

**ENGINEERING SERVICES FOR CITY  
OF KEY WEST, FL**

**RICHARD A. HEYMAN  
ENVIRONMENTAL PROTECTION  
FACILITY  
RAS AND WAS PUMPS  
REPLACEMENT – AMENDMENT 2 -  
CONSTRUCTION PHASE SERVICES**

PO # 93981

23 JUNE 2023



## SCOPE OF SERVICES

### RAS AND WAS PUMPS REPLACEMENT

#### PROJECT OVERVIEW

CITY OF KEY WEST (CITY) has requested that Black & Veatch (CONSULTANT), under the General Engineering Contract (Contract) (CITY OF KEY WEST-RFQ-002-20), provide Engineering Services During Construction (ESDC) for the project RAS and WAS Pumps Replacement at City of Key West, FL.

This scope of work (SOW) is based on the CONSULTANT providing to the CITY construction phase services for the required as described above and bid as City of Key West, Richard A. Heyman, Environmental Protection Facility, RAS and WAS Pumps Replacement, Project No. SE35042002. This scope corresponds to an amendment of the existing PO # 93981.

#### Project Description

CONSULTANT understands that the CONTRACTOR's total construction project duration will be 12 months from Notice to Proceed (NTP) to Substantial Completion and 13 months to Final Completion. The ESDC services to be provided by CONSULTANT will start approximately 30 days before Construction NTP is issued and will end 30 days after Final Completion. During this time, CONSULTANT will review submittals, reply to Requests for Information (RFIs), Change Orders and Allowances, and attend meetings.

Under the SOW for this Task Authorization (TA), CONSULTANT will provide ESDC Services for the RAS and WAS Pumps replacement Project. These ESDC services will include the following:

- Attending project initiation meeting.
- Attending pre-construction meeting.
- Attending monthly project progress meetings with the owner & the contractor.
- Reviewing and responding to Requests for Information (RFIs), qty: 7.
- Reviewing and processing contractor Shop Drawing and Submittals, Qty: 10.
- Reviewing Change Orders and Allowances. Qty: 1.
- Attending Substantial Completion and Final Substantial Completion.
- Preparing and submitting Certificate of Completion

The specific content of the deliverables and the extent of the above services are described in detail in the following sections.

The scope of work includes construction phase services. Overall, the project includes the following project phases and services:

Task 1 – Project Management

Task 2 – Engineering Services during construction.

Task 3 – Additional Engineering Services (Allowance)

## **SCOPE OF SERVICES**

CONSULTANT will provide the following professional services for project.

### **TASK 1 – PROJECT MANAGEMENT AND COORDINATION**

#### **Task 1.1 Project Management**

CONSULTANT will perform general administrative duties associated with the Project, including project set-up, progress monitoring, team coordination, general correspondence, office administration, and invoicing for project costs incurred by CONSULTANT.

CONSULTANT will maintain accurate project documentation and project cost accounting system throughout the project to include the following:

- Document management. It is assumed that all communication will be maintained via email.
- Prepare monthly invoices for engineering services during construction phase in the format required by the Contract. CONTRACTOR's standard format will be used.

#### **Deliverables (issued via electronic delivery in PDF format)**

- Thirteen (13) Monthly Report and Invoices

#### **Task 1.2 Meetings**

The following meetings will be included:

##### **Task 1.2.1 Project Kickoff Meeting**

CONSULTANT will facilitate one (1) Kickoff Meeting with the CITY, remotely. The purpose of the Kickoff Meeting is to confirm CITY's goals and objectives, identify roles, responsibilities, and communication protocols for project team members and identify critical success factors.

#### **Deliverables (issued via electronic delivery in PDF format)**

- Kickoff meeting agenda will be provided by the CONSULTANT one week prior to scheduled meeting (via electronic delivery)
- Kickoff meeting summary will be provided by the CONSULTANT within five working days following the meeting (via electronic delivery).

## **TASK 2 – ENGINEERING SERVICES DURING CONSTRUCTION**

CONSULTANT will perform engineering services during the construction phase of the project. By performing these services, CONSULTANT shall not have authority or responsibility to supervise, direct, or control the CONTRACTOR's work or the CONTRACTOR's means, methods, techniques, sequences, safety, or procedures of construction. Additionally, CONSULTANT shall not have authority or responsibility for safety precautions and programs incident to the CONTRACTOR's work or for any failure of the CONTRACTOR to comply with laws, regulations, rules, ordinances, codes, or orders applicable to the CONTRACTOR furnishing and performing the work.

It is anticipated that the construction period will be 13 (thirteen) months. Specific services to be performed by CONSULTANT are outlined in the tasks below. The CITY will serve as the lead construction contract manager and will coordinate the activities of the CONSULTANT with the CONTRACTOR that is selected to perform the work detailed in the contract documents.

### **Task 2.1- Construction Administration Support Services**

CONSULTANT will support the CITY in administering the requirements of the contract documents by providing the following construction administrative services:

- A. CONSULTANT will attend and participate remotely in the Pre-construction meeting specified in the contract documents. The CITY will conduct the Pre-construction conference at a date and time selected by the CITY. CONSULTANT will attend the meeting virtually. CONSULTANT will prepare agenda and meeting minutes for the Pre-construction meeting.
- B. CONSULTANT will prepare the Conformed for Construction drawings & Specifications to include them as part of the awarded document package.
- C. CONSULTANT shall review up to ten (10) submittals and one (1) resubmittal. CONSULTANT's review shall be for general conformity to the construction contract documents and shall not relieve the CONTRACTOR of any contractual responsibilities. Such reviews shall not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. A preliminary list of submittals has been incorporated in the LOE.

Manufacturer's O&M manuals received in CONTRACTOR submittals will be passed on to CITY without review.

The shop drawings shall be forwarded to the CITY for their final review and approval. Additionally, CONSULTANT will only review one (1) resubmittal by CONTRACTOR for compliance with approved Plans and Specifications. Further review of shop drawings may be provided as supplemental services to this Task Order.

- D. Requests for Information, Change Orders, and Claims.
  - 1. Requests for Information. CONSULTANT shall interpret construction contract documents when requested by the CITY or the CONTRACTOR. Requests for

clarification or information shall be in writing and copies of CONSULTANT's response shall be distributed to the CITY. CONSULTANT will respond CONTRACTOR's RFIs via email to the CITY. CONSULTANT 's proposed fee is based on responding to up to seven (7) RFIs. Any additional RFI will be considered as additional work.

2. CONTRACTOR Change Orders. CONSULTANT shall review one (1) CITY or CONTRACTOR charge orders.
  - a. Review documentation
  - b. Prepare any additional documentation required
  - c. Submit written recommendations to the CITY.
  - d. Assist the CITY in negotiations with CONTRACTOR to obtain a fair price for the work.
  
- E. Drawings Conformed to Construction Records. Upon completion of the project, CONSULTANT shall revise the conformed construction record drawings to certify them as specified in Section 01 78 39 Project Record Documents specification. CONSULTANT will review markup drawings signed and sealed by the CONTRACTOR's Registered Land Surveyor, identifying any changes made during the construction process and indicating all record information required by the regulatory agencies having jurisdiction (AHJ). CONTRACTOR will provide the record drawings.

CONSULTANT will be signing and sealing CONTRACTOR's record drawings.

### **Task 2.2 Field Support Services**

- A. Construction Progress Review Meetings. CONSULTANT will participate in up to thirteen (13) monthly progress construction meetings. CONSULTANT will participate remotely on the progress meetings.
 

They CITY will be preparing meeting agenda and meeting minutes for each of the monthly progress construction meetings.
- B. CONSULTANT will perform up to three (3) visits to the construction site to observe progress of the work and consult with the CITY and the CONTRACTOR as required by CITY. Additionally, CONSULTANT will perform the substantial completion and final substantial completion to certified that the work has been done following the conformed construction package.
- C. Substantial Inspection and Punch List. Upon request for substantial completion by the CONTRACTOR and coordination by the CITY, CONSULTANT will attend one (1) Substantial Completion inspection to inspect the construction work for compliance with the contract documents (Two engineers will perform the walkthrough inspection). During this meeting,

CONSULTANT will also prepare a punch list of items to be completed or corrected before final completion and acceptance of CONTRACTOR's Work. CONSULTANT will submit results of the inspection to the CITY for review and distribution to the CONTRACTOR.

- D. Final Inspection. Upon request for final completion by the CONTRACTOR and coordination by the CITY, CONSULTANT will (i) confirm that the correction of the items of Work on the punch list is complete, (ii) conduct a final inspection to determine if the Work required in the contract documents is completed, and (iii) issue the Certificate of Final Completion once the Work is complete. CONSULTANT shall provide written recommendations to the CITY concerning final payment, including a list of items, if any, to be completed prior to making such payment.
- E. The total amount of inspections will be five (5).

### **Task 2.3 Deliverables**

The following deliverables will be included in Task 2:

- One (1) Pre-construction meeting agenda and meeting minutes (via electronic delivery)
- Review up to ten (10) submittals. (via electronic delivery)
- Provide up to seven (7) RFIs responses (via electronic delivery)
- Review only one (1) change orders. (via electronic delivery)
- Two (2) hard copies and one (1) copy in electronic format version Adobe pdf. of signed and sealed record drawings. CONTRACTOR will provide the record drawings.
- Three (3) site inspection visits. These visits will be held by maximum two CONSULTANT project engineers.
- One (1) Substantial Inspection punch list review and one (1) Final Inspection punch list review (via electronic delivery).
- One (1) Certificate of Final Completion (via electronic delivery).
- Up to thirteen months (13) monthly construction progress meeting's agenda and meeting minutes (via electronic delivery)
- Two (2) copies of both inspection report (substantial completion and final substantial completion) will be generated and distributed (via electronic delivery).

### **ASSUMPTIONS**

1. There are no known hazardous materials or waste contaminated areas, wetlands, endangered species, or other environmentally sensitive flora or fauna which may require additional engineering efforts during construction.
2. This task excludes third party litigation services or expert witness services, if these are required by any third party.
3. The contract duration is assumed does not exceed thirteen (13) months from construction NTP to final completion, considering coordination with the existing SIRO plant commissioning). All the services have been estimated considering this duration for

- budgetary purposes, so services beyond this timeframe will be considered additional work.
4. CITY shall be responsible for construction management activities including daily inspections, review of monthly CONTRACTOR's pay requests, CONTRACTOR's claims and/or other entities/projects/construction work occurring on the site.
  5. COVID-19 pandemic-related restrictions may impact activities of CONTRACTOR, and CONSULTANT, which may in turn affect the construction schedule or attendance to field activities.
  6. CITY will receive CONTRACTOR's guarantees and bonds that are to be assembled by the CONTRACTOR. CITY will review for completeness in accordance with the construction CONTRACT DOCUMENTS.
  7. All RFIs and submittals and RFIs by the CONTRACTOR will first be reviewed by CITY and only those items relative to CONSULTANT's design will be forwarded to the CONSULTANT for review
  8. Monthly progress payments submitted by the CONTRACTOR will be reviewed for approval by CITY. CONSULTANT will not be responsible for this activity.
  9. Any additional structural or process mechanical design coming from different conditions assumed during the design phase will be considered as additional services.
  10. Project Schedule: CITY will utilize the CONTRACTOR's Construction Schedule. CONSULTANT will not be developing or updating any construction schedule.
  11. CONTRACTOR will be responsible for power delivery to the project site.
  12. CITY's Operations Department is the only entity authorized to manipulate (open/close) valves, energize or deenergize equipment, shutdown, etc.

## **EXCEPTIONS**

1. CONSULTANT will not review manufacturers' O&M manuals. These CONTRACTOR submittals will be passed to CITY without review.
2. CONSULTANT will not be responsible for preparation of O&M manuals or providing plant staff with training of any type, as part of this scope of work.
3. CONSULTANT will not develop, update, or make changes to the conformed record drawings provided by the CONTRACTOR. It is assumed the CONTRACTOR will prepare AS BUILTS
4. CONSULTANT will not develop or update any part of the 3D BIM model with construction record information.
5. CONSULTANT will not be responsible for preparation or development of any cost estimates (OPCCs).

6. CONSULTANT will not participate of any efforts to secure any permits, including construction permits.
7. CONSULTANT will not be responsible for addressing non-technical RFIs and submittals related to the construction contract, administration, schedule, and other items where CONSULTANT's input is not considered required, and the intent of the design is maintained.
8. By performing these services, CONSULTANT shall not have authority or responsibility to supervise, direct, or control the CONTRACTOR's work or the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction. Additionally, CONSULTANT shall not have authority or responsibility for safety precautions and programs incident to the CONTRACTOR's work or for any failure of the CONTRACTOR to comply with laws, regulations, rules, ordinances, codes, or orders applicable to the CONTRACTOR furnishing and performing the work.
9. The term "Additional Work" indicates work not included in this scope of work.
10. CONSULTANT will not provide a resident engineering team that will have continuous presence on site.
11. Unanticipated coordination of work with other Design/Construction Packages that requires participation of ENGINEER will be considered Additional Work.
12. CONSULTANT will not perform any field testing, material testing, nor any studies on materials or equipment. Additionally, CONSULTANT will not be responsible for payment of any testing or laboratory analysis.

## **PROPOSED IMPLEMENTATION SCHEDULE**

The proposed implementation schedule is outlined below and is based on duration after receiving Notice to Proceed (NTP).



The cumulative months following NTP (Noticed to Proceed) are estimates based on assumptions regarding the timing of CITY OF KEY WEST activities such as bid advertisement and award.

It is estimated that the project will have the following durations:

Task Description	Task Completion
Task 1 – Project Management and Coordination	From NTP until 12 or 13 months (Assumed final substantial completion will occur within this timeframe)
Task 2 – Construction Phase Services	13 months after NTP
Substantial completion	13 months after NTP
Total Project Duration:	13 months

## PROPOSED FEE

Compensation for this project will be on a Lump Sum basis. The fee includes \$46,869 for services defined in the SOW and \$8,554 for reimbursable expenses.

Phase	Description	Method of Payment	Amount
1.1	Project Management	Lump Sum	\$12,390
1.2	Project Kick Off Meeting	Lump Sum	\$1,004
2.1	Construction Administration Support Services	Lump Sum	\$20,139
2.2	Field Support Services	Lump Sum	\$13,336
<b>Subtotal:</b>			<b>\$46,869</b>
	Reimbursable Expenses	Lump Sum	\$8,554
<b>Subtotal:</b>			<b>\$8,554</b>
<b>Project Total:</b>			<b>\$55,423</b>

Very truly yours,

BLACK & VEATCH CORPORATION



Pablo Gala-Serra  
Project Manager

## ATTACHEMENT A – LEVEL OF EFFORT

**PO No. 93981 - RAS AND WAS PUMPS - AMENDMENT 2 - CONSTRUCTION PHASE SERVICES**

**Richard A. Heyman Environmental Protection Facility**

**RAS WAS PUMP REPLACEMENT**

Arturo B. Pablo Odoardo L. Botero J. Gloss A. Travaglia David G. Kevin Chenauli Kyle Phipps Faulk, Zane Angie K. Vivian Majok Jaclyn Hines

	Project Director	Senior Project Manager	Engineering Manager	Sr. Technical Specialist - WW Process	Sr Engineer - Structural	Sr. Engineer - Proc Mechanical	Project Engineer - Electrical	Sr. Engineering Technician - Electrical	Sr. Engineer - I&C	Engineering Technician - I&C	Staff Engineer II - Civil	Project Accountant	Administrative Assistant	Total Hours	Labor Cost
<b>Work Breakdown Structure</b>															
<b>Task Series 100 - Design Services</b>	2	9	22	0	2	8	3	2	4	0	0	13	13	78	<b>\$13,394</b>
Percent of Total - Task 100 - PROJECT MANAGEMENT AND COORDINATION	3%	12%	28%	0%	3%	10%	4%	3%	5%	0%	0%	17%	17%	27%	
1.1 Project Management	2	8	20		2	6	3	2	4			13	13	73	\$12,390
1.2 Project Kick Off Meeting		1	2			2								5	\$1,004
<b>Task Series 2 Construction Phase Services</b>	0	5	10	2	14	38	36	14	13	38	40	0	0	210	<b>\$33,475</b>
Percent of Total - Task 200 - ENGINEERING SERVICES DURING CONSTRUCTION	0%	6%	13%	3%	18%	49%	46%	18%	17%	49%	51%	0%	0%	73%	
2.1 Construction Administration Support Services		3	8	2	14	22	12	6	13	28	16			124	\$20,139
2.2 Field Support Services		2	2			16	24	8	0	10	24			86	\$13,336
	1%	5%	11%	1%	6%	16%	14%	6%	6%	13%	14%	5%	5%	100%	
Total Hours Estimated	2	14	32	2	16	46	39	16	17	38	40	13	13	288	
Total Salary (Labor B&V)	\$590	\$3,360	\$6,304	\$550	\$2,960	\$8,510	\$6,435	\$2,400	\$3,145	\$4,370	\$5,320	\$1,755	\$1,170		<b>\$46,869</b>
<b>Direct Costs</b>															<b>\$8,554</b>
Mileage		\$435	\$435				\$1,022				\$1,022				\$2,914
Communications and Shipping													\$300		\$300
Printing and Reproduction Services													\$300		\$300
Travel Costs		\$30	\$30				\$2,490				\$2,490				\$5,040
<b>TOTAL FEE</b>															<b>\$55,423</b>

NEGOTIATED RATES USED TO DEVELOP THIS FEE

\$295.00 \$240.00 \$197.00 \$275.00 \$185.00 \$185.00 \$165.00 \$150.00 \$185.00 \$115.00 \$133.00 \$135.00 \$90.00