



MOCK • ROOS

CONSULTING ENGINEERS

June 30, 2020

Ilyse Triestman, CPPO, CPPB, FCCN
Acting Purchasing Director
City of Delray Beach
100 N.W. 1st Avenue
Delray Beach, Florida 32444

Ref. No.: C0005.00
Subject: City of Delray Beach
Proposal to Provide Preliminary Engineering, Design, Permitting, Bid Assistance and
Post Design Services for the Thomas Street Stormwater Pump Station Project

Dear Ilyse:

We are submitting the attached *Proposal to Provide Preliminary Engineering, Design, Permitting, Bid Assistance and Post Design Services for the Thomas Street Stormwater Pump Station Project*. Please review the attached proposal and provide authorization for us to proceed with the Scope of Services outlined.

We will provide the Scope of Services for a lump sum fee of \$552,091. This fee includes the project permitting fees of \$5,000, to be paid directly to the agencies by Mock•Roos, as well as an allowance amount of \$40,000 for additional scope of services as directed and approved by the City.

If you have any questions please contact me at 683-3113, extension 293. Thank you for using Mock•Roos on this project. We look forward to working with you.

Sincerely,

MOCK, ROOS & ASSOCIATES, INC.

Garry Gruber, P.E.
Senior Vice President

Enclosure

Copies: Bookkeeping

Exhibit A

SCOPE OF SERVICES & DELIVERABLES

EXHIBIT A
SCOPE OF SERVICES & DELIVERABLES
Proposal to Provide Preliminary Engineering, Design, Permitting, Bid Assistance and Post Design Services for the Thomas Street Stormwater Pump Station Project

Services to be provided by: Mock•Roos
Services provided to: City of Delray Beach (City)
Proposal Date: June 30, 2020 (revised)

Proposal Terms

I. Project Description:

The City's existing stormwater pumping facility located at 1101 Thomas Street, the terminus of Thomas Street at the Intracoastal Waterway, provides protection to a 50-acre drainage basin including Thomas Street, Vista Del Mar Drive, and part of Andrews Avenue and Lowery Street. However, this existing facility is undersized, has no redundancy, is past its life expectancy, and the City continues to manage frequent reliability issues resulting in street ponding, especially during high tide events.

In 2019 ADA Engineering completed a Stormwater Master Plan (SWMP) for the City evaluating the potential of increasing the pumping capacity of this stormwater station for both current and 30-year Sea Level Rise tidal conditions. The ADA report evaluated the potential overall sizing of the pump station capacity. Later in 2019, Corollo Engineers performed an effort that included developing a pump station wetwell model and a conceptual design for an upsized replacement station.

Based on the previous work efforts, the proposed replacement pumping facility will have a nominal ultimate station pumping capacity of 40,000 gallon per minute (GPM). The proposed station's ultimate capacity will require 3 - 20,000 GPM pumps each to provide desired redundancy. The pumps will be housed in a below grade wetwell that will be designed to accommodate the additional third pump which will likely be installed in a future phase, if desired/needed, to accommodate projected 30-year Sea Level Rise tidal conditions. A water quality stormwater treatment train structure will be located upstream of the pump wetwell structure. Each stormwater pump will have its own individual discharge pipe collecting into a discharge box prior to flowing into the Intracoastal Waterway. A back-up generator, electrical controls and SCADA systems will also be included to improve reliability of the facility.

The City would like to move forward with preliminary engineering, designing, permitting, bidding and post design services of the stormwater pump station replacement facility. Mock•Roos will provide services for the recommended improvements as outlined in **B. Scope of Services** below.

II. Scope of Services:

Task 1 – Project Control/ Meetings/Technical Coordination

Mock•Roos will provide Project Management and Controls including:

1. Project management and coordination, including attendance at a Project kick-off meeting, preparation of a QA/QC Plan, and maintenance of the Project Schedule. Task includes coordinating with City's Project Manager throughout the project.
2. Prepare for, and attend during design, routine progress meetings with the City (assumes 6). At each monthly meeting, Mock•Roos shall provide the City with project status updates. Updates will generally include the activities accomplished in the previous months, present issues and concerns encountered during the Project, planned actions for the next month, and updated schedule.
3. Technical Coordination and Meetings. Mock•Roos' team members (inhouse and subconsultant) shall arrange and participate in meetings to discuss and coordinate on various technical issues/topics relating to this project.

Task 2 – Data Collection, Surveying and Field Investigations

1. Surveying Services. Prepare a topographic survey basemap in AutoCAD showing field information, property lines and easements. Provide the services of a Florida licensed surveying consultant to perform the necessary land survey in accordance with State of Florida Surveying and Mapping standards according to the Minimal Technical Standards promulgated by the Florida Board of Professional Land Surveyors, 5J-17, of the Florida Administrative Code, Section 472.027, Florida Statutes. The topographic survey will be conducted within the Project Limits (NAVD-88) and generally include:
 - a. General ground elevation shots and breaks in grade with intervals not to exceed 50 feet
 - b. Visible and attainable improvements and utilities unless otherwise noted
 - c. Footprint of permanent building structures
 - d. Invert elevations of structures
 - e. Invert elevations of sanitary sewer manholes including pipe sizes and type if attainable

- f. Type and height of walls, fences
- g. Overhead wires
- h. Outline of landscaped areas
- i. Two benchmarks, offsite placement preferred if is accessible/allowable

The surveying consultant will field verify and establish the existing right-of-way by field staking the R/W lines along Thomas Street within the Project Limits.

The specific purpose surveys, as specified above, will be incorporated into a survey basemap used for development of the construction documents. The survey will be signed and sealed by a Professional Land Surveyor and Mapper Licensed in the State of Florida and shall be provided in both printed and electronic format, the latter being compatible with latest version of AutoCAD. Survey drawings shall be provided concurrent with the design plans and updated as necessary and applicable to the referenced phase of design and/or construction.

2. Finished Floor Elevations. Obtain the Finished Floor Elevations for all dwellings in the Thomas St. drainage basin (approximately 167). Information will be included on the survey basemap.
3. Title Reporting. Provide the services of a subconsultant to prepare a Title Report for up to 4 parcels assuming to be 142 Seabreeze Ave, 202 Seabreeze Ave, Thomas St. R/W, and the adjacent Intracoastal showing current ownership and possible encumbrances. Information will be included on the survey basemap.
4. Sketch and Legal Descriptions. Provide the services of a Florida licensed surveying consultant to prepare up to six (6) sketch and legal descriptions for proposed easements in accordance with Rule 5J-17, Florida Administrative Code, pursuant to Chapter 472.027 of the Florida Statutes. The exhibits will be signed and sealed by a Professional Land Surveyor and Mapper Licensed in the State of Florida and shall be provided in both printed and electronic format, the latter being compatible with latest version of AutoCAD.
5. Perform additional service scope of services as directed and approved by the City through an allowance line item (based on hourly fees) included in this proposal.
6. Geotechnical Services. Provide the services of a Geotechnical Engineering subconsultant to perform the following scope of services:
 - a. Develop a Geotechnical Testing and Temporary Traffic Control Plan
 - b. Mobilization of a truck mounted drilling rig to drill two (2) Standard Penetration Test (SPT) borings 40 feet below land surface and two (2) SPT borings 15 feet below land surface near the proposed wetwell structure and the drainage piping tie-in at

the intersection. The boreholes will be backfilled with grout and asphalt surface patched

- c. Samples from the borings will be visually classified in the field with laboratory confirmation using the Unified Soil Classification System (USCS)
 - d. Assign and perform a series of laboratory test to ascertain soil index properties for the soils encountered in each boring
 - e. Prepare a geotechnical engineering report that summarizes the findings, analysis, and results that will be signed and sealed by a Florida registered professional engineer.
7. Underground Utility Coordination. Review available record information and survey data. Call in a Sunshine one call design ticket and coordinate with the utility companies that are identified on the design ticket to have infrastructure located within the Project Corridor. Attend utility coordination meetings. Provide the services of a utility locate subconsultant to perform an ASCE 38-02 Quality Level B utility investigation (designates) on existing utilities in order to determine the horizontal alignment for Quality Level A investigation purposes, within the Project Limits. This QLB investigation includes direct induction of toneable subsurface utility facilities from surface accessible features, and Ground Penetrating Radar sweep for non-toneable facilities. Mark detected facilities with American Public Works Association (APWA) compliant colors; flags and water-based paint on soft ground and washable chalk on hard surfaces. Incorporate contact information for each utility into the construction documents.

Provide the services of a utility locate subconsultant to provide an ASCE 38-02 Quality Level A field investigation (utility test holes) at locations as identified by the consultant within the Project Limits. Provide Survey & CADD Field Test Hole Data sheets with the obtainable data digital photos, utility description, depth, size, type, direction, and material for each test hole. All excavations, including restoration, are included. Incorporate field data into the construction documents. (Permit fees are not anticipated or included).

8. Perform an investigation and reporting of the 4-inch drain line discharging into the drainage structure at the northeast corner of Thomas St. and Andrews Ave. Services include subsurface utility locates of the line.

Task 3 – Pump Station Wetwell Conceptual Engineering

1. Finalize Pump Station Capacity. Perform review and evaluate the previous SWMP modeling completed by ADA Engineering. City to provide ADA Engineering ICPR4 model for use/refinement. Services will include recreating and refining the ICPR4 model of the Thomas Street pump station drainage basin. The developed/refined ICPR4 model will be

used to confirm/recommend an overall pump station capacity. The additional finish floor elevations obtained in Task 2.1 above will be incorporated into the model. Limited field verification will also be conducted. Simulations will be run to evaluate potential pump station capacities using the existing and 30-year SLR tailwater and groundwater conditions.

2. Finalize Pump Station Wetwell configuration. Perform review and evaluate the previous conceptual wetwell configuration completed by Corollo Engineers. The Corollo proposed trench-style wetwell as well as the more standard rectangular shaped wetwell will be considered, evaluating approach velocities and general flow paths within each wetwell configuration based on Hydraulic Institute standards, pump manufacturer general installation guidelines, and development of a Computational Fluid Dynamic (CFD) Model.
3. Prepare and submit draft Recommendation Letter Report documenting findings and recommendations from Task 3.1 and 3.2 above.
4. Attend a review meeting with City staff to discuss draft Letter Report and prepare and submit a final Recommendation Letter Report.

Task 4 – Neighborhood Coordination/Outreach

Mock•Roos will develop, implement and be responsible for a neighborhood coordination plan. Services will include:

1. Develop a written neighborhood coordination plan, specific to this project for approval by the City. The plan will outline the steps to be taken to convey to the neighborhood a clear understanding of the project's goals, objectives, strategies and timeframes. The City's typical community-wide outreach scope is not anticipated to be warranted for this site-specific project. Therefore, specific tasks such as website development and social media updates are not included in this design-phase. Perform ongoing and all necessary communications with City and residents throughout project (40 hours of communication is included in this task).
2. Prepare information for and attend a kick-off meeting with neighborhood residents during the development of the conceptual engineering of the project. Prepare meeting agenda and prepare and distribute meeting minutes.
3. Prepare information for and attend a progress meeting with neighborhood residents as requested during the design phase of the project. Timing of this progress meeting will be as selected by the City.
4. Prepare information for and attend additional individual meetings neighborhood residents, as necessary, during the design phase of the project.

5. Attend individual meetings with the City Commissioners to discuss project.
6. Prepare for and attend City Manager's workshop to discuss project.

Task 5 – Contract Document Development

Mock•Roos will coordinate and develop the engineering plans and construction specifications will follow a standard Preliminary (30%), Intermediate (60%), Pre-Final (90%) and Final (100%) review schedule. Document setup, QA/QC reviews, utility coordination and meetings, team coordination, design calculations, equipment manufacturer coordination, life cost analysis of materials of construction, coordination with FPL, etc. and Engineer's Opinion of Construction Costs will be ongoing activities as part of these progress submittals. Each submittal will generally include, but not be limited to, the following:

- Construction Drawings and Specifications (Civil/Site, Structural, Mechanical, and Electrical)
- Design Calculations
- Engineer's Opinion of Probable Construction Cost
- Construction Schedule

Construction document development will include:

1. Prepare and submit a 30-percent progress submittal for the City to review. The 30-percent preliminary progress submittal is anticipated to progress the conceptual engineering efforts and will include the completed survey and geotechnical boring data, construction drawings, a list of technical specifications by division, and an Engineer's Opinion of Construction Cost.
2. Attend progress review meeting with City and address comments.
3. Prepare and submit a 60-percent progress submittal for the City to review. The 60-percent intermediate progress submittal is anticipated to address the comments from the 30-percent preliminary progress submittal and include the design calculation and hydraulic modeling, construction drawings, the technical specifications by division, and an Engineer's Opinion of Construction Cost.
4. Prepare and submit a 90-percent pre-final progress submittal for the City to review. The 90-percent pre-final progress submittal is anticipated to address the comments from the 60-percent intermediate progress submittal and include the completed design calculation and hydraulic modeling, construction drawings, the technical specifications by division, and an Engineer's Opinion of Construction Cost. The 90-percent pre-final progress submittal is intended to confirm budget, provide sufficient technical detail to allow the District to evaluate and comment on the design.

5. Attend a review meeting with City Staff at 30-percent, 60-percent and 90-percent complete intervals.
6. Prepare and submit a 100-percent final bid package submittal for the City's use. 100-percent final progress submittal is intended to finalize the budget, provide sufficient technical detail to use the documents to publically advertise the project for Bid.
7. Provide the services of a Structural Subconsultant for the development of the engineering plans and construction specifications.
8. Provide the services of a Landscape, Hardscape and Irrigation Subconsultant for the development of the engineering plans and construction specifications.
9. Provide the services of an Electrical Subconsultant for the development of the engineering plans and construction specifications.

Task 6 – Permitting

It is anticipated that project permitting will be required from US Army Corps of Engineers (USACE) for a Dredge and Fill Permit, from SFWMD for an Individual Environmental Resource permit, and from the City Building Department (for construction, however, a courtesy copy will be provided during design). Survey information, as necessary, are included in Task 2 above. The Contractor will obtain the NPDES and Dewatering permits for the project during construction.

Mock•Roos will perform the following project permitting tasks:

1. Coordinate and lead pre-application meetings with ACOE and SFWMD and prepare and submit permit applications. Coordinate and respond to reasonable Requests for Additional Information (RAIs). Permitting fees have been included in this proposal and will be paid directly by Mock•Roos. No additional seagrass study is anticipated.

Task 7 – Engineering During Bidding

Mock•Roos will assist the City during the bidding of the project to ensure the City is contracting with the apparent low responsive bidder for the project. The following services are included:

1. Attend one (1) pre-bid meeting.
2. Review and address bidder's requests for information (RFIs) and assist the City issue appropriate addendums.
3. Review bid submittals to evaluate their responsiveness from an engineering perspective and prepare a letter of recommendation for City's use in awarding a contract.

4. Provide services of the appropriate subconsultants during bidding.

Task 8 – Post Design Services

Mock•Roos will provide post design services as directed and approved by the City through an allowance line item (based on hourly fees) included in this proposal.

III. Project Deliverables

Deliverables are to be determined and provided as directed by the City. Deliverables are anticipated to include the following items and durations:

		Task Completion <u>(from NTP)</u>
Task 1	Project Control/Management/Technical Coordination	
	Project Management and Coordination	ongoing
Task 2	Data Collection, Surveying and Field Investigations	
	Survey	2 months
	Utility Coordination	3 months
	Geotechnical Report	3 months
Task 3	Pump Station Wetwell Conceptual Engineering	
	Recommendation Letter Report	3 ½ months
Task 4	Neighborhood Coordination/Outreach	
	Coordination	Ongoing
Task 5	Contract Documents Development	
	30% Progress Submittal	4 ½ months
	60% Progress Submittal	6 ½ months
	90% Progress Submittal	8 ½ months
	100% Progress Submittal (Bid Documents)	10 ½ months
Task 6	Permitting (Anticipated Application Submittal Date)	
	US Army Corp of Engineers	4 ½ months
	South Florida Water Management District	7 months
	City's Building Department	8 ½ months
Task 7	Engineering During Bidding	
	Recommendation for Award	TBD
Task 8	Post Design Services	
	As required	TBD

PROJECT LIMITS EXHIBIT

SUBCONSULTANT SCOPE – STRUCTURAL AND LANDSCAPING KIMLEY-HORN



June 17, 2020

Garry Gruber, P.E.
Mock, Roos & Associates, Inc.
570 Corporate Way
West Palm Beach, FL 33407

Re: Thomas Street Pump Station – Engineering and Landscape Architectural Design Services

Dear Mr. Gruber,

Kimley-Horn and Associates, Inc. ("Kimley-Horn" or "Consultant") is pleased to submit this letter agreement (the "Agreement") to Mock, Roos & Associates, Inc. ("Client") for providing engineering and landscape architectural services for the above referenced project.

Project Understanding

The Client will be performing engineering design services as prime consultant to the City of Delray Beach for the replacement of the Thomas Street Pump Station in Delray Beach. Kimley-Horn will be providing engineering and landscape architecture services as a sub-consultant to the Client. It is anticipated that Kimley-Horn will provide structural engineering design related to the new seawall, discharge bay, pump station wet well, generator foundation, and generator maintenance platform within the limits of the project site. Landscape Architectural design will be provided near the east side of the project site in an effort to screen the improvements from view from the street.

Scope of Services

Task 1 – Structural Design Services

Kimley-Horn will perform design services to prepare structural construction plans and specifications for the Thomas Street Stormwater Pump Station replacement. Kimley-Horn will attend a kick off meeting with the Client and City to discuss the project goals. We will review record information provided by the City. We will visit the site to review and observe the existing conditions. We will perform a visual review of the existing wet well, City owned seawall, adjacent residential seawalls, and residential privacy walls to observe the condition and take field measurements needed for design.

Kimley-Horn will prepare structural calculations that consist of the following:

- Structural calculations for the sea wall under both construction loading and final loading
- Structural calculations for the discharge bay
- Structural calculations for the tremie style wet well



- Structural calculations for the wet well top slab, pump support members, and access grating
- Structural calculations for the generator foundation
- Structural calculations for generator maintenance platform

Construction drawings and technical specifications will be provided to the Client for incorporation into the contract documents suitable for construction and submittal to the City's Building Department containing the following information:

- Structural notes and specifications
- Structural site plan
- Structural seawall layout, sections, and details
- Structural discharge bay plan, sections, and details
- Structural wet well plan, sections, and details
- Structural wet well top slab and details
- Structural Pump support members
- Structural generator foundation plan, sections, and details
- Structural Grating Supports and Details
- Structural details

We will submit plans and specifications for review at the 30%, 60% and 90% completion stages, meet with the City to review their comments after each submittal, and accommodate one round of reasonable requests for revisions by the City after each review. We will provide an opinion of probable construction cost for the structural elements at the 90% completion stage and update this document with the final design submittal.

Task 2 – Landscape Architecture Services

Kimley-Horn will provide landscape architectural services for the design of planting enhancement at the Thomas Street Stormwater Pump Station and for screening electrical equipment along Thomas Street. A Kimley-Horn landscape architect will attend one kick off meeting with the Client and City to discuss the project landscaping goals. We will visit the site to review and inventory the existing landscape. Landscape architecture services are limited to the following:

- Preparation of schematic design of proposed planting improvements for initial coordination
- Attend up to three meetings with the City to coordinate planting improvements
- Prepare up to two colored graphic exhibits for public outreach meetings
- Prepare planting and irrigation construction documents for proposed improvements based on the City selected conceptual engineering.
- Respond to City comments with up to two rounds of plan revisions (60% and 90% submittals).



Task 3 – Bid Phase Services

Kimley-Horn will attend the pre-bid meeting, issue responses to bidder RFIs received during the bidding process, review the bid proposal for the structural elements from the apparent low bidder, and prepare a memorandum to the Client containing our findings after our review of the bids. We will incorporate any comments received from the City's Building Department on the Construction Documents and submit a conformed set of Construction Documents to the Client containing both Building Department and any revisions made during the bidding process.

Additional Services

Any services not specifically provided for in the above scope will be billed as additional services and performed at our then current hourly rates. Services that we can provide are as follows:

1. Utility Coordination
2. Public involvement/public outreach services beyond what is included in the above scope of services
3. Design and detailing of temporary sheet pile walls or cofferdams
4. Mechanical Engineering
5. Hydraulic Engineering
6. Civil Engineering
7. Permitting Assistance beyond what is described in the scope of services
8. Construction Phase Services

Information Provided by Client

We shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives. The Client shall provide all information requested by Kimley-Horn during the project, including but not limited to the following:

1. Existing As-Built Pump station plans
2. Base files for the proposed pump station layout and size developed by the Client for the project.
3. Access to the site

Fee and Expenses

Kimley-Horn will perform the scope of services for the total lump sum fee of \$90,500. All permitting, application, and similar project fees will be paid directly by the Client.

Task 1 – Structural Design Services	\$73,650
Task 2 – Landscape Design Services	\$11,780
Task 3 – Bid Phase Services	\$5,070
Total	\$90,500

SUBCONSULTANT SCOPE – GEOTECHNICAL RADISE INTERNATIONAL



June 26, 2020

Mock-Roos

5720 Corporate Way,
West Palm Beach, FL 33407

Attn.: Mr. Garry Gruber, P.E.

Phone: (561) 722-9185

Email: garry.gruber@mockroos.com

**RE: Geotechnical Engineering Services Proposal
City of Delray Beach Thomas Street Pump Station
Palm Beach County, Florida**

Dear Mr. Gruber,

RADISE International, L.C. (RADISE) is pleased to submit this proposal for the above referenced project. This proposal discusses our understanding of the project, presents our proposed scope of work, and establishes our schedule and fee for performing the work.

PROJECT INFORMATION

We understand that the City of Delray Beach has retained Mock-Roos for the Thomas Street Pump Station Project. The project includes the replacement of the existing pump station and the adjacent bulkhead. The new pump station will include a wet well with associated piping/valves, control panel and portable generator arranged on a concrete slab. The wet well invert is expected to be approximately 15 to 20 feet below existing grade. We anticipate that the proposed wet well will be installed in the wet using the caisson (tremie) installation method. We expect the new bulkhead to consist of driven/pushed steel sheetpiles with a concrete cap and suitable batter piles or tieback system, if needed, to provide lateral support.

SCOPE OF SERVICES

The proposed scope of work for the project consists of the following:

1. Visit the site to field mark (paint and/or stake) the planned boring locations and observe existing site conditions.
2. Contact Sunshine 811 to request field location and clearance of underground utilities in the areas of the borings as per Florida Statutes.



561.841.0103



4152 W. Blue Heron Blvd. Suite 1114,
Riviera Beach, FL 33404



www.RADISE.com

3. Prepare a Temporary Traffic Control (TTC) Plan.
4. Mobilize a truck-mounted drilling rig to the site.
5. Provide TTC during the performance of the field exploration in accordance with applicable Indexes of the FDOT Standard Plans for Road Construction.
6. Perform four (4) asphalt cores to determine the thickness and nature of pavement components.
7. Perform two (2) Standard Penetration Test (SPT) borings to a depth of 40 feet; one near the existing pump station and one between the existing pump station and the tie-in near the intersection.
8. Perform two (2) Standard Penetration Test (SPT) borings to a depth of 15 feet between the pump station and the intersection.
9. Following completion of the drilling operations, the boreholes will be backfilled with grout and asphalt surface patched, as needed.
10. Visually classify the collected soil samples in the field with laboratory confirmation/QC verification of classifications using the Unified Soil Classification System (USCS).
11. Assign and perform a series of laboratory test to ascertain soil index properties for the soils encountered in each boring.
12. Prepare a geotechnical report which will include, but not necessarily be limited to:
 - Detailed graphical logs of the soil borings showing the groundwater level and soil classifications.
 - Data regarding the existing asphalt including asphalt section thickness, the base thickness and composition, and estimated existing structural numbers (SN_E) for the asphalt, base, and subgrade.
 - Discussion of the suitability of the encountered soils for the support of the proposed pump station and associated improvements.
 - Recommendations for site preparation, grading and fill materials.
 - Soil properties (unit weights, internal friction angles, wall friction angles, active/passive pressure coefficients & soil cohesion values).
 - Design (capacity) and construction recommendations for deep foundations, as needed.
 - Dewatering and construction considerations
 - Structural and vibration monitoring recommendations

SCHEDULE/DELIVERABLES

Upon receiving written authorization to proceed, we will commence with field marking of the boring locations and preparation of the utility locate request. Mobilization for the drilling operations will occur soon after Sunshine 811 clearance of boring locations is received from the contacted utilities. These two upfront activities are expected to require no more than 3 weeks to complete.

The specified field drilling work is expected to require 1 to 2 days to complete. Laboratory visual classification of the soils and report preparation will require about 3 weeks to complete following completion of field work. We expect to provide the final report signed and sealed by a registered professional engineer within 6 weeks of notice to proceed; however, accelerations of this schedule may be facilitated if needed.

COMPENSATION & TERMS

Based upon our understanding of the project and interpretation of your requirements, we propose to perform the scope of work outlined previously for a Lump Sum Fee as detailed in the Fee Breakdown on Attachment A.

Soil samples obtained from the drilling operations will be retained by RADISE for a period of 90 days from the date of drilling and then they will be discarded unless alternate terms are agreed to in writing with the client.

CLOSURE

RADISE appreciates the opportunity to provide our services for this project, and trust that the scope of work and fee presented in this proposal are clear and understandable. Should the proposal contents require any clarification or amplification, please feel free to contact us.

Sincerely,
RADISE International, L.C.

A handwritten signature in blue ink, appearing to read 'Andrew Nixon', is written over a horizontal line.

Andrew Nixon, P.E.
Operations Manager

Attachments: A – Fee Breakdown

Exhibit E

SUBCONSULTANT SCOPE – ELECTRICAL SMITH ENGINEERING CONSULTANTS

May 19, 2020

Mr. Garry Gruber, P.E.
Mock, Roos & Associates, Inc.
5720 Corporate Way
West Palm Beach, FL 33407

Re: Thomas Street Stormwater Pump Station
Electrical Engineering Services Proposal

Dear Garry:

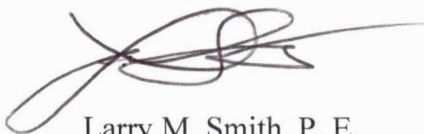
Smith Engineering Consultants, Inc. (SEC) is pleased to provide this proposal for the above referenced project. We propose to provide the following scope of services:

1. Perform initial site visit and review preliminary project plans.
2. Request/coordinate electric service upgrade from FPL and the conversion of the existing overhead service to underground and attend meetings as needed.
3. Assist in the preparation of a preliminary engineering report to discuss recommended pump station improvements and design alternatives.
4. Electrical design to provide power, controls, lighting, instrumentation, and telemetry/SCADA for the proposed pump station improvements. The electrical design will be in accordance with the Florida Building Code, the National Electrical Code, and applicable local codes.
5. Submit 30%, 60%, and 90% plans, specifications, and cost estimate and attend a review meeting with the City following each submittal.
6. Submit final (100%) plans, specifications, and cost estimate.

SEC will prepare contract documents, suitable for bidding, permit, and construction. We will assist in preparing addendums and respond to questions during the bid process. We propose to furnish drawings in AutoCAD format using base plan drawings provided by Mock Roos. Our lump sum fee to provide the services described above is \$28,500.

Thank you for using Smith Engineering Consultants as the source for these engineering services. We look forward to working with you on this project.

Sincerely,



Larry M. Smith, P. E.
President

2161 Palm Beach Lakes Blvd., Suite 312
West Palm Beach, FL 33409
(561) 616-3911 Fax (561) 616-3912

Exhibit F

**SUBCONSULTANT SCOPE – ENVIRONMENTAL, SURVEY, UTILITY
LOCATES
WANTMAN GROUP**

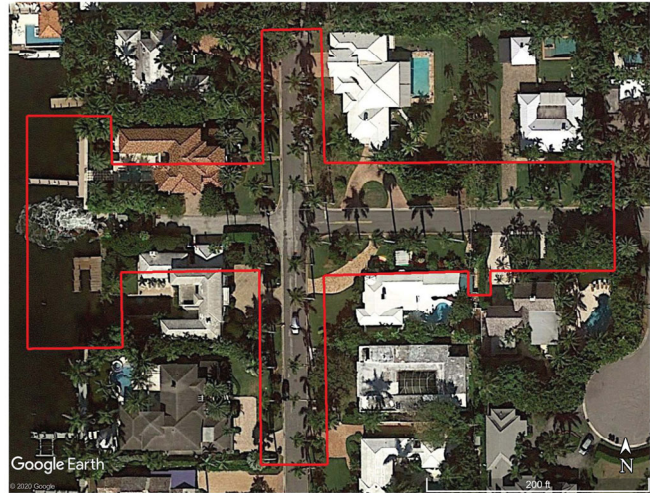
June 26, 2020
City of Delray Beach
RFQ No. 2020-011
Project No. 18-017
THOMAS STREET STORMWATER PUMP STATION

SURVEY SERVICES

I. Topographic Survey Services

Lump Sum Fee \$16,871.00

1. Prepare a Topographic Survey of the project limits as shown below and in accordance with Rule 5J-17, Florida Administrative Code, pursuant to Chapter 472.027 of the Florida Statutes.
2. The survey will consist of general ground elevation shots and breaks in grade with intervals not to exceed 50 feet.
3. The Topographic Survey will include:
 - a. Visible and attainable improvements and utilities unless otherwise noted;
 - b. Footprint of permanent building structures;
 - c. Invert elevations of storm drainage manholes, culverts, catch basins, and outfalls including pipe sizes and type if attainable;
 - d. Invert elevations of sanitary sewer manholes including pipe sizes and type if attainable;
 - e. Inverts for the connecting structure outside the topographic limits if found and attainable;
 - f. Type and height of walls, fences;
 - g. Overhead wires (horizontal location only except where noted);
 - h. Lowest wire elevation for overhead wires;
 - i. Outline of areas of dense vegetation such as bushes, hedges, and shrubs not individually located;
 - j. Outline of landscaped areas;
 - k. Individual trees with 4 inches and larger caliper measured at breast height; and
 - l. Two benchmarks, offsite placement preferred if is accessible/allowable.
4. The Topographic Survey will not include:
 - a. Sub-surface designation or location of underground utilities;
 - b. Sub-surface foundations or structures;
 - c. Subaqueous pier/dock columns or pilings;
 - d. Storm and Sanitary Sewer inverts of recessed or debris filled structures;
 - e. Sprinkler heads;
 - f. Overhead clearances (buildings, walkways, etc.) except where noted;
 - g. Traffic pavement striping including parking spaces;
 - h. Tree tagging;
 - i. Muck depths;
 - j. Location of Geotech borings; and

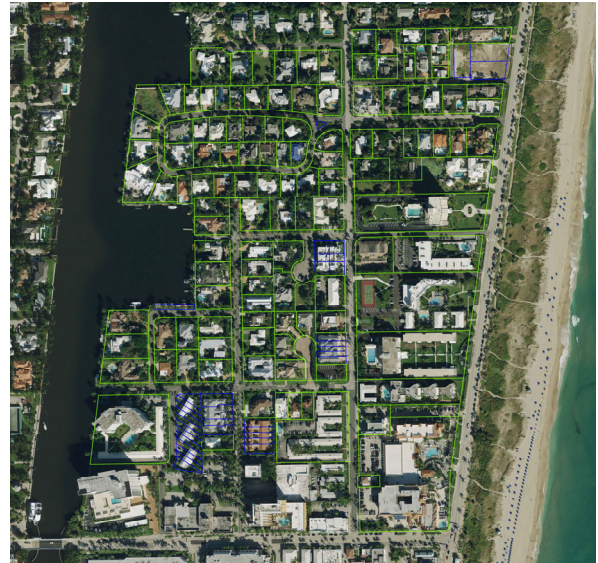


- k. Temporary features such as a trailer, delineator dome, boat, solar landscape lighting, etc.
5. Field verify and establish the existing right-of-way within the Project Limits. Research and/or Abstracting shall be performed under a separate task;
6. Field Staking of the R/W lines along Thomas Street within the Project Limits at every PI and intervals not to exceed 50 feet.
7. Deliverable will be a DTM, an AutoCAD file, and a signed and sealed plot of the Topographic Survey.

II. Finished Floor Elevation (FFE) Services

Lump Sum Fee \$6,789.00

1. Obtain the Finished Floor Elevations for up to 167 dwellings within the Thomas St. Pump Station Drainage Basin as shown below.
2. Elevations will not be based on GPS derived vertical control.
3. Deliverable will be an AutoCAD and CSV file.



III. Title Report/Commitment Services

Lump Sum Fee \$1,875.00

1. Prepare a Title Report for up to 4 parcels assuming to be 142 Seabreeze Ave, 202 Seabreeze Ave, Thomas St. R/W, and the adjacent Intracoastal showing current ownership and possible encumbrances.

IV. Exhibit Preparation Services

Fee \$750.00 per Exhibit

Six estimated (\$4,500.00)

1. Prepare Sketch and Legal Descriptions for proposed easements if needed on adjacent properties in accordance with Rule 5J-17, Florida Administrative Code, pursuant to Chapter 472.027 of the Florida Statutes.
2. The Exhibits do not include fieldwork.
3. Deliverable will be a signed and sealed exhibit.

BASIS OF THIS PROPOSAL

1. Access to the subject project shall be granted upon prior notice if restricted, gated, and/or locked. In the event that the surveyor is not allowed on site to perform the above survey services, the client shall be invoiced at the hourly rates quoted on WGI's current Fee Schedule.
2. Tree specimen nomenclature shall be generally common (oak, palm, pine, etc.) and cannot be relied upon. Consult with an arborist for further classification.
3. This survey will not constitute a boundary survey. Monumentation will not be set.
4. Permits and permit fees, if needed, are not included and are the responsibility of the CLIENT.
5. The location of storm and sanitary structures are only verified at the manhole or catch basin structure.
6. Meeting attendance is not included in these scope of services.
7. Vertical Datum will be represented in NAVD88.

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ENVIRONMENTAL SERVICES

I. Environmental Permitting

Lump Sum \$13,498

1. Pre-Application Meetings: WGI will coordinate and lead up to 2 pre-application meetings with the regulatory agencies to discuss possible environmental issues and constraints, and permit application requirements.
2. Prepare permit application packages for impacts to Waters of the United States (WOTUS). WGI will prepare the portions of the environmental permit applications that pertain to natural resources and WOTUS. The stormwater engineering design, drainage calculations, and other parts of the environmental permit application are not included in this task. WGI will prepare permit application for the following:
 - a. South Florida Water Management District (SFWMD): Individual Environmental Resource Permit (ERP) or a written request for verification of exemption, if applicable.
 - b. United States Army Corps of Engineers (USACE) Section 10 (Dredge & Fill) Permit. This project will likely qualify for a Nationwide Permit (NWP).
3. Coordination: WGI will attend meetings with project owner, client, consultants, and regulatory agencies as required for project coordination and review of the environmental permit application process.
4. Requests for Additional Information (RAI): WGI will respond to up to two rounds of comments on permits by each of the regulatory agencies.

Basis of Proposal

1. Provision of any fees required by the regulatory agencies are the responsibility of the CLIENT.
2. WGI assumes the seagrass survey conducted within growing season by WGI staff biologists on September 10, 2019 is valid for permitting and an additional seagrass survey will not be required.
3. WGI assumes there will be no mitigation requirement, or mitigation fees, based on the previous benthic resources survey that documented there are no submerged aquatic resources (e.g., seagrass) within the project footprint.
4. WGI assumes that groundwater dewatering will not require a SFWMD Water Use Permit (WUP).
5. Florida Department of Environmental Protection (FDEP) National Pollution Discharge Elimination System (NPDES) stormwater permitting; Generic Permit for Stormwater Discharge from Large and Small Construction Activities; and preparation of Form 62-621.300(4)(b), Notice of Intent (NOI) To Use Generic Permit For Stormwater Discharge

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from Large and Small Construction Activities is typically the responsibility of the CONTRACTOR and therefore are not included in the pricing.

6. This scope does not include permitting or coordination with the City of Delray Beach for tree preservation, protection, enforcement, and maintenance under land development regulations outlined in Chapter 4 Article 4.6 Section 19.
7. This scope does not include obtaining applicable permissions (e.g., construction easements) for any work proposed outside lands owned/operated/maintained by the City of Delray Beach.



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SUBSURFACE UTILITY ENGINEERING (SUE) SERVICES

I. Task I – Utility Designating (ASCE 38-02 Quality Level B) Lump Sum Fee \$5,093.00

1. WGI proposes to provide an ASCE 38-02 Quality Level B utility investigation (designates) on existing utilities in order to determine the horizontal alignment for Quality Level A investigation purposes, within the project limits as shown in Exhibit A. This QLB investigation includes direct induction of toneable subsurface utility facilities from surface accessible features, and Ground Penetrating Radar sweep for non-toneable facilities. Mark detected facilities with American Public Works Association (APWA) compliant colors; flags and water based paint on soft ground and washable chalk on hard surfaces.

II. Task II – Vacuum Excavation (ASCE 38-02 Quality Level A) Lump Sum Fee \$10,100.00

1. WGI will provide an ASCE 38-02 Quality Level A field investigation within the project limits (Exhibit A), up to fifteen (15) vacuum excavation test holes are anticipated. WGI will provide survey and location of utility test holes using network corrected GNSS surveying methods. Proposal is based on providing up to fifteen (15) vacuum excavation test holes at locations as directed by the EOR, after QLB data has been submitted.

III. Task III – Drainage Investigation Lump Sum Fee \$1,270.00

1. WGI will provide a specific field storm water investigation for a 3-4" drain line in the Catch Basin at the northeast corner of Thomas Street and Andrews Avenue.

Basis of Proposal

1. WGI proposes to provide an ASCE 38-02 Quality Level B utility investigation (designates) on existing utilities in order to determine the horizontal alignment for Quality Level A investigation purposes, within the project limits as shown in Exhibit A.
2. Survey services (QLC) for the survey location of utilities and test holes is included.
3. WGI proposes to provide ASCE 38-02 Quality Level A investigation, up to fifteen (15) vacuum excavation test holes on the existing utilities within the project limits (Exhibit A) are anticipated.
4. WGI will vacuum excavate utility facilities at the proposed locations, as directed by EOR, and provide a depth, size and material of the facility, and then backfill the test hole with native soil, compact with a pneumatic tamper to existing grade.
5. Generally, utility facilities found by vacuum excavation can be visually exposed to a depth equal to the water table; an air lance probe will be used for deeper facilities, however, visual confirmation will not be possible for facilities lying below the water table or utilities within directional bores. Note that the absence of identified utilities does not guarantee "no utility conflict".
6. Geophysical designating techniques, although highly reliable, are subject to outside interference, which are beyond the control of WGI, and may impede the effectiveness of subsurface utility investigations. Soil conditions, utility materials, size, depth, salt water and conductivity may prevent the location of some subsurface utilities. WGI utilizes state of the art equipment and

methodology during all phases of utility investigations, but no guarantee is hereby expressed that all facilities will be detected.

7. Drafting and/or other CADD services are included, and will be incorporated into existing CADD files provided by CLIENT.
8. CLIENT shall facilitate access for WGI field staff between Monday through Friday from 7am to 6pm.
9. Basic work zone safety includes safety road signs and traffic cones.

EXCLUSIONS

1. Permits and permit fees, if needed, are not included and are the responsibility of the CLIENT.
2. Select backfill material, flowable fill or other material not included.
3. Traffic control, lane closures, off duty police not included.
4. Storm drainage, gravity sewer is not included unless noted above.
5. Irrigation investigation is not included.
6. Street / parking lighting investigation is not included.
7. Subaqueous utility investigation is not included.

DELIVERABLES

1. WGI will provide a CADD deliverable with the QLB and QLA investigations drafted.
2. WGI will provide test-hole data sheets with the obtainable data; digital photos, utility description, depth, size, type, direction, and material of the facility.

EXHIBIT A

