

**CENTRAL (GIFFORD) WASTEWATER TREATMENT PLANT
GENERATOR REPLACEMENT**

This Work Order Number 23 is entered into as of this ___ day of _____, 2022, pursuant to that certain Continuing Consulting Engineering Services Agreement for Professional Services entered into as of this 17th day of April, 2018 (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 1.4 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:
Kimley-Horn and Associates, Inc.

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

By: _____
Brian Good, P.E.

By: _____
Peter D. O'Bryan, Chairman

Print Name: _____

Title: Principal

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 #A

Indian River County Department of Utility Services Central (Gifford) Wastewater Treatment Plant Generator Replacement

PROJECT UNDERSTANDING

Indian River County Department of Utility Services (IRCDUS) owns and operates the Central (Gifford) Wastewater Treatment Plants (WWTP), which has two (2) standby generators to provide emergency backup power to maintain operations during instances of utility primary power loss. The following information is provided on the existing generators:

- Central WWTP
 - One 1,000-kW generator with 5,200-gallon aboveground diesel fuel storage tank & day tank, and
 - One (1) 365-kW generator with 2,000-gallon aboveground diesel fuel storage tank & day tank

The generators are reaching the end of their useful life and replacement is necessary. Kimley-Horn recently prepared an evaluation of the existing generators at the North, Central and South WWTPs which outlined recommendations for replacement. As part of the Central WWTP evaluation, the following recommendations were provided:

- Eliminate the existing 365-kW generator
- Replace the existing 1,000-kW generator with new, equal size unit
- Replace the two (2) existing Automatic Transfer Switches (ATS) with new
- Replace day tank and generator exhaust
- Structural modifications to facilitate replacement

The following scope is provided to prepare design documents for the proposed improvements, assist with bidding of the proposed improvements and construction phase services.

SCOPE OF SERVICES

TASK 1 – Design Phase Services

Consultant will utilize the services of C&W Engineering to provide electrical engineering professional services related to design, bid and construction phase for the proposed generator replacement.

Consultant will perform up to two (2) site visits to confirm/verify existing field conditions in preparation of the design documentation.

Consultant will prepare design documents for replacement of the existing diesel day tank and fuel piping to/from the proposed generator.

Consultant will design the replacement exhaust piping and silencer. Since IRCDUS is not on Florida Power and Light Load Shedding Agreement, the exhaust system will be standard sound attenuation and will not include SO_x/NO_x emissions reduction.

Consultant will prepare design for replacement of sound attenuation wall to be replaced as part of the generator replacement.

Consultant will develop demolition drawings for the existing 365-kW generator, diesel day tank and bulk tank.

Consultant will provide suggested phasing for the proposed improvements.

It is assumed approximately 25 sheets will be generated as part of the design documents.

Consultant will prepare preliminary deliverable review package consisting of plans, specifications and Opinion of Probable Construction Costs (OPCC) and submit to IRCDUS. Consultant will prepare finalized design documents based on IRCDUS comments and use for bidding.

Consultant will attend one (1) meeting with IRCDUS. Consultant will incorporate comments from Client, finalize and submit the documents to IRCDUS for bidding.

Task 2 – Bid Phase Services

IRC purchasing department will advertise and administer the procurement of the bidding and respond to potential bidder questions. Consultant will review IRC front-end documentation and provide comments for IRC implementation for bidding.

Consultant will attend pre-bid meeting, respond to contractor or supplier questions and prepare addendum(s), if required, which will be distributed to all the contract document holders by IRC purchasing department.

Consultant will review bids, provide a summary of comments, and a letter that identifies the lowest responsive, responsible bidder.

Task 3 – Construction Phase Services

Consultant will attend one (1) pre-construction meeting with the Client and the selected bidder.

Consultant will provide signed and sealed design documents to the Contractor for the building permit application package. Consultant will respond to reasonable number of comments during the permit application review.

Consultant will visit the site up to four (4) times during construction.

Consultant will review payment applications and change order requests. We assume that three (3) applications for payment will be submitted.

Consultant will issue clarifications and interpretations.

Consultant will review Shop Drawings and Samples. We anticipate that up to four (4) submittals will be required for review with one round of return submittals for additional review.

Consultant will review the project at the substantial completion date and develop punchlist. It is assumed that there will be a substantial completion walk through at the end of project.

Consultant will witness load-bank testing for the new generator with the Contractor and generator supplier.

Consultant will conduct final walk through upon Contractor notification that the punchlist has been completed.

Consultant will review Contractor's closeout documentation including record drawings, Operation and Maintenance Manuals, Consent of Surety, Release of Liens, and final application for payment.

SCHEDULE

Consultant will work as expeditiously as practical. The following schedule for task and project completion is provided:

Task 1:	4 - 6 months after kickoff meeting/NTP
Task 2:	2 - 3 months (pending IRCDUS procurement)
Task 3:	12 – 14 months
Total:	18 - 23 months

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 1: Design Phase Services	\$ 101,371
Task 2: Bid Phase Services	\$ 7,331
Task 3: Construction Phase Services	\$ 49,994
Total Tasks 1-3:	\$ 158,696

ADDITIONAL SERVICES

The following services can be provided as additional services under separate future task order:

- Surveying and Mapping
- Geotechnical Investigation
- Fuel Tank Design
- Coordination with property owners and recording easements for the generator installation.
- Construction Phase Services

INFORMATION PROVIDED BY OWNER

- Record drawings
- Access to WWTP site
- FPL bills

C & W engineering Inc.

Consulting Engineers – Electrical • HVAC • Plumbing

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

Revised October 06, 2022

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

Subject: Indian River County Utilities, “Gifford” Central Waste Water Plant – Main Generator and ATS Replacement, Emergency Power Feeder to Solids Building Design/Permitting/Bidding/ Construction Services – Electrical Proposal.
C&W Ref. 226607

Dear Mark:

I am pleased to submit this proposal for IRC Utilities “Gifford” Wastewater Treatment facility design phase, bidding and permitting phase, and construction phase services proposal for the replacement of the main plant ATS switch, and 1MW generator unit, also to demolish the existing Sludge facility 365kW generator, and transfer switch, provide a new ATS switch and an emergency feeder from the new 1MW generator to the Sludge plant.

Project Understanding:

1. Investigate the existing electrical system and design the replacement of the existing 1MW generator, 2000A ATS switch, provide a temporary emergency service with temporary wiring to keep the wastewater facility backed up by a rental generator unit and a temporary ATS switch.
2. Design an underground power feeder from the main electrical room/ new 1MW generator to the Solids Sludge Building ATS.
3. Provide a sequence of demolition and installation/replacement that is most efficient in keeping plant load on normal power; while minimizing the number of shut downs and the number of temporary transfers of power.
4. Replacement of existing ATS equipment and generator unit will include integration to the existing plant PLC and SCADA systems. The new equipment will be designed to provide status of ATS switch positions and any equipment alarms such as loss of

phase.

5. Provide electronic metering at center pole of ATS switch to monitor kW usage, amps, volts and frequency across the three phases and provide information to SCADA.
6. Generator replacement shall be limited to Tier 2/3 class.

Task 1 - Preparation of Design Documents Phase:

1. Coordinate with Civil, Mechanical and plant I&C the engineering and design of the proposed demolition, and replacement of the electrical emergency equipment and design of the solids building emergency underground feeder, and termination at existing switchgear/ATS equipment. Include demolition of the Solids 385kW mains switchgear plant equipment.
2. We anticipate 16 to 18 electrical drawing sheets to provide bid documents during the design phase. This shall include specifications related to the division 16 equipment covered in the design documents.
3. Design drawings shall include existing equipment electrical demolition with a demo oneline diagrams at each main and solids electrical equipment rooms, a temp power oneline, a proposed new power oneline, new ATS and switchgear modifications/upgrades needed for the new ATS switch.
4. PLC I/O status of ATS switch and main switchgear, power and control raceways, plans of electrical room demo and install, electrical equipment elevation details, and other electrical details as required.
5. Coordinate with the Civil and Structural Kimley Horn drawings for the removal of the 1MW generator. We anticipate demo and rebuilding of one of the walls to facilitate the removal and placement of the 1MW generator.
6. Electrical design sequence of demolition, temp power, and installation of new equipment. Approach will be to minimize any of the needed shut downs and keep most of the plant equipment running as demolition and installation phases are implemented.
7. Prepare Opinion of Construction costs for the proposed 60% and 90% design phase.
8. Attend review meetings during design phase for 60% and 90% document submittals.
9. Prepare final 100% documents.

Task 2 – Bidding/Permitting Phase:

1. Prepare electronic copy of documents for IRC purchasing department.
2. Attend a per-bid meeting and respond to potential bidder questions.
3. Prepare addendum items, if required.
4. Provide supporting documents as needed and respond to any reviewer comments.
5. Provide a conformed set of drawings and signed and sealed permit drawings for the building department.

Task 3 - Construction Phase:

1. Review of the equipment shop drawings, including rental equipment, and Contractor's proposed sequence of demolition, shut downs, and installation.

2. Respond to Contractor RFIs
3. Attend a per-construction meeting, provide time for up to six (6) field visits, during different stages of the construction; some visits may also include attending a progress meeting and provide an email report of visit.
4. Witness a startup and testing phase, including provide a punch of electrical items found during startup visit.
5. Provide the Owner with As-built drawings, based on Contractor redlines.

FEE SUMMARY

Task 1: Design Documents Phase:	\$60,000.00, lump sum
Task 2: Bidding/Permitting Phase:	\$ 3,000.00, lump sum
Task 3: Construction Phase:	\$26,000.00, 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 call or write.

Very truly yours,

C & W Engineering, Inc.



Michael Guida, P.E.

JLR/nl/file