

**Proposal to Provide Professional Services for the
D-8 Stormwater Pump Station Rehabilitation Project**

A. Project Description:

The Town completed a Stormwater Pump Station Assessment of the D-8 Pump Station in 2015 and has been working towards completing the improvements identified in the report. The improvements to the D-8 Pump Station have been reviewed with Town staff and based on the current condition of the pump station the Town desires to implement additional improvements to improve the operation and maintainability of the pump station until it is scheduled for a future major rehabilitation. Mock•Roos will assist the Town with the engineering services as outlined in **B. Scope of Services** below

B. Scope of Services:

1. Coordinate with and attend an onsite kick-off meeting with Town staff and the design team to confirm the proposed improvements, project component sizes, and take measurements for the proposed improvements that are to be designed.
2. Incorporate the engineering improvements identified below into a final 100% submittal. The final 100% design submittal is anticipated to include drawings, specifications, and an engineer's opinion of probable construction cost. Attend one (1) review meeting with the Town and address one (1) round of minor comments. The following engineering improvements are anticipated:
 - a. (Kimley Horn) Relocate the air intake from the north wall of the generator room to the west wall of the existing generator room
 - i. Ventilation calculations to verify the blower design point is not impacted.
 - ii. Ventilation calculations to size new silencer
 - iii. Add a mechanical sheet that depicts a mechanical demo plan, mechanical plan, and a mechanical section of the improvements (existing blower, ductwork, silencer, and intake hood)
 - iv. Revise structural plan sheets, both demolition and proposed improvements, to show the masonry infill of the existing wall opening for the existing intake
 - v. Revise structural plan sheets, both demolition and proposed, to show the new wall opening for the new relocated intake
 - vi. Provide a new structural detail for the intake hood
 - b. (Kimley Horn) Design a removeable hoist beam installed over the existing axial flow pumps within the pump bay
 - i. Complete structural calculations for the removable hoistbeams
 - ii. Revise structural plan sheets, both demolition and proposed improvements, to show the new removable beams
 - iii. Add detail for removable hoist beam wall connection
 - iv. Select hoist beam and trolley and update specification
 - c. (Kimley Horn) Revise plan to remove north and south walls at wetwell bay and revise duty pump hoist to span between the electrical and generator building

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- i. Complete structural calculations for the removable hoist beams
 - ii. Revise structural plan sheets to show the north and south masonry walls removed and the new hoist beam span
 - iii. Update detail for hoist beam wall connection
- d. (Kimley Horn) Add aluminum framing and grating over top of the wetwell opening
 - i. Revise structural plan sheets, both demolition and proposed improvements, to remove the reinforced concrete slab that was designed to span the existing wetwell opening
 - ii. Prepare structural calculations for the aluminum framing beams, connections and grating
 - iii. Revise structural plan sheets, both demolition and proposed improvements, to show the aluminum framing beams, connections and grating
 - iv. Revise structural plan sheets, both demolition and proposed improvements, to show framed grating opening for ladder access
 - v. Provide structural details for grating and framing connections
- e. (Kimley Horn) Revise the ladder detail to include square treads and round bar risers and include a concrete landing elevated above the wetwell floor up to the sediment wall
 - i. Add wetwell plan view that depicts the concrete landing and existing sediment.
 - ii. Design concrete landing reinforcement and connection of existing wetwell and sediment wall
- f. (Mock•Roos) Standardize lock and key requirements with other pump stations based on Town selected door hardware and lock sets
 - i. Coordinate with the Town on hardware that is preferred and add design to drawings for new hardware and lock sets
- g. (Mock•Roos) Recommend/Design minor site improvements to facilitate improved access for the installation and removal of the trailer mounted generator.
 - i. Revise the design to include the installed/asbuilt location of the Phase 5 N electrical equipment
 - ii. Review access for a trailer mounted generator with AutoCAD AutoTURN using a vehicle that approximates the dimensions of the Town's generator trailer
- h. (Mock•Roos) Remove the 750KW generator remote radiator and add a new connection to the existing water service for flushing. Based on a preliminary review of the heat exchanger water requirements (~75gpm), a minimum 2.5" service would be recommended to provide potable cooling water. As such, potable water will not be provided for cooling the generators and the design and calculations associated with providing the new service have been removed. Valving for flushing is to be manually operated
 - i. Revise the drawings to remove the air-cooled remote radiator and piping for the 750 KW generator. The remote radiator and piping for the 110KW generator is to remain
 - ii. Design and route a new connection from the existing water service to facilitate the flushing of the heat exchangers on the 750KW and 110KW generators
 - iii. Design a new connection/valving for the 110KW generator to operate air cooled or via well water with the ability to flush it with potable water

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- i. (C&W Engineering) Revise drawings to relocate the generator receptacle to the west side of the D-8 Pump Station near the E-5 control panel. Update electrical drawings and design to reflect the design decisions described above including the electrical design to relocate the fan motor and feed from MCC-2 as the air intake of this fan may be relocated from the north to west wall of the generator room

Complete ventilation, structural and electrical calculations and prepare revise drawings, engineers opinion of probable construction cost, and specifications to accommodate the proposed improvements

3. Coordinate with and provide the services of Structural and Electrical Engineering Subconsultants to assist with performing the Scope of services identified above
 - a. Coordinate with subconsultants on the design deliverables for the project, provided update base files, provide comments on preliminary designs prior to submittal to Town, and attend a review meeting with the Town
 - b. Update Engineers Opinion of Probable Construction Cost including subconsultants costs.
 - c. Update project specifications and incorporate new subconsultant specifications

C. Additional Services:

1. Any design changes, schedule changes, drawing changes, or other project changes requested by Client will be considered Additional Services.
2. Additional Services can be provided upon Mock•Roos receiving signed authorization from Client.

D. Assumptions:

1. It is assumed that the plans to be provided will be for the purposes of maintaining the existing structural elements. The scope in this task does not include a load analysis, structural analysis, or certification that the structure meets any current design codes.
2. It is anticipated that the project will require staff level approval and not additional ARCOM approval.
3. Based on the current scope of services the following items have not been included:
 - no survey is anticipated to be required
 - easement research and acquisition will not be required
 - no evaluation of the existing drainage basin or the operation of the existing drainage system is anticipated to be required
 - design revisions to accommodate raising improvements to two (2) feet above the 100-yr flood elevation for grant coordination
 - design, permitting, and coordination with WPB for a new 2.5" or larger water service connection to the existing watermain.

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4. Town to coordinate and obtain easements for existing pump station and proposed improvements.

E. Fee and Rates:

1. Mock•Roos will complete these services on an hourly basis at Mock•Roos' hourly rates, plus reimbursable expenses.
2. The total fee to provide the Scope of Services is anticipated to be \$59,970, with the following breakdown by consultant: Mock•Roos \$20,770, Kimley Horn \$36,200, and C&W Engineering \$3,000.
3. Mock•Roos will not provide services in excess of the anticipated fee without signed authorization from Client.
4. Mock•Roos can provide Additional Services at the Mock•Roos rates in effect at that time, plus reimbursable expenses or for an agreed upon lump sum fee.

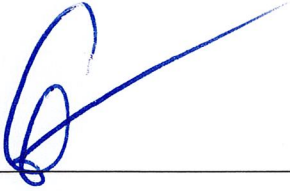
F. Conditions:

1. All terms become valid upon Mock•Roos receiving one complete copy of this proposal within 30 days of its date.
2. In case of discrepancies, the terms of this proposal supersede those of previous agreements.

G. Acceptance and Authorization to Proceed:

1. This proposal is acceptable and Mock•Roos has authorization to proceed with the Scope of Services. This authorization becomes valid upon Mock•Roos receiving a Purchase Order for these services.

MOCK•ROOS

Signed:  _____

Name: Garry G. Gruber, P.E.

Title: Senior Vice President

Date: September 22, 2022

Town of Palm Beach D-8 Pump Station Rehabilitation - Engineering Services (PA# B9035.20)							
Task Description	Labor Categories						
	Project Director	Senior Project Manager	Senior Engineer	Project Engineer III	Senior Administrative Assistant	Subconsultant	Total
Labor Hourly Billing Rate	\$195.00	\$175.00	\$170.00	\$150.00	\$70.00		
Design and Bid Phase							
1 Kick-off Meeting and Site Visit		2		4	2	\$2,780	\$ 3,870
2 Design of Proposed Improvements	2	4	22	40	4	\$32,395	\$ 43,505
2a (KH) Relocate the air intake						\$7,304	\$ 7,304
2b (KH) Addition of removable hoist beam						\$7,752	\$ 7,752
2c (KH) Revise plans to remove proposed N and S pump bay wall and revise duty pump hoist						\$4,849	\$ 4,849
2d (KH) Add aluminum framing and grating over existing wetwell opening						\$6,444	\$ 6,444
2e (KH) Revise ladder detail and add concrete landing in wetwell						\$4,046	\$ 4,046
2f (MR) Standardize Locks		1	4	8		\$0	\$ 2,055
2g (MR) Site Access Improvements		1	4	16		\$0	\$ 3,255
2h (MR) Remote Radiator Modifications and Flushing Water	2	2	14	16	4	\$0	\$ 5,800
2i (CW) Generator Receptacle Relocation Design						\$2,000	\$ 2,000
3 Coordinate Subconsultants	4	16	20	4	14	\$4,025	\$ 12,585
3a Coordination on Drawings	2	4	4	4	2		\$ 2,510
3b Update Engineers Opinion of Probable Construction Cost		4	8		4		\$ 2,340
3c Update Specifications	2	8	8		8		\$ 3,710
<i>Subtotal</i>	\$ 2,340	\$ 7,350	\$ 14,280	\$ 13,800	\$ 2,660	\$39,200	\$ 59,960
*(MR) Mock•Roos, (KH) Kimley horn, (CW) C&W Engineering						Expenses	\$ 10
						Design and Bid Services Total	\$59,970