AGREEMENT FOR PROFESSIONAL SERVICES FOR WATER PLANT AND WATER RESOURCES ENGINEERING SERVICES RFQ 2019070
WORK ORDER 2

North RO (Hobart) Supervisory Control and Data Acquisition (SCADA) System Upgrades

This Work Order Number 1 is entered into as of this ___ day of _____, 20__, pursuant to that certain Agreement for Professional Services for Water Plant and Water Resources Engineering Services entered into as of this 5th day of November, 2019 (collectively referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Kimley Horn and Associates, Inc. ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit A (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 B (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 C (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 1.5 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:

By: _____

Print Name: _____

Title: _____

BOARD OF COUNTY COMMISSIONERS OF INDIAN RIVER COUNTY

By: _____
, 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

EXHIBIT #1

Supervisory Control and Data Acquisition (SCADA) System Upgrades at Hobart Reverse Osmosis Water Treatment Plant

PROJECT UNDERSTANDING

In 2015, an evaluation of the PLC hardware and supervisory computer and data acquisition (SCADA) system was conducted which outlined numerous upgrades and improvements. The purpose of the study was to evaluate the existing outdated SCADA system and provide recommendations for upgrades and an approach with actions for IRCU to implement. The recommended work was provided in a prioritized and phased approach to allow improvements to be conducted in a logical order with minimal impact to the water treatment operations. Some of the recommended upgrades have been made since the evaluation, but there are numerous improvements still needed to address the antiquated communications hardware at the WTP.

The following scope outlines the work necessary to update the previous remediation and assessment report for the Hobart (North) water treatment plant SCADA systems based off the work completed to date, provide design phase services for incorporating the proposed upgrades, and integration labor required to program each of the respective upgrades to the remote I/O panels and various other components.

SCOPE OF WORK

Consultant will utilize the services and provide coordination of Control Systems Design, Inc., and C&W Engineering in the execution of these tasks.

TASK 1 – TECHNICAL MEMORANDUM

Consultant will prepare a brief technical memorandum that summarizes the improvements completed to date and the necessary improvements to be completed for the PLC and SCADA system at Hobart. The report will present conceptual cost estimates for specific improvements.

Consultant will develop phasing plan for implementing specific improvements. Where feasible, Consultant will prioritize improvements to allow for work to be performed under multiple construction contracts. This plan will provide the updated version of work to be performed based off the improvements completed to date and recommended in the previous remediation study.

TASK 2 – DESIGN IMPROVEMENTS

Consultant will prepare bid documents consisting of site plan depicting improvements which are needed for present and future phasing, and panel drawings and specifications for replacement and installation of new Remote I/O and PLC panels. Drawings will consist of control panel details, subplate layout, dead front layout, wiring diagrams, and specified PLC and I/O equipment.

The drawings will depict modifications to the following Remote I/O panels and PLCs:

- On-site High Service Pump Station PLC
- RIO – Electrical Room
- RIO-2 – South RO Trains
- RIO-5 – North RO Trains

Consultant will prepare design drawings to replace the existing control configuration for the RO trains Rotork modulating control valves. The proposed design will eliminate the Rotork Pakscan communication network and allow the valves to be controlled with a4-20 mA signal. This improvement will require additional cards within the RIO-2 and RIO-5 panels to accommodate the I/O for the RO train control valves.

Consultant will prepare design deliverables at the 90% and 100% design intervals. Design deliverables will consist of plans, specifications with bid item list, and opinion of probable construction costs (OPCC).

Consultant will perform one (1) site visit for data collection.

TASK 3 – BID PHASE

Consultant will provide coordination with IRCU purchasing department for bidding the proposed improvements. The technical memorandum generated in Task 1 and the OPCC's generated during the design phase will be the basis for determining which improvements will be in the base bid and which improvements will be considered an additive alternate.

Consultant will attend one (1) pre-bid meeting and respond to reasonable number of questions from potential bidders.

SCHEDULE

In general, the following schedule is anticipated and consultant will work as expeditiously as possible to meet it:

Task 1:	2 - 4 weeks from Notice to Proceed (NTP)
Task 2:	10 -12 weeks after NTP
Task 3:	1 - 2 months after Task 2 (dependent on IRCU bidding)

ADDITIONAL SERVICES

The following services are not included in the Scope of Services for this project, but may be required depending on circumstances that may arise during the execution of this project. Additional services include, but may not be limited to the following:

- HMI programming of any water plant operations
- Development of front-end specifications for contract documents
- Construction phase services

ITEMS FURNISHED BY OWNER

The following items will be furnished by the Owner and are necessary for completion of the tasks described herein.

- Access to WTP site
- Panel record drawings
- Review of design deliverables

FEE SCHEDULE

We will provide these services in accordance with our Continuing Consulting Engineering Services Agreement for Professional Services dated April 17th, 2018, by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Kimley-Horn and Associates, Inc., ("Consultant").

The Consultant will provide professional services for a lump sum fee as follows:

Task No.	Task	Task Fee
Task 1	Update report and Network Diagram	$ 5,380
Task 2	Design Phase	$ 25,340
Task 3	Bid Phase	$ 4,580
	TOTAL LUMP SUM FEE	**$ 35,300**

ADDITIONAL SERVICES

The following services are not included in the Scope of Services for this project, but may be required depending on circumstances that may arise during the execution of this project. Additional services include, but may not be limited to the following:

- Design, bid, and construction phase services for improvements

ESTIMATE FOR ENGINEERING SERVICES

PROJECT: Hobart ROWTP SCADA System Improvements							SHEET	1	OF	1
CLIENT: Indian River County Utilities							FILE NO.			
ESTIMATOR: NB							DATE:	4/2/2020		

DESCRIPTION:		DIRECT LABOR (MAN-HOURS)								
	Hobart SCADA System Improvements	PRINC	SEN PROF	REG PROF	DES/ P2	CLK P1	EXP SUB	EXP SUB	Dir Exp	LINE TOTAL
NO.	TASK									
1	**Update Report & Network Diagram**									
	Tech Memo	4		8					$240	$2,380
	CSD, Network Diagram							$3,000		$3,000
2	**Design Plans**									
	C&W							$16,000		$16,000
	CSD							$6,000		$6,000
	Coordination	4		8		10			$240	$3,340
3	**Bid Phase**									
	Pre-bid meeting, questions	4		6					$240	$2,080
	CSD							$2,500		$2,500
	TOTAL HOURS	12	0	22	0	10	0	27500	$720	**$35,300**
	LABOR ($/HOUR)	235	225	150	105	96	25		$0	$0
	SUBTOTAL	2820	0	3300	0	960	0	27500	$34,580	$35,300