AGREEMENT FOR PROFESSIONAL SERVICES FOR WATER PLANT AND WATER RESOURCES ENGINEERING SERVICES RFQ2019070 WORK ORDER____

Indian River County Utilities Department South Oslo Road WTP Improvements Construction Phase Services

This Work Order Number _____ is entered into as of this ______ day of ______, 202_, pursuant to that certain AGREEMENT FOR PROFESSIONAL SERVICES FOR WATER PLANT AND WATER RESOURCES ENGINEERING SERVICES RFQ2019070 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 <u>Kimley-Horn and Associates, Inc., (</u>"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 1.4 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:	BOARD OF COUNTY COMMISSIONERS						
Big	OF INDIAN RIVER COUNTY						
Ву:	Ву:						
Print Name: Brian Good, P.E.	, Chairman						
Title: Principal Director	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:

EXHIBIT #A

South Oslo Rd Water Treatment Plant Improvements

Construction Phase Services

Work Order No._____

PROJECT UNDERSTANDING

Kimley-Horn and Associates, Inc. ("CONSULTANT") was authorized under Work Order #1 to provide design, permitting, and bidding phase services on December 17, 2019. Following completion of design, Indian River County Utilities Department ("OWNER") plans to advertise this project for public bidding. The following scope of services provides professional engineering services in support of construction phase and startup of the improvements designed under Work Order No. 1.

SCOPE OF SERVICES

TASK 1 – CONSTRUCTION PHASE SERVICES

Consultant will provide construction phase services for this project consisting of;

- shop drawing review,
- coordination and progress meeting attendance, and preparation of meeting minutes
- construction observations, including inspector and engineer observations
- responses to contractor requests for information and clarifications and review of substitutes
- review of change order requests and changes in work
- major equipment start-up services and coordination with SCADA system integrator,
- review of record drawings based on information provided by contractors (consisting of electronic format, AutoCAD version 2018 in real world coordinates in .pdf format),
- FDEP certification of completion of the project
- Permitting support (SPAD, Building)

Consultant will provide support and information in preparation of the building permit application for processing for Indian River County Building Department and provide five (5) sets of signed/sealed drawings, specifications and CD for submittal. The permitting process will be initiated with the Contractor whom is awarded this project.

It is assumed that only a minor site plan through administrative approval is necessary since the impervious improvements will be less than 1,500 sq ft, and that only a technical review committee (TRC) review will be required. Consultant will prepare documents and submit to the TRC for a minor site plan approval (minor) as necessary. It is assumed IRCU staff will help process the application.

Consultant will review and /or take other appropriate action with respect to Shop Drawings and Samples and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs. It is anticipated that up to approximately one hundred fifty (150) shop drawings will be reviewed, including a 2nd resubmittal of each. Consultant will review the submittals and return copies to the Contractor and Owner.

Consultant will respond to a reasonable and appropriate Contractor requests for information and issue necessary clarifications and interpretations of the Contract Documents to Client as appropriate to the orderly completion of Contractor's work. Any orders authorizing variations from the Contract Documents will be made by the Owner.

Consultant may recommend Work Change Directives, or Change Orders to the Owner and will review and make recommendations related to Change Orders submitted or proposed by the Contractor.

Consultant will evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor in accordance with the Contract Documents, but subject to the provisions of applicable standards of state or local government entities.

Consultant will attend a Pre-Construction Conference prior to commencement of Work at the Site and attend up to 30 monthly progress meetings at the work site, which is anticipated to be up to 24 months. The last six months of the project duration, it is assumed that twice per month progress meetings will be scheduled. Consultant will prepare meeting agenda for each monthly progress meetings. Within one week of each respective progress meeting, Consultant will prepare and distribute meeting minutes that summarize the major discussion topics from the meeting.

Consultant will provide on-site construction observation services during the construction phase. It is assumed that construction contract duration will be approximately 24 months and observation will occur throughout that time frame. Consultant representative will visit the site up to two hundred and fifty (250) times during the expected anticipated 24-month construction duration. It is assumed that the first 3-4 months of the project will consist primarily of shop drawing review and will require minimal on-site observations to be made by the Consultant, approximately weekly per month. The remaining twenty (20) months of the project require the Consultant to be on-site on a more frequent basis since the project will be under active construction. Consultant assumes this 20-month period of construction will require approximately two to three (2-3) visits per week per month to observe the work for conformance with the Contract Documents. Such visits and observations by the Consultant representative are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress. Observations are to be limited to spot checking, selective measurement, and similar methods of general observation of the Work based on Consultant representative's exercise of professional judgment. Based on information obtained during such visits and such observations, Consultant's representative will evaluate whether Contractor's work is generally proceeding in accordance with the Contract Documents, and Consultant will keep Owner informed of the general progress of the Work.

Consultant's inspector will prepare field reports of each site visit describing observations witnessed during site visits.

The purpose of Consultant representative's site visits will be to enable Consultant to better carry out the duties and responsibilities specifically assigned in this Agreement, and to provide the OWNER a greater degree of confidence that the completed Work will conform in general to the Contract Documents. Consultant shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over Contractor's work, nor shall the Consultant have authority over or responsibility for the means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's work, nor for any failure of Contractor to comply with laws and regulations applicable to Contractor's furnishing and performing the Work.

Consultant will recommend to the Owner that Contractor's work be disapproved and rejected while it is in progress if, on the basis of such observations, Consultant believes that such work will not produce a completed Project that conforms generally to Contract Documents.

Consultant will review up to 24 contractor payment applications, including schedule of values. Based on its observations and on review of applications for payment and accompanying supporting documentation, Consultant will review the amounts that the Consultant recommends Contractor be paid. Such recommendations of payment will be in writing and will constitute Consultant's representation to Client, based on such observations and review, that, to the best of Consultant's knowledge, information and belief, Contractor's work has progressed to the point indicated and that such work-in-progress is generally in accordance with the Contract Documents.

Start-up of the new WTP equipment will be facilitated by the Contractor. Consultant will observe startup for the rehabilitated feedwater pumps, new RO trains, high service pumps, and miscellaneous new equipment once the installation is completed. It is assumed that up to twenty (20) days of startup and witness/functional testing will be required. Consultant will provide coordination with the SCADA system integrator and Client during equipment startup. Consultant will review and summarize startup data for new equipment prior to recommending Owner acceptance of said equipment.

Consultant will, promptly after notice from Contractor that it considers the entire Work ready for its intended use, in company with the Owner and Contractor, conduct a site visit to determine if the Work is substantially complete. Work will be considered substantially complete following satisfactory completion of all items with the exception of those identified on a final punch list. If after considering any objections of the Owner, Consultant considers the Work substantially complete, Consultant will notify the Owner and Contractor. Consultant anticipates completing the following items once the project is deemed substantially complete:

- Consultant will review Record Drawings and Operation and Maintenance Manuals prepared by the selected contractor.
- Consultant will prepare and submit the construction completion certifications for the FDEP permit if the construction is found to be in general accordance with the plans and specifications upon completion of the improvements

Consultant will review contractor furnished record drawing information and operation and maintenance manuals (O&M) as required under the certification of completion. Consultant will review the record drawings and note substantial deviations. Consultant will review and provide comments on the operation and maintenance manuals and project record drawings submitted by the contractor.

Multiple punch-lists will be prepared for the items that need to be completed for final closeout of the project. Consultant will provide up to six (6) site visits with the contractor to review the status of the completion of these punch-list items. The site visits will be used to determine if the completed Work of Contractor is generally in accordance with the Contract Documents and the final punch list so that Consultant may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Consultant will also provide a notice that the Work is generally in accordance with the Contract Documents to the best of Consultant's knowledge, information, and belief based on the extent of its services and based upon information provided to Consultant upon which it is entitled to rely.

Consultant assumes that up to seven (7) requests for partial clearance from FDEP will be required as part of this project. Four (4) separate partial requests will be required for each RO train, one (1) partial request will be required for the new high service pumping station, and another two (2) partial requests will be submitted following completion of the ground storage tank penetrations and high service pump supply piping improvements. A request for final release of the modifications will be submitted to FDEP, consisting of certification application, pressure test results, water quality, bacteriological test results, and record drawings if the work is found to be in general conformance with the plans and specifications.

TASK 2 – PROGRAMMING AND INTEGRATION

Consultant will utilize the services of Control Systems Design, Inc. to provide the programming, integration and develop Human Machine Interface (HMI) screen interfaces.

Contractor to migrate all HSP controls from the existing main PLC5 and other PLC5 remote input/output (RIO) panels to the CLX PLC and other standalone panels, Consultant will make any PLC modifications, test and verify all operations.

Consultant will modify the existing Lime Slurry Control panel to upgrade the MicroLogix PLC with ControlLogix hardware and migrate the PLC logic into the Main PLC and turn this panel into remote I/O to the Main PLC.

Consultant will upgrade the existing Well 4 and Well 7 control panels to replace the ControlLogix hardware with CompactLogix L306ER PLC hardware and migrate well 4/7 over ethernet to the CLX PLC via the new RIO_LAN switch.

Consultant will migrate each well into the Main PLC panel PLC as it is upgraded to a PLC panel utilizing a CompactLogix PLC as was done for Wells 4 and 7. Wells will remain controlled via the hardwired connection to the plant RIO panels and serial communications for level/flow to the PLC5 processor until all wells have been upgraded with a new panel provided by the hardware integrator. At that point, the existing PLC5 in the main PLC will be removed and a cold backup ControlLogix processor / rack will be installed.

Contractor will migrate non-train PLC-5 RIO panel, if this rack in the main panel is still necessary. Consultant will upgrade the non-train SLC5 RIO CP-1, 2 & 3 to ControlLogix RIO panels, move all programming to the new CLX processor in the Main PLC panel, along with a new RIO network switch. Operations will be converted as quickly as possible and coordinated to minimize down time.

Consultant will migrate each new train RIO panel provided and installed by the contractor into the CLX PLC, abandoning the existing main PLC RIO panels out at the trains as each existing train is updated. When complete, demolish the existing two RIO panels and remove all connectivity to the system and power.

Consultant will continue programming and tweaking of various systems startup together and after completion of the above with system cleanup and final testing.

Consultant will migrate new HSPs 4 & 5 controls into HSP PLC, which is to be constructed under a separate contract.

Consultant will perform programming for new membrane CIP system, new caustic tank and new CO_2 tank

TIME SCHEDULE

Consultant anticipates construction duration of twenty-four (24) months will be required.

FEE SCHEDULE

We will provide these services in accordance with our Agreement for Professional Services for Water Plant and Water Resources Engineering Services – RFQ 2019070, dated November 5, 2019, 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 on a lump sum fee basis as follows:

Task No.	Task	Task Fee			
Task 1	Construction Phase Services	\$ 865,774			
Task 2	Programming and Integration	\$ 356,772			
	Total Lump Sum Fee =	\$ 1,222,545			

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:

- Construction phase services beyond what is described herein
- Re-design or integration beyond what is listed

	ESTIMATE FOR ENGINEERING SERVICES												
	-							CLO					
PROJECT	: IRC Oslo WTP CPS												
CLIENT: 1	Indian River County Utilities												
ESTIMA	FOR: NB												
DESCRIP	TION	li in the second				DIDEC	TIADO		NUOID	()			
DESCRIP			DIRECT LABOR (MAN-HOURS)										
		MDM/TJ	FH/JL	NB		BK	JF						
			CENT	DEC	DROF	DDOE	DEGLONI	CEN	CLIDD	EXD	Dir Exp	LINE	
	IRCU Oslo WTP CPS	PRINC	SEN PROF	REG PROF	PROF 2	PROF 1	DESIGN INSP	SEN SUPP	SUPP STAFF	EXP SUB	4.6%	TOTAL	
NO.	TASK	PRINC	PROF	PROF	Z	1	IINSP	SUPP	STAFF	SUB			
1	CONSTRUCTION PHASE SERVICES												
1	Site Visits (up to 260)	60	60	1040		600	1600			\$2,400	\$21,073	\$481,57	
	Progress Meetings (30)	48		60		30			48	\$2,400	\$1,275	\$25,71	
	Clarifications, Recommendations, Substitutes	40				40	60		24		\$1,275	\$23,71	
	Shop Drawing Review (x 150 w/ 1 resubmittal each)	40	-	300		300	00		24		\$1,910	\$95,01	
	Review Payment Applications and Change Order Requests			<u> </u>		500			30		\$753	\$95,01 \$15,09	
	Start-up & Witness Testing (x20 days)	60				120			50		\$7,55	\$13,09	
						-			24			+ -)-	
	Substantial Completion Site Visit Punchlist	12		40		40	60		24		\$1,047	\$14,68	
	Final Completion	4		12		20	20		4		\$361	\$5,42	
	Review record drawings and O&Ms	8		30		60			24		\$686	\$13,97	
	Submit Construction Completion Certifications (FDEP)	8		20		40			12		\$596	\$12,74	
	Attend FDEP Project Walkthrough & Prep	8		12		16			8		\$283	\$5,88	
	Permitting (site plan admin approval)	4		12					8		\$157	\$3,02	
	Admin (invoicing, reports, etc.)			24		1		24			\$287	\$6,52	
	C&W - Electrical	8	12	20		40			6	\$56,555	\$577	\$69,27	
2	PROGRAMMING AND INTEGRATION												
	CSD	24		40		60			12	\$343,440	\$900	\$356,77	
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			45.5	105-		10				1000-	<u> </u>		
	TOTAL HOURS				0			24		402395	\$38,430	\$1,222,54	
	LABOR (\$/HOUR)	243	220	158	128	110	125	102	68		\$0	9	

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