISTRIBUTION PIPELINE SYSTEM

### LEGEND

-  = PROPOSED WATERMAIN
-  = EXISTING WATERMAIN

INDIAN RIVER COUNTY  
DEPARTMENT OF UTILITY SERVICES



**MASTELLER & MOLER, INC.**

**CONSULTING ENGINEERS**

CERTIFICATE OF AUTHORIZATION NUMBER 4204  
1655 27th STREET, SUITE 2, VERO BEACH, FLORIDA 32960  
(772) 567-5300 / FAX (772) 794-1106

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**WORK ORDER NO. 5**  
**ATTACHMENT #1**  
**Engineer's Construction Cost Estimate**  
**Study Area Number 2 Potable Water Distribution System**

Item No.	Item Description	Quantity	Unit of Measure	Unit Price	Total Price
1	Mobilization	1	LS	\$ 60,000.00	\$ 60,000.00
2	Stakeout Survey & As-builts	27,250	LF	\$ 2.20	\$ 59,950.00
3	4" Dia. PVC Water Main	3,750	LF	\$ 19.81	\$ 74,287.50
4	6" Dia. PVC Water Main	23,500	LF	\$ 24.56	\$ 577,160.00
5	Flushing Mains	27,250	LF	\$ 2.00	\$ 54,500.00
6	Chlorination/Test Water Mains	1	LS	\$ 20,000.00	\$ 20,000.00
7	BacT's	25	EA	\$ 430.00	\$ 10,750.00
8	4" Gate Valve Assembly	9	EA	\$ 919.82	\$ 8,278.38
9	6" Gate Valve Assembly	41	EA	\$ 1,246.95	\$ 51,124.95
10	6"x12" Wet Tap	13	EA	\$ 3,200.00	\$ 41,600.00
11	6"x16" Wet Tap	7	EA	\$ 4,500.00	\$ 31,500.00
12	6" Fittings	3	Tons	\$ 20,000.00	\$ 60,000.00
13	2" Blow-Off	13	EA	\$ 500.00	\$ 6,500.00
14	Temp. Jumper	14	EA	\$ 3,753.83	\$ 52,553.62
15	Fire Hydrant Assembly	25	EA	\$ 4,522.00	\$ 113,050.00
16	Single Service	84	EA	\$ 1,587.29	\$ 133,332.36
17	Double Service	100	EA	\$ 2,137.63	\$ 213,763.00
18	Erosion & Sediment Control	27,250	LF	\$ 1.25	\$ 34,062.50
19	Sample Points	25	EA	\$ 490.00	\$ 12,250.00
20	Air Release Valves	6	EA	\$ 4,200.00	\$ 25,200.00
21	Seed and Mulch	18,200	SY	\$ 0.10	\$ 1,820.00
22	<b>SUBTOTAL</b>				<b>\$ 1,641,682.31</b>
23	Contingencies (10%)	1	LS	\$ 164,168.23	\$ 164,168.23
24	<b>TOTAL ESTIMATED CONSTRUCTION COST</b>				<b>\$ 1,805,850.54</b>

USE **\$1,800,000.00**



**WORK ORDER NO. 5**  
**IRC WATER DISTRIBUTION PROJECT FOR NORTH COUNTY - PHASE 2**  
**POTABLE WATER DISTRIBUTION SYSTEM**  
**ENGINEERING DESIGN, PREPARATION OF CONSTRUCTION PLANS & PERMITTING APPLICATIONS**  
**MANHOUR BREAK DOWN**

10/23/2017

**LUMP SUM FEE TABULATION**

	Principal / PE		Project Manager		Designer (CAD)		Support Staff		Total Costs	Comments
		\$ 175.00		\$ 110.00		\$ 90.00		\$ 60.00		
	Hours	Amount	Hours	Amount	Hours	Amount	Hours	Amount		
Engineering Design	40	\$ 7,000.00	30	\$ 3,300.00	35	\$ 3,150.00	14	\$ 840.00	\$ 14,290.00	
Preparation of Construction Plans & Specification	52	\$ 9,100.00	36	\$ 3,960.00	232	\$ 20,880.00	47	\$ 2,820.00	\$ 36,760.00	
Preparation of Reports & Permit Applications	32	\$ 5,600.00	26	\$ 2,860.00	17	\$ 1,530.00	35	\$ 2,100.00	\$ 12,090.00	Permits needed from FDEP, FDOT, and County Right-of-way Access
Total (hrs/cost)	124	\$ 21,700.00	92	\$ 10,120.00	284	\$ 25,560.00	96	\$ 5,760.00	\$ 63,140.00	

Engineering Design/Permitting	\$ 63,140.00
Surveying Services	\$ 6,350.00
Reimbursable Expenses	\$ 150.00
<b>Total Lump Sum Fee</b>	<b>\$ 69,640.00</b>