


WORK ORDER 22

This Work Order Number 22 is entered into as of this ____ day of _____, _____, pursuant to that certain Continuing Contract Agreement, dated May 2, 2023 (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 mutually agreed upon lump sum or maximum amount not-to-exceed professional fee. Any additional costs must be approved in writing, and at a rate not to exceed the prices set forth in Exhibit B (Rate Schedule) of the Agreement, made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit A (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:

By: 
Print Name: Jason Lee
Title: Vice President

BOARD OF COUNTY COMMISSIONERS OF INDIAN RIVER COUNTY

By: _____
Joseph H. Earman, Chairman

BCC Approval Date: _____

Attest: Ryan L. Butler, Clerk of Court and Comptroller

By: _____
Deputy Clerk

By: _____
John A. Titkanich, Jr., County Administrator

Approved as to form and legal sufficiency:

Christopher A. Hicks, Asst. County Attorney

Exhibit A – Scope of Work
Indian River County Department of Utility Services
Facilities Electrical Improvements & Standby Power, Project ID 00.25.522
September 9, 2025

PROJECT UNDERSTANDING

Indian River County Department of Utilities Services (IRCDUS) owns and operates consolidated water system, wastewater collection and treatment systems, and beneficial use reclaim water system that serves customers within their service boundary. Each of these systems have major supporting infrastructure that are crucial for the daily operations of the utility. Furthermore, each of these facilities rely on utility electrical power and IRCDUS-owned electrical equipment to ensure operational reliability. IRCDUS has noted components of their electrical and emergency standby power infrastructure that require improvements to maintain reliability and resiliency.

Firstly, IRCDUS has noted deficiencies with the existing grounding and lightning protection at their major facilities. Thunderstorms are inherent to Southeast Florida and pose a threat to electrical infrastructure that is not adequately protected from lightning. As such, IRCDUS desires to quantify the deficiencies and restoration plan to enhance facility grounding infrastructure which will be outlined in a report that IRCDUS can subsequently utilize for the design, permitting and construction of necessary work.

IRCDUS also desires to improve upon the standby emergency power conditions for each of their existing Upper Floridan Aquifer (UFA) well sites that serve the Hobart and Oslo WTPs. It is known that wells S-1R, S-2 and S-3 receive standby emergency backup power from the WTP and Well S-4R has an emergency standby generator on-site. The remaining wells, S-5, S-6 and S-7 have plugs for portable generator hook-up. The Hobart WTP provides emergency standby power to seven (7) of the nine (9) total wells, with N-7 and N-9 powered from a remote FPL service with a plug for portable generator. IRCDUS desires to investigate alternatives to improve the emergency power setup for their UFA wellfield to enhance their resiliency.

Lastly, in 2022 IRCDUS completed an electrical evaluation for each of the Hobart well sites which outlined the deficiencies and areas for improvement. IRCDUS desires to refresh this evaluation and incorporate civil, process mechanical and instrumentation improvements to provide a holistic diagnosis of the Hobart wellfield, similar to what is currently being performed for the Oslo WTP under separate work order. IRCDUS desires to consolidate this evaluation into a comprehensive wellfield improvements document that can be utilized to prioritize and administer projects for the entire wellfield.

The following scope of services is provided for the Facilities Electrical Improvements and Standby Emergency Power Investigation. For this scope of work, Consultant will utilize the services of C&W Engineering, Inc. for electrical engineering professional services.

SCOPE OF SERVICES

Task 1 – Preliminary Engineering Due Diligence

Consultant will perform one site visit to utility facilities. Consultant assumes up to four (4) full days of site visits will be necessary. The sites include the following:

- Hobart WTP and supporting wellfield
- Oslo Road WTP and supporting wellfield
- Kings Highway Elevated Storage
- North Beach Storage and Repump Facility

- Roseland Elevated Storage and Repump Facility
- Gifford Wastewater Treatment Facility
- South Wastewater Treatment Facility
- West Wastewater Treatment Facility
- Residuals Dewatering Facility (Landfill)
- 77th Avenue Repump Station
- 77th Avenue Reclaim Water Pump Station

Consultant will document the findings from the site investigations.

Task 2 - Facility Lightning Protection & Grounding Evaluation

Consultant will utilize the information collected during the site visits to prepare a test plan document that outlines testing needed to determine condition of lightning protection that cannot be known through visual observations. Consultant will furnish test plan to Owner.

Consultant will coordinate with electrical contractors to obtain pricing to perform the grounding testing. Consultant will provide proposals received to IRCDUS for procurement. Consultant's proposal does not include electrical testing.

Consultant will accompany IRCDUS-selected contractor in the field to review and collect data from the testing and investigation. Consultant assumes up to five (5) days of field testing will be necessary.

Consultant will collect the data from field testing and photographs of existing equipment and combined with the findings of testing, prepare a technical memorandum that outlines the necessary lightning protection measures to be implemented at each of the eleven (11) facilities. Consultant will submit tech memo as a draft to Owner for review and comment. Consultant will implement changes to document based on Owner feedback and submit document as final.

Task 3 – Wellfield Emergency Standby Power Alternatives Analysis

Consultant will prepare an alternatives analysis to provide backup power to all the well sites for Oslo WTP. The alternatives will consist of the following:

1. Centralized Emergency Generator at South County Park to serve S-5, S-6, and S-7
2. Standalone generator at S-5, S-6 and S-7 well sites
3. Additional Generator at Oslo WTP and conduit and conductors from the WTP to each well site
 - a. This alternative will include option to remove standalone generator at S-4R

Consultant will prepare an alternatives analysis to provide backup power to all the well sites for Hobart WTP. The alternatives will consist of the following:

1. Centralized Generator for wells N-7 and N-9 and future well sites
2. Standalone generators at N-7 and N-9 well sites
3. Power service from WTP to backup the separate FPL service

Consultant will quantify the limitations of the existing WTP emergency generators to provide the necessary backup power for Oslo and Hobart Options #3. Where necessary, improvements to enhance WTP backup power will be presented.

Consultant will prepare preliminary sketches that display the necessary infrastructure improvements to facilitate each alternative. Sketches will depict conduit sizing and alignment, building/room floor plans, and one-line diagrams. Consultant will prepare an Opinion of Probable Construction Cost (OPCC) associated with the necessary improvements. OPCCs will be Class 5 as defined by the Association for the Advancement of Cost Engineering (AACE). Consultant will prepare an overview of the proposed alternative with associated advantages and disadvantages for IRCDUS consideration.

Consultant will submit alternatives analysis technical memorandum as draft to IRCDUS. Based on the alternatives analysis, feedback from staff, an option will be selected for each WTP for future implementation. This recommendation will be included in the final technical memorandum submittal.

Task 4 –Water Plant Wellfield Condition Assessment

Consultant will review site conditions for each of the nine (9) wells in at Hobart. Consultant will prepare a list of recommended improvements based on site observations.

Consultant will update Hobart Wellfield Evaluation Report previously prepared by others. Consultant will update report based on other disciplinary observations (civil, mechanical/process, instrumentation) needing improvements or enhancement.

Consultant will create a matrix to prioritize the improvements. The matrix will be in a tabulated format and be utilized to calculate and assign a priority level to each individual item. Prioritization will be based on the primary objectives that include, but are not limited to improvements for regulatory compliance, reliability, efficiency and resilience. The matrix will include the following criteria:

- Criticality to treatment/water quality
- Criticality to high service pumping
- Impacts to treatment
- Impacts to operation
- Impacts to maintenance
- Intangibles
- Capital Costs

Consultant will compile the recommended wellfield improvements with the Oslo wellfield improvements outlined in *Work Order #17 Oslo WTP Capital Upgrades and Renewals*. All capital OPCCs will be Class 5 as defined by the Association for the Advancement of Cost Engineering (AACE).

Consultant will provide Water Plant Wellfield Condition Assessment Technical Memorandum as draft to IRCDUS. Consultant will implement IRCDUS review comments and finalize submittal.

Task 5 – Project Management and Meetings

Consultant will provide coordination for the duration of the project design, including plan review and design review meeting attendance, design progress meetings, and status meetings during the progress of the project. It is anticipated that approximately four (4) meetings will be held and attended by Consultant. Consultant will prepare minutes from each meeting and distribute to the project team. The following meetings are anticipated:

- Pre-work meeting
- Task 2 – Utility Facility Lightning Protection Evaluation Draft Review Meeting
- Task 3 – UFA Wellfield Standby Emergency Power Alternatives Analysis Review Meeting
- Task 4 – UFA Wellfield Condition Assessment and Evaluation Review Meeting

Consultant will also provide project management for the project, consisting of coordination, planning and scheduling of project tasks and deliverables, meeting attendance, coordination of staffing on project, coordination with subconsultants, administrative work including filing of all documentation, meeting minutes, letters, etc. The Consultant will provide a status report with each invoice for each period covered by the invoice. The report will provide accomplishments for each task in the SOW and status of the schedule including plan versus actual. A forecast to complete date will be provided. It is estimated that approximately twenty (25) hours of administration time and twenty (20) hours of professional time will be required for this task.

The Consultant will establish a cloud-based platform for the project team members, both Consultant and designated IRCDUS staff. The portal will be utilized throughout the project to store, share, and manage project artifacts efficiently and securely.

DELIVERABLES

The following deliverables will be prepared as part of this scope of work:

1. Task 2 – Electrical Grounding Test Plan
2. Task 2 – Utility Facility Lightning Protection Improvements – Draft Technical Memorandum
3. Task 2 – Utility Facility Lightning Protection Improvements – Final Technical Memorandum
4. Task 3 – UFA Wellfield Standby Emergency Power Alternatives Analysis – Draft Technical Memorandum
5. Task 3 - UFA Wellfield Standby Emergency Power Alternatives Analysis –Final Technical Memorandum
6. Task 4 – UFA Wellfield Condition Assessment and Evaluation – Draft Technical Memorandum
7. Task 4 – UFA Wellfield Condition Assessment and Evaluation – Final Technical Memorandum
8. Task 5 – Meeting Minutes

FEE SCHEDULE

We will provide these services in accordance with the Continuing Contract Agreement for Consulting Engineering Services #2023015 dated May 2nd, 2023, 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.	Description	Fee
1	Prepare Engineering Due Diligence	\$ 25,604.42
2	Facilities Lightning/Ground and Testing	\$ 39,769.40
3	Wellfield Emergency Standby Power Alternatives Analysis	\$ 18,150.36
4	Water Plant Wellfield Condition Assessment	\$ 18,736.12
5	Meeting and Coordination	\$ 27,474.38
<u>TOTAL</u>		<u>\$ 129,734.68</u>

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, Permitting, Bid and Construction phase services

EXHIBIT B - SCHEDULE

Facilities Electrical Improvements & Standby Power

					Oct 13, 2025							Oct 20, 2025							Oct 27, 2025							Nov 3, 2025							Nov 10, 2025							Nov 17, 2025							Nov 24, 2025							Dec 1, 2025							Dec 8, 2025							Dec 15, 2025							Dec 22, 2025							Dec 29, 2025							Jan 5, 2026							Jan 12, 2026							Jan 19, 2026							Jan 26, 2026							Feb 2, 2026							Feb 9, 2026							Feb 16, 2026							Feb 23, 2026							Mar 2, 2026							Mar 9, 2026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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EXHIBIT C - FEE DETAILS									
PROJECT: IRCDUS - Facilities Electrical Improvements & Standby Power						SHEET	1	OF	1
CLIENT: Indian River County Department of Utility Services						FILE NO.			
ESTIMATOR: NB						DATE:	9/9/2025		
DESCRIPTION:									
IRCDUS - Facilities Electrical Improvements & Standby Power									
	PRINC	SEN PROF	REG PROF	DES/ P2	CLK P1	EXP SUB	EXP SUB	Dir Exp 4.6%	LINE TOTAL
NO.	TASK								
1	Prepare Engineering Due Diligence								
	Site Visits (x4 days)								
	C&W								
2	Facilities Lightning/Ground and Testing								
	Grounding Test Plan Preparation								
	Attend Testing w/ Contractor (x5 days)								
	Draft Grounding Technical Memorandum								
	Final Grounding Technical Memorandum								
	C&W								
	QA/QC								
3	Wellfield Emergency Standby Power Alternatives Analysis								
	Alternative Analysis								
	Draft Technical Memorandum								
	Final Technical Memorandum								
	C&W								
	QA/QC								
4	Water Plant Wellfield Condition Assessment								
	Prioritization Matrix								
	Draft Technical Memorandum								
	Final Technical Memorandum								
	C&W								
	QA/QC								
5	Meeting and Coordination								
	Kickoff Meeting and Minutes								
	Task 2 - Draft Review Meeting								
	Task 3 - Draft Review Meeting								
	Task 4 - Draft Review Meeting								
	Cloud Portal for Project Deliverables								
	Project Management								
	C&W								
	QA/QC								
TOTAL HOURS		16	62	94	0	195	0	\$58,000.00	\$3,154.68
LABOR (\$/HOUR)		300.00	270.00	210.00	160.00	140.00	25.00		\$0.00
SUBTOTAL		4,800.00	16,740.00	19,740.00	0.00	27,300.00	0.00	\$58,000.00	\$126,580.00

C & W engineering Inc.

Consulting Engineers – Electrical • HVAC • Plumbing

6903 Vista Parkway North, #10
West Palm Beach, FL 33411
(561) 642-5333

July 29, 2025

Nick Black, P.E.
Kimley-Horn & Associates, Inc.
1920 Wekiva Way
West Palm Beach, FL 33411

Subject: IRC Water & Waste Water Facilities Electrical Improvement & Standby Power
Grounding and Lightning Protection, Update the Oslo & Hobart WTP Well field
Emergency Power, Assessment of ten treatment facilities, Electrical Engineering
Services Proposal
C&W Ref. 256618

Dear Nick:

I am pleased to submit this proposal for a comprehensive electrical engineering resiliency assessment of the Indian River County Department of Utility Services (IRCDUS). The scope includes Water and Wastewater Treatment Facilities, Repump Stations, Elevated Water Storage Structures, Wellfields, and Reclaimed Water Pump Stations. Our evaluation will focus on the following:

- Grounding, lightning protection, and standby emergency power systems at various wells within the Oslo wellfield
- An update to the 2022 assessment of the Hobart WTP wells
- A new evaluation of the Oslo wellfield wells currently not supported by emergency power
- A general assessment of existing conditions at each site
- There will be three draft reports produced based on the grounding and surge protection of the equipment at the various facilities; the well emergency power study for Oslo, and the Hobart Well study; these reports will include equipment matrix of recommendations

Our objective is to conduct thorough documentation of each facility and gather relevant

C&W Ref. 256618

information aligned with the tasks outlined in this proposal. We anticipate that IRCDUS staff will provide plans of the existing facilities, which will serve as the foundational reference for our investigation.

The facilities selected for visitation and evaluation as part of this assessment study include:

- Hobart WTP and supporting wellfield
- Oslo Road WTP and supporting wellfield
- Kings Highway Elevated Storage
- North Beach Storage and Repump Facility
- Roseland Elevated Storage and Repump Facility
- Gifford Wastewater Treatment Facility
- South Wastewater Treatment Facility
- West Wastewater Treatment Facility
- Residuals Dewatering Facility (Landfill)
- 77th Avenue Repump Station
- 77th Avenue Reclaim Water Pump Station

Task 1: Preliminary Engineering Due Diligence:

We will conduct a single site visit to each of the eleven (11) facilities as part of this assessment. The field investigation is anticipated to span three days, during which we will document existing conditions and collect relevant site data.

At both the Oslo and Hobart Water Treatment Facilities, we will include evaluations of their associated wellfields. Special attention will be given to well sites that lack backup power from the plant's emergency generator. Additionally, we will update the 2022 emergency power evaluation previously performed for the Hobart remote wells.

At the Oslo site, we will specifically assess wells S-5, S-6, and S-7 to support a proposed centralized emergency generator installation.

We will prepare a draft report summarizing our findings and presenting recommended actions. As part of this report, we will include an updated evaluation of the emergency power systems for the remote well sites associated with the Hobart Water Treatment Facility, revisiting and refining the assessment originally conducted in 2022.

Task 2: Facility Lightning Protection and Grounding Evaluation:

We will observe and document the existing lightning protection and grounding systems across all designated facilities and structures, including the level of surge protection currently in place

for power systems and SCADA/PLC equipment. Our findings, along with recommended improvements, will be detailed in the final report. The report will also incorporate photographs and data collected during grounding tests performed by a qualified electrical contractor.

Our field investigation will focus on evaluating lightning and surge protection measures for electrical power systems, emergency power infrastructure, PLC field panels, and SCADA systems—including RTUs and radio antennas.

To support this effort, we will coordinate with electrical contractors to obtain pricing for grounding tests. Formal proposals will be submitted to IRCDUS staff for procurement consideration.

Upon contractor selection, we will participate in field testing activities to oversee and document the grounding evaluation process. We anticipate a three-day field schedule with the contractor to complete these assessments.

Task 3: Wellfield Emergency Standby Facility Evaluation:

We will perform an assessment to evaluate emergency power options for existing wells and develop an alternatives analysis to provide backup power coverage for all well sites associated with the Oslo Water Treatment Plant (WTP). The proposed alternatives will include:

1. Installation of a centralized emergency generator at the Intergenerational Center to serve wells S-5, S-6, and S-7.
2. Standalone generators installed at wells S-5, S-6, and S-7.
3. An additional generator at the Oslo WTP with conduit and conductors routed from the WTP to each well site. As part of this option, consideration will be given to removing the existing standalone generator at well S-4R to reduce ongoing maintenance costs.

A parallel alternatives analysis will be conducted to provide emergency backup power for the Hobart WTP well sites. This analysis will examine:

1. A centralized generator serving wells N-7, N-9, and future well sites.
2. Standalone generators installed at wells N-7 and N-9.
3. Extension of power service from the WTP to back up the separate FPL electrical service.

We will quantify the limitations of the existing emergency generators at both Oslo and Hobart WTPs in supporting Option 3, and where needed, recommend system enhancements to improve resiliency.

The final report will include preliminary design sketches illustrating infrastructure requirements for each alternative. These sketches will depict conduit routing and sizing, building and room layouts, and one-line electrical diagrams. Cost estimates will be developed for each solution, along with a comparative overview of advantages and disadvantages for IRCDUS's consideration.

Task 4: Waterplant Wellfield Condition Assessment:

We will conduct a site condition assessment for each of the nine (9) wells at the Hobart Water Treatment Plant (WTP). Based on field observations, we will prepare a list of recommended improvements and update the Hobart Wellfield Evaluation Report originally prepared by EDA.

To support strategic planning, we will develop a prioritization matrix in tabulated format. This matrix will assign a priority level to each recommended item based on key objectives such as regulatory compliance, system reliability, operational efficiency, and overall resilience. The matrix will evaluate each item using the following criteria:

- Criticality to treatment and water quality
- Criticality to high-service pumping
- Impact on treatment performance
- Impact on operations
- Impact on maintenance
- Intangible benefits
- Capital cost requirements

An opinion of probable cost will be provided for all recommended improvements.

Following completion of the draft report, we will submit it to IRCDUS staff and attend a review meeting. Based on feedback received, we will finalize the technical memorandum to reflect staff comments and input.

Task 5: Meetings and Coordination:

We will coordinate with IRCDUS staff and Kimley-Horn Engineers throughout the duration of the project. This coordination will encompass report development, design reviews, and technical discussions regarding proposed improvements. We anticipate participating in four (4) formal meetings to provide feedback and respond to staff comments.

The scheduled coordination meetings include:

- Pre-Work Meeting

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- Task 2 – Draft Review for Utility Facility Lightning Protection Evaluation
- Task 3 – Review Meeting for UFA Wellfield Standby Emergency Power Alternatives Analysis Draft
- Task 4 – Review Meeting for UFA Wellfield Condition Assessment and Evaluation Draft.

As part of this coordination effort, we will also work with a selected electrical contractor to perform facility grounding tests. Our estimated engineering fees for services associated with these tasks are presented below.

Engineering Fees:

Field visits to 11 facilities evaluation for task 1,2,3,4:	\$10,000.00	lump sum
Task 1: Prepare Due Diligence evaluation:	\$ 8,000.00	lump sum
Task 2: Facilities Lightning/Grounding & Testing:	\$20,000.00	lump sum
Task 3: Wellfield Emergency Power Analysis:	\$ 7,000.00	lump sum
Task 4: Wellfield Emergency Power Analysis:	\$ 7,000.00	lump sum
Task 5: Meetings and Coordination:	\$ 6,000.00	lump sum
Total Fee:	\$58,000.00	lump sum

I trust the above scope is in agreement with your needs and expectations. If you have questions or comments regarding the above, please feel free to call.

Very truly yours,

C & W Engineering Inc.



Michael Guida, P.E.

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