

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS**

AGENDA ITEM SUMMARY

Meeting Date: June 10, 2025

Consent [X]
Public Hearing []

Regular []

Department: Water Utilities Department

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: (A) Consultant Services Authorization (CSA) No. 4 to the Consulting/Professional Electrical Instrument and Telemetry Engineering Services (Contract) with Hillers Electrical Engineering, Inc., (Hillers) for Facility Wide Short Circuit Arc Flash Study and One Line Diagram Updates (Project) for a not to exceed amount of \$396,292.93; and (B) CSA No. 1 to the Contract with Electrical Design Associates, Inc., (EDA) for the Project for a not to exceed amount of \$279,952.75.

Summary: On December 5, 2023, the Board of County Commissioners (BCC) approved the Palm Beach County Water Utilities Department (PBCWUD) Contract (R2023-1784) with Hillers and Contract (R2023-1783) with EDA, CSA No. 4 and CSA No. 1 to the respective contracts will provide for short circuit arc flash studies for the proper placement of arc flash labels to equipment and the update of electrical one line diagrams at 21 facilities across PBCWUD. The facilities are as follows: CSA 4 - Water Treatment Plant (WTP) 2, WTP 3, WTP 9, Southern Region Water Reclamation Facility (WRF), Mecca Pump Station, Central Region Operations Center (ROC), Southern ROC, Central Region WRF, and Vacuum Pump Station V-2001.; CSA 1 - WTP 8, WTP 11, Western Region Wastewater Treatment Facility, West ROC, Pump Station (PS) 5, PS 9S, PS 5229, PS 5241, PS 4100, Belle Glade Water Storage Tank (WST), South Bay WST, and Pahokee WST.

This Contract was presented to the Goal Setting Committee (Committee) on April 5, 2023 and the Committee established a minimum mandatory 20% Small Business (SBE) subcontracting goal and an SBE evaluation preference for prime bidders. Hillers committed to 100% SBE participation. The SBE proposed participation for CSA No. 4 is 100% SBE participation. To date, the overall participation achieved on this Contract is 100% SBE participation. Hillers is a Palm Beach County based company.

EDA committed to 100% SBE participation. The SBE proposed participation for CSA No. 1 is 100% SBE participation. The cumulative SBE participation including CSA No. 1 is 100% SBE participation. EDA is headquartered in Orlando, Florida, but maintains an office in Palm Beach County from which the majority of the work will be performed. The Project is included in the PBCWUD FY 2025 budget. (PBCWUD Project No. 25-002) **Countywide (MWJ)**

Background and Justification (Continued on page 3)

Attachments:

1. Two (2) Originals CSA No. 4 with Hillers Electrical Engineering, Inc.
2. Two (2) Originals CSA No. 1 with Electrical Design Associates, Inc.
3. Location Map
4. Ebix Compliance Summary Report for Hillers Electrical Engineering, Inc.
5. Ebix Compliance Summary Report for Electrical Design Associates, Inc.

Recommended By: _____

Ali Bayart
Department Director

5/2/25
Date

Approved By: _____

Del J. Scher
Assistant County Administrator

5/20/25
Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2025	2026	2027	2028	2029
Capital Expenditures	\$676,246	0	0	0	0
Operating Costs	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income (County)	0	0	0	0	0
In-Kind Match County	0	0	0	0	0
NET FISCAL IMPACT	\$676,246	0	0	0	0
# ADDITIONAL FTE POSITIONS (Cumulative)	0	0	0	0	0

Budget Account No.: Fund 4001 Dept 720 Unit 2323 Object 3120

Is Item Included in Current Budget? Yes X No

Is this item using Federal Funds? Yes No X

Is this item using State Funds? Yes No X

Reporting Category N/A

B. Recommended Sources of Funds/Summary of Fiscal Impact:

One (1) time expenditure from user fees, connection fees and balance brought forward.

C. Department Fiscal Review:

Johnny Goreman

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

Liz Mante 5/7/2025
OFMB
QA 5/7
MRE 5/7

Brenda Mack 5/8/25
Contract Development and Control

B. Legal Sufficiency:

[Signature] 5/14/25
Assistant County Attorney

C. Other Department Review:

Department Director

This summary is not to be used as a basis for payment.

Background and Justification: The intent of the arc flash study is to address the specific requirements of National Fire Protection Association (NFPA) 70 and NFPA 70E related to arc flash hazards. The arc flash study will determine the amount of thermal energy that could be generated in an arc flash incident within the various electrical equipment throughout the building using the method outlined in the Institute of Electrical and Electronics Engineers (IEEE) Standard 1584. This information will be used to define a flash protection boundary around a potential source, and to determine the level of flame-resistant apparel and other personal protection equipment required when employees cross the boundary while they work on or near live parts, as recommended by NFPA 70E. This study will also address the National Electric Code (NFPA 70) labeling requirements for warning of a potential arc flash hazard. The Project will also entail updating the existing electrical One-Line Diagrams for each facility, or creating diagrams where needed. An arc flash study is required every five (5) years.

CONSULTANT SERVICES AUTHORIZATION NO. 4
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1784 Contract Dated December 5, 2023

Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

PBCWUD Project No.: 25-002

Consultant: Hillers Electrical Engineering, Inc.

Address: 23257 State Road 7, Suite 100, Boca Raton, FL 33428

Budget Line Item No.: 4001-720-2322-3120

District No.: Countywide

This Consultant Services Authorization provides for: Performing Short Circuit, Device Coordination and Arc Flash Studies at Water Treatment Plant 2 (WTP2), Water Treatment Plant 3 (WTP 3), Water Treatment Plant 9 (WTP 9), Southern Region Water Reclamation Facility (SRWRF), Mecca Pump Station, Central Region Operations Center (CROC), Southern Region Operations Center (SROC), Central Region Reclaimed Water Facility (CRRWF), and Vacuum Pump Station V-2001.

(See ATTACHMENT A for detailed scope of services)

The Contract provides for 100% SBE participation, which includes 100% SBE participation, 100% MBE (A). This Consultant Services Authorization includes 100% overall participation which includes, 100% SBE participation, 100% MBE (A) The cumulative SBE participation, including this Consultant Services Authorization is 100%, which includes 100% SBE participation, 100% MBE (A).

1. Services completed by the Consultant to date :

See ATTACHMENT B.

2. Consultant shall begin work upon receipt of Notice to Proceed correspondence.
3. The compensation to be paid to the Consultant for providing the requested services shall be:
 - A. Computation of time charges plus expenses, not to exceed \$ 396,292.93
 - B. Fixed price of \$ 0.00
 - C. Total \$ 396,292.93
4. This Authorization may be terminated, in whole or in part, by the PBCWUD with or without cause in accordance with the Contract terms. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed to termination date, together with reimbursable expenses (if applicable) then due in accordance with the Contract terms. Consultant agrees to waive any and all claims for lost profits or anticipated future profits in the event of a termination with or without cause under this Contract.

CONSULTANT SERVICES AUTHORIZATION NO. 4
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PBCWUD Project No.: 25-002

5. SBE participation is included in **ATTACHMENT C** under this Authorization. The attached Schedule 1 defines the SBE applied to this Authorization and Schedule 2 establishes the SBE contribution from each Sub-Consultant (Letter of Intent).
6. This Authorization does not amend, change, or modify the Contract dated December 5, 2023 which remains in full force and effect.
7. All Attachments to this Authorization are incorporated herein and made a part of this Consultant Services Authorization.

CONSULTANT SERVICES AUTHORIZATION NO. 4
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1784 Contract Dated December 5, 2023

Project Title Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

PBCWUD Project No.: 25-002

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA

Joseph Abruzzo, Clerk of the Circuit Court
& Comptroller, Palm Beach County

Palm Beach County, Board
of County Commissioners

ATTEST:

Signed: _____

TM

Signed: _____

Maria G. Marino, Mayor

Typed Name: _____

Deputy Clerk

A13

(Date)

Approved as to Form and Legal
Sufficiency

Hillers Electrical Engineering, Inc.
(Consultant)

Signed: _____

Mark Luther, P.E.
(Print Name)

Typed Name: Michael W. Jones
County Attorney

Mark Luther
(Signature)

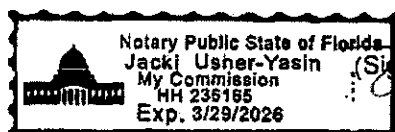
Senior Vice President
(Title)

03/26/2025
(Date)

STATE OF FLORIDA

COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization,
this 26th day of March, 2025, by Mark Luther who is ☒ personally known
to me or ☐ has produced _____ as identification.



Jacki Usher-Yasin
(Signature of Notary Public - State of Florida)

(Print, Type, or Stamp Commissioned Name of Notary Public)

CONSULTANT SERVICES AUTHORIZATION NO. 4
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1784 Contract Dated December 5, 2023

LIST OF ATTACHMENTS

ATTACHMENT A	Scope of Services
ATTACHMENT B	Summary and Status of Consultant Services Authorizations
ATTACHMENT C	OEBO Schedules 1 and 2
ATTACHMENT D	Project Schedule
ATTACHMENT E	Budget Summary
ATTACHMENT F	Summary of SBE-SBE Business Tracking
ATTACHMENT G	Location Map

Revised 06-12-24

ATTACHMENT A

SCOPE OF SERVICES

PBCWUD Project No.: 25-002

Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

CONSULTANT (Hillers Electrical Engineering, Inc.) shall perform:

Background

Background and Justification: National FireProtection Association (NFPA) 70E National Electrical Code (NEC) requires short circuit, device coordination and arc flash studies be performed on facility power distribution systems and further requires revisions after modifications are made to the system, or its components, and a general update to the study every five (5) years.

The Integrated Utility Master Plan, March 2023 (IUMP) identified needed updates to short circuit, device coordination and arc flash studies at the following Palm Beach County Water Utilities Department (PBCWUD) facilities:

- Water Treatment Plant 2 (WTP2)
- Water Treatment Plant 3 (WTP 3)
- Water Treatment Plant 9 (WTP 9)
- Southern Region Water Reclamation Facility (SRWRF)
- Mecca Pump Station
- Central Region Operations Center (CROC)
- Southern Region Operations Center (SROC)
- Central Region Reclaimed Water Facility (CRRWF)
- Vacuum Pump Station V-2001

This consultant service authorization is to provide engineering services for the required short circuit, device coordination and arc flash studies at these PBCWUD facilities.

SCOPE OF WORK

Task 1: WTP2 Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD

Revised 06-12-24

- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in portable document format (PDF) format
- Final Study Document in PDF format
- Arc Flash Labels

Task 2: WTP3 Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

Task 3: WTP9 Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Revised 06-12-24

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

Task 4: SRWRF Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in portable document format (PDF) format
- Final Study Document in PDF format
- Arc Flash Labels

Task 5: Mecca Pump Station Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis

Revised 06-12-24

- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

Task 6: CROC Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

Task 7: SROC Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Revised 06-12-24

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

Task 8: CRRWF Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting
- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

Task 9: Vacuum Station V-2001 Short Circuit Device Coordination and Arc Flash Study

Field Investigation/Data Collection

- Attend a kick-off meeting

Revised 06-12-24

- Verify available one-line diagrams
- Perform site equipment verification and data gathering for input/calibration of the study model

Model Creation/Study Analysis

- Create system model in analysis software
- Perform Short Circuit Analysis
- Perform Device Coordination Analysis
- Perform Arc Flash Hazard Analysis
- Analyze results

Draft Study Preparation

- Prepare draft study and submit to PBCWUD
- Meet with PBCWUD to review draft study

Final Study

- Incorporate review comments to report
- Prepare Final Report
- Prepare and affix Arc Flash Labels

Deliverables:

- Draft Study Document in PDF format
- Final Study Document in PDF format
- Arc Flash Labels

ATTACHMENT B

SUMMARY AND STATUS OF CONSULTANT SERVICES AUTHORIZATIONS

[illegible]

ATTACHMENT C

OEBO SCHEDULE 1

Office of Equal Business Opportunity Compliance Programs

Revised 06-12-24

OEBO SCHEDULE 1

SOLICITATION/PROJECT/BID NAME: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update
SOLICITATION OPENING/SUBMITTAL DATE: N/A

SOLICITATION/PROJECT/BID NO.: 25-002
COUNTY DEPARTMENT: Palm Beach County Water Utilities Department

Section A PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT* ON THE PROJECT:

NAME OF PRIME RESPONDENT/BIDDER: Hillers Electrical Engineering, Inc. ADDRESS: 23257 State Road 7, Suite 100, Boca Raton, FL 33428

CONTACT PERSON: Mark Luther PHONE NO.: 561-451-9165 E-MAIL: mluther@hillersee.com

PRIME'S DOLLAR AMOUNT OR PERCENTAGE OF WORK: \$396,292.93 (100%)
*SMWBE Prime's must include their percentage or dollar amount in the Total Participation line under section B.
Non-SBE ☐ MBE ☒ WBE ☐ SBE ☒

Section B PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT BELOW:

Subcontractor/Sub consultant Name	(Check all Applicable Categories)				DOLLAR AMOUNT OR PERCENTAGE OF WORK					
	Non-SBE	MBE	WBE	SBE	Black	Hispanic	Women	Caucasian	Asian	Other
		Minority Business	Women Business	Small Business						
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

(Please use additional sheets if necessary)
Total \$396,292.93

Total Bid/Offer Price \$ 396,292.93
Total Certified S/M/WBE Participation \$ 396,292.93

I hereby certify that the above information is accurate to the best of my knowledge: Mark Luther Mark Luther Senior Vice President
Name & Authorized Signature Title

- Note:
- 1. The amount listed on this form for a Subcontractor/sub consultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
 - 2. Only those firms certified by Palm Beach County at the time of solicitation due date are eligible to meet the established OEBO Affirmative Procurement Initiative (API). Please check the applicable box and list the dollar amount or percentage under the appropriate demographic category.
 - 3. Modification of this form is not permitted and will be rejected upon submittal.
 - 4. If a Mandatory API goal applies, failure to submit a properly executed Schedule 2 will result in a determination of non-responsiveness to the solicitation.



ATTACHMENT C

OEBO SCHEDULE 2

Office of Equal Business Opportunity Compliance Programs

Revised 06-12-24

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. If a Mandatory API goal applies, failure to submit a properly executed Schedule 2 will result in a determination of non-responsiveness to the solicitation. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: 25-002

SOLICITATION/PROJECT NAME: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

Prime Contractor: Hillers Electrical Engineering, Inc. Subcontractor: Hillers Electrical Engineering, Inc.

(Check box(s) that apply)

☒ SBE ☐ WBE ☒ MBE ☐ M/WBE ☐ Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 10/17/2024 - 10/16/2027

The undersigned affirms they are the following (select one from each column if applicable):

Column 1

Column 2

Column 3

☒ Male ☐ Female

☐ African-American/Black ☒ Asian American ☐ Caucasian American

☐ Supplier

☐ Hispanic American ☐ Native American

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. When applicable, identify the line item(s) associated with the service/product being supplied. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed quote/proposal may be attached to a properly executed Schedule 2 for additional information.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	Electrical Engineering Services	\$396,292.93	1		\$396,292.93

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$396,292.93

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A

Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage:

Hillers Electrical Engineering, Inc.

Print Name of Prime

By:

Authorized Signature

Mark Luther, PE

Print Name

Senior Vice President

Title

Date: 3/26/2025

Hillers Electrical Engineering, Inc.

Print Name of Subcontractor/subconsultant

By:

Authorized Signature

Mark Luther, PE

Print Name

Senior Vice President

Title

Date: 3/26/2025



If you have experienced or witnessed a violation of the EEO Ordinance or would like to file a complaint, please scan the QR Code

Revised 09/26/2024

PROJECT SCHEDULE

Engineering Services

(Calendar Days)

Revised 06-12-24

**ATTACHMENT E
BUDGET SUMMARY**

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services for Electrical Instrumentation and Telemetry Engineering Services
Resolution No.: R2023-1784 Contract Dated: December 5, 2023
Consultant Services Authorization No.: 4
Consultant: Hillers Electrical Engineering, Inc.
Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update
PBCWUD Project No.: 25-002

Task Number	Task Description	Labor Classification and Hourly Rate								Sub Consultant
		Project	Prof.	Lead	CADD/		Construction	Administrative	Total	
		Manager	Engineer	Engineer	Technician	Programmer	Coordinator	Assistant	Labor	
Task 1	WTP2 Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		24			24		\$8,566.71	
	Model Update/Study Analysis	6	40						\$9,143.06	
	Draft Study Preparation	6	40		25			3	\$12,626.41	
	Final Final Study	4	20		12			3	\$6,631.58	
	Affix Arc Flash Labels	4		24			24		\$8,566.71	
	Subtotal Task 1	24	100	48	37	0	48	6	\$45,534.47	
Task 2	WTP3 Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		24			24		\$8,566.71	
	Model Update/Study Analysis	6	45						\$10,099.66	
	Draft Study Preparation	6	55		20			3	\$14,853.96	
	Final Final Study	4	30		10			3	\$8,288.04	
	Affix Arc Flash Labels	4		24			24		\$8,566.71	
	Subtotal Task 2	24	130	48	30	0	48	6	\$50,375.28	
Task 3	WTP9 Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	8		32			32		\$12,083.91	
	Model Update/Study Analysis	8	40						\$9,639.28	
	Draft Study Preparation	6	45		20			3	\$12,940.36	
	Final Final Study	4	30		18			3	\$9,316.60	
	Affix Arc Flash Labels	4		32			32		\$11,091.46	
	Subtotal Task 3	30	115	64	38	0	64	6	\$55,071.61	
Task 4	SRWRF Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		48			48		\$16,140.98	
	Model Update/Study Analysis	6	40						\$9,143.06	
	Draft Study Preparation	6	55		12			3	\$13,825.40	
	Final Final Study	4	15		10			3	\$5,417.64	
	Affix Arc Flash Labels			48			48		\$15,148.54	
	Subtotal Task 4	20	110	96	22	0	96	6	\$59,675.62	
Task 5	Mecca Pump Station Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		8			8		\$3,517.20	
	Model Creation/Study Analysis	4	24						\$5,585.08	

Task 6	Draft Study Preparation	6	24		12			3	\$7,893.24	
	Final Final Study	4	12		9			3	\$4,714.99	
	Affix Arc Flash Labels			8			8		\$2,524.76	
	Subtotal Task 6	18	60	16	21	0	16	6	\$24,235.27	
	CROG Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	8		32			32		\$12,083.91	
	Model Creation/Study Analysis	8	60						\$13,466.48	
	Draft Study Preparation	8	55		25			3	\$15,993.03	
	Final Final Study	6	30		20			3	\$10,069.96	
	Affix Arc Flash Labels			32			32		\$10,099.02	
Task 7	Subtotal Task 6	30	145	64	45	0	64	6	\$61,712.40	
	CROG Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	8		32			32		\$12,083.91	
	Model Creation/Study Analysis	8	55						\$12,509.68	
	Draft Study Preparation	8	50		25			3	\$15,036.23	
	Final Final Study	6	30		20			3	\$10,069.96	
	Affix Arc Flash Labels			32			32		\$10,099.02	
	Subtotal Task 7	30	135	64	45	0	64	6	\$59,798.80	
	CRRWF Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		8			8		\$3,517.20	
Task 8	Model Update/Study Analysis	4	15						\$3,862.84	
	Draft Study Preparation	4	12		8			3	\$4,586.42	
	Final Final Study	4	8		6			3	\$3,563.84	
	Affix Arc Flash Labels			8			8		\$2,524.76	
	Subtotal Task 8	16	35	16	14	0	16	6	\$18,055.06	
	Vacuum Station V-2001 Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		8			8		\$3,517.20	
	Model Creation/Study Analysis	4	24					3	\$5,854.18	
	Draft Study Preparation	4	20		10			3	\$6,374.44	
	Final Final Study	4	8		6			3	\$3,563.84	
Task 9	Affix Arc Flash Labels			8			8		\$2,524.76	
	Subtotal Task 8	16	52	16	16	0	16	9	\$21,834.42	
	Vacuum Station V-2001 Short Circuit Device Coordination and Arc Flash Study									
	Field Investigations/Data Collection	4		8			8		\$3,517.20	
	Model Creation/Study Analysis	4	24					3	\$5,854.18	
	Draft Study Preparation	4	20		10			3	\$6,374.44	
	Final Final Study	4	8		6			3	\$3,563.84	
	Affix Arc Flash Labels			8			8		\$2,524.76	
	Subtotal Task 9	16	52	16	16	0	16	9	\$21,834.42	
	Labor Subtotal Hours	208	882	432	258	0	432	57		
	Labor Raw Costs	\$82.98	\$64.00	\$54.37	\$43.00	\$50.00	\$51.18	\$30.00		
	Labor Multiplier	2.99	2.99	2.99	2.99	2.99	2.99	2.99		
	Labor Total	\$51,606.92	\$168,779.52	\$70,228.64	\$34,456.78	\$0.00	\$66,108.16	\$5,112.80		
	Sub Consultant Labor Total									
	Sub Consultant Multiplier									
	Subcontract Total									
	Project Total								\$396,282.93	

ATTACHMENT F

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1784 Contract Dated December 5, 2023

**SUMMARY OF
SBE-SBE BUSINESS TRACKING**

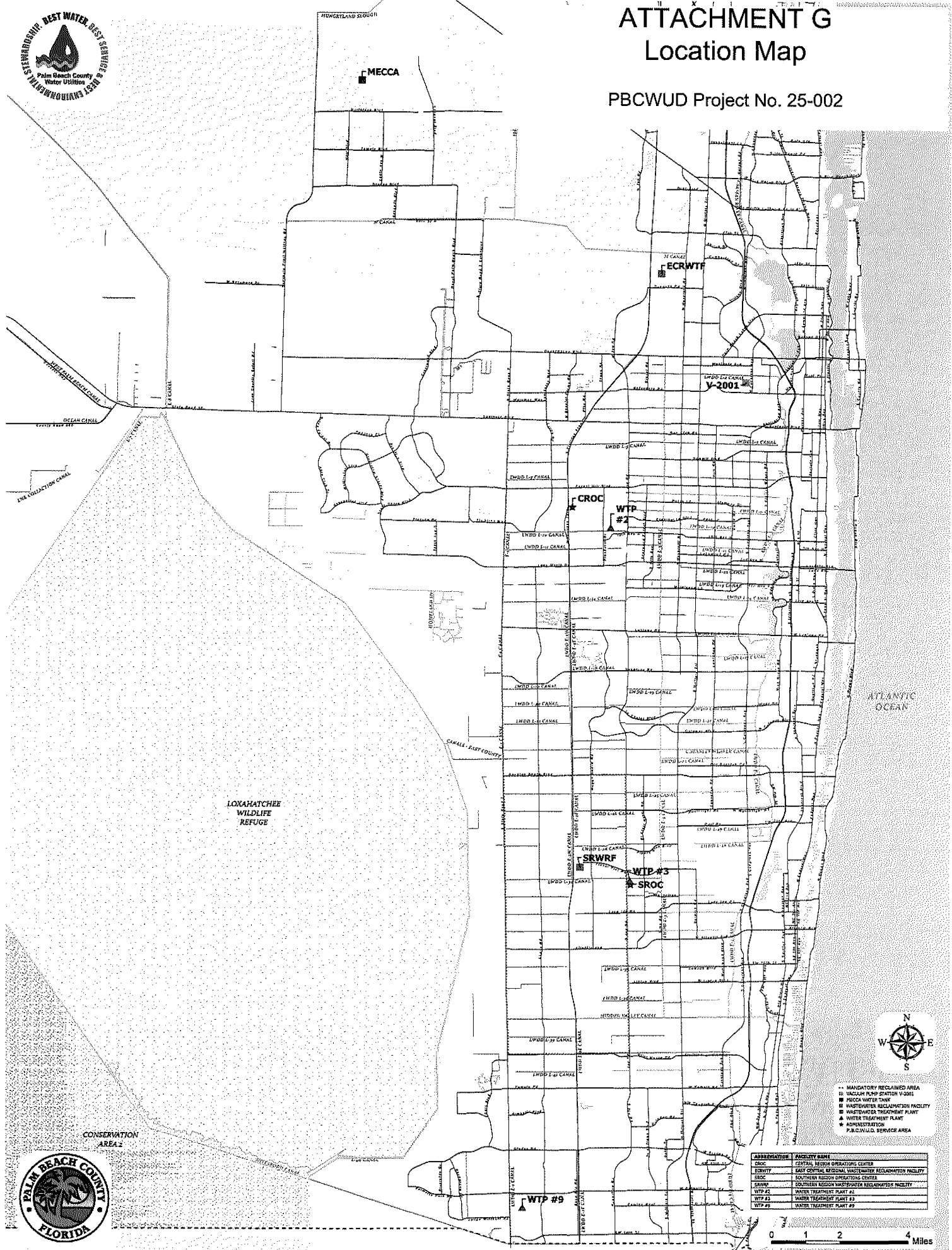
Master Contract Goals	SBE: 100%	MBE: 100%	MBE (A): 100%
Current Proposal			
Value of Authorization No. <u>4</u>	\$396,292.93	\$	\$
Value of SBE-SBE Letters of Intent	\$396,292.93	\$396,292.93	\$396,292.93
Actual Percentage	100%	100%	100%
Signed/Approved Authorizations			
Total Value of Authorizations	\$132,489.20	\$0	\$0
Total Value of SBE-SBE Signed Subcontractors	\$132,489.20	\$132,489.20	\$132,489.20
Actual Percentage	100%	100%	100%
Signed/Approved Authorizations Plus Current Proposal			
Total Value of Authorization	\$528,782.13	\$	\$
Total Value of Subcontractors & Letters of Intent	\$528,782.13	\$528,782.13	\$528,782.13
Actual Percentage	100%	100%	100%



ATTACHMENT G

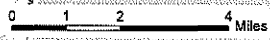
Location Map

PBCWUD Project No. 25-002



- MANDATORY RECLAIMED AREA
- VACUUM PUMP STATION V-2001
- WPCO WATER TANK
- WASTEWATER RECLAMATION FACILITY
- WASTEWATER TREATMENT PLANT
- ▲ WATER TREATMENT PLANT
- ★ ADMINISTRATION
- P.B.C. WUD SERVICE AREA

ABBREVIATION	FACILITY NAME
CROC	CENTRAL REGION OPERATIONS CENTER
ECRWTF	EAST CENTRAL REGIONAL WASTEWATER RECLAMATION FACILITY
SRWRF	SOUTHERN REGION OPERATIONS CENTER
SROC	SOUTHERN REGION WASTEWATER RECLAMATION FACILITY
WTP #2	WATER TREATMENT PLANT #2
WTP #3	WATER TREATMENT PLANT #3
WTP #9	WATER TREATMENT PLANT #9



CONSULTANT SERVICES AUTHORIZATION NO. 1
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1783 Contract Dated December 5, 2023

Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

PBCWUD Project No.: 25-002

Consultant: Electrical Design Associates, Inc.

Address: 7284 West Palmetto Park Road, Suite 302-S, Boca Raton, Florida 33433

Budget Line Item No.: 4001-720-2322-3120

District No.: Countywide

This Consultant Services Authorization provides for: professional engineering services to provide short circuit and arc flash hazard studies for Water Treatment Plant No. 8 (WTP 8), Water Treatment Plant No. 11 (WTP 11), Western Region Waste Water Treatment Facility(WRWWTP), Western Region Operations Center (WROC), Lift Station No. 5 (PS 5 or LS0005), Lift Station No. 9S (PS 9S or LS0009S), Lift Station No. 5229 (PS 5229 or LS5229), Lift Station No. 5241 (PS 5241 or LS5241), Lift Station No. 4100 (PS 4100 or LS4100), Belle Glade 1.0 Million Gallon Ground Storage Tank (1 MG GST), South Bay 1.0 Million Gallon Ground Storage Tank (1 MG GST), and Pahokee Elevated Storage Tank (EST) for Palm Beach County Water Utilities Department (PBCWUD).

(See **ATTACHMENT A** for detailed scope of services)

The Contract provides for 100% SBE participation, which includes 100% MBE participation, 100% MBE (B). This Consultant Services Authorization includes 100% overall participation which includes, 0.00% MBE participation, 100% MBE (B). The cumulative SBE participation, including this Consultant Services Authorization is 100%, which includes 100% MBE participation, 100% MBE (B).

1. Services completed by the Consultant to date :

See ATTACHMENT B.

2. Consultant shall begin work upon receipt of Notice to Proceed correspondence.
3. The compensation to be paid to the Consultant for providing the requested services shall be:
 - A. Computation of time charges plus expenses, not to exceed \$279,952.75
 - B. Fixed price of \$0.00
 - C. Total \$279,952.75
4. This Authorization may be terminated, in whole or in part, by the PBCWUD with or without cause in accordance with the Contract terms. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed to termination date, together with reimbursable expenses (if applicable) then due in accordance with the Contract terms. Consultant agrees to waive any and all claims for lost profits or anticipated future profits in the event of a termination with or without cause under this Contract.

CONSULTANT SERVICES AUTHORIZATION NO. 1
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1783 Contract Dated December 5, 2023

Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

PBCWUD Project No.: 25-002

5. SBE participation is included in **ATTACHMENT C** under this Authorization. The attached Schedule 1 defines the SBE applied to this Authorization and Schedule 2 establishes the SBE contribution from each Sub-Consultant (Letter of Intent).
6. This Authorization does not amend, change, or modify the Contract dated December 5, 2023 which remains in full force and effect.
7. All Attachments to this Authorization are incorporated herein and made a part of this Consultant Services Authorization.

CONSULTANT SERVICES AUTHORIZATION NO. 1
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1783 Contract Dated December 5, 2023

Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

PBCWUD Project No.: 25-002

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA

Joseph Abruzzo, Clerk of the Circuit Court
& Comptroller, Palm Beach County

Palm Beach County, Board
of County Commissioners

ATTEST:

Signed: _____

Typed Name: _____
Deputy Clerk

DM

Signed: _____
Maria G. Marino, Mayor

A13

(Date)

Approved as to Form and Legal
Sufficiency

Signed: _____

Typed Name: Michael W. Jones
County Attorney

Electrical Design Associates, Inc.
(Consultant)

Dameion Donaldson, P.E.
(Print Name)

(Signature)

President
(Title)

04/09/2025
(Date)

STATE OF FLORIDA

COUNTY OF Palm Beach County

The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization,
this 9th day of April, 2025, by Dameion Donaldson who is ☒
personally known to me or ☐ has produced _____ as identification.

Karen R. O'Connor
(Signature of Notary Public - State of Florida)



Karen O'Connor
(Print, Type, or Stamp Commissioned Name of Notary Public)

CONSULTANT SERVICES AUTHORIZATION NO. 1
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Electrical Instrumentation and Telemetry Engineering Services
Resolution No. R2023-1783 Contract Dated December 5, 2023

LIST OF ATTACHMENTS

ATTACHMENT A	Scope of Services
ATTACHMENT B	Summary and Status of Consultant Services Authorizations
ATTACHMENT C	OEBO Schedules 1 and 2
ATTACHMENT D	Project Schedule
ATTACHMENT E	Budget Summary
ATTACHMENT F	Summary of SBE-M/WBE Business Tracking
ATTACHMENT G	Location Map

ATTACHMENT A

SCOPE OF SERVICES

PBCWUD Project No.: 25-002

Project Title: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

Electrical Design Associates, Inc. (CONSULTANT) shall perform:

INTRODUCTION

Palm Beach County (COUNTY) entered into an agreement entitled Electrical Instrumentation and Telemetry Engineering Services – Palm Beach County Water Utilities Department (PBCWUD) Project No. 25-002 (CONTRACT) with CONSULTANT to provide engineering services for various general activities (Resolution Number R2023-1783). This Consultant Services Authorization will be performed under that CONTRACT.

SCOPE OF SERVICES

Background:

It is our understanding that the PBCWUD wants to provide updated/new arc flash labels for the existing electrical equipment at several of its facilities. These existing facilities include:

1. Water Treatment Plant No. 8 (WTP 8)
2. Water Treatment Plant No. 11 (WTP 11)
3. Western Region Waste Water Treatment Facility (WRWWTF)
4. Western Region Operations Center (WROC)
5. Lift Station No. 5 (PS 5 or LS0005)
6. Lift Station No. 9S (PS 9S or LS0009S)
7. Lift Station No. 5229 (PS 5229 or LS5229)
8. Lift Station No. 5241 (PS 5241 or LS5241)
9. Lift Station No. 4100 (PS 4100 or LS4100)
10. Belle Glade 1.0 Million Gallon Ground Storage Tank (1 MG GST)
11. South Bay 1.0 Million Gallon Ground Storage Tank (1 MG GST)
12. Pahokee Elevated Storage Tank (EST)

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WTP 11 and WROC are powered/connected to the same main power distribution system. Therefore, these two sites will be included under one report.

The goal of the arc flash analysis is to address the specific requirements of National Fire Protection Association (NFPA) 70, National Fire Protection Association (NFPA) 70E, and Institute of Electrical and Electronics Engineers (IEEE)-1584 related to arc flash hazards. The arc flash analysis will determine potential arc flash incident energies, arc flash boundaries, shock hazard boundaries, and proper personal protective equipment (PPE) required. A Short Circuit, Device Coordination and Arc Flash Study will be performed and will include:

1. The development of an up-to-date electrical system one-line diagram and model that represents the installed electrical system.
2. Determination of possible system operating modes and conditions that can impact short circuit currents and arc flash hazard energy levels.
3. Short circuit and equipment duty study to verify that equipment is rated to safely handle short circuit currents without creating hazardous conditions.
4. Protective device coordination study and analysis to help ensure proper electrical system reliability and to determine if arc flash hazard energy levels can be reduced.
5. Arc flash hazard assessment for locations and/or equipment where workers are exposed to the risk.
6. Provide arc flash labels to comply with National Electrical Code (NEC) 110.16 labeling requirements.
7. The Short Circuit, Device Coordination and Arc Flash Study will be performed by computer using SKM System Analysis, Inc. *PowerTools for WINDOWS* software.

SCOPE OF WORK:

Our scope of work will include the following tasks:

Task 1.0 - Project Management:

1. Project Status Updates/Coordination:
 - a. Project Status Updates: CONSULTANT shall prepare monthly Project Summary Report and monthly invoice. The report will summarize the project progress to date, work performed over the previous month, work anticipated for the upcoming month, outstanding items, and summary of pertinent decisions, recommendations and scope changes. The estimate is based on ten (10) Project Summary Reports and monthly invoices.
 - b. Project Coordination: CONSULTANT shall perform project coordination and communication throughout the project.
 - c. Project Meetings: CONSULTANT shall attend four (4) – (one every two months) project meetings throughout the project to obtain input and comments from PBCWUD and inform PBCWUD on the progress of the project.

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2. Kick-Off Meeting:

- a. CONSULTANT shall attend a Kick-Off Meeting with PBCWUD for the purpose of verifying PBCWUD's goals and objectives, coordinating and establishing a working schedule.

3. Review Meeting:

- a. CONSULTANT shall attend a review meeting with PBCWUD following the power system submittals.

Task 2.0 – WTP 8:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating two (2) site visits (2 days).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

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c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:

1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 3.0 – WTP 11 & WROC (Same Power Distribution System):

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution

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systems for development of the Figures (single line diagrams).

- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating two (2) site visits (2 days).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 - 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 - 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
 - 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

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3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 4.0 – WRWWTF:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating two (2) site visits (2 days).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing

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power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

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Task 5.0 – PS 5:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:

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- a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
- 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.
- 3. Draft Study Preparation:
 - a. CONSULTANT shall prepare the draft report for the study.
- 4. Final Study:
 - a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.
- 5. Affix Arc Flash Labels:
 - a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
 - b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
 - c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 6.0 – PS 9S:

- 1. Data Collection/Field Investigation:
 - a. Data Collection and Review:
 - i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
 - ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
 - iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.
 - b. Field Investigation:
 - i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site

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and open the panels for review.

- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 - 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 - 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
 - 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined

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from the Short Circuit, Device Coordination, and Arc Flash Study.

- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 7.0 – PS 5229:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:

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1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.
3. Draft Study Preparation:
 - a. CONSULTANT shall prepare the draft report for the study.
4. Final Study:
 - a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.
5. Affix Arc Flash Labels:
 - a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
 - b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
 - c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 8.0 – PS 5241:

1. Data Collection/Field Investigation:
 - a. Data Collection and Review:
 - i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
 - ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
 - iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

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b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

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4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 9.0 – PS 4100:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault

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current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 10.0 – Belle Glade 1 MG GST:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power

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system studies, shop drawings, and data sheets).

- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 - 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 - 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.

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3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

Task 11.0 – South Bay 1 MG GST:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

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- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.
- b. Florida Power and Light Company (FPL) Coordination:
 - i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.
- c. Short Circuit, Device Coordination, and Arc Flash Study:
 - i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 - 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 - 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:
 - a. CONSULTANT shall perform a Short Circuit Study.
 - b. CONSULTANT shall perform a Protective Device Evaluation Study.
 - c. CONSULTANT shall perform a Protective Device Coordination Study.
 - 3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.
- 3. Draft Study Preparation:
 - a. CONSULTANT shall prepare the draft report for the study.
- 4. Final Study:
 - a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.
- 5. Affix Arc Flash Labels:
 - a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
 - b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
 - c. CONSULTANT shall install Arc Flash labels to the required equipment.

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Task 12.0 – Pahokee EST:

1. Data Collection/Field Investigation:

a. Data Collection and Review:

- i. CONSULTANT will collect and review available documents for the existing facility as provided by PBCWUD (e.g. record drawings, previous power system studies, shop drawings, and data sheets).
- ii. CONSULTANT will visit the facility to observe the existing power distribution systems for development of the Figures (single line diagrams).
- iii. For budget purposes we are estimating one (1) site visit to observe/verify the existing power distribution systems for the facility.

b. Field Investigation:

- i. CONSULTANT shall perform a site investigation and obtain all data necessary to perform the study. This includes feeder cable sizes, approximate feeder lengths, motor data, transformer nameplates, panel and circuit breaker types, protective relay/breaker settings, and any other information relevant to the study. It is our understanding that a representative from PBCWUD will accompany CONSULTANT to the site and open the panels for review.
- ii. For budget purposes we are estimating one (1) site visit (1 day).

2. Model Update/Study Analysis:

a. Single Line Diagrams Development:

- i. CONSULTANT will develop single line diagrams depicting the existing power distribution systems for the existing facility for use with preparing the power system study.

b. Florida Power and Light Company (FPL) Coordination:

- i. CONSULTANT shall coordinate with FPL to obtain the available fault current information for the facility that will be utilized in the power system study.

c. Short Circuit, Device Coordination, and Arc Flash Study:

- i. CONSULTANT shall provide a Short Circuit, Device Coordination, and Arc Flash Study for the existing electrical distribution systems at the facility. The study shall be based on the following:
 1. CONSULTANT shall utilize the single line diagrams prepared under the subtask above to create and model one-line diagrams of each electrical distribution system using SKM computer software.
 2. Short Circuit Study and Protective Device Evaluation/Coordination Study:

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- a. CONSULTANT shall perform a Short Circuit Study.
- b. CONSULTANT shall perform a Protective Device Evaluation Study.
- c. CONSULTANT shall perform a Protective Device Coordination Study.

3. Arc Flash Evaluation Study: CONSULTANT shall perform a Arc Flash Evaluation Study.

3. Draft Study Preparation:

- a. CONSULTANT shall prepare the draft report for the study.

4. Final Study:

- a. CONSULTANT shall prepare the final report for the study based on comment from PBCWUD.

5. Affix Arc Flash Labels:

- a. CONSULTANT shall adjust/verify device settings based on settings determined from the Short Circuit, Device Coordination, and Arc Flash Study.
- b. CONSULTANT shall prepare electronic Portable Document Format (PDF) of Arc Flash Hazard Labels and provide operation procedures to PBCWUD for safe electrical system maintenance.
- c. CONSULTANT shall install Arc Flash labels to the required equipment.

DELIVERABLES:

- 1. Short Circuit, Device Coordination, and Arc Flash Study/Report. Each Arc Flash study shall include representation of the calculation methods and tabulations, and a one-line drawing of all identifying equipment included in the study.
- 2. CONSULTANT shall submit one (1) electronic copy of each study/report in PDF format. All reproduction shall be completed by others.
- 3. CONSULTANT shall affix permanent adhesive non-fading labeling indicating the equipment ID number and required information as required by NFPA 70E.

ASSUMPTIONS:

- 1. PBCWUD staff will be available to assist with access to equipment as well as to execute de-energizing of equipment to facilitate confirmation of loads served as well as to collect equipment and cable information.
- 2. PBCWUD staff will work with CONSULTANT staff to implement setting changes identified in CONSULTANT's reports that PBCWUD elects to have implemented.
- 3. Injection testing/commissioning of relays is not included.

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ATTACHMENT B

SUMMARY AND STATUS OF CONSULTANT SERVICES AUTHORIZATIONS

[illegible]

ATTACHMENT C

OEBO SCHEDULE 1

Office of Equal Business Opportunity Compliance Programs

OEBO SCHEDULE 1

SOLICITATION/PROJECT/BID NAME: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update
SOLICITATION OPENING/SUBMITTAL DATE: N/A

SOLICITATION/PROJECT/BID NO.: 25-002
COUNTY DEPARTMENT: Water Utilities Department

Section A PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT* ON THE PROJECT:

NAME OF PRIME RESPONDENT/BIDDER: Electrical Design Associates, Inc. ADDRESS: 7248 West Palmetto Park Road, Suite 302-S, Boca Raton, FL 33433
CONTACT PERSON: Dameion Donaldson, P.E. PHONE NO.: 561-819-5556 E-MAIL: DDONALDSON@GOEDA.COM
PRIME'S DOLLAR AMOUNT OR PERCENTAGE OF WORK: \$279,952.75
Non-SBE ☐ MBE ☒ WBE ☐ SBE ☒
*SMWBE Prime's must include their percentage or dollar amount in the Total Participation line under section B.

Section B PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT BELOW:

Subcontractor/Sub consultant Name	(Check all Applicable Categories)				DOLLAR AMOUNT OR PERCENTAGE OF WORK					
	Non-SBE	MBE	WBE	SBE	Black	Hispanic	Women	Caucasian	Asian	Other
		Minority Business	Women Business	Small Business						
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

(Please use additional sheets if necessary)

Total

Total Bid/Offer Price \$ \$279,952.75

Total Certified S/M/WBE Participation \$ \$279,952.75

I hereby certify that the above information is accurate to the best of my knowledge: Dameion Donaldson [Signature] President
Name & Authorized Signature Title

- Note:
- The amount listed on this form for a Subcontractor/sub consultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
 - Only those firms certified by Palm Beach County at the time of solicitation due date are eligible to meet the established OEBO Affirmative Procurement Initiative (API). Please check the applicable box and list the dollar amount or percentage under the appropriate demographic category.
 - Modification of this form is not permitted and will be rejected upon submittal.
 - If a Mandatory API goal applies, failure to submit a properly executed Schedule 2 will result in a determination of non-responsiveness to the solicitation.



ATTACHMENT C

OEBO SCHEDULE 2

Office of Equal Business Opportunity Compliance Programs

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OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. If a Mandatory API goal applies, failure to submit a properly executed Schedule 2 will result in a determination of non-responsiveness to the solicitation. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: PBCWUD 25-002

SOLICITATION/PROJECT NAME: Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update

Prime Contractor: Electrical Design Associates, Inc. Subcontractor: N/A

(Check box(s) that apply)

☒ SBE ☐ WBE ☒ MBE ☐ M/WBE ☐ Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 06/07/24-06/06/27

The undersigned affirms they are the following (select one from each column if applicable):

Column 1

Column 2

Column 3

☒ Male ☐ Female ☒ African-American/Black ☐ Asian American ☐ Caucasian American ☐ Supplier
☐ Hispanic American ☐ Native American

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. When applicable, identify the line item(s) associated with the service/product being supplied. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed quote/proposal may be attached to a properly executed Schedule 2 for additional information.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
9.01/9.03	Electrical Engineering				100%

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: 100%

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage: _____

Electrical Design Associates, Inc.

Print Name of Prime

By: _____

Authorized Signature

Dameion Donaldson, P.E.

Print Name

President

Title

Date: April 9, 2025

Electrical Design Associates, Inc.

Print Name of Subcontractor/subconsultant

By: _____

Authorized Signature

Dameion Donaldson, P.E.

Print Name

President

Title

Date: April 9, 2025



If you have experienced or witnessed a violation of the EBO Ordinance or would like to file a complaint, please scan the QR Code

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ATTACHMENT D

PROJECT SCHEDULE

The completion dates for this work will be as follows (starting from CONSULTANT'S receipt of Notice to Proceed).

<u>Engineering Services</u>		<u>Completion Date from Notice to Proceed</u> (Calendar Days)
Task 1.0	Preliminary Phase	90 Days
Tasks 2.0 – 12.0	Short Circuit, Device Coordination, and Arc Flash Studu and One Line Diagram Update	210 Days
PBCWUD Review		240 Days
Final Report		300 Days

ATTACHMENT E
BUDGET SUMMARY

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services:
Resolution No.:
Contract Dated:
Consultant Services Authorization No.:
Consultant:
Project Title:
PBCWUD Project No.:

Electrical, Instrumentation and Telemetry Engineering Services
R2023-1783
December 5, 2023
1
Electrical Design Associates, Inc.
Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update
25-002

Task No.	Task Description	Labor Classification and Hourly Rate											Sub Consultant Services	TASK TOTAL
		Principal	Senior Electrical Engineer	Engineer	Senior Associate	Electrical Designer	Field Supervisor	CADD Technician	Clerical/Admin	Total Labor	Mileage (\$0.655/mt)	ODC		
1.0	Project Management													
1.1	Data Collection/Review													
1.1.a	Project Status Updates		40						10					\$ 8,871.30
1.1.b	Project Coordination		60											\$ 12,006.00
1.1.c	Project Meetings		16	16										\$ 5,664.32
1.2	Kick-Off Meeting		4											\$ 800.40
1.3	Review Meeting		8											\$ 1,600.80
	Subtotal Task 1.0	0	128	16	0	0	0	0	10	154.0	\$ -	\$ -	\$ -	\$ 28,942.82
2.0	WTP 8													
2.1	Data Collection/Field Investigation													
2.1.a	Data Collection/Review	1	8	4				2	1					\$ 2,770.89
2.1.b	Field Investigation		16				16							\$ 4,972.80
2.2	Model Update/Study Analysis													
2.2.a	Single Line Diagrams Development	1	6	2				16						\$ 3,633.72
2.2.b	FPL Coordination		2											\$ 400.20
2.2.c	Short Circuit, Device Coordination, and Arc Flash Study	4	36	24										\$ 11,821.20
2.3	Draft Study Preparation	2	16	10										\$ 5,202.56
2.4	Final Study	1	4	2										\$ 1,339.12
2.5	Affix Arc Flash Labels	1	8				8							\$ 2,717.28
	Subtotal Task 2.0	10	96	42	0	0	24	18	1	191.0	\$ -	\$ -	\$ -	\$ 32,857.77
3.0	WTP 11 & WROC													
3.1	Data Collection/Field Investigation													
3.1.a	Data Collection/Review	1	8	4				2	1					\$ 2,770.89
3.1.b	Field Investigation		16				16							\$ 4,972.80
3.2	Model Update/Study Analysis													
3.2.a	Single Line Diagrams Development	1	6	2				16						\$ 3,633.72
3.2.b	FPL Coordination		2											\$ 400.20
3.2.c	Short Circuit, Device Coordination, and Arc Flash Study	4	36	24										\$ 11,821.20

3.3	Draft Study Preparation		2	16	10										\$	5,202.56
3.4	Final Study		1	4	2										\$	1,339.12
3.5	Affix Arc Flash Labels		1	8				8							\$	2,717.28
Subtotal Task 3.0			10	96	42	0	0	24	18	1	191.0	\$	-	\$	-	\$ - \$ 32,857.77
4.0	WRWWTP															
4.1	Data Collection/Field Investigation															
4.1.a	Data Collection/Review		1	8	4				2	1					\$	2,770.89
4.1.b	Field Investigation			16				16							\$	4,972.80
4.2	Model Update/Study Analysis															
4.2.a	Single Line Diagrams Development		1	6	2				16						\$	3,633.72
4.2.b	FPL Coordination			2											\$	400.20
4.2.c	Short Circuit, Device Coordination, and Arc Flash Study		4	36	24										\$	11,821.20
4.3	Draft Study Preparation		2	16	10										\$	5,202.56
4.4	Final Study		1	4	2										\$	1,339.12
4.5	Affix Arc Flash Labels		1	8				8							\$	2,717.28
Subtotal Task 4.0			10	96	42	0	0	24	18	1	191.0	\$	-	\$	-	\$ - \$ 32,857.77
5.0	PS 5															
5.1	Data Collection/Field Investigation															
5.1.a	Data Collection/Review		1	4	2				1	1					\$	1,544.25
5.1.b	Field Investigation			8				8							\$	2,486.40
5.2	Model Update/Study Analysis															
5.2.a	Single Line Diagrams Development		1	4	2				8						\$	2,286.32
5.2.b	FPL Coordination			2											\$	400.20
5.2.c	Short Circuit, Device Coordination, and Arc Flash Study		2	20	16										\$	6,926.48
5.3	Draft Study Preparation		1	10	8										\$	3,155.40
5.4	Final Study		1	2	2										\$	938.92
5.5	Affix Arc Flash Labels		1	4				4							\$	1,474.08
Subtotal Task 5.0			7	54	28	0	0	12	9	1	111.0	\$	-	\$	-	\$ - \$ 19,212.05
6.0	PS 9S															
6.1	Data Collection/Field Investigation															
6.1.a	Data Collection/Review		1	4	2				1	1					\$	1,544.25
6.1.b	Field Investigation			8				8							\$	2,486.40
6.2	Model Update/Study Analysis															
6.2.a	Single Line Diagrams Development		1	4	2				8						\$	2,286.32
6.2.b	FPL Coordination			2											\$	400.20
6.2.c	Short Circuit, Device Coordination, and Arc Flash Study		2	22	18										\$	7,634.52
6.3	Draft Study Preparation		1	12	8										\$	3,863.44
6.4	Final Study		1	2	2										\$	938.92
6.5	Affix Arc Flash Labels		1	4				4							\$	1,474.08
Subtotal Task 6.0			7	58	32	0	0	12	9	1	119.0	\$	-	\$	-	\$ - \$ 20,628.13
7.0	PS 5229															
7.1	Data Collection/Field Investigation															
7.1.a	Data Collection/Review		1	4	2				2	1					\$	1,662.65
7.1.b	Field Investigation			8				8							\$	2,486.40

[illegible]

ATTACHMENT F

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Facilities Wide Short Circuit Arc Flash Study and One Line Diagram Update
Resolution No. R2023-1783 Contract Dated Decmeber 5, 2023

**SUMMARY OF
SBE-M/WBE BUSINESS TRACKING**

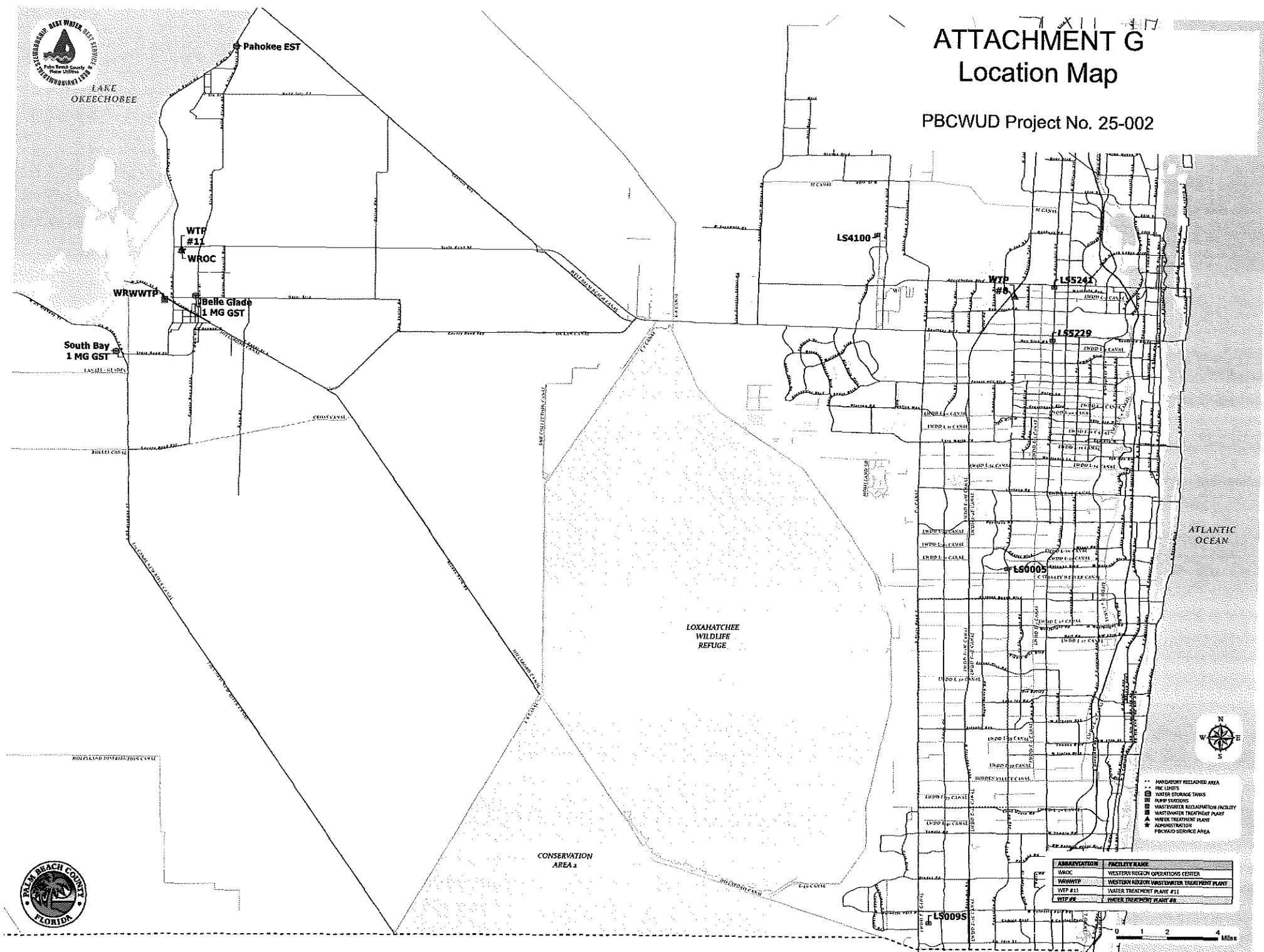
Master Contract Goals	SBE: 100%	M/WBE: %	MBE (Black): 100%	MBE (Category): %
Current Proposal				
Value of Authorization No. <u>1</u>	\$279,952.75		\$279,952.75	
Value of SBE-M/WBE Letters of Intent	\$279,952.75	\$	\$279,952.75	\$
Actual Percentage	100%	%	100%	%
Signed/Approved Authorizations				
Total Value of Authorizations	\$0.00		\$0.00	
Total Value of SBE-M/WBE Signed Subcontractors	\$0.00	\$	\$0.00	\$
Actual Percentage	0.00%	%	0.00%	%
Signed/Approved Authorizations Plus Current Proposal				
Total Value of Authorization	\$279,952.75		\$279,952.75	
Total Value of Subcontractors & Letters of Intent	\$0.00	\$	\$0.00	\$
Actual Percentage	100%	%	100%	%



LAKE OKEECHOBEE

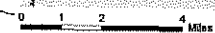
ATTACHMENT G Location Map

PBCWUD Project No. 25-002



- HAZARDOUS RECLAMATION AREA
- PBC LIGHTS
- WATER STORAGE TANKS
- WASTEWATER RECLAMATION FACILITY
- WASTEWATER TREATMENT PLANT
- WASTE TREATMENT PLANT
- ADMINISTRATION
- PICKUP SERVICE AREA

ABBREVIATION	FACILITY NAME
WROF	WESTERN REGION OPERATIONS CENTER
WTP #1	WESTERN REGION WASTEWATER TREATMENT PLANT
WTP #8	WATER TREATMENT PLANT #8
WTP #9	WATER TREATMENT PLANT #9





LAKE
OKEECHOBEE

Pahokee EST

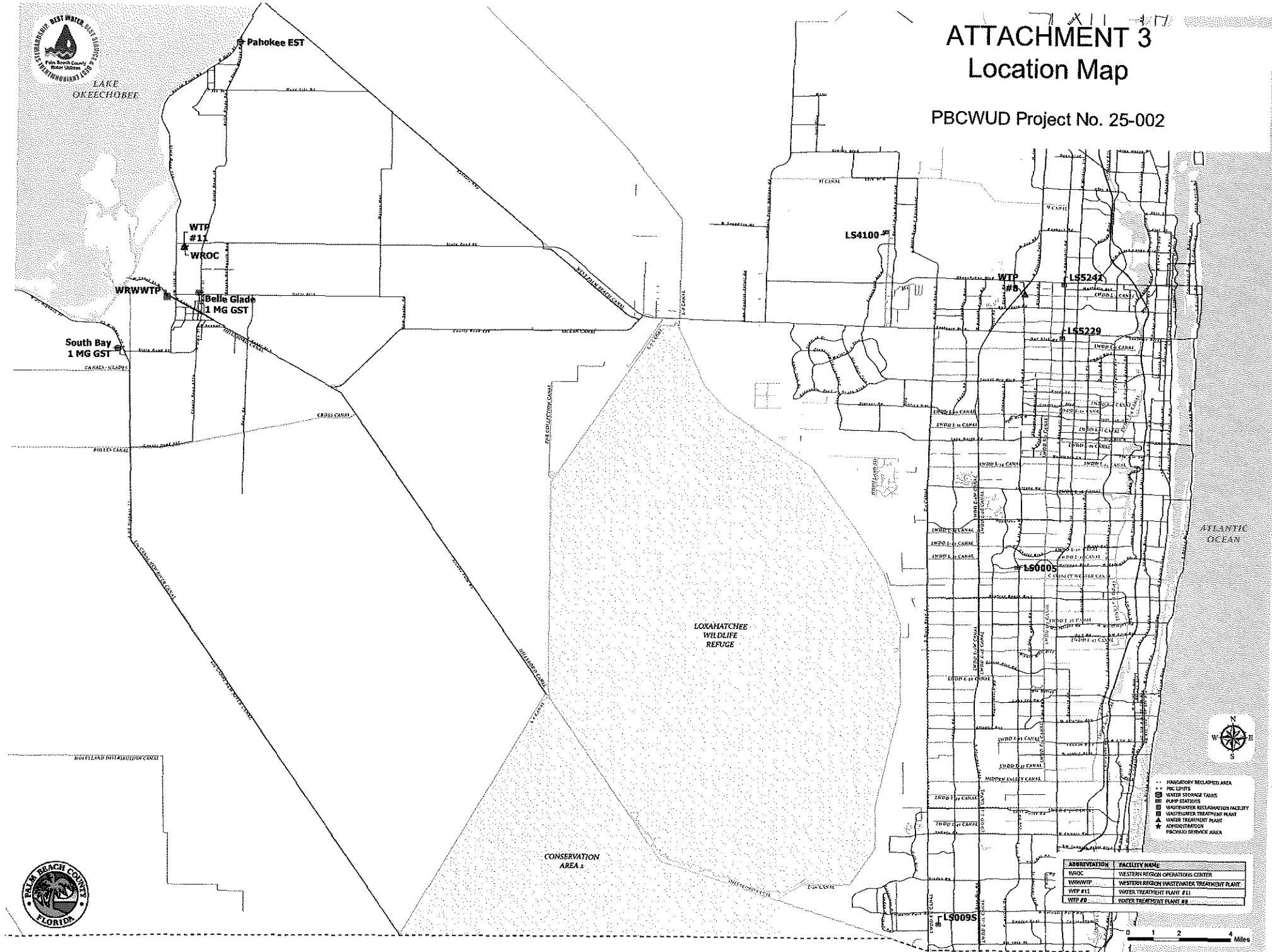
WTP
#11
WROC

WRWWTP
Belle Glade
1 MG GST

South Bay
1 MG GST

ATTACHMENT 3 Location Map

PBCWUD Project No. 25-002



- HANGAR/RECLAIMED AREA
- PBC LIMITS
- WATER STORAGE TANKS
- PUMP STATIONS
- WASTEWATER RECLAMATION FACILITY
- WASTEWATER TREATMENT PLANT
- WATER TREATMENT PLANT #11
- ★ ADMINISTRATION
- ★ PBCWUD SERVICE AREA

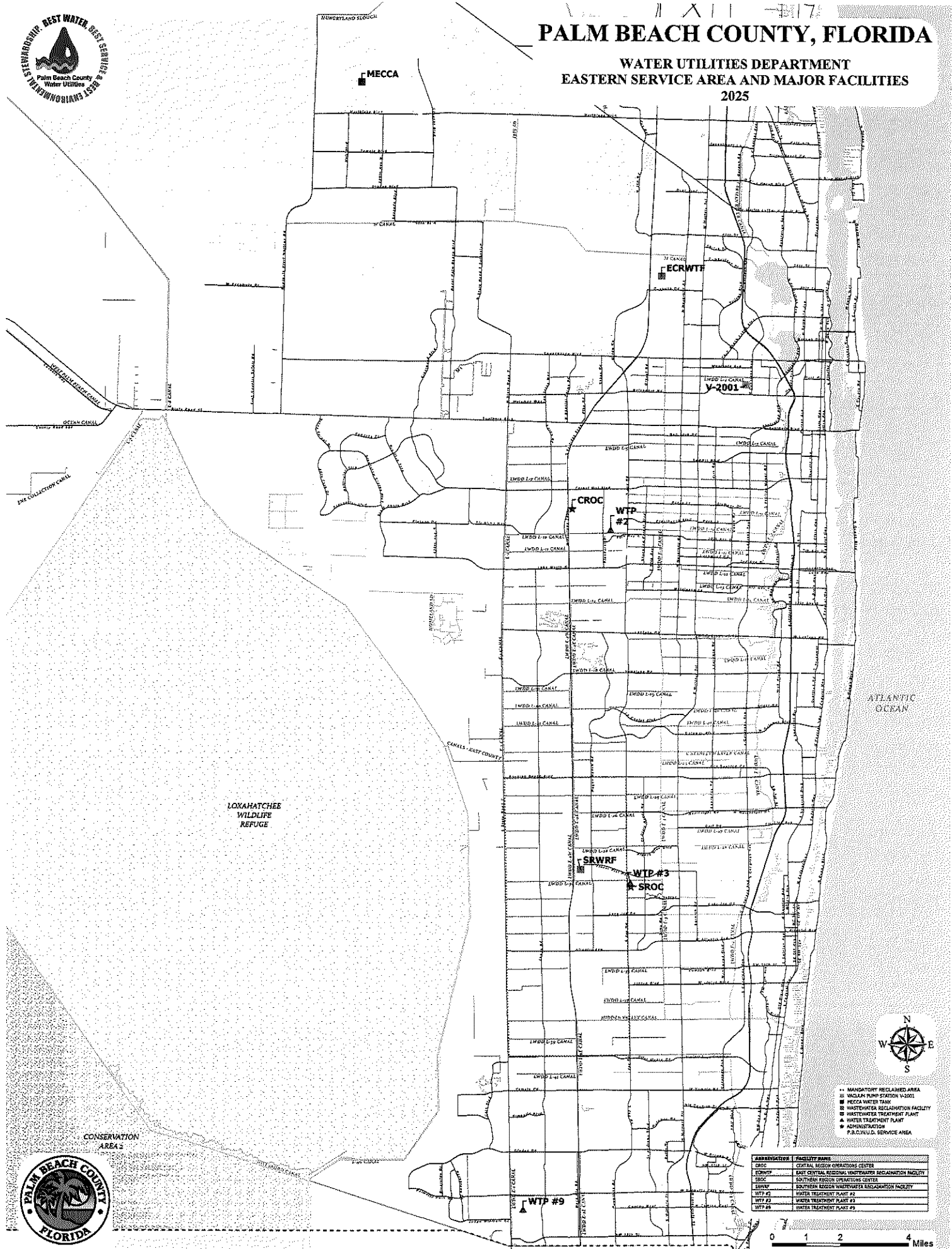
ABBREVIATION	FACILITY NAME
WROC	WESTERN REGION OPERATIONS CENTER
WRWWTP	WESTERN REGION WASTEWATER TREATMENT PLANT
WTP #11	WATER TREATMENT PLANT #11
WTP #8	WATER TREATMENT PLANT #8

0 1 2 4 Miles



PALM BEACH COUNTY, FLORIDA

WATER UTILITIES DEPARTMENT
EASTERN SERVICE AREA AND MAJOR FACILITIES
2025



- MANDATORY RECLAIMED AREA
- W WACLAN PUMP STATION V-2001
- MECCA WATER TREATMENT PLANT
- WASTEWATER RECLAMATION FACILITY
- WASTEWATER TREATMENT PLANT
- WATER TREATMENT PLANT
- ADMINISTRATION
- P.B. UNCLD. SERVICE AREA

ABBREVIATION	FACILITY NAME
CROC	CENTRAL REGION OPERATIONS CENTER
ECRWTF	EAST CENTRAL REGION WASTEWATER RECLAMATION FACILITY
SROC	SOUTHERN REGION OPERATIONS CENTER
SRIWRF	SOUTHERN REGION WASTEWATER RECLAMATION FACILITY
WTP #2	WATER TREATMENT PLANT #2
WTP #3	WATER TREATMENT PLANT #3
WTP #9	WATER TREATMENT PLANT #9

0 1 2 4 Miles

ATTACHMENT NO. 4



Palm Beach County
Compliance Summary Report

Vendor Number	Vendor Name	AM Best Rating	Insurance Carrier	Policy #	Eff. Date	Exp. Date	Coverage	Contract Number	Contract Name
DX00002535	Hillers Electrical Engineering, Inc.	Modified	Compliant					23-027	Electrical Instrumentation and Telemetry Engineering Services
		Ap , XV	Nationwide General Insurance Company	ACBPB013200972931	8/11/2024	8/11/2025	Auto Liability		
		A+g , XIV	Mt. Hawley Insurance Company	GXS0018388	8/11/2024	8/11/2025	Excess Liability		
		Ap , XV	Nationwide General Insurance Company	ACBPB013200972931	8/11/2024	8/11/2025	General Liability		
		Ap , XV	Westfield Select Insurance Company	ADP-0000246	12/1/2024	12/1/2025	Professional Liability		
		A+g , XIV	Mt. Hawley Insurance Company	ACPWC013200972931	8/11/2024	8/11/2025	Workers Comp		

Risk Profile : Standard - Professional Services

Required Additional Insured : Palm Beach County Board of County Commissioners

Ownership Entity :

ATTACHMENT NO. 5



Palm Beach County
Compliance Summary Report

Vendor Number	Vendor Name	AM Best Rating	Insurance Carrier	Policy #	Eff. Date	Exp. Date	Coverage	Contract Number	Contract Name
DX00002548	Electrical Design Associates, Modified Inc.		Compliant					23-027	Contract For Consulting/Professional Services Electrical Instrumentation And Telemetry Engineering Services
		Ap , XV	Nationwide General Insurance Company	ACPBP013200972931	8/11/2024	8/11/2025	Auto Liability		
		A+g , XIV	Mt. Hawley Insurance Company	GXS0018388	8/11/2024	8/11/2025	Excess Liability		
		Ap , XV	Nationwide General Insurance Company	ACPBP013200972931	8/11/2024	8/11/2025	General Liability		
		Ap , XV	Westfield Select Insurance Company	ADP0000246	12/1/2024	12/1/2025	Professional Liability		
		A+g , XIV	Mt. Hawley Insurance Company	ACPWC013200972931	8/11/2024	8/11/2025	Workers Comp		

Risk Profile : Standard - Professional Services

Required Additional Insured : Palm Beach County Board of County Commissioners

Ownership Entity :