

**Proposal to Provide Professional Engineering Services for
Town of Palm Beach
D-17 Stormwater Pump Station Rehabilitation**

A. Project Description:

The Town of Palm Beach's (Town) D-17 Stormwater Pump Station is located on the Intracoastal Waterway at the west end of Clarendon Avenue. A majority of the critical components at the station appear to be original to its rehabilitation completed in 2002. Town staff have identified ongoing concerns with the pump station, as documented in the Town's 2015 and 2024 Stormwater Pump Station Condition Assessment Reports. In 2018, the Town completed the design (completed by Mock•Roos) of various improvements, however, the improvements were not implemented at that time. The Town intends to update the 2018 design and incorporate additional improvements identified in the 2024 assessment. The Town further intends to complete a separate project associated with the integration of the adjacent E-13 Ejector Station and associated minor roadway improvements.

The D-17 Stormwater Pump Station Rehabilitation project entails extensive, multi-disciplinary upgrades. The scope of work for this rehabilitation, as identified in the 2024 assessment, includes the following major components, organized by discipline:

- Civil: Installation of temporary construction fencing, site demolition, saw-cutting existing pavement, asphalt milling and overlay, curb replacement, grading and restoration, signage installation, sediment removal from the wet well, abandoned E-13 demolition, inlet and pipe drainage upgrades, and minor planting, irrigation modifications, and landscape demolition (excluding ARCOM review).
- Mechanical: Demolition of pump cans and discharge pipes, installation of primary and duty submersible pumps, discharge pipes, flap gates, temporary facilities, stilling well and staff gauge, prime generator rehabilitation, and general demolition housekeeping pads.
- Structural: Repairs to the discharge seawall, installation of a new concrete outfall box structure, concrete repairs to the inside of the wetwell, replacement of the grating on the east side of the wetwell, and partial filling in or removal of the abandoned E-13 structure. Additionally, the project involves installing a new pad to elevate the existing generator (only a few feet instead of 3 feet above the 100-year flood elevation), installing a support structure to elevate electrical equipment (only a few feet instead of 3 feet above the 100-year flood elevation), an access platform for the electrical equipment providing NEC clearance from equipment, removal of the top slab of the wetwell, and casting of a new top slab on the wetwell.
- Electrical: FPL coordination for integration of the proposed improvements, electrical demolition, meter relocation, disconnect replacement, power pull box, feeder to existing main breaker, MCC1, disconnects, control pull box, transformers, panel boards, lighting, wet well lighting, lightning protection, conduit and wire, raising junction boxes, main control panel, field instruments, RTU installation, battery backup, and control panel installation.

Mock•Roos will provide the scope of services outlined below.

B. Scope of Services:

Task 1 – Design Phase Services

1. Attend a project kick-off meeting followed by an onsite meeting with the Town to review the scope of the rehabilitation. Mock•Roos' team members shall arrange and participate in up to two (2) meetings with the Town staff and/or others to discuss and coordinate various technical issues/topics relating to this project. The Town shall provide confined space entry to the wetwell during the site visit including operations staff, an entry supervisor, ventilation and gas detection equipment, and extraction equipment.
2. Call in an 811-design ticket and coordinate with utilities listed on the design ticket to request records on infrastructure located within the project limits. It is anticipated that most of the utilities listed will be shown on the record drawings associated with the Town's Phase 2 Undergrounding project. If necessary, horizontally locate existing below grade utilities using Electromagnetic (EM) and Ground Penetrating Radar (GPR) techniques, provide the horizontal locations of the utilities based on offsets from surveyed features verify the relative depth. Up to three (3) hard surface vacuum excavations are included. Incorporate field data into the construction documents.
3. Provide the services of a geotechnical subconsultant (WIRX Engineering) to perform one (1) Standard Penetration Test (SPT) boring to depth of 20 feet in accordance with ASTM D-1586. Perform a geotechnical analysis and prepare a geotechnical engineering report.
4. Provide the services of a survey subconsultant licensed in the state of Florida to prepare a limited topographic survey of the pump station with sufficient data to prepare a basemap and perform the design.
5. Update the 2018 basemap with the limited topographic survey data and any other available utility information.
6. Evaluate drainage basin hydraulics to confirm/recommend individual pump sizing and capacities. Conduct permit research and review, review pump operational data, develop ICPR model to approximate the drainage system and run various simulations. Provide a letter report to document findings. Design of off-site collection system improvements is not included in this Scope of Services.
7. Prepare typical design calculations, drawings, specifications, and other required deliverables for Project components based on industry practice for such facilities to advance the Project design through 30-percent (for review/comment), 90-percent (for review/comment and Town Building Department submittal) and 100-percent complete documents (for preapproved contractors). Review and coordination with Town staff shall be performed to confirm the proposed improvements are generally in accordance with the Town's Operation and Maintenance (O&M) goals.
8. Provide the design phase services of an electrical engineer (C&W Engineering) to assist with the tasks above.
9. Provide the design phase services of a structural engineer (Kimley-Horn) to assist with the tasks above.
10. Provide services related to coordination and quality control of the project and project products. These services include general coordination with the Town, its consultants and internal reviews of deliverables, schedules, and project progress reports as necessary.

Task 2 – Bid Phase Services

1. Assist the Town in responding to RFI's pertaining to the project. Attend a pre-bid meeting at the Town's office followed by a site visit. Assist Town review and evaluate bid submittals for the project and attend a pre-award meeting, if requested. Provide Town with Letter of Recommendation Award for the project.

Assumptions:

1. *It is anticipated that no additional easements will be required for the project. Stakeholder coordination will be completed by the Town.*
2. *Calusa hedge(s) will be called out to screen equipment with a temporary irrigation system or watering schedule to establish the plants. No additional landscaping is anticipated to be required. Services of a landscape architect are not included.*
3. *It is anticipated that Mock•Roos will provide the Town with signed and sealed drawings for the Town to walk through the Town Building Department. No additional permits or ARCOM review are anticipated or included in this scope.*
4. *Town standard Flygt pumps will be used for the basis of the pump selection.*
5. *Rehabilitation of the adjacent E-13 Ejector Station and roadway improvements will be completed under a separate authorization.*
6. *Grant administration is not included and will be completed by the Town.*
7. *Per FEMA Flood Insurance Rate Map Panel 591 effective October 5, 2017, the Pump Station falls in Zone AE with a determined base flood elevation of 6.0 (NAVD 88) ~ 7.56 (NGVD 29). NGVD29=NAVD88+1.56'. Based on the survey from the Town's Phase 2 Undergrounding Project, the grades adjacent to the pump station appear to vary around elevation 2.3 to 3.9 (NGVD 29). Equipment will be elevated to meet building department requirements. Equipment will not need to be elevated to 3 feet above the 100-year flood elevation, to elevation 10.56.*

C. Fee and Rates:

The total fee to provide the Scope of Services outlined above is estimated to be **\$212,442**, which includes \$104,522 of subconsultant services. Mock•Roos will complete the Scope of Services on an hourly basis at Mock•Roos' hourly rates, plus reimbursable expenses. See Attachment A for estimate of hours.

D. Acceptance and Authorization to Proceed:

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

MOCK•ROOS

Signed: _____



Name: Garry G. Gruber, P.E.

Title: Senior Vice President

Date: July 26, 2024

Town of Palm Beach
D-17 Stormwater Pump Station Rehabilitation
EXHIBIT A
Mock•Roos PA#C3045.00

Labor Categories							
Task Description	Principal Director	Senior Project Manager	Professional Engineer	Project Engineer III	Senior Administrative Assistant	Subconsultant	Total
Labor Hourly Billing Rate	\$195.00	\$175.00	\$170.00	\$150.00	\$70.00		
Task 1 – Design Phase Services							242,795
1 Kickoff meeting and Site Visit	2	12	16	4	4		\$ 6,090
2 Utility Coordination		2	8	20	2	5,000	\$ 9,850
3 Geotechnical Investigation and Reporting	2	4	8		2	6,985	\$ 9,575
4 Topographic Survey (DJL)		4	8	20	2	3,990	\$ 9,190
5 Develop a Project Basemap		4	8	20	2		\$ 5,200
6 Pump and Hydrologic and Hydraulics Model	4	24	40	80	4		\$ 24,060
7 Design and Construction Drawings	6	52	56	180	16		\$ 47,910
8 Electrical Engineering (C&W)		8				22,000	\$ 23,400
9 Structural Design Services (Kimley Horn)		8				59,940	\$ 61,340
10 Project Management	8	16					\$ 4,360
Task 2 - Bid Phase Services							
1 Bid Phase Assistance (Kimley Horn and C&W)	4	8	12		2	\$6,607	\$ 10,967
<i>Subtotal</i>	\$ 5,070	\$ 24,850	\$ 26,520	\$ 48,600	\$ 2,380	\$ 104,522	\$ 211,942
						Expenses	\$ 500
(Hourly Not to Exceed) Project Total							\$212,442