

TASK ORDER

AMENDMENT REQUEST

ENGINEERING DESIGN, PERMITTING, AND BID PHASE FOR REPLACEMENT OF EFFLUENT PUMPS AT THE RICHARD A. HEYMAN ENVIRONMENTAL PROTECTION FACILITY

This TASK ORDER is issued under the terms and conditions of the MASTER AGREEMENT TO PROVIDE GENERAL ENGINEERING SERVICES TO THE CITY OF KEY WEST ("AGREEMENT") between the City of Key West ("CITY") and Jacobs Engineering Group, Inc. ("CONSULTANT") executed on March 29th, 2023.

A. SCOPE OF SERVICES

Specific services which the CONSULTANT agrees to furnish are summarized on the "Scope of Services". This Task Order, when executed, shall be incorporated in and shall become an integral part of the AGREEMENT.

B. TIME OF COMPLETION

Start date for this project will be no later than ten days after execution of this authorization. The duration of this TASK ORDER is estimated in sixty (60) weeks.

C. COMPENSATION

Compensation for Labor portion of Task A under TASK ORDER will be on a Lump Sum Basis as stipulated in Article 5, Paragraph 5.1.1 and Labor portion of Task B will be on a Cost Reimbursable (Time and Expenses) basis as stipulated in Article 5, Paragraph 5.1.2 of the AGREEMENT. Compensation for other direct charges will be on Cost Reimbursable basis as stipulated in Article 5, Paragraph 5.2 of the AGREEMENT. The estimated compensation is shown as Attachment A.

D. ACCEPTANCE

By signature, the parties each accept the provisions of this TASK ORDER and authorize the CONSULTANT to proceed at the direction of the CITY's representative in accordance with the "SCOPE OF SERVICES."

For Jacobs Engineering

For City of Key West

 6/5/2026

Andrea Suarez Abastida
Manager of Projects

Brain L. Barosso
City Manager

 6/5/2026

Erik Jorgensen, P.E.
Senior Project Manager

Dated the ____ day of _____, 2026.

ATTEST:

TASK ORDER

AMENDMENT REQUEST ENGINEERING DESIGN SERVICES FOR REPLACEMENT OF EFFLUENT PUMPS AT THE RICHARD A. HEYMAN ENVIRONMENTAL PROTECTION FACILITY

SCOPE OF SERVICES

Background

The CITY owns and operates the Richard A. Heyman Environmental Protection Facility (RAHEPF) under Florida Department of Environmental Protection (FDEP) Domestic Wastewater Facility Permit FLA147222. The permit allows for only one method of reuse or disposal of treated water via deep well injection. This disposal method requires effluent pumping prior to discharge and as such the effluent pumps are critical to the operation of the facility. The RAHEPF has three existing effluent pumps, two installed in the early 1990's. The two older effluent pumps are scheduled to be replaced as planned under the CITY's asset management program to support the continued operation of the RAHEPF. In addition to pump replacement, associated discharge manifold piping will be replaced. The exposed portion of the discharge manifold installed at the same time as the effluent pumps and based on visual inspection needs to be replaced. Replacement of the exposed manifold is a part of the work of this project.

The CITY previously authorized the CONSULTANT to proceed with design of replacement of the effluent pumps assuming a replacement in-kind. The CONSULTANT encountered issues requiring additional effort including

- 1) The existing Aurora pumps were installed in the 1990s and are no longer manufactured. Similar replacement pumps have higher power requirements that would require significant modifications and upgrades to RAHEPF existing power infrastructure. These changes would significantly increase the cost of the overall project delivery;
- 2) The observed operating points (pressure and flow) of the existing pumps did not correspond to certified pump curves provided by the manufacturer. Further the measurement locations of the available operating data was obtained at the inlet to the injection wells instead of the discharge locations of the pumps. The CONSULTANT compensated for this measurement anomaly by modeling the flow in the piping between the pumps and injection well. The modeling results confirmed operating conditions at the discharge of the existing pumps do not correspond to the certified pump curves. The causes of this difference could be either excessive pump, significant resistance to flow within the piping system, or other flow anomalies. The CONSULTANT expended additional effort to investigate the possible causes to confirm future pump operating criteria for replacement pumps; and
- 3) The available similar alternative replacement pumps require challenging installation geometries such that elevated pump suction intakes would reduce the operating volume of the pump wet well. The CONSULTANT expended additional effort researching alternative pump types and installation alignments to select a preferred pump installation.

CONSULTANT has completed the additional effort and identified a suitable pump from a reputable pump manufacturer that meets the project criteria and is now in a position to move forward to complete the design.

Amendment Request

Additional Authorization to Complete Engineering Design

The CONSULTANT will prepare final design incorporating information on pump selected to replace existing Aurora pumps. This deliverable includes the preparation of required pre-final design drawings and technical specifications. The CONSULTANT will conduct a virtual design review meeting with the CITY to obtain comments and input on the pre-final submittal. Consultant has assumed comments on the pre-final submittal will be minor and only minor edits will be needed for submittal of the technical drawings and specifications for advertisement. The CONSULTANT will prepare a Class I Cost Estimate after final comments are obtained.

Deliverables (issued electronically in .pdf format)

1. Meeting agenda and design review meeting minutes for final submittal.
2. Pre-Final Design Drawings (11" x 17") and Technical Specifications.
3. Class 1 AACE International construction cost estimate.
4. Construction schedule in electronic format (PDF) and one hard copy.
5. Final Design Drawings and Technical Specifications for advertisement.

Compensation

Compensation for Labor portion of Task A was originally in the amount of \$137,922. The current Amendment Requests increases the authorization for Task A by \$40,124 tot a total for Task A in the amount of \$177,884. Task A is on a Lump Sum basis as stipulated in Article 5, Paragraph 5.1.1 of the Agreement and Labor portion of Task B in the amount of \$61,816 will be on a Cost Reimbursable (Time and Expenses) basis as stipulated in Article 5, Paragraph 5.1.2 of the AGREEMENT. Compensation for other direct charges will be on Cost Reimbursable basis as stipulated in Article 5, Paragraph 5.2 of the AGREEMENT. Estimated other direct charges include an allowance for permit fees up to \$750 and an allowance for reimbursement of travel expenses up to \$9,058. The breakdown of the total estimated compensation in the amount of \$249,238 is provided in Attachment A.

Assumptions

The following assumptions were used in the development of this Task Order:

1. CONSULTANT will reasonably rely upon the accuracy, timeliness, and completeness of the information/data provided by the CITY or other third parties without independent verification. Additional effort by CONSULTANT due to invalid data or information provided by the CITY or others, may entitle CONSULTANT to additional compensation.
2. Existing electrical power and distribution system as well as variable frequency drives (VFDs) will not be replaced other than conduits and conductors originating from the VFD to field equipment.
3. Replacement of the discharge manifold under this phase of construction will be limited to exposed piping. No replacement of below grade piping is intended at this time. The need for survey and subsurface utility engineering can thus be excluded. These services can be added either through amendment or under a separate authorization.
4. The Contractor will be responsible for the design of the temporary by-pass system to allow for shutdown of the existing effluent pumps and discharge manifold. The CONSULTANT will prepare a performance specification for temporary by-pass pumping.
5. Existing utilities have been constructed in accordance with provided record documentation. Design of

existing structures complied with governing codes at time of original design, not necessarily the current ones.

6. The design documents will be prepared for a single construction contract. Further, the CITY will construct the work under a single construction contract. If the City desire multiple solicitations for construction, this can be accomplished by amending this TO or issuing a separate authorization. If the CITY defers installation of an effluent pump to a later solicitation, there is a risk that available pumps suppliers and models could change resulting in a need to revise the design. The revision of plans under this circumstance is not included within the proposed scope of work.
7. CONSULTANT standard specifications will be used for this project. Technical specifications will follow the Construction Specifications Institute numbering system (Divisions 1- 49). CITY will provide the Division 0.
8. CITY will prepare front-end documents for advertisement. The CONSULTANT's submittal requirement is limited to technical plans and specifications. The CONSULTANT shall use a standard set of Division 1 specifications with minimal customization.
9. CITY will reproduce and distribute the contract bidding documents and addenda, maintain the plan holders list, tabulate bids, and make award recommendations.
10. In providing opinions of cost, financial analyses, economic feasibility projections, for the project, CONSULTANT has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, CONSULTANT makes no warranty that CITY's actual project costs, financial aspects, economic feasibility, will not vary from CONSULTANT'S opinions, analyses, projections, or estimates and the CONSULTANT shall have no liability for such variances.
11. The CITY will be responsible to provide full time on-site inspection during construction and start-up activities, prepare daily diaries and maintain document control for all construction documents. CONSULTANT will receive copies of these diaries. CITY shall be responsible for keeping submittal and RFI logs as well as preparation of construction progress meeting minutes.
12. The presence or duties of CONSULTANT personnel at a construction site, whether as onsite representatives or otherwise, do not make CONSULTANT or CONSULTANT'S personnel in any way responsible for those duties that belong to CITY and/or the construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction Contract Documents and any health or safety precautions required by such construction work.
13. CONSULTANT AND CONSULTANT'S personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except CONSULTANT'S own personnel.
14. The presence of CONSULTANT'S personnel at a construction site is for the purpose of providing to CITY a greater degree of confidence that the completed construction work will conform generally to the construction documents and that the integrity of the design concept as reflected in the construction documents has been implemented and preserved by the construction contractor(s). CONSULTANT neither guarantees the performance of the construction contractor(s) nor assumes responsibility for construction contractor's failure to perform work in accordance with the construction documents.

**ATTACHMENT A
ESTIMATED LEVEL OF EFFORT
ENGINEERING DESIGN, PERMITTING, AND BID PHASE FOR REPLACEMENT OF EFFLUENT PUMPS
THE RICHARD A. HEYMAN ENVIRONMENTAL PROTECTION FACILITY**

	STAFF CLASSIFICATIONS					Total Hours	Fee
	Eng 7	Eng 5	Eng 4	Tech 4	Clerical/Office Support		
Tasks \ Rates	\$275.00	\$222.00	\$194.00	\$128.00	\$104.00		
Task A - Design Documents							
Subtask A1 - Project Kickoff/Site Visit/Data Request	26	12	36	0	2	76	\$ 17,006
Subtask A2 - Intermediate Submittal	38	58	112	136	4	348	\$ 62,878
Subtask A3 - Final Submittal	40	52	80	96	4	272	\$ 50,768
Amendment Request for Additional Design Services	16	42	80	85	0	223	\$ 40,124
Subtask A4 - Permitting Assistance	20	0	4	0	8	32	\$ 7,108
Subtotal	140	164	312	317	18	951	\$ 177,884
Task B - Bid Services and Services During Construction							
Subtask B1 - Bid Services	12	12	20	0	6	50	\$ 10,468
Subtask B2 -Limited Engineering Support During Construction	26	86	98	26	24	260	\$ 51,078
Subtotal	38	98	118	26	30	310	\$ 61,546
Total Hours	178	262	430	343	48	1,261	
Labor Fee	\$ 48,950	\$ 58,164	\$ 83,420	\$ 43,904	\$ 4,992		\$ 239,430
Allowance for Permit Fees							\$ 750
Allowance for Travel Expenses							\$ 9,058
Total Esitmated Fee							\$ 249,238