



**II. FISCAL IMPACT ANALYSIS**

**A. Five Year Summary of Fiscal Impact:**

Fiscal Years	2021	2022	2023	2024	2025
Capital Expenditures	\$321,828	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
<b>NET FISCAL IMPACT</b>	<b>\$321,828</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
# ADDITIONAL FTE POSITIONS (Cumulative)	0	0	0	0	0

**Budget Account No.:** Fund 4011 Dept 721 Unit W031 Object 6546

Is Item Included in Current Budget? Yes X No     

Does this item include the use of federal 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: *Stephan Mack* GE

**III. REVIEW COMMENTS**

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

*Lisa Monte* 8/12/21  
OFMB 8/14/21 BR 9/19

*J. G. Lawrence* 8/24/21  
Contract Development and Control  
8-24-21 TD

**B. Legal Sufficiency:**

*[Signature]* 8/31/21  
Assistant County Attorney

**C. Other Department Review:**

\_\_\_\_\_  
Department Director

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

CONSULTANT SERVICES AUTHORIZATION NO. 2  
Palm Beach County Water Utilities Department  
Contract for Consulting/Professional Services  
**MASTER LIFT STATION AND REPUMP IMPROVEMENTS**  
Resolution No. R2021-0508 Contract Dated April 20, 2021

**Project Title:** LS 5015 CONVERSION TO REPUMP

**PBCWUD Project No.:** 21-062

**Consultant:** AECOM Technical Services, Inc.

**Address:** 3201 West Commercial Blvd., Fort Lauderdale, FL 33309

**Budget Line Item No.:** 4011-721-W031- 6546

**District No.:** 2

This Consultant Services Authorization provides for: Engineering Services including design, permitting, and bidding support for the conversion of lift station number 5015 (LS5015) to a repump station.

(See ATTACHMENT A for detailed scope of services)

The Contract provides for 31.00% SBE participation which includes 19.00% M/WBE participation, 17.00% MBE (Black) and 2.00% MBE (Asian). This Consultant Services Authorization includes 32.31% overall participation which includes 25.11% M/WBE participation, 25.11% MBE (Black) and 0% MBE (Asian). The cumulative SBE participation, including this authorization is 28.69% overall participation which includes 22.94% M/WBE participation, 22.94% MBE (Black) and 0% MBE (Asian).

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 \$ 321,827.36
  - B. Fixed price of \$ 0.00
  - C. Total \$ 321,827.36
4. This Authorization may be terminated by the County without cause or prior notice. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed through the date of termination, together with reimbursable expenses (if applicable) then due.

CONSULTANT SERVICES AUTHORIZATION NO. 2  
Palm Beach County Water Utilities Department  
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*MASTER LIFT STATION AND REPUMP IMPROVEMENTS*  
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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 April 20, 2021 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. 2  
Palm Beach County Water Utilities Department  
Contract for Consulting/Professional Services  
MASTER LIFT STATION AND REPUMP IMPROVEMENTS  
Resolution No. R2021-0508 Contract Dated April 20, 2021

Project Title: LS5015 CONVERSION TO REPUMP

PBCWUD Project No.: 21-062

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: \_\_\_\_\_

*GAM*

Signed: \_\_\_\_\_

Dave Kerner, Mayor

Typed Name: \_\_\_\_\_  
Deputy Clerk

*AB*

\_\_\_\_\_  
(Date)

Approved as to Form and Legal  
Sufficiency

CONSULTANT: AECOM Technical Services, Inc.

Signed: \_\_\_\_\_

*Karen D. Brandon*  
\_\_\_\_\_  
(Signature)

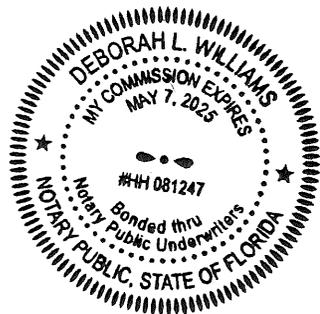
Typed Name: Michael W. Jones  
County Attorney

Karen D. Brandon, Associate Vice President  
(Name and Title)

08/17/2021  
(Date)

STATE OF FLORIDA  
COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me by means of  physical presence or  online notarization, this 17th day of August, 2021, by Karen D. Brandon who is  personally known to me or  has produced \_\_\_\_\_ as identification.



*Deborah L. Williams*  
\_\_\_\_\_  
(Signature of Notary Public - State of Florida)

Deborah L. Williams  
\_\_\_\_\_  
(Print, Type, or Stamp Commissioned Name of Notary Public)



AECOM Technical Services, Inc. 213.593.8100 tel  
300 South Grand Avenue 213.593.8730 fax  
9<sup>th</sup> Floor  
Los Angeles, CA 90071  
www.aecom.com

## **SECRETARY'S CERTIFICATE**

### **AECOM TECHNICAL SERVICES, INC. a California corporation**

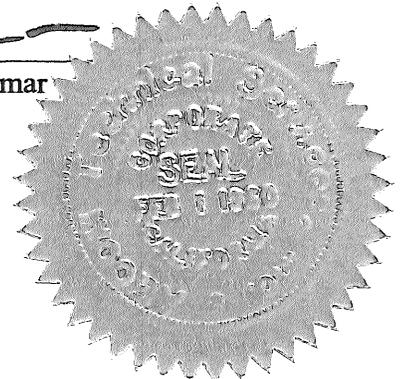
I, Manav Kumar, DO HEREBY CERTIFY that I am the duly elected and acting Secretary of AECOM Technical Services, Inc., a corporation organized under the laws of the State of California ("ATS" or "Corporation"), and the keeper of its records and corporate seal.

I FURTHER CERTIFY that ATS's full legal address is c/o CT Corporation System, 818 West 7<sup>th</sup> Street, Los Angeles, CA 90017-0000 and that the Corporation's principal place of business is 300 South Grand Avenue, 9<sup>th</sup> Floor, Los Angeles, California 90071.

I FURTHER CERTIFY that pursuant to the Written Consent of the Board of Directors of ATS, adopted on June 7, 2021, and attached hereto as Exhibit A, Karen D. Brandon has signatory authority for ATS and is authorized to execute contracts and other documents on behalf of the Corporation.

IN WITNESS WHEREOF, I have subscribed my name and affixed the seal of the Corporation, this 22nd day of July, 2021.

Manav Kumar  
Secretary



**LIST OF ATTACHMENTS**

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

# ATTACHMENT A

## SCOPE OF SERVICES

**Project Title:** LS 5015 CONVERSION TO REPUMP

**PBCWUD Project No.:** 21-062

CONSULTANT shall perform:

### PROJECT BACKGROUND

The existing master lift station (LS) number 5015 (LS5015) is a submersible configuration receiving flow from multiple upstream lift stations connected by a force main (FM) network. There is a portion of local gravity sewer directly connected to LS5015, with an adjacent submersible lift station LS0217 providing much of the local contributing flow. Flow from LS5015 is pumped into a downstream interconnected FM network. Currently, the peak wet weather flows have the potential for exceeding the firm capacity of LS5015 and need to be increased in capacity and a provision implemented to reduce the risk of potential overflows.

The Palm Beach County Water Utilities Department (PBCWUD) intends to convert LS5015 to an inline booster pump station (also called a repump station) with closed pipe connections on the suction and discharge points. Additionally, PBCWUD intends to reconfigure the local collection system as described:

- The flows to the existing LS0217 will be rerouted to the location of the existing LS5015 submersible lift station.
- Rehabilitate and reconfigure the existing submersible LS5015 to serve local collection system flows and convey that flow to the new repump station LS5015.
- During construction the existing LS0217 will need to convey flow from an additional 12-inch gravity sewer with either new or temporary pumps.
- Rename the rehabilitated and reconfigured existing submersible LS5015 to LS0217 and demolish the existing LS0217 upon completion of work.

PBCWUD has requested AECOM Technical Services, Inc. (CONSULTANT) to provide design, permitting, and bid phase services to help achieve construction of a new LS5015 repump station, reconfiguration of the existing LS5015 to LS0217 to serve local flows and demolition of the existing LS0217.

The new repump station will be constructed on a new easement west of Sherwood Forest Blvd from the existing lift station. The suction and discharge FMs will need to be constructed within the public right-of-way with restoration of Sherwood Forest Blvd upon completion. The finished work is intended to be similar to other PBCWUD inline booster stations and to include such features as:

- Multiple pumps (possibly separate sizes if needed to accommodate hydraulic conditions) arranged in an above-grade horizontal configuration that will facilitate the range of anticipated flows.
- Overhead cover in an open-air configuration for protection of the pumping equipment.
- Weatherproof exterior electrical and control panels that will house the variable frequency drives (VFDs).
- Overhead hoisting equipment to facilitate removal of pumps, motors, and valves.

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- External to the station onsite would be a new low flow bypass, emergency bypass connections and concrete parking pad for placement of temporary bypass pumps.
- Emergency power is intended to be provided as a new freestanding diesel generator with sound enclosure and integral “belly” tank.
- Security camera Closed Circuit Television (CCTV) is to be provided consistent with similar PBCWUD pump stations.
- Suction and discharge FMs constructed within the public right-of-way with restoration of Sherwood Forest Blvd upon completion.
- Intercept and manifold existing FM flow in front of the new booster pump station.
- Manifold the FM in front of exiting LS5015 to allow flexibility to pump north or south (existing FM’s will no longer actively discharge into the wetwell).

The rehabilitated and reconfigured submersible lift station will be constructed within the existing easement limits with the finished work following PBCWUD minimum lift station design standards as closely as possible and to include such features as:

- Duplex submersible pumps with rail-style pump removal system and access hatches.
- Weatherproof exterior electrical and control panels that will house motor soft starters, controls and generator automatic transfer switch (ATS).
- Emergency power is intended to be provided as a new freestanding diesel generator with sound enclosure and integral “belly” tank.
- Security camera Closed Circuit Television (CCTV) is to be provided consistent with similar PBCWUD pump stations.
- Replacement of security fencing and restoration of the site.
- Reroute the gravity sanitary from existing LS0217 to the existing wetwell of LS5015.
- Convert LS0217 to a flow through manhole and decommission it as a lift station with the removal of FM piping, valve vault, and electrical.
- Rehabilitate LS 5015 for the reduced flow, modify the wetwell, complete structural repairs, and new hatches, pumps, controls, and piping .
- Wetwell shall remain as a reservoir and FM piping shall be such that the wetwell could be used as an emergency reservoir.

## **Assumptions**

1. PBCWUD will provide information related to pump run times, pressures, existing pump curves and background hydraulic models in order for the necessary hydraulic analysis to be performed to define the required basis of design operating ranges of pressures and flows.
2. Electrical service appears to be directly available adjacent to the potential project sites with Florida Power and Light coordination anticipated for a new power drop .
3. PBCWUD will obtain the easements and define the boundary of the easement property prior to initiation of design work.
4. The new work can be constructed within the easement limits being developed by PBCWUD.
5. New security fencing will match that of the subdivision along Sherwood Forest Blvd, from which the easement is being obtained.
6. No onsite stormwater retention will be required.
7. No bathrooms or sinks will be provided at the site.
8. Construction phase support services are excluded.
9. PBCWUD will perform any needed asbestos and lead surveys. CONSULTANT will incorporate the results into the specifications.

## **SCOPE OF SERVICES**

The task structure for engineering and design delivery of the work by the CONSULTANT is anticipated to be as follows:

### **TASK 1 - Project Initiation and Management**

#### **Subtask 1.1 - Project Planning and Project Initiation Meeting**

At the outset of work, a detailed Project Delivery Plan (PDP) with Quality Management Plan (QMP) will be developed based on this scope of work, available information on the facilities, team member roles, agreed-upon schedule, deliverable requirements, and communications protocol of PBCWUD. Items of discussion during the project initiation meeting are anticipated to include:

1. Standard design and construction document criteria
2. Standard technical and procurement specifications
3. Review of roles, responsibilities, and critical schedule milestones
4. Initial review of possible regulatory agency and permitting requirements
5. Initial design concepts

#### **Subtask 1.2 - Project Reporting, Coordination, and Communications**

Updated schedules will be provided to reflect schedule changes that may occur during project development, coordination, and permitting. CONSULTANT shall provide monthly progress reports, including a summary of work performed and an updated permit register.

#### **Subtask 1.3 - Quality Control**

A Quality Management Plan (QMP) will be prepared as part of the project planning process and adhered to throughout the project delivery with quality and constructability review of all project deliverables. Submittals and correspondence will be reviewed prior to issuance.

#### **Deliverables - Project Initiation and Management**

1. Project Management Plan (Digital)

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2. Project Initiation Meeting Materials and Meeting Minutes (Digital)
3. Monthly Progress Reports (Digital)

## **TASK 2 - Existing Conditions and Field Investigations**

### **Subtask 2.1 - Existing Information and Engineering Field Investigations**

Design disciplines (Mechanical, Civil, Structural, Electrical, Instrumentation, and Architectural) will evaluate the as-built drawings and verify current field conditions. Drawings of the existing facilities, project site and right-of-way will be augmented with field conditions, subsurface utilities and survey information as necessary for design purposes and inclusion in developed drawings of the subsequent design submittals. Field assessment notes will be provided to PBCWUD.

### **Subtask 2.2 - Topographic Survey and Subsurface Utility Investigation**

Carry out a field survey and subsurface utility investigation of the project site and within the associated public right-of-way where the work is being performed to support the construction of the new facilities to include the following:

1. Support of PBCWUD for easement acquisition of the new pump station site with a boundary survey, sketch and legal description of the proposed easement.
2. Determine dimensions, elevations, and measurements of existing pump station features, piping, and site layout.
3. Utilize ground penetrating radar (GPR) to identify buried utilities. Perform soft digs at proposed tie-in locations and critical pipe crossings. Place witness pipes with labels at found utilities so coordinates and depths can be obtained by the topographical surveyor.
4. Obtain site-specific information, such as the boundary survey and topographic survey.
5. Obtain specific boundary information, such as right-of-way lines, subdivision lines, lot lines, baselines, and easement lines, as required by the project.

The survey shall be signed and sealed by a Florida Registered Professional Land Surveyor.

### **Subtask 2.3 - Geotechnical Investigation and Report**

Carry out a geotechnical investigation of the proposed project site to support the construction of the new facilities to include the following:

1. Identify soil types within the project area.
2. Identify the characteristics and properties of the soils under investigation.
3. Use soil characteristics, properties, and potential project geometrics to identify possible geotechnical concerns.
4. Provide geotechnical recommendations for engineering design.
5. Obtain groundwater table elevation.

Upon completion of the geotechnical investigation, prepare a geotechnical report for design engineering support and inclusion in the subsequent design submittals. The report shall include the following:

1. Brief description of soil conditions observed.
2. Conclusions and recommendations regarding:
  - a. Primary geotechnical engineering concerns and mitigating measures, as applicable.
  - b. Site preparation and grading including treatment of weak, porous, compressible, and expansive surface soils and the construction of fills.

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- c. Preparation of subgrade and aggregate base for pavement areas.
  - d. Foundation design, dewatering requirements with estimated groundwater flows, backfill material, and compaction methods.
3. Expected sub-surface conditions.

The geotechnical investigation and report shall be signed and sealed by a Florida Registered Professional Engineer.

**Deliverables - Existing Conditions and Field Investigations**

- 1. Field Assessment Notes (Digital)
- 2. Property Easement Exhibit and Legal Description (Digital and Printed)
- 3. Property Survey, Signed and Sealed (Digital and Printed)
- 4. Geotechnical Findings and Design Recommendations Report (Digital and Printed)

**TASK 3 - Design Delivery and Permitting**

**Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design**

- 1. Hydraulic Analysis – Review the PBCWUD provided information related to pump run times, pressures, existing pump curves and background hydraulic models. Develop the hydraulic analysis for anticipated system operation in order to define the required basis of design operating ranges of pressures and flows. A summary of the hydraulic analysis work, findings and recommendations will be documented in a technical memorandum.
- 2. Basis of Design Memorandum
  - a. Basis of Design Criteria Documentation – Provide a summary of the operating conditions and design requirements that will be used as a basis throughout the design process.
  - b. Equipment Review and Selection – Provide a shortlist review of the potential mechanical, electrical, and piping equipment to be implemented as part of the work with clear recommendations for implementation. This will include sizing and selection of major equipment components.
  - c. Preliminary Layout and Configuration – Based on interactive feedback of PBCWUD requirements and preferences, a preliminary layout of the site, equipment, piping, and appurtenances will be developed for review. This concept will be developed to a point required to communicate concepts, potential issues, improvement opportunities, and to receive PBCWUD feedback prior to detailed design.
  - d. Permitting and Code Review – An initial review of the site changes and disciplines of work anticipated along with the potential regulatory agency and permit requirements.
  - e. Preliminary Opinion of Probable Construction Cost (OPCC) (30 percent) – Developed to an American Association of Cost Engineers (AACE) Class 5 expected accuracy range based on the level of project definition.
  - f. Construction Sequence and Schedule (30 percent) – A preliminary estimation of the sequence of work required to minimize bypass pumping requirements while also constructing the new pump station, demolishing the existing pump station, restoring the site, and commissioning the final work.
  - g. Technical Specification Table of Contents – A listing of the anticipated technical specifications that will be required for the procurement of construction.
- 3. Construction Drawings (30 percent) - An initial layout of the site, electrical arrangement, piping, pumping, overhead cover, hoisting equipment, and one-line electrical drawings will be developed and provided along with the basis of design memorandum. Initial

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recommendations for flow management or bypassing during construction will also be provided.

4. Review Meeting and Decision Log (30 percent) - Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
5. Deliverables - Basis of Design Memorandum and Conceptual (30 percent) Design - Deliverables will be provided as outlined below and discussed as part of a formal design review meeting with PBCWUD.
  - a. Hydraulic Analysis Technical Memo (Digital and Printed)
  - b. Basis of Design Memorandum (Digital and Printed)
    - i. Permitting and Code Review
    - ii. Preliminary OPCC
    - iii. Construction Sequence and Schedule
    - iv. Technical Specification Table of Contents
  - c. Conceptual (30 percent) Design Drawings (Digital and Printed)
  - d. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital and Printed)

### **Subtask 3.2 - Intermediate (60 percent) Design**

The following elements will be further developed from the previous Conceptual (30 percent) Design phase of work and updated to reflect the additional detail of design.

1. Construction Drawings (60 percent) – Will include some level of detail for all of the anticipated design drawings. Civil, landscape architecture, piping, mechanical, process control, and structural will be advanced to a pre-final stage of work. Electrical will be at an early draft stage of work based on the support of the pumping system requirements. A final design concept for flow management or bypassing during construction will also be provided.
2. Construction Technical Specifications (60 percent) – An initial draft of all technical specifications will be provided. Specific equipment details and requirements for the sizing of components may be excluded from the technical specifications pending PBCWUD concurrence with design elements. Procurement-specific specification will not be included at this phase of work.
3. OPCC, Construction Sequence, and Schedule (60 percent) – Developed to an AACE Class 4 expected accuracy range based on the level of project definition.
4. Permit Register (60 percent) – Updated to reflect the anticipated regulatory agency permit requirements based on the site changes and disciplines of work involved in the project. Will also include known points of contact, permit forms for completion, level of design required for submittal, required supporting information, and anticipated duration and sequence for obtaining approval of each permit.
5. Review Meeting and Decision Log (60 percent) - Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
6. Deliverables - Intermediate (60 percent) Design
  - a. Construction Drawings (Digital and Printed)
  - b. Construction Technical Specifications (Digital and Printed)
  - c. OPCC, Construction Sequence and Schedule (Digital and Printed)
  - d. Permit Register (Digital and Printed)

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- e. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital and Printed)

**Subtask 3.3 - Pre-Final (90 percent) Design**

The following elements will be further developed from the previous Intermediate (60 percent) design phase of work and updated to reflect the additional detail of design.

1. Construction Drawings (90 percent) – All construction drawings shall be updated with a consistent level of detail to reflect a pre-final condition that is comprehensive of the work to be completed.
2. Construction Procurement and Technical Specifications (90 percent) - All procurement and technical specifications documents shall be updated with a consistent level of detail to reflect a pre-final condition that is comprehensive of the work to be completed. This includes bid advertisement, description of work, and technical criteria reflective of the equipment, systems, and elements of work.
3. OPCC, Construction Sequence, and Schedule (90 percent) – Developed an updated OPCC reflective of the level of project definition.
4. Permit Register (90 percent) – Update of the previous register with status on any permitting activities that are currently underway and planned.
5. Review Meeting and Decision Log (90 percent) - Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
6. Deliverables - Pre-Final (90 percent) Design
  - a. Construction Drawings (Digital and Printed)
  - b. Construction Procurement and Technical Specifications (Digital and Printed)
  - c. OPCC, Construction Sequence and Schedule (Digital and Printed)
  - d. Permit Register (Digital and Printed)
  - e. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital and Printed)

**Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies**

Permitting activities are anticipated to continue across several phases of the design development work. However, activities for the permitting will be conducted separately and in parallel with the construction documents used to support permitting activities.

1. Permit Register – CONSULTANT shall maintain a register of known permits and agency approvals required for the project.
2. Preparation of Permit Packages – For all permits that can be obtained prior to the initiation of construction, the required materials will be prepared and submitted for approval. As needed, regulatory agencies will be met with to review documents and make revisions for approval in an expedited manner.
3. Dry run submittal – To minimize the potential for permitting delays in the construction phase, drawings will be submitted to the Palm Beach County Department of Planning, Zoning & Building during the design process, as a “dry run” submittal for the building permit. Review comments will be reviewed and incorporated into the construction drawings.
4. Approved Permits – All approved permits and relevant permitting correspondence will be provided to PBCWUD and included in the Construction Documents.
5. Deliverables - Permitting
  - a. Draft Permit Applications and Supporting Documents (Digital and Printed)
  - b. Approved Final Permits and Supporting Documents (Digital and Printed)

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- c. Permit Register (Digital and Printed)

### **Subtask 3.5 - Final (100 percent) Design**

The following elements will be further developed from the previous Pre-Final (90 percent) design phase of work and updated to reflect the additional detail of design.

1. Construction Drawings – Final bid-ready construction drawings that incorporate all of the PBCWUD review comments and requirements.
2. Construction Procurement and Technical Specifications - Final bid ready Construction Procurement and Technical Specifications that incorporate all of the PBCWUD review comments and requirements.
3. OPCC, Construction Sequence, and Schedule – Final revised OPCC reflective of the level of project definition. The sequence of work and schedule will be reflective of the actual anticipated construction work.
4. Permit Register – Final approved pre-construction permits and supporting documents. Permits that are anticipated to be obtained during construction will be identified.
5. Review Meeting and Decision Log (100 percent) – Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.

### **Deliverables - Final (100 percent) Design**

1. Construction Drawings (Digital and Printed)
2. Construction Procurement and Technical Specifications (Digital and Printed)
3. OPCC, Construction Sequence and Schedule (Digital and Printed)
4. Permit Register (Digital and Printed)
5. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital and Printed)

## **TASK 4 - Bid Phase Services**

Engineering support during the public bidding for procurement of construction services is anticipated to include the following work elements:

### **Subtask 4.1 - Bid Advertisement and Procurement Package**

Print digitally signed and sealed construction drawings, procurement documents, and technical specifications needed to bid the work. Prepare a narrative description of the work and review the advertisement for bid. Review procurement documents produced by PBCWUD for consistency with technical specifications and construction drawings.

### **Subtask 4.2 - Pre-Bid Meeting**

Prepare presentation materials and prepare to provide an overview of the project requirements and anticipated sequence of work. Attend a site visit with prospective bidders.

### **Subtask 4.3 - Response to Bidder Questions**

Respond to bidder questions, if needed, to clarify the intent of the bid documents. As required, addenda will be prepared and issued to PBCWUD for distribution to bidders.

### **Subtask 4.4 - Bid Tabulation and Recommendation**

A tabulation of received bids will be performed along with an evaluation of bid submittals to identify any bid deficiencies for PBCWUD's use.

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#### **Subtask 4.5 - Conformed Contract Documents**

CONSULTANT shall prepare a conformed set of contract documents for use by the Contractor during construction.

##### **Deliverables - Bid Phase Services**

1. Signed and Sealed Contract Documents
2. Narrative Description of the Work
3. Pre-Bid Meeting Presentation Materials
4. Responses to Bidder Questions
5. Addendum Documents
6. Tabulation of Bids and Recommendation
7. Conformed Contract Documents

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**ATTACHMENT C**

**OEBO SCHEDULE 1**

Office of Equal Business Opportunity Compliance Programs

# OEBO SCHEDULE 1

## LIST OF PROPOSED CONTRACTOR/CONSULTANT AND SUBCONTRACTOR/SUBCONSULTANT PARTICIPATION

SOLICITATION/PROJECT/BID NAME: LS 5015 Conversion to Repump  
 NAME OF PRIME RESPONDENT/BIDDER: AECOM Technical Services, Inc.  
 CONTACT PERSON: Karen D. Brandon, PE  
 SOLICITATION OPENING/SUBMITTAL DATE: October 7, 2020

SOLICITATION/PROJECT/BID No.: WUD No. 21-062  
 ADDRESS: 2090 Palm Beach Lakes Blvd., #600, West Palm Beach, FL 33409  
 PHONE NO.: 561-515-3907 E-MAIL: karen.brandon@aecom.com  
 DEPARTMENT: Palm Beach County Water Utilities Department

**PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT ON THIS PROJECT. PLEASE ALSO LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT.**

Name, Address and Phone Number	(Check all Applicable Categories)			DOLLAR AMOUNT OR PERCENTAGE OF WORK				
	Non-SBE	M/WBE	SBE	Black	Hispanic	Women	Caucasian	Other (Please Specify)
		Minority/ Women Business	Small Business					
1. AECOM Technical Services, Inc. 2090 Palm Beach Lakes Blvd., #600 West Palm Beach, FL 33409	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	\$151,673.52	_____
2. Brown & Phillips, Inc. 1860 Old Okeechobee Rd., Suite 509 West Palm Beach, FL 33409	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$10,200.90	_____	_____	_____	_____
3. Barnes, Ferland and Associates, Inc. 300 Butler Street, Suite 9 West Palm Beach, FL 33407	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$70,623.64	_____	_____	_____	_____
4. C & W Engineering, Inc. 2775 Vista Parkway, G-6 West Palm Beach, FL 33411	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	_____	_____	\$23,158.00	_____
5. Mock, Roos & Associates, Inc. 5720 Corporate Parkway West Palm Beach, FL 33407	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	\$59,486.00	_____
(Please use additional sheets if necessary)				<b>Total</b>	_____	_____	_____	_____

Total Bid Price \$ \_\_\_\_\_

Total SBE - M/WBE Participation \_\_\_\_\_

Page 1 of 2

I hereby certify that the above information is accurate to the best of my knowledge:

Karen D. Brandon  
Signature

Karen D. Brandon,  
Associate Vice President  
Title

- Note:**
1. The amount listed on this form for a Subcontractor/subconsultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
  2. Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and/or M/WBE, please indicate the dollar amount under the appropriate category.
  3. Modification of this form is not permitted and will be rejected upon submittal.

# OEBO SCHEDULE 1

## LIST OF PROPOSED CONTRACTOR/CONSULTANT AND SUBCONTRACTOR/SUBCONSULTANT PARTICIPATION

SOLICITATION/PROJECT/BID NAME: LS 5015 Conversion to Repump  
 NAME OF PRIME RESPONDENT/BIDDER: AECOM Technical Services, Inc.  
 CONTACT PERSON: Karen D. Brandon, PE  
 SOLICITATION OPENING/SUBMITTAL DATE: October 7, 2020

SOLICITATION/PROJECT/BID No.: WUD No. 21-062  
 ADDRESS: 2090 Palm Beach Lakes Blvd., #600, West Palm Beach, FL 33409  
 PHONE NO.: 561-515-3907 E-MAIL: karen.brandon@aecom.com  
 DEPARTMENT: Palm Beach County Water Utilities Department

**PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT ON THIS PROJECT. PLEASE ALSO LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT.**

Name, Address and Phone Number	(Check all Applicable Categories)			DOLLAR AMOUNT OR PERCENTAGE OF WORK					
	Non-SBE	M/WBE Minority/Women Business	SBE Small Business	Black	Hispanic	Women	Caucasian	Other (Please Specify)	
1. RADISE International, L.C. 4152 W. Blue Heron Blvd., Suite 228 West Palm Beach, FL 33404	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	\$6,685.30 (non-certified Asian)	
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____	
(Please use additional sheets if necessary)				<b>Total</b>	\$80,824.54	0.00	0.00	\$234,317.52	\$6,685.30 (non-certified asian)

Total Bid Price \$ 321,827.36

Total SBE - M/WBE Participation 32.31%

Page 2 of 2

I hereby certify that the above information is accurate to the best of my knowledge: Karen D. Brandon  
 Signature

Karen D. Brandon,  
 Associate Vice President  
 Title

- Note:
1. The amount listed on this form for a Subcontractor/subconsultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
  2. Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and/or M/WBE, please indicate the dollar amount under the appropriate category.
  3. Modification of this form is not permitted and will be rejected upon submittal.

**ATTACHMENT C**

**OEBO SCHEDULE 2**

Office of Equal Business Opportunity Compliance Programs

Revised 04/26/2021

**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. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD No. 21-062

SOLICITATION/PROJECT NAME: LS 5015 Conversion to Repump

Prime Contractor: AECOM Technical Services, Inc. Subcontractor: Barnes, Ferland and Associates, Inc.

**(Check box(s) that apply)**

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 8/7/20-8/6/23

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

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input checked="" type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	<input type="checkbox"/> Caucasian American <input type="checkbox"/> Supplier

**S/M/WBE PARTICIPATION** – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
8.02 & 8.04	Mechanical Engineering-Wastewater Collection Systems; Mechanical Engineering-Water Distribution Systems; Subsurface Utility Engineering				\$70,623.64

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: \$70,623.64

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 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant \_\_\_\_\_ Price or Percentage: \_\_\_\_\_

AECOM Technical Services, Inc.  
 Print Name of Prime  
 By: *Karen D. Brandon*  
 Authorized Signature  
Karen D. Brandon, PE  
 Print Name  
Associate Vice President  
 Title  
 Date: 07/21/2021

Barnes, Ferland and Associates, Inc.  
 Print Name of Subcontractor/subconsultant  
 By: *Willie E. Thomas*  
 Authorized Signature  
Willie E. Thomas, PE  
 Print Name  
President  
 Title  
 Date: 7/21/2021

**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. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD No. 21-062

SOLICITATION/PROJECT NAME: LS 5015 Conversion to Repump

Prime Contractor: AECOM Technical Services, Inc. Subcontractor: Brown & Phillips, Inc.

**(Check box(s) that apply)**

SBE  WBE  MBE  M/WBE  Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 1/31/19-1/30/22

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

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input checked="" type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	<input type="checkbox"/> Caucasian American <input type="checkbox"/> Supplier

**S/M/WBE PARTICIPATION** – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
5.01	Topography-Land Surveying				\$10,200.90
5.02	Topography-Engineering Surveying				

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: \$10,200.90

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.

\_\_\_\_\_ Price or Percentage: \_\_\_\_\_

Name of 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant

AECOM Technical Services, Inc.  
 Print Name of Prime  
 By: *Karen D. Brandon*  
 Authorized Signature  
Karen D. Brandon, PE  
 Print Name  
Associate Vice President  
 Title  
 Date: 7/21/21

Brown & Phillips, Inc.  
 Print Name of Subcontractor/subconsultant  
 By: *Anthony Brown*  
 Authorized Signature  
Anthony Brown  
 Print Name  
CEO  
 Title  
 Date: 7/21/21

**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. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD No. 21-062

SOLICITATION/PROJECT NAME: LS 5015 Conversion to Repump

Prime Contractor: AECOM Technical Services, Inc. Subcontractor: C & W Engineering, Inc.

**(Check box(s) that apply)**

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 1/9/20-1/8/23

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

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> 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. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
8.06 & 9.03	Mechanical Engineering-Cooling Systems; Electrical Electrical Engineering-Industrial Facilities				\$23,158.00

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: \$23,158.00

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.

\_\_\_\_\_ Price or Percentage: \_\_\_\_\_

Name of 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant

AECOM Technical Services, Inc.  
Print Name of Prime

By:   
Authorized Signature

Karen D. Brandon, PE  
Print Name

Associate Vice President  
Title

Date: 07/22/2021

C & W Engineering, Inc.  
Print Name of Subcontractor/subconsultant

By:   
Authorized Signature

Michael Guida, PE  
Print Name

President  
Title

Date: 07/21/2021

**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. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD No. 21-062

SOLICITATION/PROJECT NAME: LS 5015 Conversion to Repump

Prime Contractor: AECOM Technical Services, Inc. Subcontractor: Mock, Roos & Associates, Inc.

**(Check box(s) that apply)**

SBE  WBE  MBE  M/WBE  Non-S/M/WBE Date of Palm Beach County Certification (if applicable): N/A

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

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> 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. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
8.02 & 8.04	Mechanical Engineering-Wastewater Collection System; Mechanical Engineering-Water Distribution System				\$59,486.00

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: \$59,486.00

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 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant \_\_\_\_\_ Price or Percentage: \_\_\_\_\_

AECOM Technical Services, Inc.  
Print Name of Prime  
By: *Karen D. Brandon*  
Authorized Signature  
Karen D. Brandon, PE  
Print Name  
Associate Vice President  
Title  
Date: 7/21/21

Mock, Roos & Associates, Inc.  
Print Name of Subcontractor/subconsultant  
By: *[Signature]*  
Authorized Signature  
Garrytt G. Gruber, PE  
Print Name  
Senior Vice President  
Title  
Date: 7/21/21

**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. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD No. 21-062

SOLICITATION/PROJECT NAME: LS 5015 Conversion to Repump

Prime Contractor: AECOM Technical Services, Inc. Subcontractor: RADISE International, L.C.

**(Check box(s) that apply)**

SBE  WBE  MBE  M/WBE  Non-S/M/WBE Date of Palm Beach County Certification (if applicable): N/A

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

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input checked="" type="checkbox"/> Asian American <input type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> 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. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
6.01, 6.08	Geological & Geophysical Studies, Materials Testing				\$6,685.30

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: \$6,685.30

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.

\_\_\_\_\_ Price or Percentage: \_\_\_\_\_

Name of 2<sup>nd</sup>/3<sup>rd</sup> tier Subcontractor/subconsultant

AECOM Technical Services, Inc.  
 Print Name of Prime  
 By: *Karen Brandon*  
 Authorized Signature  
Karen D. Brandon, PE  
 Print Name  
Associate Vice President  
 Title  
 Date: 07/22/2021

RADISE International, L.C.  
 Print Name of Subcontractor/subconsultant  
 By: *Andrew Nixon*  
 Authorized Signature  
Nixon, Andrew  
 Print Name  
Authorized Representative  
 Title  
 Date: 7/22/21

# 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> (Task Name)	<u>Completion Date from</u> <u>Notice to Proceed</u> (Calendar Days)
Task 1 - Project Initiation and Management	360 days
Task 2 - Existing Conditions and Field Investigations	30 days
Task 3 - Design Delivery and Permitting	
Basis of Design Memorandum and Conceptual (30 percent) Design	60 days
Intermediate (60 percent) Design	90 days
Pre-Final (90 percent) Design	120 days
Permitting Submittals and Coordination with Regulatory Agencies	150 days
Final (100 percent) Design	180 days
Task 4 - Bid Phase Services	360 days

*Note: PBCWUD to provide review comments within 15 days of submittals*

Revised 04/26/2021

**ATTACHMENT E  
BUDGET SUMMARY**

**Palm Beach County Water Utilities Department  
Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS)  
Resolution No. R2021-0508 Contract Dated April 20, 2021  
Consultant Services Authorization No.: 2  
Consultant: AECOM Technical Services, Inc.  
Project Title: LS 5015 Conversion to Repump  
PBCWUD Project No.: 21-062**

Summary Table with Labor and Expenses	PRIME (AECOM)	SUBCONSULTANTS						TOTAL
		SUB1 (Mock Roos)	SUB2 (BFA)	SUB3 (Brown Phillips)	SUB4 (C&W)	SUB5 (Radise)	SUB6 (Csolutions)	
<i>OEBO APPROVED AWARDED CATEGORY</i>	Non-SBE	Non-SBE	SBE + M/WBE (Black)	SBE + M/WBE (Black)	SBE	Non-SBE		
LABOR	\$ 142,478.00	\$ 59,196.00	\$ 62,264.64	\$ 10,200.90	\$ 23,158.00	\$ 6,325.30	\$ -	\$ 303,622.84
REIMBURSABLES	\$ 9,195.52	\$ 290.00	\$ 8,359.00	\$ -	\$ -	\$ 360.00		\$ 18,204.52
<b>TOTAL</b>	<b>\$ 151,673.52</b>	<b>\$ 59,486.00</b>	<b>\$ 70,623.64</b>	<b>\$ 10,200.90</b>	<b>\$ 23,158.00</b>	<b>\$ 6,685.30</b>	<b>\$ -</b>	<b>\$ 321,827.36</b>

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS)  
 Resolution No. R2021-0508 Contract Dated April 20, 2021  
 Consultant Services Authorization No.: 2  
 Consultant: AECOM Technical Services, Inc.  
 Project Title: LS 5015 Conversion to Repump  
 PBCWUD Project No.: 21-062

**BUDGET SUMMARY**

Task Number	Task Description	PRIME (AECOM)	SUB1 (Mock Roos)	SUB2 (BFA)	SUB3 (Brown Phillips)	SUB4 (C&W)	SUB5 (Radise)	SUB6 (Csolutions)	TOTAL
	<b>OEBO APPROVED AWARDED CATEGORY</b>	Non-SBE	Non-SBE	SBE + M/WBE (Black)	SBE + M/WBE (Black)	SBE	Non-SBE		
TASK 1	Project Initiation and Management								
	<i>Subtask 1.1 - Project Planning and Project Initiation M</i>	\$ 8,306.00	\$ 2,740.00	\$ 1,020.00	\$ -	\$ -	\$ -	\$ -	\$ 12,066.00
	<i>Subtask 1.2 - Project Reporting, Coordination, and Co</i>	\$ 17,460.00	\$ -	\$ 2,340.00	\$ -	\$ 2,590.00	\$ -	\$ -	\$ 22,390.00
	<i>Subtask 1.3 - Quality Control</i>	\$ 2,216.00	\$ -	\$ 2,880.00	\$ -	\$ -	\$ -	\$ -	\$ 5,096.00
	<i>Reimbursable</i>	\$ 165.92	\$ 58.24	\$ 528.00	\$ -	\$ -	\$ -	\$ -	\$ 752.16
	<b>Task 1 - Subtotal</b>	<b>\$ 28,147.92</b>	<b>\$ 2,798.24</b>	<b>\$ 6,768.00</b>	<b>\$ -</b>	<b>\$ 2,590.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 40,304.16</b>
		\$ -							
TASK 2	Existing Conditions and Field Investigations	\$ -							
	<i>Subtask 2.1 - Existing Information and Engineering Field Investigations</i>	\$ 3,644.00		\$ 4,320.00	\$ -	\$ 3,372.00	\$ -	\$ -	\$ 11,336.00
	<i>Subtask 2.2 - Topographic Survey and Subsurface Utility Investigation</i>	\$ 582.00		\$ 4,562.64	\$ 10,200.90	\$ -	\$ -	\$ -	\$ 15,345.54
	<i>Subtask 2.3 - Geotechnical Investigation and Report</i>	\$ 1,328.00			\$ -	\$ -	\$ -	\$ -	\$ 1,328.00
	<i>Reimbursable</i>	\$ 165.92		\$ 7,020.00	\$ -	\$ -	\$ -	\$ -	\$ 7,185.92
	<b>Task 2 - Subtotal</b>	<b>\$ 5,719.92</b>	<b>\$ -</b>	<b>\$ 15,902.64</b>	<b>\$ 10,200.90</b>	<b>\$ 3,372.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 35,195.46</b>
		\$ -							
TASK 3	Design Delivery and Permitting	\$ -							
	<i>Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design</i>	\$ 19,948.00	\$ 14,170.00	\$ 9,015.00	\$ -	\$ 2,860.00	\$ -	\$ -	\$ 45,993.00
	<i>Subtask 3.2 - Intermediate (60 percent) Design</i>	\$ 29,884.00	\$ 23,264.00	\$ 14,481.00	\$ -	\$ 4,156.00	\$ -	\$ -	\$ 71,785.00
	<i>Subtask 3.3 - Pre-Final (90 percent) Design</i>	\$ 29,884.00	\$ 13,506.00	\$ 11,512.50	\$ -	\$ 4,156.00	\$ -	\$ -	\$ 59,058.50

Task Number	Task Description	PRIME (AECOM)	SUB1 (Mock Roos)	SUB2 (BFA)	SUB3 (Brown Phillips)	SUB4 (C&W)	SUB5 (Radise)	SUB6 (Csolutions)	TOTAL
	<i>Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies</i>	\$ 9,798.00	\$ 1,288.00	\$ 1,689.00	\$ -	\$ 2,041.00	\$ -		\$ 14,816.00
	<i>Subtask 3.5 - Final (100 percent) Design</i>	\$ 8,208.00	\$ 2,374.00	\$ 8,125.50	\$ -	\$ 1,457.00	\$ -	\$ -	\$ 20,164.50
	<i>Reimbursable</i>	\$ 6,647.76	\$ 231.76	\$ 711.00	\$ -	\$ -	\$ -	\$ -	\$ 7,590.52
	<b>Task 3 - Subtotal</b>	<b>\$ 104,369.76</b>	<b>\$ 54,833.76</b>	<b>\$ 45,534.00</b>	<b>\$ -</b>	<b>\$ 14,670.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 219,407.52</b>
		\$ -							
TASK 4	Bid Phase Services	\$ -							
	<i>Subtask 4.1-4.5 Bid Phase Services</i>	\$ 11,220.00	\$ 1,854.00	\$ 2,319.00	\$ -	\$ 2,526.00	\$ 6,325.30	\$ -	\$ 24,244.30
	<i>Reimbursable</i>	\$ 2,215.92	\$ -	\$ 100.00	\$ -	\$ -	\$ 360.00	\$ -	\$ 2,675.92
	<b>Task 4 - Subtotal</b>	<b>\$ 13,435.92</b>	<b>\$ 1,854.00</b>	<b>\$ 2,419.00</b>	<b>\$ -</b>	<b>\$ 2,526.00</b>	<b>\$ 6,685.30</b>	<b>\$ -</b>	<b>\$ 26,920.22</b>
	<b>TOTAL PROJECT</b>	<b>\$ 151,673.52</b>	<b>\$ 59,486.00</b>	<b>\$ 70,623.64</b>	<b>\$ 10,200.90</b>	<b>\$ 23,158.00</b>	<b>\$ 6,685.30</b>	<b>\$ -</b>	<b>\$ 321,827.36</b>
	Percentage	47.129%	18.484%	21.945%	3.170%	7.196%	2.077%	0.000%	
				PRIME	\$ 151,673.52	47.12%			
				SBE	\$ 103,982.54	32.31%	SUB2, SUB3, SUB4		
				M/WBE	\$ 80,824.54	25.11%	SUB2, SUB3		
				M/WBE (Black)	\$ 80,824.54	25.11%	SUB2, SUB3		

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS)  
 Resolution No. R2021-0508 Contract Dated April 20, 2021  
 Consultant Services Authorization No.: 2  
 Consultant: AECOM Technical Services, Inc.  
 Project Title: LS 6015 Conversion to Repump  
 WUD Project No.: 21-062

BUDGET SUMMARY FOR FIRM																			PRIME TOTALS			
Task Number	Task Description	Officer / Principal	Senior Technical Expert	Technical Specialist	Senior Project Manager	Project Manager	Senior Engineer / Tech. Discipline Leader	Engineer / Technologist 5	Engineer / Technologist 4	Engineer / Technologist 3	Engineer / Technologist 2	Engineer / Technologist 1	Designer 3	Designer 2	Designer 1	Document Control Specialist	Project Administration	Total Hours	Total Labor	Total Expenses	Total Labor and Expenses	
	Raw Rate RANGE frm MASTER EXHIBIT C	\$90-\$110	\$90-\$105	\$82-\$95	\$71-\$81	\$55-\$70	\$77.5-\$87.5	\$65-\$77	\$53-\$63	\$41-\$52	\$33-\$41	\$26-\$32.5	\$45-\$52	\$38-\$44	\$31.5-\$37	\$33-\$38	\$27-\$35					
	Raw Rate >	\$ 98.53	\$ 94.85	\$ 90.07	\$ 77.21	\$ 63.60	\$ 80.88	\$ 67.65	\$ 56.25	\$ 48.16	\$ 37.87	\$ 29.41	\$ 48.90	\$ 42.28	\$ 34.93	\$ 34.93	\$ 29.78					
	Multiplier >	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72	2.72					
	Bill Rate >	\$ 268.00	\$ 258.00	\$ 245.00	\$ 210.00	\$ 173.00	\$ 220.00	\$ 184.00	\$ 153.00	\$ 131.00	\$ 103.00	\$ 80.00	\$ 133.00	\$ 115.00	\$ 95.00	\$ 95.00	\$ 81.00					
TASK 1	<b>Project Initiation and Management</b>																					
	Subtask 1.1 - Project Planning and Project Initiation Meeting	2	0	0	24	0	0	0	0	6	0	0	0	0	0	0	24	56	\$ 8,306.00	\$ -	\$ 8,306.00	
	Subtask 1.2 - Project Reporting, Coordination, and Communications	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	60	120	\$ 17,460.00	\$ -	\$ 17,460.00	
	Subtask 1.3 - Quality Control	2	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	10	\$ 2,216.00	\$ -	\$ 2,216.00	
	Reimbursable	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	\$ 165.92	\$ 165.92	
	<b>Task 1 - Subtotal</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>92</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>186</b>	<b>\$ 27,982.00</b>	<b>\$ 165.92</b>	<b>\$ 28,147.92</b>	
TASK 2	<b>Existing Conditions and Field Investigations</b>																					
	Subtask 2.1 - Existing Information and Engineering Field Investigations	0	0	0	4	0	2	0	4	8	0	0	0	0	4	0	4	26	\$ 3,644.00	\$ -	\$ 3,644.00	
	Subtask 2.2 - Topographic Survey and Subsurface Utility Investigation	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	4	\$ 582.00	\$ -	\$ 582.00	
	Subtask 2.3 - Geotechnical Investigation and Report	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	2	8	\$ 1,328.00	\$ -	\$ 1,328.00	
	Reimbursable	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	\$ 165.92	\$ 165.92	
	<b>Task 2 - Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>8</b>	<b>38</b>	<b>\$ 5,554.00</b>	<b>\$ 165.92</b>	<b>\$ 5,719.92</b>	
TASK 3	<b>Design Delivery and Permitting</b>																					
	Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design	2	0	8	0	0	2	8	4	80	0	0	0	0	40	0	8	152	\$ 19,948.00	\$ -	\$ 19,948.00	
	Subtask 3.2 - Intermediate (60 percent) Design	2	0	8	0	0	24	8	48	24	0	0	0	0	100	0	8	222	\$ 29,884.00	\$ -	\$ 29,884.00	
	Subtask 3.3 - Pre-Final (90 percent) Design	2	0	8	0	0	24	8	48	24	0	0	0	0	100	0	8	222	\$ 29,884.00	\$ -	\$ 29,884.00	
	Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies	0	0	2	0	0	2	0	4	8	60	0	0	0	4	0	8	88	\$ 9,798.00	\$ -	\$ 9,798.00	
	Subtask 3.5 - Final (100 percent) Design	2	0	4	0	0	4	0	12	8	0	0	0	0	24	0	8	62	\$ 8,208.00	\$ -	\$ 8,208.00	
	Reimbursable	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	\$ 6,647.76	\$ 6,647.76	
	<b>Task 3 - Subtotal</b>	<b>8</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>56</b>	<b>24</b>	<b>116</b>	<b>144</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>268</b>	<b>0</b>	<b>40</b>	<b>746</b>	<b>\$ 97,722.00</b>	<b>\$ 6,647.76</b>	<b>\$ 104,369.76</b>	
TASK 4	<b>Bid Phase Services</b>																					
	Subtask 4.1-4.5 Bid Phase Services	2	0	0	16	0	2	0	4	20	4	0	0	0	0	0	40	88	\$ 11,220.00	\$ -	\$ 11,220.00	
	Reimbursable	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	\$ 2,215.92	\$ 2,215.92	
	<b>Task 4 - Subtotal</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>20</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>40</b>	<b>88</b>	<b>\$ 11,220.00</b>	<b>\$ 2,215.92</b>	<b>\$ 13,435.92</b>	
	<b>Labor Subtotal Hours</b>	<b>14</b>	<b>0</b>	<b>30</b>	<b>116</b>	<b>0</b>	<b>62</b>	<b>24</b>	<b>126</b>	<b>178</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272</b>	<b>0</b>	<b>172</b>	<b>1058</b>				
	<b>Labor Raw Costs</b>	<b>\$ 1,379.41</b>	<b>\$ -</b>	<b>\$ 2,702.21</b>	<b>\$ 8,955.88</b>	<b>\$ -</b>	<b>\$ 5,014.71</b>	<b>\$ 1,623.53</b>	<b>\$ 7,087.50</b>	<b>\$ 8,572.79</b>	<b>\$ 2,423.53</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 9,500.00</b>	<b>\$ -</b>	<b>\$ 5,122.06</b>		<b>\$ 52,381.62</b>			
	<b>Labor Subtotal (Bill Rate * Labor Subtotal Hours)</b>	<b>\$ 3,752.00</b>	<b>\$ -</b>	<b>\$ 7,350.00</b>	<b>\$ 24,360.00</b>	<b>\$ -</b>	<b>\$ 13,640.00</b>	<b>\$ 4,416.00</b>	<b>\$ 19,278.00</b>	<b>\$ 23,318.00</b>	<b>\$ 6,592.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 25,840.00</b>	<b>\$ -</b>	<b>\$ 13,932.00</b>		<b>\$ 142,478.00</b>			
	<b>PROJECT TOTAL</b>																	<b>1058</b>	<b>\$ 142,478.00</b>	<b>\$ 9,195.52</b>	<b>\$ 151,673.52</b>	

**Estimate of Work Effort and Cost  
Prime Consultant**

**BUDGET SUMMARY**

<b>Palm Beach County Water Utilities Department</b>				
<b>Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS)</b>				
<b>Resolution No. R2021-0508 Contract Dated April 20, 2021</b>				
<b>Consultant Services Authorization No.: 2</b>				
<b>Consultant: AECOM Technical Services, Inc.</b>				
<b>Project Title: LS 5015 Conversion to Repump</b>				
<b>PBCWUD Project No.: 21-062</b>				
<b>FIRM NAME Reimbursables</b>		<b>Projected Quantity</b>	<b>Unit Cost</b>	<b>Project Cost</b>
<i>Task 1 - Project Initiation and Management</i>	Mileage	207	\$0.56	\$115.92
	8.5x11 Print	200	\$0.25	\$50.00
<i>Task 2 - Existing Conditions and Field Investigations</i>	Mileage	207	\$0.56	\$115.92
	8.5x11 Print	200	\$0.25	\$50.00
<i>Task 3 - Design Delivery and Permitting</i>	Mileage	942	\$0.56	\$527.76
	Bond Copies/Black line/Blueprints (24x36)	3000	\$1.00	\$3,000.00
	Bond Copies/Black line/Blueprints (11x17)	4000	\$0.50	\$2,000.00
	8.5x11 Print	4000	\$0.25	\$1,000.00
	CAD Drawing Files/Digital Transmission	6	\$20.00	\$120.00
<i>Task 4 - Bid Phase Services</i>	Mileage	207	\$0.56	\$115.92
	Bond Copies/Black line/Blueprints (24x36)	1000	\$1.00	\$1,000.00
	Bond Copies/Black line/Blueprints (11x17)	1000	\$0.50	\$500.00
	8.5x11 Print	2000	\$0.25	\$500.00
	CAD Drawing Files/Digital Transmission	5	\$20.00	\$100.00
<b>PROJECT TOTAL</b>				<b>\$9,195.52</b>

**ATTACHMENT E**  
**BUDGET SUMMARY – DRAWING LIST**

<b>SHEET</b>	<b>DWG. NO.</b>	<b>TITLE</b>
<b>GENERAL</b>		
1	G-01	Title Sheet and Location Map
2	G-02	Index of Drawings and Digital Seals
<b>CIVIL</b>		
3	C-01	Civil Notes and Legend
4	C-02	Existing LS5015 Site Layout and Piping Plan
5	C-03	Existing LS5015 Site and Piping Modification Plan
6	C-04	Existing LS0217 Site and Piping Modification Plan
7	C-05	Proposed Gavity Sewer Plans and Profiles
8	C-06	Proposed LS5015 Site Layout and Grading Plan
9	C-07	Proposed LS5015 Site Piping Plan
10	C-08	Proposed LS5015 Force Mains Plan and Profiles
11	C-09	Site Piping Details
12	C-10	Gravity Sewer Details
13	C-11	Force Main and Pavement Restoration Details
14	C-12	Miscellaneous Site Details
<b>LANDSCAPE ARCHITECTURE</b>		
15	L-01	Landscape Architecture Notes, Schedules and Legend
16	L-02	Landscape Architecture Plan and Details
<b>MECHANICAL</b>		
17	M-01	Mechanical Notes and Legend
18	M-02	Existing LS0217 Conversion Manhole Plan and Sections
19	M-03	Existing LS5015 to LS0217 Conversion Mechanical Plan and Sections
20	M-04	Proposed LS5015 Pump Station Layout Plan
21	M-05	Proposed LS5015 Pump Station Sections
22	M-06	Proposed LS5015 Bypass Plan and Sections
23	M-07	Mechanical Pumping Details
24	M-08	Mechanical Piping and Valve Details
<b>STRUCTURAL</b>		
25	S-01	Structural Notes and Legend
26	S-02	Existing Wet Well Modification Details
27	S-03	Structure Foundation and Roof Plans

Revised 04/26/2021

28	S-04	Structure Sections
29	S-05	Structural Details
30	S-06	Hoisting Equipment Plan and Details
31	S-07	Bypass Vault Structure Plans and Sections
32	S-08	Generator and Equipment Pad Plans and Sections
33	S-09	Standard Structural Details 1
34	S-10	Standard Structural Details 2
35	S-11	Standard Structural Details 3

**ELECTRICAL**

36	E-01	Electrical Notes and Legend
37	E-02	Electrical Demolition Plan
38	E-03	Proposed LS5015 Overall One-Line Diagram
39	E-04	Proposed LS5015 MCC One-Line Diagram
40	E-05	Proposed LS5015 Electrical Site Plan
41	E-06	Proposed LS5015 Electrical Equipment Layout Plan
42	E-07	Proposed LS5015 Lighting Plan
43	E-08	Proposed LS0217 Overall One-Line Diagram
44	E-09	Proposed LS0217 MCC One-Line Diagram
45	E-10	Proposed LS0217 Electrical Site Plan
46	E-11	Proposed LS0217 Electrical Equipment Layout Plan
47	E-12	Proposed LS0217 Lighting Plan
48	E-13	Electrical Panel Schedule
49	E-14	Electrical Schematics
50	E-15	Electrical Details
51	E-16	Instrumentation One-Line Diagrams
52	E-17	Generator Wiring Diagram

**INSTRUMENTATION**

53	Y-1	Piping and Instrumentation Diagram Symbols & Legend
54	Y-2	Proposed LS5015 Pump Station P&ID
55	Y-3	Proposed LS0217 Pump Station P&ID
56	Y-4	Instrumentation Details
57	Y-5	Proposed LS5015 System Architecture and Control Panel Layout
58	Y-6	Proposed LS0217 System Architecture and Control Panel Layout

Revised 04/26/2021

**ATTACHMENT – E**  
**BUDGET SUMMARY – SUB-CONSULTANT PROPOSALS**

Sub-consultant proposals provided on subsequent pages.

Revised 04/26/2021

July 15, 2021

BFA Project No. 2021-10.02

Mr. Jeremy Lock, PE, PMP  
AECOM Technical Services Inc.  
3201 West Commercial Blvd.  
Fort Lauderdale, FL 33309

**Subject: Palm Beach County Water Utilities Department  
CSA No. 2 LS 5015 Conversion to Repump  
REVISED Scope and Fee Proposal for Civil/Sitework Design and  
Subsurface Utility Investigation Services**

Dear Jeremy:

Barnes, Ferland and Associates, Inc. (BFA) is pleased to submit for your consideration, our scope and fee proposal to provide Civil/Sitework Design and Subsurface Utility Investigation services for the subject project.

### **Project Understanding**

The existing master lift station number 5015 (LS5015) is a submersible configuration receiving flow from multiple upstream lift stations connected by a force main network. There is a portion of local gravity sewer directly connected to LS5015, with an adjacent submersible lift station LS0217 providing much of the local contributing flow. Flow from LS5015 is pumped into a downstream interconnected force main network. Currently the peak wet weather flows have the potential for exceeding the firm capacity of LS5015 and needs to be increased in capacity and provisions implemented to reduce the risk of potential overflows.

The Palm Beach County Water Utilities Department (PBCWUD) intends to convert LS5015 to an inline booster pump station (also called a repump station) with closed pipe connections on the suction and discharge points. Additionally, PBCWUD intends to reconfigure the local collection system such that:

- The flows to the existing LS0217 will be rerouted to the location of the existing LS5015 submersible lift station.
- Rehabilitate and reconfigure the existing submersible LS5015 to serve local collection system flows and convey that flow to the new repump station LS5015.
- During construction, the existing LS0217 will need to convey flow from an additional 12-inch gravity sewer with either new pumps or adding temporary pumps.
- Rename the rehabilitated and reconfigured existing submersible LS5015 to LS0217 and demolish the existing LS0217 upon completion of work.

PBCWUD has requested AECOM Technical Services Inc. (CONSULTANT) to provide design, permitting, and bid phase services to help achieve construction of a new LS5015 repump station, reconfiguration of the existing LS5015 to LS0217 to serve local flows and demolition of the existing LS0217.

1230 Hillcrest Street, Suite 100 • Orlando, Florida 32803  
Office (407) 896-8608 • Fax (407) 896-1822

The new repump station will be constructed on a new easement west of Sherwood Forest Blvd from the existing lift station. The suction and discharge force mains will need to be constructed within the public right of way with restoration of Sherwood Forest Blvd upon completion. The finished work is intended to be similar to other PBCWUD inline booster stations and to include such features as:

- Multiple pumps (possibly separate sizes if needed to accommodate hydraulic conditions) arranged in an above-grade horizontal configuration that will facilitate the range of anticipated flows.
- Overhead cover in an open-air configuration for protection of the pumping equipment.
- Weatherproof exterior electrical and control panels that will house the variable frequency drives (VFDs).
- Overhead hoisting equipment to facilitate removal of pumps, motors, and valves.
- External to the station onsite would be a new low flow bypass, emergency bypass connections and concrete parking pad for placement of temporary bypass pumps.
- Emergency power is intended to be provided as a new freestanding diesel generator with sound enclosure and integral "belly" tank.
- Security camera Closed Circuit Television (CCTV) is to be provided consistent with similar PBCWUD pump stations.
- Suction and discharge force mains constructed within the public right of way with restoration of Sherwood Forest Blvd upon completion.
- Intercept and manifold existing force main flow in front of the new booster pump station.
- Manifold the FM in front of existing LS5015 to allow flexibility to pump north or south (existing FM's will no longer actively discharge into the wetwell).

The rehabilitated and reconfigured submersible lift station will be constructed within the existing easement limits with the finished work following PBCWUD minimum lift station design standards as closely as possible and to include such features as:

- Duplex submersible pumps with rail style pump removal system and access hatches.
- Weatherproof exterior electrical and control panels that will house motor soft starters, controls, and generator automatic transfer switch (ATS).
- Emergency power is intended to be provided as a new freestanding diesel generator with sound enclosure and integral "belly" tank.
- Security camera Closed Circuit Television (CCTV) is to be provided consistent with similar PBCWUD pump stations.
- Replacement of security fencing and restoration of the site.
- Reroute the gravity sanitary from existing LS0217 to the existing wetwell of LS5105.
- Convert LS0217 to a flow through manhole and decommission it as a lift station with the removal of FM piping, valve vault, and electrical.
- Rehabilitate LS5015 for the reduced flow, modify the wetwell, structural repairs, hatches, pumps, controls, and piping.

- Wetwell shall remain as a reservoir and FM piping shall be such that the wetwell could be used as an emergency reservoir.

#### **Assumptions**

1. PBCWUD will provide information related to pump run times, pressures, existing pump curves and background hydraulic models in order for the necessary hydraulic analysis to be performed in order to define the required basis of design operating ranges of pressures and flows.
2. Electrical service appears to be directly available adjacent to the potential project sites with FPL coordination anticipated for a new power drop.
3. PBCWUD will obtain the easements and define the boundary of the easement property prior to initiation of design work.
4. The new work can be constructed within the easement limits being developed by PBCWUD.
5. New security fencing will match that of the subdivision along Sherwood Forest Blvd, which the easement is being obtained from.
6. No onsite stormwater retention will be required.
7. No bathrooms or sinks will be provided at the site.
8. Construction phase support services are excluded.
9. PBCWUD will perform any needed asbestos and lead surveys. CONSULTANT will incorporate the results into the specifications.

#### **Scope of Work**

As a subconsultant to AECOM, BFA is proposing to perform the following services as part of the overall project scope summarized in the following task structure:

#### **Task 1 - Project Initiation and Management**

##### **Subtask 1.1 Project Planning and Project Initiation Meeting**

At the outset of work, a detailed Project Delivery Plan (PDP) with Quality Management Plan (QMP) will be developed based on this scope of work, available information on the facilities, team member roles, agreed-upon schedule, deliverable requirements, and communications protocol of PBCWUD. Items of discussion during the project initiation are anticipated to include:

- a. Standard design and construction document criteria.
- b. Standard technical and procurement specifications.
- c. Review of roles, responsibilities, and critical schedule milestones.
- d. Initial review of possible regulatory agencies and permitting requirements.
- e. Initial design concepts.

**BFA will coordinate with AECOM's Project Manager to discuss and develop a PDP that conforms to the overall project goals.**

### **Subtask 1.2 Project Reporting, Coordination, and Communications**

Updated schedules will be provided to reflect schedule changes that may occur during the project development, coordination, and permitting. CONSULTANT shall provide monthly progress reports, including a summary of work performed and an updated permit register.

### **Subtask 1.3 - Quality Control**

A Quality Management Plan (QMP) as part of the project planning process and adhered to throughout the project delivery with QA/QC review of all project deliverables. Submittals and correspondence will be reviewed prior to issuance.

### **Deliverables - Project Initiation and Management**

- a. Project Management Plan (Digital)
- b. Project Initiation Meeting Materials and Meeting Minutes (Digital)
- c. Monthly Progress Reports (Digital)

**BFA will provide monthly progress reports, schedule updates, project coordination and communication to AECOM throughout the project execution.**

### **Task 2 - Existing Conditions and Field Investigations**

#### **Subtask 2.1 - Existing Information and Engineering Field Investigations**

Design disciplines (Mechanical, Civil, Structural, Electrical, Instrumentation, and Architectural) will evaluate the as-built drawings and verify current field conditions. Drawings of the existing facilities, project site and right-of way will be augmented with field conditions, subsurface utilities, and survey information as necessary for design purposes and inclusion in developed drawings of the subsequent design submittals. Field assessment notes will be provided to PBCWUD.

**BFA to review available as-builts and O&M information and verify current field conditions by visitation.**

#### **Subtask 2.2 - Subsurface Utility Investigation**

BFA shall perform a subsurface utility investigation of the project site and within the associated public right-of-way where the work is being performed to support the construction of the new facilities to include the following:

- a. Utilize ground penetrating radar (GPR) to identify buried utilities.
- b. Perform soft digs at proposed tie-in locations and critical pipe crossings. Place witness pipes with labels at found utilities so coordinates and depths can be obtained by the topographical surveyor.

**Under this task AECOM will call in a Sunshine One-Call Design Ticket and contact utility companies/agencies listed on the design ticket that may have underground or aboveground service lines, utilities, easements, or structures within or adjacent to the project limits. AECOM will request location, alignment, size, diameter,**

**material, and depth of cover of existing facilities to avoid conflicts with proposed improvements. If record drawings are not available, AECOM will request the utility/agency mark the best available information on a plan view sheet and provide the available information. If the company/agency has no existing utilities in the area, AECOM will request that the utility/agency confirm such by stating that there are no utilities in the area. If existing utility information is not available and as directed by AECOM, BFA will perform horizontal locations of existing detectable utility mains using electromagnetic (EM) and ground-penetrating radar (GPR) techniques, mark selected targets on the ground surface as necessary, and review onsite discoveries with onsite personnel/surveyors where applicable.**

**BFA will provide services to conduct utility test hole excavations to obtain depth, diameter, and material of the force mains and utilities located around the force mains and gravity sanitary sewer rerouting. BFA's scope of services assumes up to ten (10) utility test hole excavations, comprised of five (5) "Hard Digs" and five (5) "Soft Digs" (Grass, Dirt areas, etc....).**

**Deliverables - Existing Conditions and Subsurface Utility Investigation**

- a. **Field Assessment Notes (Digital)**
- b. **BFA will submit field notes and sketches of the utility designations performed in pdf format.**
- c. **BFA will submit utility test hole reports indicating findings of utility locates performed in pdf format.**

**Task 2 Assumptions:**

1. **AECOM will provide utility coordination and call in Sunshine One-Call Design Tickets and contact utility companies/agencies. Records drawings, as-builts and other existing utility information provided by the utility companies will be provided to BFA to assist with confirmation of underground utilities.**
2. **Topographic survey of BFA's utility designates and utility test hole excavations will be performed by others.**

**Task 3 – Design Delivery and Permitting**

**Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design**

1. Hydraulic Analysis **No BFA services**
2. Basis of Design Memorandum
  - a. Basis of Design Criteria Documentation – Provide a summary of the operating conditions and design requirements that will be used as a basis throughout the design process.
  - b. Equipment Review and Selection – Provide a shortlist review of the potential

- mechanical, electrical, and piping equipment to be implemented as part of the work with clear recommendations for implementation. This will include sizing and selection of major equipment components.
- c. Preliminary Layout and Configuration – Based on interactive feedback on PBCWUD requirements and preferences a preliminary layout of the site, equipment, piping, and appurtenances will be developed for review. This concept will be developed to a point required to communicate concepts, potential issues, improvement opportunities, and to receive PBCWUD feedback prior to detailed design.
  - d. Permitting and Code Review – An initial review of the site changes and disciplines of work anticipated along with the potential regulatory agency and permit requirements.
  - e. Preliminary Opinion of Probable Construction Cost (OPCC) (30 percent) – Developed to an American Association of Cost Engineers (AACE) Class 5 expected accuracy range based on the level of project definition.
  - f. Construction Sequence and Schedule (30 percent) – A preliminary estimation of the sequence of work required to minimize bypass pumping requirements while also constructing the new pump station, demolishing the existing pump station, restoring the site, and commissioning the final work.
  - g. Technical Specification Table of Contents – A listing of the anticipated technical specifications that will be required for the procurement of construction.
3. Construction Drawings (30 percent) - An initial layout of the site, electrical arrangement, piping, pumping, overhead cover, hoisting equipment, and one-line electrical drawings will be developed and provided along with the basis of design memorandum. Initial recommendations for flow management or bypassing during construction will also be provided.
  4. Review Meeting and Decision Log (30 percent) - Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
  5. Deliverables - Basis of Design Memorandum and Conceptual (30 percent) Design - Deliverables will be provided as outlined below and discussed as part of a formal design review meeting with PBCWUD.
    - a. Hydraulic Analysis Technical Memo **No BFA services**
    - b. Basis of Design Memorandum (Digital)
      - i. Permitting and Code Review
      - ii. Preliminary OPCC
      - iii. Construction Sequence and Schedule
      - iv. Technical Specification Table of Contents
    - c. Conceptual (30 percent) Design Drawings (Digital)
    - d. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital)

### **Subtask 3.2 Intermediate (60 percent) Design**

The following elements will be further developed from the previous Conceptual (30 percent) design phase of work and updated to reflect the additional detail of design.

1. Construction Drawings (60 percent) – Will include some level of detail for the anticipated Civil/Sitework and piping will be advanced to a pre-final stage of work. A final design concept for flow management or bypassing during construction will also be provided.
2. Construction Technical Specifications (60 percent) – An initial draft of all technical specifications will be provided. Specific equipment details and requirements for the sizing of components may be excluded from the technical specifications pending PBCWUD concurrence with design elements. Procurement specific specification will not be included at this phase of work.
3. OPCC, Construction Sequence, and Schedule (60 percent) – Developed to an AACE Class 4 expected accuracy range based on the level of project definition.
4. Permit Register (60 percent) – Updated to reflect the anticipated regulatory agencies based on the site changes and disciplines of work involved in the project. Will also include known points of contact, permit forms for completion, level of design required for submittal, required supporting information, and anticipated duration and sequence for obtaining approval of each permit.
5. Review Meeting and Decision Log (60 percent) - Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
6. Deliverables - Intermediate (60 percent) Design
  - a. Construction Drawings (Digital)
  - b. Construction Technical Specifications (Digital)
  - c. OPCC, Construction Sequence and Schedule (Digital)
  - d. Permit Register (Digital)
  - e. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital)

### **Subtask 3.3 Pre-Final (90 percent) Design**

The following elements will be further developed from the previous Intermediate (60 percent) design phase of work and updated to reflect the additional detail of design.

1. Construction Drawings (90 percent) – All construction drawings shall be updated with a consistent level of detail to reflect a pre-final condition that is comprehensive of the work to be completed.
2. Construction Procurement and Technical Specifications (90 percent) - All procurement and technical specifications documents shall be updated with a consistent level of detail to reflect a pre-final condition that is comprehensive of the

work to be completed. This includes bid advertisement, description of work, and technical criteria reflective of the equipment, systems, and elements of work.

3. OPCC, Construction Sequence, and Schedule (60 percent) - Developed to an AACE Class 3 expected accuracy range based on the level of project definition.
4. Permit Register (90 percent) – Update of the previous register with status on any permitting activities that are currently underway and planned.
5. Review Meeting and Decision Log (90 percent) - Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
6. Deliverables - Pre-Final (90 percent) Design
  - a. Construction Drawings (Digital)
  - b. Construction Procurement and Technical Specifications (Digital)
  - c. OPCC, Construction Sequence and Schedule (Digital)
  - d. Permit Register (Digital)
  - e. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital)

#### **Subtask 3.4 Permitting Submittals and Coordination with Regulatory Agencies**

Permitting activities are anticipated to continue across several phases of the design development work. However, activities for the permitting will be conducted separately and in parallel with the construction documents used to support permitting activities.

1. Permit Register – CONSULTANT shall maintain a register of known permits and agency approvals required for the project.
2. Preparation of Permit Packages – For all permits that can be obtained prior to the initiation of construction, the required materials will be prepared and submitted for approvals. As needed regulatory agencies will be met with to review documents and make revisions for approval in an expedited manner.
3. Dry run submittal – To minimize the potential for permitting delays in the construction phase, drawings will be submitted to the Palm Beach County Department of Planning, Zoning & Building during the design process, as a “dry run” submittal for the building permit. Review comments will be reviewed and incorporated into the construction drawings.
4. Approved Permits – All approved permits and relevant permitting correspondence will be provided to PBCWUD and included in the Construction Documents.
5. Deliverables - Permitting
  - a. Draft Permit Applications and Supporting Documents (Digital and Printed)
  - b. Approved Final Permits and Supporting Documents (Digital and Printed)
  - c. Permit Register (Digital and Printed)

### **Subtask 3.5 Final (100 percent) Design**

The following elements will be further developed from the previous Pre-Final (90 percent) design phase of work and updated to reflect the additional detail of design.

1. Construction Drawings – Final bid-ready construction drawings that incorporate all the PBCWUD review comments and requirements.
2. Construction Procurement and Technical Specifications - Final bid ready Construction Procurement and Technical Specifications that incorporate all the PBCWUD and PBC Procurement review comments and requirements.
3. OPCC, Construction Sequence, and Schedule – Final OPCC Developed to an AACE Class 3 expected accuracy range based on the level of project definition. The sequence of work and schedule will be reflective of the actual anticipated construction work.
4. Permit Register – Final approved pre-construction permits and supporting documents. Permits that are anticipated to be obtained during construction will be identified.
5. Review Meeting and Decision Log (100 percent) – Materials will be provided in advance of all review meetings with meeting outcomes documented in meeting minutes and as part of a decision log.
6. Deliverables - Final (100 percent) Design
  - a. Construction Drawings (Digital)
  - b. Construction Procurement and Technical Specifications (Digital)
  - c. OPCC, Construction Sequence and Schedule (Digital)
  - d. Permit Register (Digital)
  - e. Review Meeting Materials, Meeting Minutes, and Decision Log (Digital)

**BFA to complete the Task 3 scope items described above as they relate to the Civil/Sitework design components.**

### **Task 4 Bid Phase Services**

Engineering support during the public bidding for procurement of construction services is anticipated to include the following work elements.

#### **Subtask 4.1 - Bid Advertisement and Procurement Package**

#### **Subtask 4.2 - Pre-Bid Meeting**

#### **Subtask 4.3 - Response to Bidder Questions**

Respond to bidder questions, if needed, to clarify the intent of the bid documents. As required, addenda will be prepared and issued to PBCWUD for distribution to bidders.

#### **Subtask 4.4 - Bid Tabulation and Recommendation**

#### **Subtask 4.5 - Conformed Contract Documents**

CONSULTANT shall prepare a conformed set of contract documents for use by the Contractor during construction.

**Deliverables - Bid Phase Services**

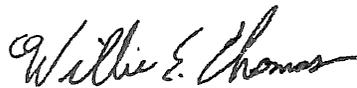
1. Signed and Sealed Contract Documents
2. Narrative Description of the Work
3. Conformed Contract Documents

**BFA to complete the Task 4 scope items described above as they relate to the Civil/Sitework design components.**

<b>Preliminary List of Drawings for BFA' Scope of Work</b>		
<b>Sheet</b>	<b>Dwg. No.</b>	<b>Title</b>
1	C-01	Civil Notes and Legend
2	C-02	LS0217 Existing Site Layout and Piping Plan
3	C-03	LS5015 Existing Site Layout and Piping Plan
4	C-04	LS0217 Site and Piping Demolition Plan
5	C-05	LS5015 Site and Piping Demolition Plan
6	C-06	LS0217 Proposed Site Layout and Grading Plan
7	C-07	LS5015 Proposed Site Layout and Grading Plan
8	C-08	LS0217 Proposed Site Piping Plan
9	C-09	LS5015 Proposed Site Piping Plan
10	C-10	Site Piping Details
11	C-11	Miscellaneous Site Details

BFA's total fee to provide the services described herein for the project is **\$70,623.64**. A cost breakdown is provided in the attached Budget Summary. We appreciate the opportunity to assist AECOM on this PBCWUD project.

Sincerely,



Willie E. Thomas, PE  
President

Attachments

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS)  
 Resolution No. R2021-0508 Contract Dated April 20, 2021  
 Consultant Services Authorization: 2  
 Consultant: Barnes, Ferland and Associates, Inc. Subconsultant to AECOM Technical Services, Inc.  
 Project Title: LS 5015 CONVERSION TO REPUMP  
 WUD Project No.: 21-062

**BUDGET SUMMARY FOR BARNES, FERLAND AND ASSOCIATES, Inc.**

Task Number	Task Description	Engineer V	Engineer IV	Engineer I	Sr. Designer	CAD IV	Surveyor and Mapper	Survey Technician	Utility Coordinator	Administrative Support II	PRIME TOTALS			
											Total Hours	Total Labor	Total Expenses	Total Labor and Expenses
	Raw Rate RANGE frm MASTER EXHIBIT C	\$60-\$65	\$48-\$52	\$27-\$30	\$40-\$44	\$33-\$36	\$45-\$49	\$30-\$33	\$27-\$30	\$21-\$23				
	Raw Rate >	\$ 60.00	\$ 50.00	\$ 27.50	\$ 40.00	\$ 33.25	\$ 46.11	\$ 31.50	\$ 27.00	\$ 21.00				
	Multiplier >	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00				
	Bill Rate >	\$ 180.00	\$ 150.00	\$ 82.50	\$ 120.00	\$ 99.75	\$ 138.33	\$ 94.50	\$ 81.00	\$ 63.00				
<b>TASK 1</b>	<b>Task 1 - Project Initiation and Management</b>													
	Subtask 1.1 - Project Planning and Project Initiation Meeting	4	2	0	0	0	0	0	0	0	6	\$ 1,020.00	—	\$ 1,020.00
	Subtask 1.2 - Project Reporting, Coordination, and Communications	8	6	0	0	0	0	0	0	0	14	\$ 2,340.00	—	\$ 2,340.00
	Subtask 1.3 - Quality Control	16	0	0	0	0	0	0	0	0	16	\$ 2,880.00	—	\$ 2,880.00
	Task 1 Reimbursable	—	—	—	—	—	—	—	—	—	—	—	\$ 528.00	\$ 528.00
	Task 1 - Subtotal	28	8	0	0	0	0	0	0	0	36	\$ 6,240.00	\$ 528.00	\$ 6,768.00
<b>TASK 2</b>	<b>Task 2 - Existing Conditions and Field Investigations</b>													
	Subtask 2.1 - Existing Information and Engineering Field Investigations	0	16	0	16	0	0	0	0	0	32	\$ 4,320.00	—	\$ 4,320.00
	Subtask 2.2 - Topographic Survey and Subsurface Utility Investigation	0	0	0	0	0	8	16	24	0	48	\$ 4,562.64	—	\$ 4,562.64
	Subtask 2.3 - Geotechnical Investigation and Report	0	0	0	0	0	0	0	0	0	0	\$ -	—	\$ -
	Task 2 Reimbursable	—	—	—	—	—	—	—	—	—	—	—	\$ 7,020.00	\$ 7,020.00
	Task 2 - Subtotal	0	16	0	16	0	8	16	24	0	80	\$ 8,882.64	\$ 7,020.00	\$ 15,902.64

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS)  
 Resolution No. R2021-0508 Contract Dated April 20, 2021  
 Consultant Services Authorization: 2  
 Consultant: Barnes, Ferland and Associates, Inc. Subconsultant to AECOM Technical Services, Inc.  
 Project Title: LS 5015 CONVERSION TO REPUMP  
 WUD Project No.: 21-082

**BUDGET SUMMARY FOR BARNES, FERLAND AND ASSOCIATES, Inc.**

Task Number	Task Description	Engineer V	Engineer IV	Engineer I	Sr. Designer	CAD IV	Surveyor and Mapper	Survey Technician	Utility Coordinator	Administrative Support II	PRIME TOTALS			
											Total Hours	Total Labor	Total Expenses	Total Labor and Expenses
	Raw Rate RANGE frm MASTER EXHIBIT C	\$60-\$65	\$48-\$52	\$27-\$30	\$40-\$44	\$33-\$36	\$45-\$49	\$30-\$33	\$27-\$30	\$21-\$23				
	Raw Rate >	\$ 60.00	\$ 50.00	\$ 27.50	\$ 40.00	\$ 33.25	\$ 46.11	\$ 31.50	\$ 27.00	\$ 21.00				
	Multiplier >	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00				
	Bill Rate >	\$ 180.00	\$ 150.00	\$ 82.50	\$ 120.00	\$ 99.75	\$ 138.33	\$ 94.50	\$ 81.00	\$ 63.00				
<b>TASK 3</b>	<b>Task 3 - Design Delivery and Permitting</b>													
	Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design	2	20	8	25	20	0	0	0	0	75	\$ 9,015.00	—	\$ 9,015.00
	Subtask 3.2 - Intermediate (50 percent) Design	2	25	24	40	36	0	0	0	0	127	\$ 14,481.00	—	\$ 14,481.00
	Subtask 3.3 - Pre-Final (50 percent) Design	2	20	16	32	30	0	0	0	0	100	\$ 11,512.50	—	\$ 11,512.50
	Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies	2	4	4	0	4	0	0	0	0	14	\$ 1,689.00	—	\$ 1,689.00
	Subtask 3.5 - Final (100 percent) Design	2	14	12	24	18	0	0	0	0	70	\$ 8,125.50	—	\$ 8,125.50
	Task 3 Reimbursable	—	—	—	—	—	—	—	—	—	—	—	\$ 711.00	\$ 711.00
	Task 3 - Subtotal	10	83	64	121	108	0	0	0	0	386	\$ 44,823.00	\$ 711.00	\$ 45,534.00
<b>TASK 4</b>	<b>Task 4 - Bid Phase Services</b>													
	Subtask 4.1-4 Bid Phase Services	4	8	0	0	4	0	0	0	0	16	\$ 2,319.00	—	\$ 2,319.00
	Task 4 Reimbursable	—	—	—	—	—	—	—	—	—	—	—	\$ 100.00	\$ 100.00
	Task 4 - Subtotal	4	8	0	0	4	0	0	0	0	16	\$ 2,319.00	\$ 100.00	\$ 2,419.00
	<b>Labor Subtotal Hours</b>	<b>42</b>	<b>115</b>	<b>64</b>	<b>137</b>	<b>112</b>	<b>8</b>	<b>16</b>	<b>24</b>	<b>0</b>	<b>518</b>			
	<b>Labor Raw Costs</b>	<b>\$ 2,520.00</b>	<b>\$ 5,750.00</b>	<b>\$ 1,760.00</b>	<b>\$ 5,480.00</b>	<b>\$ 3,724.00</b>	<b>\$ 368.88</b>	<b>\$ 504.00</b>	<b>\$ 648.00</b>	<b>\$ -</b>		<b>\$ 20,754.88</b>		
	<b>Labor Subtotal (Bill Rate * Labor Subtotal Hours)</b>	<b>\$ 7,560.00</b>	<b>\$ 17,250.00</b>	<b>\$ 5,280.00</b>	<b>\$ 16,440.00</b>	<b>\$ 11,172.00</b>	<b>\$ 1,106.64</b>	<b>\$ 1,512.00</b>	<b>\$ 1,944.00</b>	<b>\$ -</b>		<b>\$ 62,264.64</b>		
	<b>PROJECT TOTAL</b>										<b>518</b>	<b>\$ 62,264.64</b>	<b>\$ 8,359.00</b>	<b>\$ 70,623.64</b>

**Barnes, Ferland and Associates, Inc.  
BUDGET SUMMARY**

**AECOM - Palm Beach County Water Utilities Department**  
**Contract for Consulting/Professional Services – Master Lift Station and Repump Improvements**  
**Consultant Services Authorization: 2**  
**Consultant: Barnes, Ferland and Associates, Inc., Sub-consultant to AECOM**  
**Project Title: LS 5015 CONVERSION TO REPUMP**  
**WUD Project No.: 21-062**

BFA Reimbursables		Projected Quantity	Unit Cost	Project Cost
<b>TASK 1</b>	Mileage	600	\$0.56	\$336.00
<i>Project Initiation and Management</i>	Lodging (\$160/ night + tax = \$192/ night)	1	\$192.00	\$192.00
	Bond Copies/Black line/Blueprints (24x36)		\$1.00	\$0.00
	Bond Copies/Black line/Blueprints (11x17)		\$0.50	\$0.00
	8.5x11 Print		\$0.25	\$0.00
	8.5x11 Print (color)		\$2.00	\$0.00
	CAD Drawing Files/Digital Transmission		\$50.00	\$0.00
<b>TASK 2</b>	Mileage	689	\$0.56	\$386.00
<i>Subtask 2.2 - Subsurface Utility Investigation</i>	Lodging (\$160/ night + tax = \$192/ night)	2	\$192.00	\$384.00
	Utility Test Hole Excavation "Soft Dig" (Grass, Dirt areas, etc....)	5	\$500.00	\$2,500.00
	Utility Test Hole Excavation "Hard Dig" (Concrete, Paved areas, etc....)	5	\$750.00	\$3,750.00
	8.5x11 Print		\$0.25	\$0.00
	CAD Drawing Files/Digital Transmission		\$50.00	\$0.00
<b>TASK 3</b>	Mileage	957	\$0.56	\$536.00
<i>Design Delivery and Permitting</i>	Lodging (\$160/ night + tax = \$192/ night)		\$192.00	\$0.00
	Bond Copies/Black line/Blueprints (24x36)	50	\$1.00	\$50.00
	Bond Copies/Black line/Blueprints (11x17)	50	\$0.50	\$25.00
	8.5x11 Print	400	\$0.25	\$100.00
	8.5x11 Print (color)		\$2.00	\$0.00
	CAD Drawing Files/Digital Transmission		\$50.00	\$0.00
<b>TASK 4</b>	Mileage	179	\$0.56	\$100.00
<i>Bid Phase Services</i>	Lodging (\$160/ night + tax = \$192/ night)		\$192.00	\$0.00
	Bond Copies/Black line/Blueprints (24x36)		\$1.00	\$0.00
	Bond Copies/Black line/Blueprints (11x17)		\$0.50	\$0.00
	8.5x11 Print		\$0.25	\$0.00
	8.5x11 Print (color)		\$2.00	\$0.00
	CAD Drawing Files/Digital Transmission		\$50.00	\$0.00
<b>PROJECT TOTAL</b>				<b>\$8,359.00</b>

July 12, 2021

Mr. Jeremy Koch  
AECOM  
2090 Palm Beach Lakes Boulevard, Suite 600  
West Palm Beach, FL 33409

**Re: PBCWUD Master Pump Station – CSA #2 for LS 5015 Conversion to Repump  
Topographic Survey and Easement Legal Description & Sketch**

Dear Jeremy:

Thank you for the opportunity to provide you with the following services for the subject site. This proposal is based on documentation and information provided by your office. The scope of services is as follows:

#### **SCOPE OF SERVICES**

##### **I. HORIZONTAL PROJECT NETWORK CONTROL**

A traverse will be run through the site and all found monumentation will be tied in. The survey will be oriented to Palm Beach County horizontal control (NAD 83/11 Adjustment). We will obtain the sectional and geodetic control information from the Palm Beach County Survey Department.

##### **II. VERTICAL PROJECT NETWORK CONTROL**

A level run will be performed onsite using the existing Palm Beach County benchmarks (NAVD 1988). At least two benchmarks will be set onsite.

##### **III. RIGHT-OF-WAY**

We will review and compile any title information furnished to us for the rights-of-way (R/W), abutting properties, easements, and restrictions. No search of the Public Records will be performed by Brown & Phillips. We will review the title package and plot all right-of-way documents and easements on the Survey.

##### **IV. TOPOGRAPHIC SURVEY**

A complete topographic survey will be done at the site (approximate limits are outlined in pink on Attachment 'B') tying in all above ground features. This will include the following from the Scope of Work included in your email dated June 17, 2021 and July 12, 2021 including additional topographic survey of the existing LS5015 and LS0217 directly adjacent to one another.

Carry out a field survey of the project site and within the associated public right-of-way where the work is being performed to support the construction of the new facilities to include the following:

1860 Old Okeechobee Road • Suite 509 • West Palm Beach, Florida 33409  
(561) 615-3988 • Fax (561) 615-3991

M: PROPOSALS BY COMPANY\AECOM\PBCWUD Master Pump Station LS 5015-LS 5015 Topographic Survey and Easement Exhibits.doc

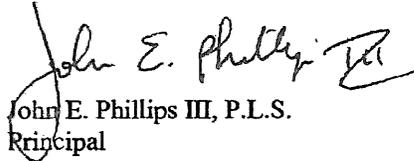
1. Support of PBCWUD for easement acquisition of the new pump station site with a topographic survey, sketch and legal description of the proposed easement.
2. Determine dimensions, elevations, and measurements of existing pump station features, piping, and site layout.
3. Brown & Phillips (B&P) will coordinate with BFA, who will utilize ground penetrating radar (GPR) to identify buried utilities. Once BFA has designated buried utilities, B&P will locate the marked lines and then add them to the survey. B&P will locate the soft digs performed by BFA and obtain the pipe coordinates and depths.
4. Obtain site-specific information, such as the boundary survey and topographic survey.
5. Obtain specific boundary information, such as right-of-way lines, subdivision lines, lot lines, baselines, and easement lines, as required by the project.

The survey shall be signed and sealed by a Florida Registered Professional Land Surveyor. Not a boundary survey.

#### V. CLOSURE

A drawing will be produced which will show all the features located. We propose to provide AECOM with hard copies, a digitally signed PDF file, and an AutoCAD file in the version requested. Any additional work will be done on an hourly basis as approved by you. We will perform the scope of services for an hourly, not to exceed fee of \$10,200.90 (see Attachment 'A' for an hourly breakdown). Please do not hesitate to call me with any questions you might have regarding this proposal. We look forward to working with you on this project.

**Brown & Phillips, Inc.**

  
John E. Phillips III, P.L.S.  
Principal

Attachment

JEP/mb

This Proposal accepted this \_\_\_\_ day of \_\_\_\_\_, 2021

By: \_\_\_\_\_

**AECOM**

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_



**BROWN & PHILLIPS, Inc.**  
PROFESSIONAL SURVEYING SERVICES

ATTACHMENT 'A'

PBCWUD Master Pump Station – CSA #2 for LS 5015 Conversion to Repump

Type of Survey: Topographic

Size:

Date: July 12, 2021

TASK	SURVEY CREW	CADD TECH	SURVEY TECH	PLS	COMMENTS
Meetings and Coordination				1	
Horizontal Project Network Control	2		8	2	Set control points, work up R/W and plats
Vertical Project Network Control	6		1		Establish onsite benchmarks
Section/Boundary Ties	4		2	1	Find and locate existing monumentation
Tie In Improvements and Cross Sections	24		3	1	All above ground features, 50' cross sections & spot elevs.
As-builts	3				Obtain as-built data
Underground Utilities	3	1	1		Field locate flagged utilities and potholes
Drawing		17	4	2	Prepare topographic survey
Legal Description & Sketch			6	1	
Total Hours:	42	18	25	8	
Rate/Hour	\$42.17	\$30.12	\$30.12	\$41.75	(unloaded)
Subtotal:	\$1,771.14	\$542.16	\$753.00	\$334.00	
Total cost per Lift Station (unloaded):					\$3,400.30
Multiplier:					3
Total cost per Lift Stations (loaded) :					\$10,200.90

<u>Other Direct Costs:</u>	<u>quantity</u>	<u>unit</u>	<u>cost/unit</u>	<u>total</u>
Legal Description & Sketch		each	\$550.00	\$0.00
Prints		sheet	\$1.50	\$0.00
Shipping		cost x markup	1.20	\$0.00
Other				\$0.00
<b>Total Other Direct Costs:</b>				\$0.00
<b>TOTAL PRICE</b>				<b>\$10,200.90</b>

ATTACHMENT B



Revised 04/26/2021

# **C & W engineering, Inc.**

---

Electrical Consultants

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

July 12, 2021

Jeremy Koch  
AECOM  
2090 Palm Beach Lakes Blvd Ste 600  
West Palm Beach, FL 33409

Subject: LS 5015 Conversion to Repump  
WUD Project# 21-020  
Electrical Engineering Proposal  
C&W Ref. 50208

Dear Mr. Koch:

I am pleased to submit this proposal for your consideration to provide Electrical, Instrumentation and Controls Engineering Design Services for the above referenced project. The work will include:

1. Include new electrical 480V 3 phase service from power company to new pump station.
2. Include new control panel with Emergency breaker and PBCWUD standard generator receptacle.
3. Provide new Electrical Service lateral to new service new meter, main breaker service disconnect and Automatic Transfer Switch. New electrical equipment will be housed outside on pipe stand rack.
4. Design for new pumps, VFD and control panel.
5. Design for new Owner furnished standby generator with diesel subbase fuel tank.
6. Coordination with the Electrical Utility.
7. Include instrumentation and control equipment per PBCWUD for the wet well level transmitter, floats, and the like. Also for inlet/outlet pressure sustaining controls and motor actuated valves

8. Include the PBCWUD standard remote telemetry unit.
9. Include power and data for security camera CCTV system.
10. Include rehabilitation of the existing electrical equipment at for LS 5150 triplex station, including odor control panel, ATS and generator. Station will be renamed as LS 0217. Including CCTV power /data provisions.
11. Include demolition of the existing electrical equipment at lift station LS 0217 station.
12. Submit documents for review and comment at the 30%, 60 % and 90 % completion levels. The Submittal will include drawings, specifications, and an opinion of costs.
13. The documents will be useful for permitting, bidding and construction.
14. Include services for permitting.
15. Include services during the bid cycle.
16. Weekly zoom meetings.
17. Services during construction are EXCLUDED.

**DESIGN SERVICES**

**Coordination**

AECOM/Mock Roos  
Owner  
Vendors

**Field Investigations**

**Engineering**

Verifying Power Source  
Observe Existing Conditions

**Drawings**

Electrical Site Plan  
Wet Well Electrical Equipment Plan  
One Line Power Diagram  
Instrumentation Diagrams  
Details as may be required

C&W#50208

Typical Specifications

Provide documents for Review and Approval.

Bid Assistance, Response to Questions

**DESIGN FEE:**

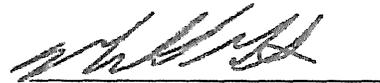
Tasks 1	\$ 2,590.00
Tasks 2	\$ 3,372.00
Tasks 3	\$14,670.00
Tasks 4	\$ 2,526.00
<b>Total Fee</b>	<b>\$23,158.00</b>

**CONSTRUCTION SERVICES: EXCLUDED**

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

Very truly yours,

**C & W Engineering, Inc.**



Michael Guida, P.E.

JLR/nl

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services  
 Resolution No. **R2021-0508** Contract Dated **April 20, 2021**  
 Consultant Services Authorization No.: **1**  
 Consultant: **C & W ENGINEERING, INC., Subconsultant to AECOM**  
 Project Title: **LS 5015 CONVERSION TO REPUMP**  
 PBCWUD Project No.: **21-062**

**BUDGET SUMMARY FOR FIRM**

Task Number	Task Description	Principal Engineer	Project Engineer	Engineer	Sr. CAD/Designer	Sr. Administrative Assistant	PRIME TOTALS			
							Total Hours	Total Labor	Total Expenses	Total Labor and Expenses
	Raw Rate RANGE from MASTER EXHIBIT C	\$75-\$100	\$64-\$75	\$35-\$55	\$25-\$35	\$20-\$30				
	Raw Rate >	\$ 76.00	\$ 64.89	\$ 36.00	\$ 28.00	\$ 24.00				
	Multiplier >	2.25	2.25	2.25	2.25	2.25				
	Bill Rate >	\$ 171.00	\$ 146.00	\$ 81.00	\$ 63.00	\$ 54.00				
<b>TASK 1</b>	<b>Project Initiation and Management</b>									
	<i>Subtask 1.2 - Project Reporting, Coordination and Communications</i>	8	8	0	0	1	17	\$ 2,590.00	\$ -	\$ 2,590.00
	<b>Task 1 - Subtotal</b>	8	8	0	0	1	17	\$ 2,590.00	\$ -	\$ 2,590.00
<b>TASK 2</b>	<b>Existing Conditions and Field Investigations</b>									
	<i>Subtask 2.1 - Existing Information and Engineering Field Investigations</i>	6	12	6	0	2	26	\$ 3,372.00	\$ -	\$ 3,372.00
	<b>Task 2 - Subtotal</b>	6	12	6	0	2	26	\$ 3,372.00	\$ -	\$ 3,372.00
<b>TASK 3</b>	<b>Design Delivery and Permitting</b>									
	<i>Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design</i>	2	8	16	0	1	27	\$ 2,860.00	\$ -	\$ 2,860.00
	<i>Subtask 3.2 - Intermediate (60 percent) Design</i>	2	8	32	0	1	43	\$ 4,156.00	\$ -	\$ 4,156.00
	<i>Subtask 3.3 - Pre-Final (90 percent) Design</i>	2	8	32	0	1	43	\$ 4,156.00	\$ -	\$ 4,156.00
	<i>Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies</i>	1	8	8	0	1	18	\$ 2,041.00	\$ -	\$ 2,041.00
	<i>Subtask 3.5 - Final (100 percent) Design</i>	1	4	8	0	1	14	\$ 1,457.00	\$ -	\$ 1,457.00
	<b>Task 3 - Subtotal</b>	8	36	96	0	5	145	\$ 14,670.00	\$ -	\$ 14,670.00
<b>TASK 4</b>	<b>Bid Phase Services</b>									
	<i>Subtask 4.1 Bid Phase Services</i>	2	12	4	0	2	20	\$ 2,526.00	\$ -	\$ 2,526.00
	<b>Task 4 - Subtotal</b>	2	12	4	0	2	20	\$ 2,526.00	\$ -	\$ 2,526.00
	<b>Total (Task 1,2,3, and 4)</b>	24	68	106	0	10	208	\$ 23,158.00	\$ -	\$ 23,158.00
	<b>Labor Subtotal Hours</b>	24	68	106	0	10	208			
	<b>Labor Raw Costs</b>	\$ 1,824.00	\$ 4,412.45	\$ 3,816.00	\$ -	\$ 240.00		\$ 10,292.45		
	<b>Labor Subtotal (Bill Rate * Labor Subtotal Hours)</b>	\$ 4,104.00	\$ 9,928.00	\$ 8,586.00	\$ -	\$ 540.00		\$ 23,158.00		
	<b>PROJECT TOTAL</b>						208	\$ 23,158.00	\$ -	\$ 23,158.00

**Exhibit A for MOCK, ROOS & ASSOCIATES, INC., sub-consultant to AECOM, Inc.**

**MASTER LIFT STATION AND REPUMP IMPROVEMENTS**

**WUD PROJECT NO. 21-062, PACKAGE IDENTIFICATION NO. CD08**

**Project: LS 5015 Conversion to Repump**

**Background**

The existing master lift station number 5015 (LS 5015) is a submersible configuration receiving flow from multiple upstream lift stations connected by a force main network. There is an portion of local gravity sewer directly connected to LS5015, with an adjacent submersible lift station LS0217 providing much of the local contributing flow.. Flow from LS 5015 is pumped into a downstream interconnected force main network. Currently the peak wet weather flows have the potential for exceeding the firm capacity of LS 5015 and needs to be increased in capacity and provision implemented to reduce the risk of potential overflows.

The Palm Beach County Water Utilities Department (PBCWUD) intends to construct a new inline booster pump station (also called a repump station) with closed pipe connections on the suction and discharge points to repump the forcemain flows that currently flow to LS 5015. . Additionally PBCWUD intends to reconfigure the local collection system such that:

- The gravity flow to the existing LS0217 will be rerouted to the location of the existing LS5015 submersible lift station, via LS 217 being converted to a flow through manhole.
- Rehabilitate and reconfigure the existing submersible LS5015 to serve local collection system flows
- Rename the rehabilitated and reconfigured existing submersible LS5015 to LS0217 and demolish the existing LS0217 upon completion of work

AECOM has requested Mock, Roos & Associates, Inc. (SUBCONSULTANT) Technical Services Inc. (CONSULTANT) to provide design and bid phase services to help achieve the conversion of LS 5015 to a repump station in a new easement obtained by PBCWUD, , reconfiguration of the existing LS5015 to LS0217 to serve local flows, and demolition of the existing LS0217 so it can be converted to a flow through manhole.

The conversion is to include a new pump station constructed on a new easement west of Sherwood Forest Blvd. The demolition or modification of the existing LS 5015 and adjacent LS 217 will begin following the completion of the new pump station. The suction and discharge force mains will need to be constructed within the public right of way with restoration of Sherwood Forest Blvd upon completion. The finished work is intended to be similar to other PBCWUD inline booster stations and to include such features as:

- Multiple pumps (possibly separate sizes if needed to accommodate hydraulic conditions) arranged in an above-grade horizontal configuration that will facilitate the range of anticipated flows.
- Overhead cover in an open-air configuration for protection of the pumping equipment.
- Weatherproof exterior electrical and control panels that will house the variable frequency drives (VFDs).
- Overhead hoisting equipment to facilitate removal of pumps, motors, and valves.
- External to the station onsite would be a new low flow bypass, emergency bypass connections and concrete parking pad for placement of temporary bypass pumps.

- Emergency power is intended to be provided as a new freestanding diesel generator with sound enclosure and integral "belly" tank.
- Security camera Closed Circuit Television (CCTV) is to be provided consistent with similar PBCWUD pump stations.
- Suction and discharge force mains constructed within the public right of way with restoration of Sherwood Forest Blvd upon completion
- Manifold the FM in front of existing LS5015 to allow flexibility to pump north or south (existing FM's will no longer actively discharge into the wetwell)

The rehabilitated and reconfigured submersible lift station will be constructed within the existing easement limits with the finished work following PBCWUD minimum lift station design standards as closely as possible and to include such features as:

- Duplex submersible pumps with rail style pump removal system and access hatches.
- Weatherproof exterior electrical and control panels that will house motor soft starters, controls and generator automatic transfer switch (ATS) if requested.
- Emergency power is intended to be provided as a new freestanding diesel generator with sound enclosure and integral "belly" tank.
- Security camera Closed Circuit Television (CCTV) is to be provided consistent with similar PBCWUD pump stations.
- Replacement of security fencing and restoration of the site.
- Reroute the gravity sanitary from existing LS0217 to the existing wetwell of LS5105
- Convert LS0217 to a flow through manhole and decommission it as a lift station with the removal of FM piping, valve vault, and electrical
- Rehabilitate LS 5015 for the reduced flow, modify the wetwell, structural repairs, hatches, pumps, controls, and piping
- Wetwell shall remain as a reservoir and FM piping shall be such that the wetwell could be used as an emergency reservoir

SUBCONSULTANT will provide mechanical engineering services to support the CONSULTANT with portions of this task as described above. Mechanical services related to piping outside of the easement for the new lift station 5015 are not included in this scope of services. At LS 217 and existing LS 5015 SUBCONSULTANT will provide mechanical design outside of the easement to connect the proposed FM to the existing downstream FM, manifold piping to allow for the existing wetwell to be used as a reservoir, and providing a large diameter by-pass pump out connection.

SUBCONSULTANT's services are defined below.

### Scope of Services

The SUBCONSULTANT will include pumping mechanical engineering with Drawing, Specifications, and an Engineers Opinion of Probable Construction Cost. The drawings sheets are anticipated to include:

- Mechanical Notes and Legend
- Existing LS0217 Conversion Manhole Plan and Sections
- Existing LS5015 to LS0217 Conversion Mechanical Plan and Sections
- Proposed LS5015 Pump Station Layout Plan
- Proposed LS5015 Pump Station Sections
- Proposed LS5015 Bypass Plan and Sections
- Mechanical Pumping Details
- Mechanical Piping and Valve Details

The County's Standard Specifications will be modified based on the proposed design of this project. The SUBCONSULTANT will prepare specifications from Division 43 - Process Gas and Liquid Handling, Purification, and Storage Equipment

#### **Task 1 Project Initiation and Management**

**Subtask 1.1 – Project Planning and Project Initiation** – The SUBCONSULTANT will attend the project kick-off meeting with the CONSULTANT and Palm Beach County Water Utilities Department. The SUBCONSULTANT will coordinate with the CONSULTANT on internal deliverables and to obtain standards for the project.

#### **Task 3 Design Delivery and Permitting**

**Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design** - The SUBCONSULTANT will assist the CONSULTANT to prepare preliminary mechanical layouts, construction drawings, and an Engineer Opinion of Probable Construction Cost associated with the mechanical improvements. The SUBCONSULTANT will prepare a list of technical specifications. SUBCONSULTANT will coordinate with PBCWUD approved pump manufactures to provide information on available service cart and rail systems for horizontal dry pump installation. The drawings, cost opinion, and specifications will be provided to the CONSULTANT for inclusion into the submittal to PBCWUD. SUBCONSULTANT will attend one review meeting with the CONSULTANT and Palm Beach County Water Utilities Department.

**Subtask 3.2 - Intermediate (60 percent) Design** – The SUBCONSULTANT will review the flow data and calculations provided by the CONSULTANT and design/select the pumps and mechanical equipment for the project. The SUBCONSULTANT will also review flows and pipe sizes from the intake manifold through the pumps to the discharge manifold. SUBCONSULTANT will coordinate the mechanical design requirements with the CONSULTANT so the CONSULTANT can prepare the design of the instrumentation and controls for the operation of the station.

The SUBCONSULTANT will assist the CONSULTANT to incorporate comments from the 30 percent review meeting and prepare mechanical layouts, construction drawings, and an Engineer Opinion of Probable Construction Cost associated with the mechanical improvements. The SUBCONSULTANT will prepare a list of technical specifications associated with the mechanical design. The drawings, cost opinion, and specifications will be provided to the CONSULTANT for inclusion into the submittal to PBCWUD. SUBCONSULTANT will attend one review meeting with the CONSULTANT and Palm Beach County Water Utilities Department.

**Subtask 3.3 - Pre-Final (90 percent) Design** - The SUBCONSULTANT will assist the CONSULTANT to incorporate comments from the 60 percent review meeting and prepare mechanical layouts, construction drawings, and an Engineer Opinion of Probable Construction Cost associated with the mechanical improvements. The SUBCONSULTANT will prepare draft technical specifications associated with the mechanical design. The drawings, cost opinion, and specifications will be provided to the CONSULTANT for inclusion into the submittal to PBCWUD. SUBCONSULTANT will attend one review meeting with the CONSULTANT and Palm Beach County Water Utilities Department.

**Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies** - The SUBCONSULTANT will coordinate with the CONSULTANT to sign and seal permit submittals for the Palm Beach County Building Department and the Palm Beach County Health Department.

**Subtask 3.5 - Final (100 percent) Design** - The SUBCONSULTANT will assist the CONSULTANT to incorporate comments from the 90 percent review meeting and permitting agencies and prepare mechanical layouts, construction drawings, and an Engineer Opinion of Probable Construction Cost associated with the mechanical improvements. The SUBCONSULTANT will prepare a final technical specifications associated with the mechanical design. The drawings, cost opinion, and specifications will be provided to the CONSULTANT for inclusion into the BID submittal to PBCWUD.

#### **Task 4 Project Initiation and Management**

**Subtask 4.1 – Bid Advertisement and Procurement Package** – The SUBCONSULTANT will digitally sign and seal the mechanical drawing and specifications for the bid. The SUBCONSULTANT will respond to questions that come up during the bid.

**Subtask 4.5 – Bid Advertisement and Procurement Package** - The SUBCONSULTANT will prepare conformed drawings for the CONSULTANT's use issuing contract documents.

#### **Assumptions:**

1. SUBCONSULTANT can assist the CONSULTANT with a Palm Beach County Land Development (PBCLD) permit, but it is not anticipated that the SUBCONSULTANT will prepare drawings showing roadwork, restoration, and/or PBCLD details that will be required for permitting.
2. PBCWUD will obtain a new easement of sufficient size to construct the proposed improvement.
3. Mechanical services related to piping outside of the PBCWUD obtained easement for the connection of the existing FM to the new LS 5015 are not included in this scope of services.
4. Civil and structural design associated with items such as hatches, structural wetwell repair/modifications, concrete slab, top slabs, conversion of LS 217 to a flow through manhole are not included in this scope of services.
5. All information utilized for pump selection for both pump stations (i.e. design peak hour flow, min and max pressures at point of connection, discharge FM sizes and lengths to point of connection) will be provided to SUBCONSULTANT for the design services in this Scope of Services.
6. The design services provided in this scope of services are limited to pumping mechanical engineering with Drawing, Specifications, and an Engineers Opinion of Probable Construction Cost. No other design services are provided in this Scope of Service.
7. No field data collection services or coordination is provided in this Scope of Service.
8. All flow and pressure data utilized for the design are provided by CONSULTANT and no independent verification of this data is provided in this Scope of Service.
9. CONSULTANT will provide CAD Standards for SUBCONSULTANT to use for the drafting.

10. Civil, Electrical, Instrumentation and Controls, and Structural design to support the mechanical design and equipment will be provided by the CONSULTANT.

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS WUD PROJECT NO. 20-043, PACKAGE IDENTIFICATION NO. CD08)  
 Resolution No. R2021-0508 Contract Dated April 20, 2021  
 Consultant Services Authorization: 2  
 Consultant: **MOCK, ROOS & ASSOCIATES, INC., sub-consultant to AECOM, Inc.**  
 Project Title: **LS 6016 Conversion to Repump**  
 PBCWUD Project No.: **21-082**

**BUDGET SUMMARY FOR MOCK, ROOS & ASSOCIATES, INC., sub-consultant to AECOM, Inc.**

Task Number	Task Description	Principal	Senior Project Manager	Senior Project Engineer	Project Engineer II	Project Engineer I	Senior CADD / Senior Designer	Senior Field Representative	Senior Project Administrator	SUBCONSULTANT TOTALS			
										Total Hours	Total Labor	Total Expenses	Total Labor and Expenses
	Raw Rate RANGE from MASTER EXHIBIT C	\$75.00 - \$85.00	\$59.00 - \$80.00	\$45.00 - \$65.00	\$31.00 - \$45.00	\$28.00 - \$31.00	\$50.00 - \$60.00	\$47.00 - \$55.00	\$30.00 - \$35.00				
	Raw Rate >	\$ 76.67	\$ 69.33	\$ 53.67	\$ 34.67	\$ 29.33	\$ 53.33	\$ 47.33	\$ 31.00				
	Multiplier >	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00				
	Bill Rate >	\$ 230.00	\$ 190.00	\$ 161.00	\$ 104.00	\$ 88.00	\$ 160.00	\$ 142.00	\$ 93.00				
TASK 1	Project Initiation and Management												
	Subtask 1.1 - Project Planning and Project Initiation Meeting	2	12	0	0	0	0	0	0	14	\$ 2,740.00	\$ 58.24	\$ 2,798.24
	Subtask 1.2 - Project Reporting, Coordination, and Communications	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
	Subtask 1.3 - Quality Control	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
	<b>Task 1 - Subtotal</b>	<b>2</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>\$ 2,740.00</b>	<b>\$ 58.24</b>	<b>\$ 2,798.24</b>
TASK 2	Existing Conditions and Field Investigations												
	Subtask 2.1 - Existing Information and Engineering Field Investigations	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
	Subtask 2.2 - Topographic Survey and Subsurface Utility Investigation	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
	Subtask 2.3 - Geotechnical Investigation and Report	0	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -
	<b>Task 2 - Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
TASK 3	Design Delivery and Permitting												
	Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design	2	8	30	20	60	0	0	0	120	\$ 14,170.00	\$ 58.24	\$ 14,228.24
	Subtask 3.2 - Intermediate (60 percent) Design	2	8	60	20	100	0	0	8	198	\$ 23,264.00	\$ 58.24	\$ 23,322.24
	Subtask 3.3 - Pre-Final (90 percent) Design	2	6	40		60	0	0	2	110	\$ 13,506.00	\$ 58.24	\$ 13,564.24
	Subtask 3.4 - Permitting Submittals and Coordination with Regulatory Agencies	0	0	8	0	0	0	0	0	8	\$ 1,288.00		\$ 1,288.00
	Subtask 3.5 - Final (100 percent) Design	2	2	4		8	0	0	2	18	\$ 2,374.00	\$ 57.04	\$ 2,431.04
	<b>Task 3 - Subtotal</b>	<b>8</b>	<b>24</b>	<b>142</b>	<b>40</b>	<b>228</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>454</b>	<b>\$ 54,602.00</b>	<b>\$ 231.76</b>	<b>\$ 54,833.76</b>

<b>TASK 4</b>	<b>Bid Phase Services</b>													
	<i>Subtask 4.1 Bid Phase Services</i>	0	2	4	0	0	0	0	2	8	\$ 1,210.00		\$ 1,210.00	
	<i>Subtask 4.2 Prebid Meeting</i>	0	0	0	0	0	0	0	0	0	\$ -		\$ -	
	<i>Subtask 4.3 Response to Bidders Questions</i>	0	0	0	0	0	0	0	0	0	\$ -		\$ -	
	<i>Subtask 4.4 Bid Tabulation and Recommendations</i>	0	0	0	0	0	0	0	0	0	\$ -		\$ -	
	<i>Subtask 4.5 Conformed Contract Documents</i>	0	0	4	0	0	0	0	0	4	\$ 644.00		\$ 644.00	
	<b>Total Task 4:</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>12</b>	<b>\$ 1,854.00</b>	<b>\$ -</b>	<b>\$ 1,854.00</b>	
	<b>Labor Subtotal Hours</b>	<b>10</b>	<b>38</b>	<b>150</b>	<b>40</b>	<b>228</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>480</b>				
	<b>Labor Raw Costs</b>	<b>\$ 766.67</b>	<b>\$ 2,406.67</b>	<b>\$ 8,050.00</b>	<b>\$ 1,386.67</b>	<b>\$ 6,688.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 434.00</b>		<b>\$ 19,732.00</b>			
	<b>Labor Subtotal (Bill Rate * Labor Subtotal Hours)</b>	<b>\$ 2,300.00</b>	<b>\$ 7,220.00</b>	<b>\$ 24,150.00</b>	<b>\$ 4,160.00</b>	<b>\$ 20,064.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,302.00</b>		<b>\$ 59,196.00</b>			
	<b>PROJECT TOTAL</b>									<b>480</b>	<b>\$ 59,196.00</b>	<b>\$ 290.00</b>	<b>\$ 59,486.00</b>	

**Estimate of Work Effort and Cost  
SUBCONSULTANT**

<b>ATTACHMENT E BUDGET SUMMARY</b>			
Palm Beach County Water Utilities Department Contract for Consulting/Professional Services (MASTER LIFT STATION AND REPUMP IMPROVEMENTS WUD PROJECT NO. 20-043, PACKAGE IDENTIFICATION NO. CD08) Resolution No. R2021-0508 Contract Dated April 20, 2021 Consultant Services Authorization: 2 Consultant: MOCK, ROOS & ASSOCIATES, INC., sub-consultant to AECOM, Inc. Project Title: LS 5015 Conversion to Repump PBCWUD Project No.: 21-062			
Reimbursables	Projected Quantity	Unit Cost	Project Cost
Subtask 1.1 - Project Planning and Project Initiation Meeting	Mileage	104.000	\$0.56
			\$58.24
Subtask 3.1 - Basis of Design Memorandum and Conceptual (30 percent) Design	Mileage	104.000	\$0.56
			\$58.24
Subtask 3.2 - Intermediate (60 percent) Design	Mileage	104.000	\$0.56
			\$58.24
Subtask 3.3 - Pre-Final (90 percent) Design	Mileage	104.000	\$0.56
			\$58.24
Subtask 3.5 - Final (100 percent) Design	Mileage	101.857	\$0.56
			\$57.04
<b>PROJECT TOTAL</b>			<b>\$290.000</b>



**Scope of Work (07-06-21)**  
**Geotechnical Engineering Services**  
**Lift Station 5015 Replacement Project**

We understand that the Palm Beach County Water Utilities Department (PBCWUD) has retained AECOM for the Lift Station No. 5015 Replacement Project. We expect the new lift station will include a submersible pump housed in a wet well with associated piping/valves, control panel and portable generator arranged on a concrete slab. The wet well invert is expected to be approximately 15 to 20 feet below existing grade. The following geotechnical scope of work was identified:

**Field Work**

Site Visit/Utility Clearances at the lift station site

Two (2) Standard Penetration Test (SPT) borings to a depth of 30 feet

**Lab Testing**

Visual Classification

Natural Moisture Content – 2 tests (1 per boring)

Fines Content Determination – 2 tests (1 per boring)

Organic Content – 2 tests (1 per boring)

**Engineering Services**

Coordinate access with PBCWUD

Utility Coordination

Field & Lab Work Coordination

Project Management

One (1) Geotechnical Engineering Services Report

- Detailed graphical logs of the soil borings showing the groundwater level and soil classifications.
- Laboratory test results.
- Table of pertinent soil parameters (USCS classification, dry and saturated unit weight, friction angle).
- Discussion of the suitability of the encountered soils for the support of the design of the new lift station.



**Fee Estimate (07-06-21)**  
**Geotechnical Engineering Services**  
**Lift Station 5015 Replacement Project**

	Qty	Unit	Unit Price	Contract Item #	Total
<b>1.0 FIELD EXPLORATION</b>					
1.1 Access Coordination (Engineer, PE)	2	Hour	\$ 111.38	66	\$ 222.76
1.2 Stake borings and Utility Clearance (Staff Engineer)	6	Hour	\$ 95.91	67	\$ 575.46
Mobilization of drilling equipment to project (Minimum					
1.3 Charge): 50 mile travel	1	Trip	\$ 360.00	58	\$ 360.00
<b>1.4 2 SPT Borings to 30 ft</b>					
1.4.1 Standard Penetration Tests - Truck Rig (0' - 50')	60	LF	\$ 16.00	50	\$ 960.00
1.4.2 Casing (0' - 50')	60	LF	\$ 7.50	54	\$ 450.00
1.4.3 Grout bore holes (0' - 50')	60	LF	\$ 5.00	52	\$ 300.00
				<b>TOTAL FIELD WORK</b>	<b>\$ 2,868.22</b>
<b>2.0 LABORATORY SERVICES</b>					
2.1 Visual Classification (Engineer, PE)	2	Hour	\$ 111.38	66	\$ 222.76
2.2 Natural Sample Moisture Content	2	Test	\$ 20.00	10	\$ 40.00
2.3 Grain size determination - Wash through (#200)	2	Test	\$ 50.00	29	\$ 100.00
2.4 Organic Content Test	2	Test	\$ 55.00	7	\$ 110.00
				<b>TOTAL LABORATORY SERVICES</b>	<b>\$ 472.76</b>
<b>3.0 PROFESSIONAL SERVICES &amp; DELIVERABLES</b>					
3.1 Senior Geotechnical Engineer	2	Hour	\$ 147.84	65	\$ 295.68
3.2 Engineer, P.E.	8	Hour	\$ 111.38	66	\$ 891.04
3.3 Staff Engineer	16	Hour	\$ 95.91	67	\$ 1,534.56
3.4 Drafter / CADD	8	Hour	\$ 77.88	70	\$ 623.04
				<b>TOTAL PROFESSIONAL SERVICES</b>	<b>\$ 3,344.32</b>
				<b>TOTAL AMOUNT</b>	<b>\$ 6,685.30</b>

**ATTACHMENT E  
BUDGET SUMMARY**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services – Lift Station Rehabilitation  
 Resolution No. R2021-0508 Contract Dated: April 20, 2021  
 Consultant Services Authorization: 2  
 Consultant: RADISE International, LC subconsultant to AECOM  
 Project Title: Lift Station 5015 Conversion to Repump  
 PBCWUD Project No.: 21-062

BUDGET SUMMARY FOR FIRM											PRIME TOTALS			
Task Number	Task Description	Principal Engineer	Senior Geotechnical Engineer	Engineer, PE	Staff Engineer	Senior Engineering Technician	Engineering Technician	Draft/CADD			Total Hours	Total Labor	Total Expenses	Total Labor and Expenses
	Raw Rate RANGT Firm MASTER EXHIBIT	Raw Rate >	\$65.39	\$49.28	\$37.13	\$31.97	\$31.67	\$33.33	\$25.96					
		Multiplier >	3.00	3.00	3.00	3.00	3.00	3.00	3.00					
		Bill Rate >	\$196.16	\$147.84	\$111.38	\$95.91	\$95.00	\$70.00	\$77.88					
TASK 2	Geotechnical Services													
	Subtask 2.3 - Geotechnical Investigation and Report		2	12	22			8			44	\$ 4,365.35		\$ 4,365.35
	Task 2 - Subtotal:	0	2	12	22	0	0	8	0	0	44	\$ 4,365.35	\$ -	\$ 4,365.35
	Labor Subtotal Hours	0	2	12	22	0	0	8	0	0	44			
	Labor Raw Costs	\$ -	\$ 98.56	\$ 445.54	\$ 703.34	\$ -	\$ -	\$ 207.68	\$ -	\$ -	\$ -	\$ 1,455.12		
	Labor Subtotal (Bill Rate * Labor Subtotal Hours)	\$ -	\$ 295.68	\$ 1,336.61	\$ 2,110.02	\$ -	\$ -	\$ 623.04	\$ -	\$ -	\$ -	\$ 4,365.35		
	PROJECT TOTAL										44	\$ 4,365.35	\$ -	\$ 4,365.35

**ATTACHMENT F**

Palm Beach County Water Utilities Department  
 Contract for Consulting/Professional Services  
**MASTER LIFT STATION AND REPUMP IMPROVEMENTS**  
 Resolution No. R2021-0508 Contract Dated April 20, 2021

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

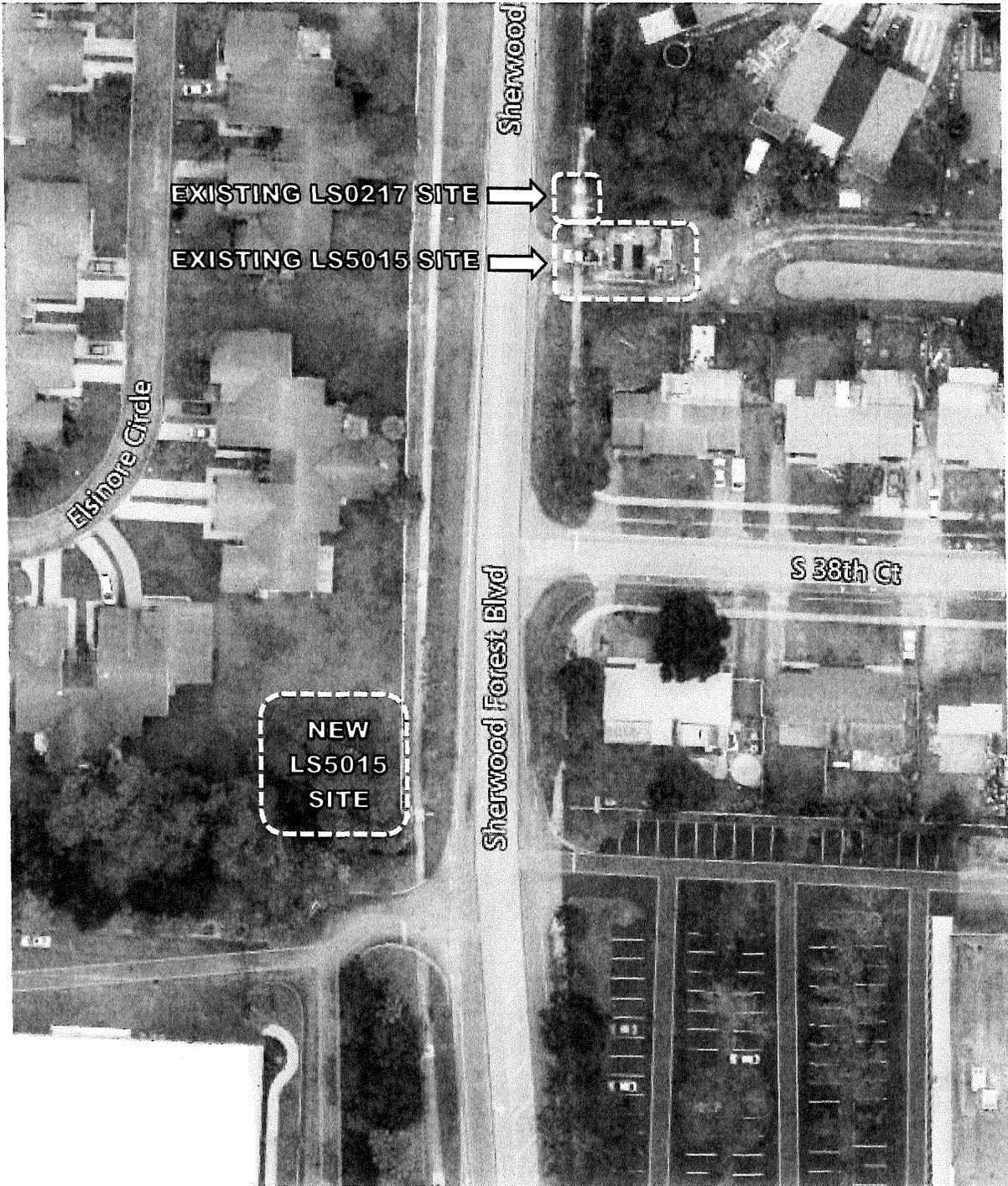
Master Contract Goals	SBE: 31%	M/WBE: 19%	MBE (Black): 17%	MBE (Asian): 2%
Current Proposal				
Value of Authorization No. 2	\$ 321,827.36	\$ 321,827.36	\$ 321,827.36	\$ 321,827.36
Value of SBE-M/WBE Letters of Intent	\$ 103,982.54	\$ 80,824.54	\$ 80,824.54	\$ -
Actual Percentage	32.310%	25.110%	25.110%	0.000%
Signed/Approved Authorizations				
Total Value of Authorizations	\$ 251,732.16	\$ 251,732.16	\$ 251,732.16	\$ 251,732.16
Total Value of SBE-M/WBE Signed Subcontractors	\$ 60,608.86	\$ 50,783.78	\$ 50,783.78	\$ -
Actual Percentage	24.070%	20.170%	20.170%	0.000%
Signed/Approved Authorizations Plus Current Proposal				
Total Value of Authorization	\$ 573,559.52	\$ 573,559.52	\$ 573,559.52	\$ 573,559.52
Total Value of Subcontractors & Letters of Intent	\$ 164,591.40	\$ 131,608.32	\$ 131,608.32	\$ -
Actual Percentage	28.696%	22.946%	22.946%	0.000%

Revised 04/26/2021

ATTACHMENT G

Location Map

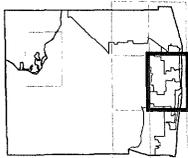
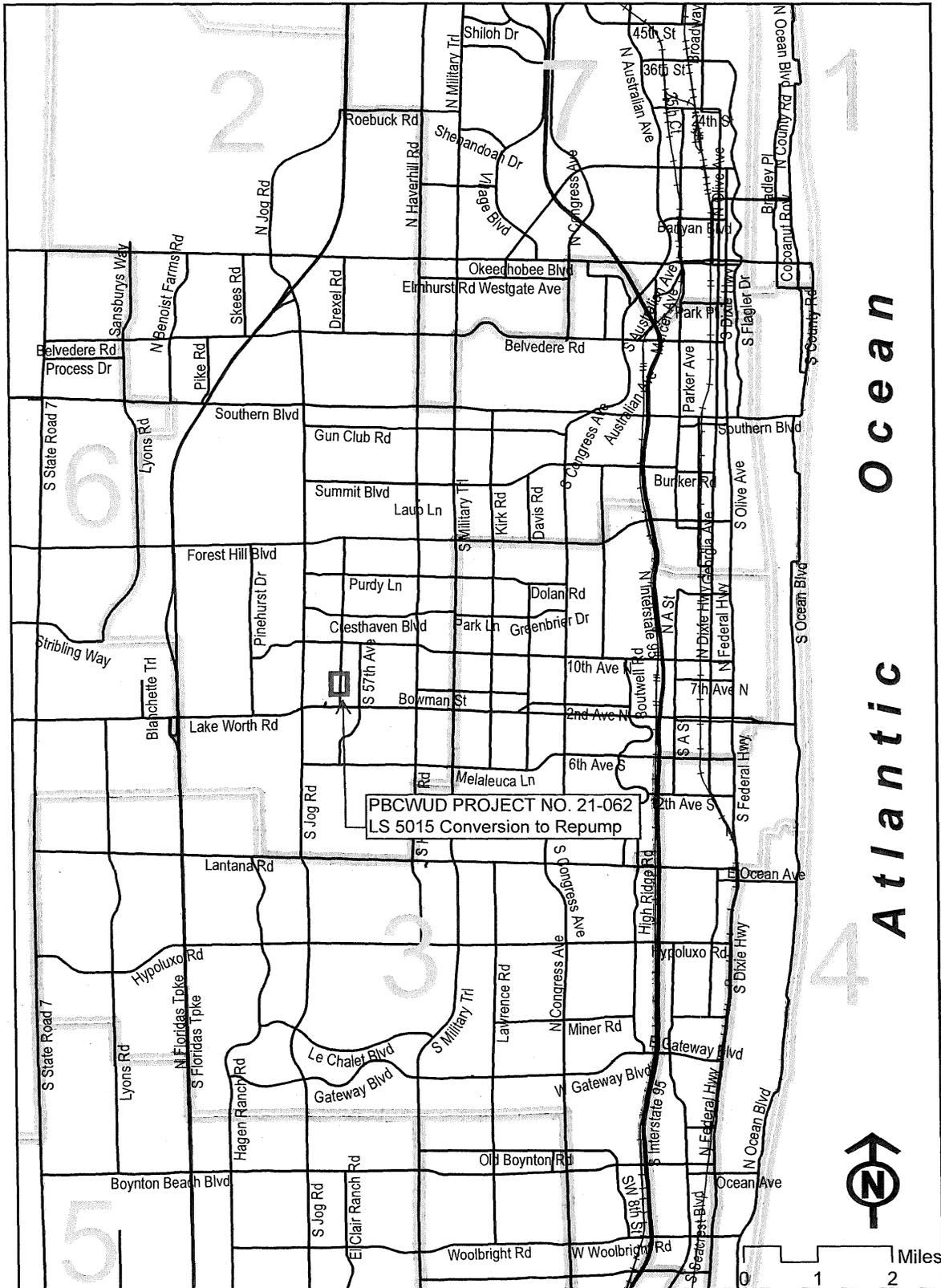
PBCWUD Project No.: 21-062



Revised 04/26/2021

# Attachment 2 - Location Map

CONSULTANT SERVICES AUTHORIZATION NO. 2  
AECOM TECHNICAL SERVICES, INC.  
PBCWUD PROJECT NO. 21-062



0 1 2 Miles

