



HILLERS ELECTRICAL ENGINEERING, INC.

August 4, 2021

Ms. Shannon LaRocque, PE
Utility Director
Village of Wellington
12300 Forest Hill Blvd
Wellington, FL 33414

Subject: Village of Wellington Water Treatment Plant Emergency Diesel Generator 3
Replacement Design and Bidding Phase Services

Dear Shannon:

Hillers Electrical Engineering, Inc. (HEE) is pleased to provide the Village of Wellington (Village) this proposal for engineering design services for the above referenced project. The Village desires to replace, and relocate, the existing 1500kW (1825kVA) 4.16kV, three-phase emergency diesel generator, presently in Membrane Building One, with a new 480V unit in a walk-in style, weather protective, impact resistant outdoor rated enclosure. HEE recently performed a study of options related to the generator replacement with the following conclusions/recommendations:

- The power demand related to the processes and facilities served by the current emergency diesel generator, with expansion cap may be adequately served by a 1250kW (1563kVA) unit at 480V.
- The current Commercial-Industrial Load Control (CILC) rate structure requires an EPA Tier 4 compliant emergency diesel generator because it is a financial incentive program as defined in EPA "FINAL RULING ON NATIONAL EMISSIONS STANDARDS for HAZARDOUS AIR POLLUTANTS (NESHAP) on RECIPROCATING DIESEL INTERNAL COMBUSTION ENGINES" (RICE) and the existing 1500kW unit is not compliant. The study recommendation is to move to a different power cost rate structure and implement a Tier 2/3 emergency diesel generator that is compliant with the EPA RICE NESHAP requirements.
- Add an insulated case breaker and transfer control equipment and logic to recently installed 480V switchgear MDP-RO1 in Membrane Building One to create a transfer scheme at 480V to serve process and facility loads.
- Eliminate the existing legacy medium voltage switchgear and transfer scheme to remove medium voltage (4.16kV) to the greatest extent possible from the plant.
- Re-work the existing 4.16kV service from the existing utility power transformer vault directly to the recently installed 1500kVA stepdown transformer and associated primary switch. The primary switch will become the service entrance disconnecting means for the Membrane Building One service.
- Route new generator output conductors in a new underground ductbank from the new emergency diesel generator to existing MDP-RO1 for emergency power to the plant.

- Route feeder conductors for enclosure support power from the power distribution system in MDP-RO1 to the new emergency diesel generator weather protective enclosure.
- Route new control and monitoring signals from the new emergency diesel generator and enclosure support equipment to the new transfer control equipment to be installed in existing MDP-RO1 and to the existing process control system in Membrane Building One as appropriate.
- Route new diesel fuel bulk supply and return piping from existing above ground storage tanks to new emergency diesel generator/enclosure.
- Design civil/site modifications including finish grade elevation modifications; area drainage modifications (as needed); new asphalt driveway and repairs to existing plant asphalt roadways as necessary; subsurface conflict resolution where needed for ductbank and fuel pipe routing.
- Structural design for new emergency diesel generator concrete foundation slab; miscellaneous structural/architectural repairs for Membrane Building One resulting from removal of old equipment.

HEE will engage subconsultant Hazen and Sawyer (Hazen) to perform design elements related to civil, structural, and mechanical disciplines. Hazen will also assist with permitting services related to Palm Beach County ERM/FDEP with regards to fuel storage, if any.

The Village is procuring the emergency diesel generator in weather protective, sound attenuating, and wind resistant enclosure as owner furnished equipment under a separate work order. The work of this scope is to design the installation of the owner furnished equipment and make all other improvements identified above.

Our scope of services is as described below:

Task 1: Design Phase Services

Task 1.1: Project Kick-Off Meeting

1. HEE and Hazen will attend a project kick-off meeting with the Village to discuss project goals, establish roles, points of contact, and schedule.
2. *Time Duration:* One (1) day, as soon as possible for all parties to meet after notice to proceed.
3. *Deliverable:* Meeting minutes.

Task 1.2: Fifty (50) Percent Design

1. HEE and Hazen will prepare a fifty (50) percent design level-of-completion submittal of drawings, specifications, and opinion of probable construction cost (technical documents) for review and comment by the Village.
2. *Deliverable:* Submit fifty (50) percent technical documents for Village review and comment.
3. *Time Duration:* One Hundred Twenty (120) days after notice to proceed (assuming owner furnished equipment shop drawings are reviewed and approved during this time frame).

Task 1.3: Fifty (50) Percent Design Technical Documents Review Meeting

1. HEE and Hazen will attend a fifty (50) percent design review meeting with the Village to receive and discuss comments on the submittal documents. It is assumed the Village will engage a Construction Manager At-Risk (CMAR) to provide constructability reviews and initial pricing. It is assumed that HEE and Hazen will receive comments from the CMAR as part of the design review comments from the Village.
2. Deliverable: Meeting minutes.
3. Fifty (50) percent design technical documents review meeting: Fourteen (14) days after submittal of the fifty (50) percent technical documents.

Task 1.4: Ninety (90) Percent Design

1. HEE and Hazen will incorporate comments from the fifty (50) percent review meeting and prepare a ninety (90) percent design level-of-completion submittal of drawings, specifications, and opinion of probable construction cost (technical documents) for review and comment by the Village.
2. Deliverable: Submit ninety (90) percent technical documents for Village review and comment.
3. Time Duration: Ninety (90) days after fifty (50) percent design review meeting (assuming owner furnished equipment shop drawings are reviewed and approved during this time frame.)

Task 1.5: Ninety (90) Percent Design Technical Documents Review Meeting

1. HEE and Hazen will attend a ninety (90) percent design review meeting with the Village to receive and discuss comments on the submittal documents. It is assumed the Village will engage a CMAR to provide constructability reviews and updated pricing. It is assumed that HEE and Hazen will receive comments from the CMAR as part of the design review comments from the Village.
2. Deliverable: Meeting minutes.
3. Ninety (90) percent design technical documents review meeting: Fourteen (14) days after submittal of the ninety (90) percent technical documents.

Task 1.6: One Hundred (100) Percent Design

1. HEE and Hazen will incorporate comments from the ninety (90) percent review meeting and prepare a one hundred (100) percent design level-of-completion submittal of drawings, specifications, and opinion of probable construction cost (technical documents) for review and comment by the Village.
2. Deliverable: Submit one hundred (100) percent technical documents for Village review and comment.
3. Time Duration: Forty-five (45) days after ninety (90) percent design review meeting.

Task 2.0: Permitting Assistance Services

Task 2.1: Building Department Permitting Assistance

1. HEE and Hazen will prepare signed and sealed technical documents for Village submission to the Building Department for permit application.
2. Deliverable: Signed and Sealed permitting technical documents. Seven (7) days after final negotiations with contractor.

Task 2.2: Environmental Regulatory Permitting Assistance

1. Hazen will take the lead and assist the Village with application for and obtaining applicable environmental related permits required for construction of the proposed improvements and will respond to requests for additional information submitted by the regulatory agencies. The permits to be applied for within the scope of work are as follows:
 - a. Palm Beach County ERM/FDEP – AST Registrations (if applicable)
2. Deliverable(s):
 - a. Permit Applications: Hazen shall submit the permit applications listed above to the Village for signature (as required).
 - b. Responses to Requests for Additional Information (RAIs): Hazen will furnish responses for to up to two (2) RAIs from each agency listed above and furnish response copies of all correspondence to the Village.

Task 3.0: Bid Negotiation Assistance

Task 3.1: Coordination with CMAR

1. HEE and Hazen will assist the Village with technical reviews of solicited bids by the CMAR for compliance with the technical specifications and will provide written comments to the Village. HEE and Hazen will assist the Village with technical aspects of the negotiations with the CMAR to finalize and secure a construction contract.
2. Deliverable: Bid review technical comments.
3. CMAR negotiation meetings: HEE and Hazen will attend two (2) bid review meetings with the Village and the CMAR to assist with negotiations.

Assumptions:

1. Village will furnish all available as-built documents related to Membrane Building One and any as-built drawings that may be available in AutoCAD for HEE team use in preparing the design. Site information including, but not limited to, existing as-built drawings will be provided to HEE and Hazen by the Village. Drawings available in .dwg format will be obtained by Village and provided electronically.
2. No construction phase assistance services are included in this proposal.
3. Proposal does not assume design and construction of a building to house a generator and/or electrical equipment.
4. The existing FPL service and utility transformer vault will remain; the existing service conductors will be re-worked to the existing primary switch on the existing 1500kVA transformer service Membrane Building One.

Ms. Shannon LaRocque, PE

Subject: Village of Wellington Water Treatment Plant Emergency Diesel Generator 3 Replacement Design and Bidding Phase Services

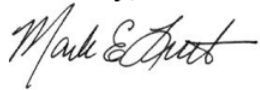
5. It is assumed that South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) (Permit 50-102961-P, Application No 200110-2609) has been obtained by others, and that adequate stormwater dry detention capacity exists elsewhere onsite to accommodate fill of stormwater dry detention area.
6. It is assumed that the Village will coordinate with FPL to determine an appropriate new rate structure for power purchase that will not result in the need to purchase, and design the installation of, a Tier 4 compliant emergency diesel generator.
7. All permit fees will be the responsibility of the Village or construction contractor. HEE and Hazen have not included any permitting agency fees in this proposal.
8. Standard Village Front End Construction Contract Documents will be prepared/provided by the Village.
9. Any topographical survey information required for the design will be provided by the Village.
10. Identification of underground interferences by ground penetrating radar (GPR) will be performed by the Village. No level of effort is included in this proposal for this activity.
11. It is assumed that no petroleum soil or groundwater contamination exists in the project areas.
12. Due to the minor nature of demolition and restoration activities, lead based paint (LBP) sampling or asbestos containing materials (ACM) sampling is not anticipated.
13. Village of Wellington Building Department dry-run permit review will not be completed.

Our Proposed Lump Sum Design Fee is:

\$130,665.00

HEE wishes to thank the Village for the opportunity to assist with this project. Please do not hesitate to call me if you have any questions regarding this proposal or any other related matter.

Sincerely,



Mark E. Luther, PE

MEL/mel

Attachment

WTP Emergency Diesel Generator 3 Replacement Design and Bidding Phase
Village of Wellington Utilities
HILLERS ELECTRICAL ENGINEERING, INC.
Scope Fee Breakdown
Date: 8/4/21

	Rate	\$192.00	\$153.00	\$147.00	\$81.00	\$138.00	\$78.00				
	Chief Engineer Hours	Project Manager Hours	Professional Engineer Hours	CADD/ Technician Hours	Construction Coordinator Hours	Secretarial Hours	Total Task Hours	Expenses Cost	SUBTOTAL Cost	TASK TOTAL Cost	
PHASE OF WORK											
Task 1: Design Phase Services											
Task 1.1: Project Kick Off Meeting										\$678.00	
Engineering Hours	2		2				4		\$678.00		
Task 1.2 Fifty (50) Percent Design										\$30,030.00	
Engineering Hours	16		92	163			271		\$29,799.00		
Contract Management		1				1	2		\$231.00		
Task 1.3 Fifty (50) Percent Design Technical Documents Review Meeting										\$909.00	
Engineering Hours	2		2				4		\$678.00		
Contract Management		1				1	2		\$231.00		
Task 1.4 Ninety (90) Percent Design										\$41,769.00	
Engineering Hours	24		130	220			374		\$41,538.00		
Contract Management		1				1	2		\$231.00		
Task 1.5 Ninety (90) Percent Design Technical Documents Review Meeting										\$909.00	
Engineering Hours	2		2				4		\$678.00		
Contract Management		1				1	2		\$231.00		
Task 1.6 One Hundred (100) Percent Design										\$17,175.00	
Engineering Hours	12		50	90			152		\$16,944.00		
Contract Management		1				1	2		\$231.00		
Task 2: Permitting Assistance											
Task 2.1 Building Department Permit Assistance										\$4,191.00	
Engineering Hours	5		16	8			29		\$3,960.00		
Contract Management		1				1	2		\$231.00		
Task 2.2 Environmental Regulatory Permit Assistance										\$231.00	
Contract Management		1				1	2		\$231.00		
Task 3: Bid Negotiation Assistance											
Task 3.1 Bid Negotiation Assistance										\$4,119.00	
Engineering Hours	8		16				24		\$3,888.00		
Contract Management		1				1	2		\$231.00		
Sub-Consultant (Hazen and Sawyer)								\$30,654.00	\$30,654.00	\$30,654.00	
Total Hours	71	8	310	481		8	878	\$30,654.00	\$130,665.00		
Subtotal	\$13,632.00	\$1,224.00	\$45,570.00	\$38,961.00		\$624.00			\$130,665.00		
Total										\$130,665.00	

Proposal to Provide

WTP – 1,250 kW Generator in Outdoor Enclosure

Services to be provided by: Hazen and Sawyer (Hazen)

Services provided to (“Village”): Hillers Electrical Engineers (HEE)

Proposal Date: August 3, 2021

Proposal Terms

PROJECT DESCRIPTION

The Village of Wellington (Village) Water Treatment Plant (WTP) currently has two on-site emergency diesel generators to supply power to the plant and facilities when utility power is not available. Emergency power availability for the treatment process is of critical importance for maintaining safe and reliable water service to the residents of the Village. The existing standby medium-voltage generator (Generator 3) for the lime plant and a portion of the membrane treatment plant (Membrane Plant 1) has reached the end of its useful life, with maintenance and service of the unit becoming more costly due to declining parts availability. In addition, the Village is phasing out medium voltage power distribution for low-voltage (480V) power distribution.

The Village completed a conceptual design report in June 2021 which determined that the most cost-effective option was to replace Generator 3 with an 480V generator in a standalone outdoor enclosure. This project comprises detailed design of the recommended alternative, and to be procured by Construction Manager at Risk (CMAR). Hazen will provide the following services as a subconsultant to HEE for civil, mechanical, and structural engineering services.

SCOPE OF SERVICES

Task 1 – Project Initiation and Meetings

Hazen will attend meetings with the Village and HEE during the design of the described improvements. The anticipated meetings are listed below;

- Kickoff meeting to discuss the project details
- Meeting to review 60% design submittal materials and constructability review with Construction Manager at Risk (CMAR)
- Meeting to review 100% design submittal materials and constructability review with Construction Manager at Risk (CMAR)

Hazen will attend meetings organized and led by HEE with Village staff and key members of the project team. During the project initiation kickoff meeting, the overall work plan, project goals,

and schedule will be discussed, lines of communication will be established, and data needs will be assessed. Minutes for each meeting will be prepared and distributed by the HEE.

Task 2 – Development of Contract Documents

Hazen will assist HEE in preparation of the drawings and specifications needed for construction. Hazen shall provide civil, mechanical, and structural plan and detail drawings and specifications for design of the following items:

- Fill portion of dry detention area to raise subgrade for design finished floor elevation
- Asphalt driveway to facilitate maintenance access for new facilities
- Structural design of concrete foundation slab to support the generator enclosure
- Structural design for restoration of the generator room/electrical room following demolition of generator and switchgear at Membrane Building 1.
- Fuel piping to fuel oil day tank connected to the nearby existing bulk fuel storage system
- Yard conduit ductbank plan / conflict resolution

The preliminary list of drawings anticipated for design are as follows:

Sheet	Drawing	Title
4	C1	Key Plan and Site Plan
5	C2	Generator and Fuel Piping Site Plan
6	C3	Civil Details
7	C4	Civil Details
8	S1	Structural Notes and Generator Pad Detail
9	S2	Membrane Building 1 Restoration Plan and Details

Hazen will submit a draft 60% complete set of construction drawings and list of specifications to HEE for review and comment. Upon receipt of comments from HEE, Hazen will implement comments and submit updated 60% set of construction drawings and list of specifications.

Hazen will submit a draft 100% complete set of construction drawings and specifications to HEE for review and comment. Upon receipt of comments from HEE, Hazen will implement comments and submit updated 100% set of construction drawings and list of specifications.

Hazen will prepare a Class 3 Engineer's Opinion of Probable Construction Cost (OPCC) at the 100% design level for civil, structural, and mechanical improvements as defined by the AACE International in Recommended Practices 18R-97, which is normally expected to be accurate within approximately plus 30 percent to minus 20 percent of the estimated cost.

Deliverable(s):

- 2.1 – Preliminary (60%) Construction Documents: Two (2) 22” x 34” hard copy plans, two (2) 11” x 17” hard copy plans, and two (2) hard copies of the List of Specifications will be provided. One (1) electronic version of the plans and List of Specifications will also be provided
- 2.2 – Final (100%) Construction Documents: Two (2) 22” x 34” hard copy plans, two (2) 11” x 17” hard copy plans, and two (2) hard copies of the Technical Specifications will be provided. One (1) electronic version of the plans and Technical Specifications will also be provided, in both .pdf and word .doc format.
- 2.3 – Class 3 OPCC (100%): Two (2) hard copies and one (1) electronic version of the OPCC will be provided.

Task 3 – Permitting Services

Hazen will assist HEE in applying for and obtain applicable permits required for construction of the proposed improvements and will respond to requests for additional information submitted by the regulatory agencies. The permits to be applied for within the scope of work are as follows:

- Palm Beach County ERM/FDEP – AST Registrations
- Village of Wellington Building Department

Deliverable(s):

- 3.1 – Permit Applications: Hazen shall assist HEE to submit to the Village the permit applications listed above for signature (as required).
- 3.2 – Responses to Requests for Additional Information (RAIs): Hazen will respond to up to two RAIs from each agency listed above and copy HEE and the Village on correspondence.

Task 4 – Coordination With CMAR

It is assumed that the Village will procure this project through a Construction Manager At Risk (CMAR) arrangement with a third party contractor. Hazen shall assist HEE in the following ways related to civil, structural, and mechanical components of the design:

- Hazen shall attend constructability review meetings at the 60% and 100% review milestones.
- Hazen shall receive constructability comments from the CMAR, and implement comments as agreed by the Village and CMAR.
- Hazen shall review guaranteed maximum price (GMP) proposal and provide a recommendation of award.
- Hazen shall prepare Conformed Drawings based constructability comments received.

Deliverable(s):

- 4.1 – Recommendation of Award: Following review of the GMP, Hazen shall assist HEE submit to the Village the recommendation for award.
- 4.2 – Conformed Drawings and Specifications: Five (5) 22” x 34” hard copy plans, five (5) 11” x 17” hard copy plans will be provided. One (1) electronic version of the plans and Technical Specifications will also be provided.

ASSUMPTIONS

1. It is assumed that South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) (Permit 50-102961-P, Application No 200110-2609) has been obtained by others, and that adequate stormwater dry detention capacity exists elsewhere onsite to accommodate fill of stormwater dry detention area.
2. Site information including, but not limited to, existing as-built drawings will be provided to Hazen by the Village. Drawings available in .dwg format will be obtained by Village and provided electronically.
3. Permit fees will be the responsibility of the Village or Contractor.
4. Standard Front End Documents will be prepared/provided by the Village.
5. Topographical survey information required will be provided by the Village.
6. Ground penetrating radar (GPR) for identification of unknown utilities will be performed by the Village.
7. SCADA HMI screens will be programmed by Village third-party consultant.
8. It is assumed that no petroleum soil or groundwater contamination exists in the project areas.
9. Due to the minor nature of demolition and restoration activities, lead based paint (LBP) sampling or asbestos containing materials (ACM) sampling is not anticipated.
10. Village of Wellington Building Department dry-run permit review will not be completed.

SCHEDULE

Task	Description	Time of Completion from NTP
1	Meeting Minutes	As Applicable
2	60% Drawings and List of Specifications	14 weeks
2	100% Drawings and Specifications, Class 3 OPCC	22 weeks
3	Permit Applications	18 weeks
4	Coordination with CMAR	30 weeks (estimated)

COMPENSATION

Compensation for all tasks, unless specifically noted below, will be billed on a lump sum basis based on percent of work complete and total project fees presented in Attachment A.

AUTHORIZATION

Work described in this proposal will commence upon authorization to proceed and receipt of a signed agreement.

Hazen and Sawyer (Hazen)

Signed: Albert Muniz

Name: Albert Muniz, PE

Title: Vice President

Date: August 3, 2021

Hiller Electrical Engineers (HEE)

Signed: _____

Name: _____

Title: _____

Date: _____

BUDGET SUMMARY - Lump Sum

Task No.	Description	BUDGET SUMMARY for WTP – 1,250 kW Generator in Outdoor Enclosure							
		Vice President	Senior Associate	Associate	Engineer/ Asst Engr	Principal Designer	Office	Total Labor	Sub-Consultant
1	Meetings	1	0	9	0	0	0	10	
2	Contract Documents	1	32	41	40	38	8	160	
3	Permitting	1	2	8	8	4	0	23	
4	Coordination with CMAR	1	0	8	8	6	4	27	
	SUB-TOTAL	4	34	66	56	48	12	220	
	Labor Raw Costs	\$218	\$196	\$165	\$105	\$114	\$73		
	Labor Sub-Total	\$872	\$6,664	\$10,890	\$5,880	\$5,472	\$876		
	Labor Total							\$30,654	
	Subconsultant Labor Total								\$0
	Subconsultant Multiplier								1.0
	Subconsultant Total								\$0
	Reimbursable Expenses								
	Project Total								\$30,654