

**WORK AUTHORIZATION # CM2452-WA08  
NASSAU COUNTY  
BOARD OF COUNTY COMMISSIONERS  
CONTINUING CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES  
RFQ/BID NO. NC16-033**

<b>Consultant:</b>	GAI Consultants, Inc.
<b>Contract Number:</b>	CM2452
<b>Contact Name:</b>	Jill Grimaldi
<b>Contact Number:</b>	561-345-6129
<b>Email:</b>	J.Grimaldi@gaiconsultants.com

CURRENT WORK AUTHORIZATION			
Project Short Title: Water Treatment Plant Emergency Standby Generator Replacement			
		CONTRACT OVERVIEW	
		Total of Previous Authorizations (Including Change Orders)	
		\$419,334.51	
<b>Date Submitted</b>	6/12/19	<b>This Work Authorization</b>	\$55,000.00
<b>Amount</b>	\$55,000.00	<b>Current Contract Total</b>	\$474,334.51
<b>Scheduled Completion</b>	December 31, 2019		

This Work Authorization is to the AGREEMENT between Nassau County and the Consultant known as GAI Consultants for the Continuing Contract for Miscellaneous Engineering Services for Nassau Amelia Utilities (NAU) for Nassau County, Florida, dated September 20, 2017. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

GAI will provide professional engineering services for the replacement of an emergency standby generator at the Nassau Amelia Utilities Water Treatment Plant, attached hereto as Exhibit "A". Services will be completed as Tasks consisting of:

**Task 1-** Kickoff Meeting

**Task 2-** Generator Sizing Eval and Procurement

**Task 3-** Preparation of Design Documents

**Task 4-** Bidding Services

**Task 5-** Services during Construction

**Task 6-** Project Management

ARTICLE 2. Time Schedule

Services will be provided from Notice to Proceed (NTP) through December 31, 2019.

Task 1- Within 7 days of receipt of NTP

Task 2- Within 30 days of NTP

Task 3- 30 percent design within 60 days of NTP

Task 3- 60 percent design within 75 days of NTP

Task 3- Final bid documents within 90 days of NTP

Task 4- Bidding Services/Recommendation of Award within 130 days of NTP (includes 30-day advertisement and 10 days to review bids)

Task 5- Construction to last 6 weeks

Task 6- Throughout entire project

### ARTICLE 3. Budget

GAI proposes to perform these services for a lump sum fee \$55,000. GAI will submit monthly invoices based on the percent of work complete. Payment terms will be in accordance with the 2017 Professional Services Agreement Contract No. CM2452.

### Article 4. Other Provisions

The Services covered by this Work Authorization will be performed in accordance with the provisions set forth in the AGREEMENT referenced above and any of its attachments or schedules. Additional terms or contract provisions whether submitted purposely or inadvertently, shall have no force or effect. This Work Authorization will become a part of the referenced AGREEMENT when executed by both parties.

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In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed scope of services are attached.

AGREED TO BY:

BY: \_\_\_\_\_

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

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

Date: \_\_\_\_\_



**RECOMMENDED AND APPROVED BY NASSAU COUNTY:**

Nassau Amelia Utilities:

\_\_\_\_\_  
Josh Stillwagon

Board of County Commissioners, Chair:

\_\_\_\_\_  
Justin M. Taylor

Ex-Officio Clerk:

\_\_\_\_\_  
John Crawford

County Attorney:

\_\_\_\_\_  
Michael Mullin

APPROVED by the BOARD OF COUNTY COMMISSIONERS, the \_\_\_\_ day of  
\_\_\_\_\_, 2019

ACCOUNT NO.: 71500536-531400

## **EXHIBIT A**

### **Scope of Services**

## **EXHIBIT A**

### **Scope of Services**

#### **Proposal for Professional Services – Contract No. CM2452**

#### **Work Authorization No. 08**

### **Water Treatment Plant Emergency Standby Generator Replacement**

#### **Project Understanding**

Nassau Amelia Utilities (NAU) owns and operates a water treatment plant (WTP) that provides potable water service to island residents. Since NAU is the sole provider of potable water to these residents, reliability of the facility is critical. In the event of a storm or other power outage, emergency standby power is currently provided by a 250-kilowatt (KW) generator, which was originally installed in 1974 during construction of the WTP.

The generator is located within the WTP building and provides standby power for 3 production wells, the basic treatment process at the WTP, and the high service pump system; however, it is not adequately sized to run all of these components at once. NAU has planned to replace the existing unit with a larger (possibly 500 KW) generator that is capable of providing reliable power to the critical loads of the plant (operating all at the same time).

The generator has been maintained over the years, but due to age and availability of spare parts, it is becoming increasingly unreliable. In recent years, the generator failure has been the source of two system-wide boil water notices for the system.

It has become critical that the generator be replaced with an appropriately sized unit. Since NAU is planning upgrades to the WTP's electrical system and controls (motor control centers, instrumentation and SCADA upgrades) in the near future, it is recommended that NAU replace the existing generator (located interior to the WTP) with a free-standing (outdoor) unit. This will allow for future use of the footprint of the current generator (inside the WTP) as a proper electrical room to house the planned electrical and instrumentation upgrades (future project; not included in this scope of services). Therefore, the following scope of services pertains to the replacement of the existing generator with a larger (size to be confirmed during design), free standing generator equipped with an incorporated fuel tank and sound-attenuating enclosure, a new automatic transfer switch (ATS), new concrete slab, demolition/removal of the existing generator and fuel tank, new conduit runs to the outdoor generator location (including pulling new wire), and relocation of the control panel and ATS to the outdoor generator location.

It is assumed that the existing Florida Public Utilities (FPU) power feed to the facility is adequate for the new generator unit. No services related to replacement or reconfiguration of FPU feed are included in this scope of services. GAI Consultants, Inc., (GAI) has prepared the following scope of services to provide engineering services related to the replacement.

#### **Scope of Services**

To accomplish the above, GAI proposes the following tasks:

##### **Task 1 – Kickoff Meeting**

GAI will facilitate a kickoff meeting with WTP staff, NAU stakeholders and appropriate design team members to walk through the facility and identify the critical loads to be included in the sizing evaluation (Task 2). This kickoff meeting will also serve to establish the basis of design criteria for the project.

GAI will prepare meeting minutes and finalize a basis of design memorandum for review by all parties upon completion of the kickoff meeting. Any deviations from this basis of design, once finalized, may result in the need for the authorization of supplemental services/additional fees.

## **Task 2 – Generator Sizing Evaluation and Procurement**

GAI will utilize the critical component information gathered during the kickoff meeting/site visit to perform load calculations to serve as the basis for sizing the replacement generator. Once the size of the generator is established, GAI will contact three reputable generator suppliers to obtain equivalent model numbers. It is recommended that the Nassau County (County) consider obtaining quotes from each of the 3 pre-qualified suppliers and procure the generator itself via direct-purchase. There are several drivers for this recommendation. First, the estimated lead time on a unit of the anticipated size (500 KW) is 16 to 18 weeks from time of order. Therefore, a direct purchase could be initiated upon completion of the load calculations, prior to the preparation of the full project plans/specifications and bidding activities (which can proceed concurrently with the generator order processing). Second, the sales tax on a unit of this size can be \$10,000 or more. A direct purchase through existing contracts, such as the Florida Sheriffs Association Cooperative Purchase Program, saves NAU this additional money. The following design, bidding, and construction tasks are based on the assumption that the NAU direct-purchases the generator set.

## **Task 3 – Preparation of Design Documents**

GAI will prepare plans and specifications, suitable for obtaining competitive bids, for the relocation and installation of the generator, new automatic transfer switch (ATS), replacement wiring, new conduit runs, generator slab at desired, outdoor location, demolition of the existing generator and fuel tank, and relocation of the control panel and ATS to the new, outdoor location.

### **Subtask 3.1 30 and 60 Percent Design**

GAI will prepare detailed drawings and technical specifications, which will consist of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to this project, as well as applicable calculations. Note: front end documents (Divisions 0 and 1) are to be provided by the County purchasing department. Anticipated plan sheets to be prepared, in addition to calculations, are as follows:

1. Cover/Index
2. General Notes/symbols
3. C-1 Site Plan of WTP (location of FPU feed, fuel tank, WTP building and relevant features)
4. E-1 Electrical Symbols and Abbreviations
5. E-2 Electrical Site Plan and One Line Power Diagram Modifications
6. E-3 Existing Building Plan View
7. E-4 Electrical Details
8. E-5 Electrical Yard Piping Details
9. S-1 Concrete Slab Plan and Profile
10. D-1 Demolition Details (for the existing generator, fuel tank, and fuel tank slab)

The relocation of the generator to a stand-alone, outdoor location will require a new slab, which will require a geotechnical boring and structural design. GAI will subcontract with a qualified geotechnical engineering firm to perform the boring/field work and subsequent geotechnical report. GAI will prepare 30 percent design documents (full plans and limited specifications) for review and comment by NAU. GAI will provide the review documents in electronic, PDF, format. A review meeting will be held on site to discuss the design progress to date and any outstanding issues or challenges remaining to be addressed. Upon receipt of comments, GAI will advance the design (both plans and specifications) to the 60 percent level for subsequent review by NAU. GAI will provide the review documents in electronic, PDF, format. A second review meeting will be held with NAU staff to discuss the 60 percent progress set and note any review comments to be incorporated into the final bid documents.

### **Subtask 3.2 Final Drawings and Specifications Submittal**

GAI will incorporate all review comments from the 60 percent review meeting and finalize the bid documents. GAI will submit one set of final drawings and specifications (24-inch x 36-inch drawings) to NAU upon completion, as well as a full PDF set for use in advertising the project.





## **Task 4 – Bidding Services**

GAI will assist with bidding services, to include participation in pre-bid meeting, responses to bidders' requests for information/clarification (RFIs), preparation of addenda, review of bids received, contacting references, preparation of recommendation of award, and assistance with preparing conformed contract documents. GAI will prepare meeting minutes summarizing questions asked at the pre-bid meeting and applicable responses.

## **Task 5 – Services during Construction**

### **5.1 Pre-Construction Meeting**

GAI will prepare for and participate in a pre-construction kickoff meeting with the successful bidder. This will include identification of communication plan, allowable work hours, laydown areas, coordination of the generator delivery, discussion of contractor's proposed schedule, permitting requirements (building and/or generator permits from local government will be the responsibility of the contractor), and any other relevant details.

### **Subtask 5.2 Progress Meetings**

GAI will participate in bi-weekly progress meetings with the contractor and NAU over the anticipated 6-week construction period. Progress meetings will be held in person or via conference call, as warranted by the work being completed at the time. GAI will prepare and distribute meeting minutes to document each meeting.

### **Subtask 5.3 Construction Oversight**

GAI will conduct periodic site visits during construction to oversee critical phases of construction. Specifically, GAI will inspect underground conduit prior to encasing in concrete/backfilling trenches, inspect rebar prior to pouring concrete (if applicable), witness startup, etc. The budget for this task assumes weekly site visits (up to 8 hours per week) will be required, not including the punch list walk-through visits identified in Subtask 5.5. This task will also include review of shop drawings, pay applications, potential change orders and field change directives.

### **Subtask 5.4 Startup and Training Activities**

GAI and the contractor will prepare for and oversee startup activities and load bank testing upon construction completion. It should be noted that any Programmable Logic Controller programming and input/output integration is the responsibility of NAU and must be completed before full startup and testing can commence. GAI and the contractor will also prepare for and participate in a half-day training session with NAU's operators once startup and testing are completed. Contractor will provide an operations and maintenance manual on all equipment furnished under this Task Order for the NAU's records (will be required in the contract documents).

### **Subtask 5.5 Contract Closeout**

GAI will participate in a pre-final walkthrough upon substantial completion and develop a punch list for use in closing out the project. GAI will also participate in a follow-up final walkthrough to verify that all punch list items have been resolved to the satisfaction of NAU. Copies of walkthrough lists will be provided to NAU in PDF format.

### **Subtask 5.6 Record Drawings**

Upon completion of construction, GAI will prepare as-built/record drawings to document final project details. NAU will provide site record drawings (native, digital files) that will include a boundary survey and locations of existing underground utilities for use in preparing both the design documents and record drawings.

GAI's final record drawings will be based on field changes made during construction. GAI will provide NAU with a PDF of the final record drawings, an AutoCAD disk, and one hardcopy of full-size (24 by 36-inch) drawings signed and sealed by a professional engineer. One hard copy of the final record drawings containing GAI's professional engineering stamp shall take precedence over the electronic copy.

## Task 6 - Project Management

Activities performed under this task consist of those general functions required to maintain the project on schedule, within budget, and ensure that the quality of the work products defined within this scope is consistent with GAI's standards and NAU's expectations.

### Deliverables

- Kickoff meeting minutes (Task 1)
- Basis of Design Memorandum (Task 1)
- Load calculations (Task 2)
- Quotes from three generator suppliers (Task 2)
- 30 percent design documents – PDF review set (Task 3)
- 60 percent design documents – PDF review set (Task 3)
- Final design documents – PDF and Hardcopies (Task 3)
- Pre-bid meeting minutes (Task 4)
- Addenda, RFIs, recommendation of award (Task 4)
- Progress meeting minutes (Task 5)
- Shop drawing reviews, copies of pay applications, change orders (Task 5)
- Substantial Completion walk-through punch list (Task 5)
- Final Completion walk-through punch list (Task 5)
- Record drawings (hardcopy and PDF)

### Project Schedule

GAI will perform the above requested services, as follows:

Task 1	Within 7 days of receipt of Notice to Proceed (NTP)
Task 2	Within 30 days of NTP
Task 3	30 percent design within 60 days of NTP
Task 3	60 percent design within 75 days of NTP
Task 3	Final bid documents within 90 days of NTP
Task 4	Bidding Services/Recommendation of Award within 130 days of NTP (includes 30-day advertisement and 10 days to review bids)
Task 5	Construction to last 6 weeks
Task 6	Throughout entire project

### Additional Services

Additional services may be added to this contract during the course of work based on negotiated fees. These respective fees shall be determined jointly by the County staff and GAI. No work shall be undertaken on any additional service tasks without the written authorization of the County.

### Fee

GAI proposes to perform these services for a lump sum fee \$55,000. GAI will submit monthly invoices based on the percent of work complete.

### Payment

Payment terms will be in accordance with the 2017 Professional Services Agreement Contract No. CM2452.

## **Assumptions and Understandings**

GAI's Scope of Services, Schedule and Compensation as set forth above, have been prepared on the basis of the following assumptions and understandings:

1. FPU power feed is adequate for replacement generator unit/ATS.
2. Generator is to be placed outside, nearby the existing building.
3. NAU will provide as-built drawings depicting yard piping in the vicinity of the selected generator location, as well as provide utility locate services prior to finalizing conduit locations.
4. NAU to direct-purchase generator.
5. Access to the project site(s) or other land upon which GAI is to conduct any field work will be available to GAI personnel in a timely manner.
6. At the time of each work request, the client will provide all its requirements for GAI's scope of services and all criteria and/or specifications that GAI should utilize. This includes any requirement for any statement of professional opinion or certification.
7. At the time of each work request, the client will provide all available information pertinent to GAI's scope of services, including previous reports/drawings; utility information, etc. Unless otherwise noted, GAI may rely upon such information.
8. Client will give GAI prompt notice whenever it observes or otherwise becomes aware of any development that affects the scope or timing of GAI's performance. Client will examine and provide comments and/or decisions with respect to any GAI interim or final deliverables within a period mutually agreed upon.