

TASK ORDER No. 4

Dated this *20th* day of *September*, 2017

FORT LAUDERDALE PUBLIC WORKS DEPARTMENT

STORMWATER MASTER PLAN MODELING AND DESIGN IMPLEMENTATION ENGINEERING CONSULTING SERVICES (FINAL DESIGN SERVICES)

PROFESSIONAL SERVICES

This Task Order is pursuant to the Agreement between the City of Fort Lauderdale, a Florida municipal corporation (hereinafter referred to as "CITY") and Hazen and Sawyer, P.C., a New York corporation authorized to transact business in Florida (hereinafter referred to as "CONSULTANT") is pursuant to the Stormwater Master Plan Modeling and Design Implementation Engineering Consulting Services dated April 19, 2016 that expires on April 18, 2021 ("MASTER AGREEMENT").

PROJECT BACKGROUND

This task order is part of the larger RFQ No. 256-11660 Stormwater Master Plan Modeling and Design Implementation Engineering Consulting Services Continuing Services Contract, and it will require the CONSULTANT to provide final engineering services needed to deliver the following tasks:

- Obtain additional data of stormwater infrastructure and other survey information as identified in the preliminary design report and as needed to develop final designs for stormwater management improvements in seven specific neighborhoods as listed in Table 1 and Exhibit B-1.
- Obtain additional field data required for seawall design such as, bathymetric survey, inspection reports, topographic surveys for the areas as identified in the Specific Scope of Services, mean high water survey, and geotechnical investigations.
- Establish seawall design criteria, design plans, and construction method for each seawall.
- Utilize model results from analyses completed in Task Order No. 1 and Task Order No. 2 to develop stormwater improvements for the seven specific neighborhoods.
- Develop final stormwater improvement plans, specifications and opinions of probable construction costs based on improvements proceeding from the preliminary design report recommendations and from modeling results. In addition, final design of twelve proposed seawalls shall be included in this Task Order as shown in Table 2.
- Provide final permitting coordination with primary regulatory agencies relative to proposed neighborhood improvements.
- Provide an electronic copy of the ICPR model with the final design and permitting plans.

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Table No. 1 Specific Neighborhoods for Final Design and Permitting of Stormwater Management Improvements

City Project Number	Project Name
11845	Stormwater Master Plan Modeling and Design Implementation - Dorsey Riverbend
11844	Stormwater Master Plan Modeling and Design Implementation - Durrs Area
11842	Stormwater Master Plan Modeling and Design Implementation - Edgewood
11843	Stormwater Master Plan Modeling and Design Implementation - Progresso
11868	Stormwater Master Plan Modeling and Design Implementation - River Oaks
12074	Stormwater Master Plan Modeling and Design Implementation - Southeast Isles
12082	Stormwater Master Plan Modeling and Design Implementation - Victoria Park

Table No. 2 Seawall Design

Seawall Master Plan Seawall No. ⁽¹⁾	Seawall Location	Approximate Length, LF	Average Elevation, ft NAVD88 ⁽⁴⁾
29	Cordova Road from SE 11 th Court to SE 7 th Street	2,186 ⁽²⁾	2.35
32	Mola Avenue	33 ⁽²⁾	1.9 ⁽⁵⁾
15	Isle of Palms Drive	894 ⁽²⁾	1.26
35	SE 8 th St.	470 ⁽³⁾	1.48 ⁽⁵⁾
10	SE 23 rd Ave. & Del Mar Pl.	291 ⁽²⁾	1.61
30	SE 10th St.	470 ⁽³⁾	1.86
34	Barcelona Dr. East of NE 26 th Terrace	148 ⁽³⁾	1.87 ⁽⁵⁾
12	E. Las Olas Blvd. East of Lido Dr.	96 ⁽³⁾	2.19
17	Solar Plaza Dr./SE 25 Ave.	157 ⁽³⁾	2.27
14	E. Las Olas Blvd. East of Coral Way	80 ⁽³⁾	2.38
13	E. Las Olas Blvd. East of San Marco Dr.	75 ⁽³⁾	2.38

9	Victoria Park	120 ⁽²⁾	1.79
Total Linear Feet		5,020	

(1) Seawall number and approximate seawall length as per City's Seawall Master Plan.

(2) Approximate seawall length obtained from Seawall Master Plan inspection report.

(3) Approximate seawall length obtained from Seawall Master Plan GIS geodatabase.

(4) Elevation averaged from LiDAR elevations.

(5) Elevation averaged from Seawall Master Plan surveyed elevations.

The CONSULTANT shall appropriate adequate staff and material resources to perform the tasks outlined in the Specific Scope of Services section of this Task Order by the date of December 31, 2017. Projects will be developed as separate bid packages for each specific neighborhood and the seawalls design. The following outlines the understanding of design elements, criteria and scope as it relates to the final design:

1. Design documents shall be prepared utilizing topographic surveys provided by the CITY. The survey elevations are in North American Vertical Datum of 1988 (NAVD88) and in North American Horizontal Datum of 1983 (NAD83) and utilize the State Plane Coordinate System, Florida East. As an alternate AutoCAD base (or in conjunction with the surveys), the final design will use the 2' DTM developed under Task Order No. 1.
2. The proposed design will utilize the City's standard details developed under Task Order No. 1. The developed standard details were created using STB plot style as per City's request. In contrast, the final design drawings use CTB plot style. The work associated with the conversion of the standard details from STB plot style to CTB plot style is included under this Task Order.
3. The installation of the proposed stormwater improvements will impact the adjacent roadways and driveways, landscapes, and irrigation systems. The design addresses the impacted area including new landscaping and irrigation system (along with electrical for irrigation system), asphalt overlay and/or roadway reconstruction (along with new striping) in the areas impacted by the proposed stormwater improvements and/or seawall designs. Landscaping shall comply with Fort Lauderdale Unified Land Development Code. Irrigation controllers shall be solar powered if practical.
4. The proposed seawalls would be constructed adjacent to the existing seawalls. The replacement seawall design criteria shall be coordinated with the City. Exhibit B-3 presents the location map of the existing seawalls to be replaced.
5. The CITY's Cordova Road survey terminates about 200 feet north of SE 11th Court. The CITY has determined that the design of the seawall replacement will extend to the south side of SE 7th Street and to the edge of the private seawall located in the backyard of 1501 SE 12th Street. Hence, additional topographic surveying is included in this task order to extend the existing surveys to cover the area needed for the design. Additional topographic surveying is also required for the following seawalls: 10, 11,12,13,14, 32, and 34.
6. Seawalls 29, 35, and 34 have boat docks attached to them. Along the seawall replacements, all existing docks, lighting, potable water (if present) and electrical associated with the docks shall be removed. Design for replacing boat docks and associated appurtenances are not included under this Task Order. All other seawalls do not have existing boat docks.

7. Cordova Road includes drainage inlets with outfalls that pass through the existing seawall. Additionally, the outfalls include one-way valves. Design includes replacement of the existing inlets, outfall pipes and one-way valves along the Cordova Road seawall. The drainage inlets, piping and one-way valves shall be designed to match the existing sizes (or increase in capacity if warranted based on ongoing modeling).
8. Stormwater sheet flow occurs over the existing Isle of Palms seawall. Hence, raising the elevation of the seawall would prevent the sheet flow. Consequently, a drainage collection system shall be designed along the Isle of Palms Drive seawall; stormwater would be discharged to the adjacent waterbody. Evaluations of the stormwater sheet flow over Isle of Palms seawall and on the other eleven seawalls will be performed prior to final design.
9. Eleven of the twelve seawalls are located within the Southeast Isles neighborhood and one of the seawalls is located within Victoria Park neighborhood. The seawalls design could bid as part of the Southeast Isles and Victoria Park bid contracts or as a separate bid package to provide funding flexibility. In either case, the design of the twelve seawalls shall bid to a single contractor.

GENERAL REQUIREMENTS

Design Standards

The CONSULTANT shall be solely responsible for determining the standards the work shall meet and obtain all the requisite regulatory approvals. The design shall include, but is not limited to, the plans and specifications, which describe all systems, elements, details, components, materials, equipment, and any other information necessary for construction. Drawings shall meet City's CADD Standards. Civil drawings shall be developed using Autodesk Civil 3D, 2017 version. The design shall be accurate, coordinated between disciplines, and in all respects, adequate for construction, and shall be in conformity, and compliance, with all applicable laws, codes, permits, and regulations.

Quality Control

The CONSULTANT is responsible for the quality control (QC) of its work and of its sub-consultants to meet the deliverables included in this Task Order. The sub-consultants for this project shall be in accordance with MASTER AGREEMENT. Sub-consultants will not be changed without the CITY's approval. All sub-consultant documents and submittals shall be submitted by the sub-consultant directly to the CONSULTANT for its independent quality assurance/quality control review and subsequent submittal to the CITY. The CITY shall only accept submittals for review and action from the CONSULTANT.

The CONSULTANT shall be responsible for the professional quality, technical accuracy, and coordination of all design services, designs, drawings, specifications, and other services furnished by the CONSULTANT and its sub-consultant(s). It is the CONSULTANT's responsibility to independently and continually QC its plans, specifications, reports, electronic files, progress payment applications, schedules, and all project deliverables required by this task order. If requested by the CITY, the CONSULTANT shall provide the CITY with a marked up set of plans and/or specifications showing the CONSULTANT's QC review. Such mark-ups shall accompany the CONSULTANT's scheduled deliverables. The submittal shall include the names of the CONSULTANT's staff that performed the QC review for each component (structures, roadway, drainage, etc.).

All submittals and project deliverable from the CONSULTANT to the CITY shall be submitted as required by this Task Order. Alternatively, the CONSULTANT may upload electronic project files/Submittals to the CITY's 'Serve U' share file server if requested by the CITY. It is the responsibility of the CONSULTANT to verify that all electronic project files and submittals have been received by the CITY's project manager.

The quality of the CONSULTANT's performance and all interim and final product(s) provided to or on behalf of the CITY shall meet and exceed all professional standards of the State of Florida. Failure to meet the quality standards may be considered as reason(s) to terminate the Order, as stipulated in the MASTER AGREEMENT.

Ownership of Documents and Project Deliverables

All project documents and deliverables, including electronic files in native format, are owned by the CITY as stipulated by the MASTER AGREEMENT. It shall be the responsibility of the CONSULTANT to deliver and upload all project electronic files with each submittal to the CITY as required by the CITY's project manager.

Project Schedule

A preliminary final design project schedule prepared by the CONSULTANT is included as Exhibit C. The schedule shall be prepared in Microsoft Project, and shall utilize an estimated Notice-to-Proceed (NTP), based on best available information.

The CONSULTANT shall submit a final project schedule to the CITY, for approval, within 10 business days after receiving the NTP and prior to beginning work. No work shall commence without an approved schedule. The final schedule shall include design, permitting activities, submittal review timeframes, and other project activities as required to complete the work. The CONSULTANT shall submit updated project schedules as required in the specific scope of services and as applicable as the Project unfolds.

Permitting

The CONSULTANT shall coordinate with the CITY, regulatory agencies, and any other government entity having an interest or jurisdiction, which may require permits for this project. The CONSULTANT shall provide an estimate of fees and duration associated with the permitting process. Some of the regulatory or permitting agencies associated with this project include, but are not limited to:

- South Florida Water Management District (SFWMD)
- Florida Department of Environmental Protection (FDEP)
- U.S. Army Corps of Engineers (USACE)
- U.S. Coast Guard (USCG)
- Broward County Environmental Protection and Growth Management Department (BCEPGMD)
- Broward County Environmental Engineering and Permitting Division
- CITY' s Planning and Zoning Board

- City's Department of Sustainable Development (DSD)
- City's or other municipality's City Commission

Identify Known Contamination Sites

Known contamination sites within project sites are presented in Exhibit B-2 based on Broward County's Pollution Prevention, Remediation and Air Quality Division Contaminated Sites website. These contamination site locations shall be illustrated on a location map in the design drawings.

SPECIFIC SCOPE OF SERVICES

The Scope of Services to be provided by CONSULTANT shall be as follows:

Using the findings of the modeling efforts and preliminary design in Task Order No. 1 and Task Order No. 2 CONSULTANT shall prepare final design for improvements to alleviate chronic flooding in each of the specific seven neighborhoods. The final design shall address both water quantity and quality and shall include primary collection, conveyance, treatment and disposal features. In addition, CONSULTANT shall provide design for seawalls listed on Table No. 2. The Scope of Services to be provided by the CONSULTANT shall be as follows:

Task No. 1 – Additional Data Collection

Subtask 1.1 – Additional Field Data Collection for Seven Specific Neighborhoods

This sub-task will include the collection of additional data identified in the preliminary design report or as otherwise required to develop final engineering design documents. The additional field data may include, but is not limited to: stormwater structures such as manholes, catch basins, junction boxes, drainage wells, drainage pumps, underground storage vaults and exfiltration systems, pipelines, culverts, bridge and aerial crossings, headwalls, canal/waterways profiles and cross sections, swales and retention/detention areas and cross sections. As needed, CONSULTANT shall conduct additional field visits within CITY's public right-of-ways. Digital photographs of visited structures shall be taken at the time of the field visit.

Deliverables:

- Database of the additional stormwater infrastructure attributes in ArcGIS geodatabase format.
- Electronic copies of data collected.

Subtask 1.2 - Additional Data Collection for Seawall Design

The additional field data collection specified in Subtasks 1.2.1, 1.2.2, 1.2.3, and 1.2.4 are specific for seawall design.

Subtask 1.2.1 – Seawall Design Criteria (task fully funded via Task Order No. 2)

- CONSULTANT shall meet with two (2) marine seawall contractors to get input on the design concepts for the seawalls. The meetings shall be documented in meeting minutes.

- CONSULTANT shall discuss and evaluate with the seawall contractor(s) and the CITY the following seawall replacement design concepts:
 - Marine sheet piles with concrete caps versus concrete piles and panels (pros and cons)
 - Anchored versus cantilevered seawalls
 - The relative level of neighborhood disruption for each design concept
 - Construction phasing requirements
- The following design parameters shall be established based on discussions with the seawall contractor(s) and the CITY:
 - Type of seawall and top elevations for piling systems (sheet pile or concrete anchor piles)
 - Efficacy of cantilevered seawalls
 - Sizing of soil anchors, if required
 - Seawalls' top elevation
 - The top elevation of each seawall shall be in accordance with the Seawall Ordinance No. C-16-13. top elevation range of 3.9 feet NAVD88 to the maximum elevation of 5.0 feet NAVD88. Each seawall top elevation shall be evaluated separately.
- CONSULTANT shall discuss with City the stormwater flow conditions at each seawall and provide drainage design recommendations.

Subtask 1.2.1 Deliverables:

- Draft meeting minutes shall be delivered to the CITY via email in word format.
- Final design criteria summary table shall be delivered to the CITY via email.

Subtask 1.2.2 - Bathymetric Survey

CONSULTANT shall retain Craven Thompson and Associates (CTA) to provide the following:

- Prepare a bathymetric survey along the approximate 5,020 ft length of seawalls to be replaced. The survey shall extend from the face of the seawall to 25-ft waterward.
- Prepare bathymetric cross sections every 50-ft along length of seawalls.
- Survey the locations and edges of the underwater concrete cap. Include underwater concrete cap in bathymetric survey.
- Create a new external reference file in AutoCAD that incorporates the data collected in the bathymetric survey, underwater concrete cap survey and rip-rap inspections with the CITY's upland survey.

Subtask 1.2.2 Deliverables:

- AutoCAD file that incorporates the data collected in the bathymetric survey, underwater concrete cap survey and rip-rap inspections. A PDF of the AutoCAD drawings shall be submitted via email.

Subtask 1.2.3 – Seawall Inspection and Report

CTA shall retain Industrial Divers Corp. Inc. (IDC) to collect field data on the seawalls. IDC's scope of work shall include the following:

- The following subtask work represents work required for the final design and construction phasing coordination of the twelve seawalls.
- Inspect the seawalls via divers and document the inspection findings in a report. Report shall contain photos, sketches and data tables that summarize the field information collected as described below.
 - Provide the length and location of the various types of walls encountered (i.e., Rubble, Rubble w/footer, Concrete Panel Wall, etc.). Provide these data in a manner suitable for CTA to overlay the data accurately on its survey.
 - Provide the thickness (height) of the underwater footer. This will be needed in case of removal.
 - Provide the horizontal dimension from the waterside face of above water seawall cap to the waterside face of underwater footer.
 - Provide width and thickness of riprap revetment above the mudline on the bottom of the canal, against the existing seawall or footer, if it exists.
 - Provide locations of all outfall pipes through the seawall.
 - Where feasible, provide the location where there are any tiebacks on the existing seawalls.
 - Provide location information in a manner suitable for CTA to overlay the IDC field data accurately on the topographic survey provided to IDC and CTA.

Subtask 1.2.3 Deliverables:

- Seawall inspection report shall be submitted via email in Adobe PDF format.
- AutoCAD drawings (Autodesk Civil 3D 2017 version) shall be provided showing seawall inspection elements.
- Underwater photos shall be provided on a compact disk in native format.

Subtask 1.2.4 – Mean High Water Survey

CONSULTANT shall employ the services of CTA to:

- Contact Florida Department of Environmental Protection (DEP) for procedural approval, to establish the mean high water, the mean water, the mean low water, and the mean lower low water elevations of the New River and the canals at all seawalls.

Subtask 1.2.4 Deliverables:

- Prepare a report discussing and establishing the above specified water elevations in NAVD 1988 at each seawall.

Subtask 1.3 – Topographic Survey

CONSULTANT shall retain Craven Thompson and Associates (CTA) to perform the following:

- Prepare a topographic survey for Cordova Road right-of-way (including docks mounted to the seawall). In addition, prepare topographic surveys for seawalls 10, 11, 12, 13, 14, 32, and 34 as shown in Exhibits B-4 to B-8.
- Survey shall be integrated with the existing survey provided by the CITY.
- Prepare topographic surveys for areas identified in preliminary design report which are not covered by existing City surveys and where LiDAR information was not sufficient for the specific design requirements.

Subtask 1.3 Deliverables:

- Provide AutoCAD drawings of the topographic surveys compliant with the CITY's CADD Standards.
- Up to 10 copies (22"x34") of signed and sealed surveys upon request.

Subtask 1.4 Private Utility Locating Services

CONSULTANT shall retain the services of a utility locating company to identify private property utilities and/or to confirm location of critical utility conflicts which were not able to be identified by the services provided by "Sunshine 811". Approximately 90 test locations will be required for the seven neighborhoods. The utility locator shall use state-of-the-art ground radar (GPR), electromagnetic scanning, soft digging, and/or mapping software to provide a comprehensive, detailed view of the entire test location.

Subtask 1.4 Deliverables:

- The private utility locating services company shall prepare a report detailing utilities identified. A PDF of the report shall be submitted via e-mail.

Subtask 1.5 Geotechnical Investigation

CONSULTANT shall employ the services of Radise International, L.C. (RADISE) to perform the following geotechnical services.

- Utility Clearance: Secure underground utility clearance through Sunshine State One Call of Florida.
- Perform the 50 Standard Penetration Test (SPT) soil borings (ASTM D-1586) to a depth of 12 feet (and potentially deeper, as required) below the existing grade within the various seven neighborhoods. Borings shall be as shown in Table No. 3 – Number of Borings.

Table No. 3 – Number of Borings

Location	Number of Borings
Seawall 29	11
Seawall 32	1
Seawall 15	4
Seawall 35	2
Seawall 10	1
Seawall 9	1
Seawall 30	2
Seawall 34	1
Seawall 12	1
Seawall 17	1
Seawall 14	1
Seawall 13	1
Dorsey Riverbend	3
Durrs	3
Edgewood	4
Progresso	3
River Oaks	3
Southeast Isles	4
Victoria Park	3
Total	50

- All borings shall be performed using Standard Penetration Tests (ASTM D-1586) procedure.
- Grout boreholes upon completion.
- Collect soil samples from the test boring locations. Visually classify soil samples using the Unified Soil Classification System (USCS) in general accordance with the American

Society of Testing and Materials (ASTM) test designation ASTM D2488 titled "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)".

- Estimate the engineering parameters of the soil based upon the boring results, geotechnical literature and their experience. Recommend structural loading and foundation design parameters required for different types of proposed structures.
- Update Geotechnical Report provided under Task Order No. 2 to include additional geotechnical services provided under this Task Order. RADISE shall provide five (5) copies of updated geotechnical report signed and sealed by a Professional Geotechnical Engineer licensed in the State of Florida. This report shall contain as a minimum the following items:
 - Overall site map showing the locations of all soils borings (include borings under this Task Order and Task Order No. 2).
 - Ground water level elevations (including seasonal fluctuation).
 - Soil borings subsurface profiles showing soil classifications, depth, groundwater, and standard penetration "N values", and soil description.
 - Foundation recommendations for all proposed structures.
 - Recommended depth of bottom of seawall.
 - Recommended allowable soil bearing pressures.
 - Estimated total and differential settlements (deflection) under each structure based on foundation system recommended.
 - Recommended soil Modulus of Subgrade Reaction (K) for each structure (e.g., stormwater manholes).
 - Locations and descriptions of any existing fill or potentially deleterious materials encountered at the site that may interfere with construction progress or structure performance.
 - Analysis of seawall stability and estimate of passive and active soil pressure coefficients to enable structural design of seawalls.
 - Lateral earth pressure and other soil parameters for the design of below grade structures. Engineering properties shall include but not be limited to:
 - Dry unit weight of soil
 - Submerged unit weight of soil
 - Lateral coefficients for at-rest condition
 - Lateral coefficient for passive condition
 - Lateral coefficient for active condition
 - Soil internal friction angle
 - Recommendations for dewatering, well point system, etc. associated with trenching for construction of stormwater collection piping and structures.
 - Address adequacy of existing soil for use in backfilling under and against structures (e.g., seawalls and stormwater manholes).

- It is anticipated that trenches 10-feet deep (and potentially deeper) will be needed for construction of proposed stormwater piping and manholes. Provide the following relative to trenching:
 - Permissible excavation slopes
 - Sheeting and shoring recommendations
 - Suitability of excavated material for use as fill or backfill

Subtask 1.5 Deliverables:

- Provide 5 signed and sealed hard copies of the final geotechnical report. Update geotechnical report provided under Task Order No.2 to include all work as outlined in this Specific Scope of Services.
- Provide a digital copy of the geotechnical report in Adobe PDF format.

Task No. 2 – Final Design

Subtask 2.1 – Color Renderings

CONSULTANT shall prepare color conceptual landscaping plans along seawalls 11,12,13,14,15,17, and 29 with two cross sections at each right-of-way to illustrate existing road, proposed seawall, proposed landscaping, and adjacent residential property. The purpose of these color renderings is to facilitate the CITY's communication of its improvement plans with the residents that will be impacted by the construction.

Subtask 2.1 Deliverables:

- Color renderings shall be 22" x 34" and delivered to the CITY via email in Adobe PDF format.

Subtask 2.2 – Detailed Design

The final design includes stormwater improvements for the seven specific neighborhoods including the detailed design for the recommendations provided in the preliminary design report. The stormwater management design will include a variety of approaches, depending on the characteristics of the respective neighborhoods and the extent, condition and capacity of existing systems. These approaches may include:

- Design of complete new systems to address unserved or partially served neighborhoods.
- Augmentation to or extension of existing systems which need spatial and/or capacity improvements.
- Retrofit of existing systems, which due to infrastructure size, condition, and/or location require modifications.

Plan and profile and paving, grading and drainage drawings, as appropriate, will be developed at acceptable scales (typically 1"=20' or 1"=30'). Associated utility relocations/adjustments will

be included. Necessary structural, mechanical, civil, electrical, and I&C plans, sections, schedules and details will be included for stormwater system components as needed.

The stormwater systems will be designed to provide improved flood protection and enhanced water quality treatment by using Best Management Practices (BMPs). The proposed stormwater collection and conveyance systems will include, but are not limited to:

- Swales
- Inlets and catch basins
- Exfiltration trenches
- Dry and wet retention systems (basins)
- Backflow prevention valves
- Underdrain systems
- Stormwater pump stations
- Outfalls
- Control structures
- Drainage wells
- Green infrastructure such as bioswales and precast porous pavement

In addition, CONSULTANT shall provide detailed design for seawalls shown in Exhibit B-3.

60% Design Submission

- The CONSULTANT shall prepare and submit 60% design documents that include the following:
 - 60% design drawings (11" x 17" sheets)
 - 60% specifications
 - Opinion of probable construction cost
 - Updated project schedule
- The CITY shall provide comments to the CONSULTANT within 14 calendar days of receiving the submittal.
- The CONSULTANT shall attend one (1) coordination meeting with the CITY to address review comments. CONSULTANT shall prepare the agenda, record and submit meeting minutes.
- At the 60% milestone, CONSULTANT shall provide a Class 2 opinion of probable construction cost as defined by the Association for Advancement of Cost Engineering International (AACE International) in Recommended Practice 56R-08. An estimate of this type is normally expected to be accurate within +15% and -10%.

- Update the project schedule submitted at the start of the project. Updated project schedule shall be in Microsoft Project.

60% Design Deliverables:

- Three (3) original sets of the 60% design drawings (11" x 17" plan sheets) and specifications, together with one (1) electronic copy in Adobe PDF format.
- One (1) copy of the meeting minutes in Microsoft Word submitted via email.
- One (1) copy of the opinion of probable construction cost in Adobe PDF format submitted via email.
- One (1) copy of updated project schedule in Microsoft project format submitted via email.

90% Design Submission

- The CONSULTANT shall incorporate the review comments from the 60% design submission in the 90% design submission. The 90% design submission shall include the following:
 - 90% design drawings (11" x 17" sheets)
 - 90% specifications
 - Updated opinion of probable construction cost
 - Updated project schedule
- The CITY shall provide comments to the CONSULTANT within 14 calendar days of receiving the submittal.
- The CONSULTANT shall attend one (1) coordination meeting with the CITY to address review comments. CONSULTANT shall prepare the agenda, record and submit meeting minutes.
- At the 90% milestone, CONSULTANT shall provide a Class 1 opinion of probable construction cost as defined by the Association for Advancement of Cost Engineering International (AACE International) in Recommended Practice 56R-08. An estimate of this type is normally expected to be accurate within +10% and -5%.
- Updated project schedule shall be in Microsoft Project.

90% Design Deliverables:

- Three (3) original sets of the 90% design drawings (11" x 17" plan sheets) and specifications, together with one (1) electronic copy in Adobe PDF format.
- One (1) copy of the meeting minutes in Microsoft Word submitted via email.
- One (1) copy of the opinion of probable construction cost in Adobe PDF format submitted via email.
- One (1) copy of updated project schedule in Microsoft project format submitted via email.

- CONSULTANT shall submit 90% plans and specifications for permits. CONSULTANT shall provide three (3) original signed and sealed sets of the 90% Design Package (22" x 34" plan sheets), together with an electronic copy.

100% Design Submission

- The CONSULTANT shall incorporate the review comments from 90% design submission in the 100% design submission.
- The CONSULTANT shall submit the 100% design submission for CITY review. The design drawings shall be submitted in 11" x 17" plan sheets. The CITY shall provide comments to the CONSULTANT within 10 working days of receiving the submittal.
- The CITY shall provide comments to the CONSULTANT within 14 calendar days of receiving the submittal.
- The CONSULTANT shall attend one (1) coordination meeting with the CITY to address review comments. CONSULTANT shall prepare the agenda, record and submit meeting minutes.
- The CONSULTANT shall provide an updated schedule in Microsoft Project as part of this submittal package for City review and approval.
- Once all comments are addressed the CONSULTANT shall provide updated Plans and Specifications to permitting agencies, if required.
- At the 100% milestone, CONSULTANT shall provide a Class 1 opinion of probable construction cost as defined by the Association for Advancement of Cost Engineering International (AACE International) in Recommended Practice 56R-08. An estimate of this type is normally expected to be accurate within +10% and -5%.

100% Design Deliverables:

- Draft 100% design drawings and specifications shall be submitted to the City for review. Drawings shall be in Adobe PDF format and AutoCAD DWG format (11" x 17" plan sheets). Specifications shall be in Microsoft Word format.
- Once the draft 100% design drawings and specifications are approved, a final 100% drawings and specifications shall be submitted in Adobe PDF format and AutoCAD DWG format (11" x 17" and 22" x 34" plan sheets). Specifications shall be in Microsoft Word format.
- Three signed and sealed 100% final design drawings and specifications shall be submitted to the permitting agencies, if required for final permits' approvals.
- One (1) copy of the meeting minutes in Microsoft Word submitted via email.
- One (1) copy of the opinion of probable construction cost in Adobe PDF format submitted via email.
- Copy of the final ICPR Model
- One (1) copy of updated project schedule in Microsoft project format submitted via email.

Task No. 3 - Permitting

The CONSULTANT shall continue the coordination efforts with regulatory agencies, and authorities for all required permits under the final design. The CONSULTANT shall submit permit applications for agencies as listed in Table No. 4.

Table No. 4 Final Design Related Permit Applications

Agency	Permit Application
South Florida Water Management District (SFWMD)	ROW Permits, Form 0122-OP (02/2016)
Broward County Environmental Protection and Growth Management Department (BCEPGMD)	Environmental Resource License (ERL), Aquatic and Wetland Resources License, Surface Water Management (SWM) License, and Tree Removal License
Broward County Planning and Development Management Division	Development and Environmental Review Approval
BCEPGMD	Joint Application for Individual Environmental Resource Permit (ERP) ^A Authorization to Use State-Owned Submerged Lands / Federal Dredge and Fill Permit
U.S. Army Corps of Engineers (ACOE)	Application for Department of Army Permit - Engineering Form 4345, December 2014
City of Fort Lauderdale Zoning Division	Zoning Forms: Zoning Affidavit, Environmental Review Guide, Final Survey Review
City of Fort Lauderdale Department of Sustainable Development	Building Permit Application, Seawall and Dock Permit

Permitting Deliverables:

- CONSULTANT shall prepare meeting minutes for each meeting.
- CONSULTANT shall respond to all permit comments from the CITY, regulatory agencies, or authorities having jurisdiction.
- CONSULTANT is responsible for determining which permits are required and which agencies are applicable to the project.

^A Based on discussion with FDEP (Monica Sovacool, Environmental Manager), the placement of a seawall within 18-inches or less waterward of the existing seawall is exempt from the ERP requirements. If this exemption is feasible, then an exemption request on FDEP Form 62-330.050(1) shall be prepared.

PROJECT ASSUMPTIONS

- Within one week of issuing a notice to proceed for this task order, the CITY will provide all available record drawings of the existing seawalls along with water, sewer and drainage at each project area. City will provide existing electronic CAD files, if available. If CAD files are not available, record drawings will be in Adobe PDF format.
- CITY will provide access to the project sites.
- If Contractor equipment and material staging areas near the project sites are not feasible, it shall be the responsibility of the contractor to obtain off-site staging areas. This limitation will be described to the contractor in the contract documents.
- City will assist in coordination with property owners near the project sites.
- Development of maintenance-of-traffic plans is dependent on contractor means and methods. Hence, development of maintenance-of-traffic plans is the responsibility of the contractor.
- Value engineering, constructability review and other outside reviews (other than CITY staff and internal CONSULTANT review) are not anticipated.
- Submittal of applications to the City’s Development Review Committee are not required for the seawall design.
- It is assumed that a benthic survey and submerged lands easements are not required for the seawall design. If required, CITY will process and secure the easements within the Intracoastal Waterway.

ADDITIONAL SERVICES

If authorized in writing by the CITY, as an amendment to this Task Order, the CONSULTANT shall furnish, or obtain, Additional Services of the types listed in the MASTER AGREEMENT. The CITY, as indicated in the MASTER AGREEMENT, will pay for these services.

PERFORMANCE SCHEDULE

The durations of major work tasks are summarized in Table No. 5.

Table No. 5 Major Work Tasks

Description	Estimated Completion Time in Calendar Days	
	For Task	From NTP
Task No. 1 – Additional Data Collection		
Subtask 1.1 - Additional Field Data Collection for Neighborhoods	42	42
Subtask 1.2 - Additional Field Data Collection for Seawall Design	42	42
Subtask 1.2.1 – Seawall Design Criteria	56	56

Description	Estimated Completion Time in Calendar Days	
	For Task	From NTP
Subtask 1.2.2 - Bathymetric Survey	42	42
Subtask 1.2.3 - Seawall Inspection and Report	42	42
Subtask 1.2.4 - Mean High Water Survey	42	42
Subtask 1.3 - Topographic Survey	42	42
Subtask 1.4 – Private Utility Location Services	42	42
Subtask 1.5 - Geotechnical Investigation	42	42
Task No. 2 – Final Design		
Subtask 2.1 – Color Renderings	21	154
Subtask 2.2 – Detailed Design		
• Prepare 60% Documents	70	70
• City 60% Review	14	84
• 60% Review Meeting	Milestone	84
• Prepare 90% Documents	42	126
• City 90% Review	14	140
• 90% Review Meeting	Milestone	140
• Prepare 100% Documents	21	161
• City 100% Review	14	175
• 100% Review Meeting	Milestone	175
Task No. 3 – Permitting*	119	259

* Task No. 3 – Permitting will commence at 90% design stage (@ 140 calendar days)

Many factors affecting the project are beyond the control of CONSULTANT including work by others such as reviews by others and delivery of information to be supplied by others. Consequently, the schedule presented herein is dynamic and is presented as a best-case scenario. The schedule will be updated when appropriate.

PROJECT FUNDING

Performance of this project is at the CITY’s discretion and may be contingent upon the CITY receiving funding and work shall not begin until the CITY provides a Notice to Proceed to CONSULTANT.

METHOD OF COMPENSATION

The services performed will be accomplished using the Not-to-Exceed method of compensation. The total hourly rates payable by the CITY for each of CONSULTANT's employee categories, reimbursable expenses, if any, and sub-consultant fees, if any, are shown on Exhibit A attached hereto and made a part hereof. Pay application requests shall be prepared on the CITY's approved pay application request form. The CONSULTANT shall submit the pay application request to the CITY's Project Manager for review and approval. Once the CITY's Project Manager approves the CONSULTANT's pay application request, the CONSULTANT may submit it to the CITY's account payable department via email (AcctsPavable@fortlauderdale.gov). Pay application requests shall be submitted monthly.

TERMS OF COMPENSATION

Services will be provided for the following Not-to-Exceed amounts as shown in Table No. 6:

Table No. 6 Compensation

Description	Fee (Not-to-Exceed)
Task No. 1 — Additional Data Collection	\$1,240,356.00
Task No. 2 — Final Design	\$2,709,904.00
Task No. 3 — Permitting	\$304,796.00
Grand Total	\$4,255,056.00

CITY CONTACTS

Requests for payments should be directed to City of Fort Lauderdale Accounts Payable via e-mail to AcctsPayable@FortLauderdale.gov after getting approval from the CITY's Project Manager. All other correspondence and submittals should be directed to the attention of *Rares Petrica, PE*, Senior Project Manager, at the address shown below. **Please be sure that all correspondence refers to the CITY project number and title as stated above.**

Rares Petrica, P.E.
Senior Project Manager
Public Works
City of Fort Lauderdale
City Hall, 4th Floor Engineering
100 North Andrews Avenue
Fort Lauderdale, FL 33301
(954) 828-7150
RPetrica@fortlauderdale.gov

Christopher Bennett, P.E.
Assistant City Engineer
Public Works
City of Fort Lauderdale
City Hall, 4th Floor Engineering
100 North Andrews Avenue
Fort Lauderdale, FL 33301
(954) 828-6522
CHbennett@fortlauderdale.gov

CONSULTANT CONTACTS

Robert B. Taylor, Jr., P.E.
Vice President
Hazen and Sawyer
4000 Hollywood Blvd., Suite 750N
Hollywood, Florida 33021
(954) 987-0066
rbtaylor@hazenandsawyer.com

Patricia A. Carney, P.E.
Vice President
Hazen and Sawyer
4000 Hollywood Blvd., Suite 750N
Hollywood, Florida 33021
(954) 987-0066
pcarney@hazenandsawyer.com

CITY

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first above written.

CITY OF FORT LAUDERDALE, a municipal corporation of the State of Florida

By: 

Lee R. Feldman, City Manager

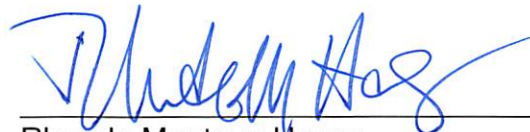
(CORPORATE SEAL)

ATTEST:



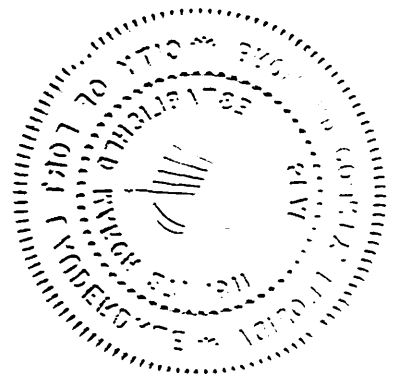
Jeffrey A. Modarelli, City Clerk

Approved as to Legal Form:



Rhonda Montoya Hasan
Assistant City Attorney





CONSULTANT

WITNESSES

Patrick A. Davis

Patrick A. Davis, P.E.

Print Name

Phil Cooke

Phil Cooke

Print Name

(COR)



HAZEN AND SAWYER, P.C., a New York Corporation authorized to transact business in the State of Florida

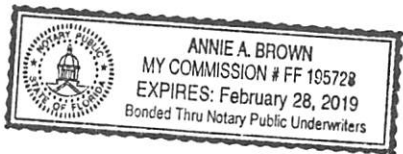
By Robert B. Taylor, Jr.

Robert B. Taylor, Jr., PE
Vice President

STATE OF FLORIDA:
COUNTY OF BROWARD:

The foregoing instrument was acknowledged before me this 25th day of August, 2017, by Robert B. Taylor, Jr., P.E. as Vice President of Hazen and Sawyer, P.C., a New York Corporation authorized to transact business in the State of Florida and who is personally known to me or has produced _____ as identification.

(SEAL)



Annie A. Brown

Notary Public, State of Florida
(Signature of Notary taking Acknowledgment)

Annie A. Brown
Name of Notary Typed, Printed or Stamped

**EXHIBIT A
FEE ESTIMATE
City of Fort Lauderdale**

Hazen and Sawyer, P.C.
TASK ORDER NO. 4
Overall Fee Schedule

A. Fee Schedule

The fee schedule below is based upon an estimate of the personnel to work on the project. The actual personnel may vary based upon availability and area of expertise. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform the services set forth in the Task Order for total compensation in the amount of or less than the stated total.

All Consultants

Fee Schedule										
Sub-Task	Task Title	Total Hours	Hazen Labor Cost	HDR Labor Cost	CTA Labor Cost	Chen Labor Cost	Total Labor Cost	Reimbursables	Additional Subs	Total
	Final Design	24,950	\$1,270,152.00	\$786,052.00	\$610,810.00	\$444,590.00	\$3,111,604.00	\$48,800.00	\$862,652.00	\$4,255,056.00
1	Additional Data Collection	1078	\$92,580.00	\$16,044.00	\$251,440.00	\$17,640.00	\$377,704.00	\$0.00	\$862,652.00	\$1,240,356.00
	Neighborhoods	652	\$41,636.00	\$12,872.00	\$248,120.00	\$14,880.00	\$317,508.00	\$0.00	\$581,540.00	\$899,048.00
	Seawalls	292	\$41,636.00	\$0.00	\$0.00	\$0.00	\$41,636.00	\$0.00	\$56,520.00	\$98,156.00
	Geotechnical	134	\$9,308.00	\$3,172.00	\$3,320.00	\$2,760.00	\$18,560.00	\$0.00	\$224,592.00	\$243,152.00
2	Final Design	21412	\$1,042,484.00	\$703,840.00	\$534,970.00	\$384,610.00	\$2,665,904.00	\$44,000.00	\$0.00	\$2,709,904.00
	Renderings	52	\$4,384.00	\$0.00	\$2,980.00	\$0.00	\$7,364.00	\$8,000.00	\$0.00	\$15,364.00
	60% Design	8,530	\$414,900.00	\$283,120.00	\$210,300.00	\$153,000.00	\$1,061,320.00	\$12,000.00	\$0.00	\$0.00
	90% Design	8,530	\$414,900.00	\$283,120.00	\$210,300.00	\$153,000.00	\$1,061,320.00	\$12,000.00	\$0.00	\$0.00
	100% Design	4,300	\$208,300.00	\$137,600.00	\$111,390.00	\$78,610.00	\$535,900.00	\$12,000.00	\$0.00	\$0.00
3	Permitting	2460	\$135,088.00	\$66,168.00	\$56,400.00	\$42,340.00	\$299,996.00	\$4,800.00	\$0.00	\$304,796.00
	Totals	24,950	\$1,270,152.00	\$786,052.00	\$842,810.00	\$444,590.00	\$3,343,604.00	\$48,800.00	\$862,652.00	\$4,255,056.00

Sub-Consultant (included Above)

B. Reimbursables (included above)

C. Other Costs (not used)

TOTAL NOT-TO-EXCEED FEE

\$4,255,056.00

D. Note: Hour totals associated with survey costs are not included in column E.

**EXHIBIT A
FEE ESTIMATE
City of Fort Lauderdale**

**Hazen and Sawyer, P.C.
TASK ORDER NO. 4
Survey Sub-consultants**

A. Fee Schedule

The fee schedule below is based upon an estimate of the personnel to work on the project. The actual personnel may vary based upon availability and area of expertise. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform the services set forth in the Task Order for total compensation in the amount of or less than the stated total.

Survey Sub-consultants

Fee Schedule									
Sub-Task No	Task Title		Langan Cost	Nobles Cost	Biscayne Cost	Longitude Cost	Brownell Cost	Radise Cost	Total Cost
1	Additional Data Collection		\$77,640.00	\$164,000.00	\$120,125.00	\$189,700.00	\$86,595.00	\$224,592.00	\$862,652.00
	Neighborhoods		\$77,640.00	\$164,000.00	\$120,125.00	\$133,180.00	\$86,595.00	\$0.00	\$581,540.00
	Seawalls		\$0.00	\$0.00	\$0.00	\$56,520.00	\$0.00	\$0.00	\$56,520.00
	Geotechnical		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$224,592.00	\$224,592.00
2	Final Design		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Renderings		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	60% Design		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	90% Design		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	100% Design		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3	Permitting		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Totals		\$77,640.00	\$164,000.00	\$120,125.00	\$189,700.00	\$86,595.00	\$224,592.00	\$862,652.00

(Note: these roles and the time/fee allocation may change during the course of final design)

Neighborhood	Surveyor	Survey Cost	Mobile Lidar by Langan	Total	Total Linear Footage	Cost per LF	Notes
Dorsey Riverbend	CTA	\$132,000.00	\$24,092.42	\$156,092.42	32,600	\$4.79	CTA survey cost (\$132,000) is included in "CTA Survey" tab
Durrs	CTA	\$100,000.00	\$18,101.25	\$118,101.25	24,500	\$4.82	CTA survey cost (\$100,000) is included in "CTA Survey" tab
Progresso	Nobles	\$120,000.00	\$25,772.43	\$145,772.43	33,600	\$4.34	
River Oaks	Nobles	\$44,000.00	\$9,673.90	\$53,673.90	13,100	\$4.10	
Edgewood	Biscayne	\$120,125.00	\$0.00	\$120,125.00	25,500	\$4.71	
Victoria Park	Brownell	\$86,954.60	\$0.00	\$86,954.60	20,222	\$4.30	
Southeast Isles	Longitude	\$189,700.00	\$0.00	\$189,700.00	30,699	\$6.18	includes LF of seawalls and right of way, plus tidal valve locations

Additional surveyors were added per authorization letter approved by City on 7/31/17. Additional surveyors rates are include with the approved letter and will be used for billing. Those approved rates were used to develop the fee estimates for each surveyor's respective neighborhood(s) and cross checked with "Cost per LF" as shown above.

EXHIBIT A
FEE ESTIMATE
City of Fort Lauderdale

Hazen and Sawyer, P.C.
TASK ORDER NO. 4

A. Fee Schedule

The fee schedule below is based upon an estimate of the personnel to work on the project. The actual personnel may vary based upon availability and area of expertise. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform the services set forth in the Task Order for total compensation in the amount of or less than the stated total.

Consultant - Hazen and Sawyer

Fee Schedule																						Hazen Total Hours	Hazen Labor Cost
Labor Category		Vice President		Senior Associate		Associate		Sr. Principal Engineer		Principal Engineer		Engineer		Assistant Engineer		Principal Designer		Designer		Administrative Assistant			
Percent Utilization		4%		8%		7%		8%		9%		9%		9%		21%		22%		3%			
Labor Rate		\$242/hr		\$195.00/hr		\$175.00/hr		\$170.00/hr		\$145/hr		\$126.00/hr		\$112/hr		\$128.00/hr		\$112.00/hr		\$63.00/hr			
Sub-Task No	Task Title	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)		
	Preliminary Design	352	\$85,184.00	736	\$143,520.00	632	\$110,600.00	776	\$131,920.00	780	\$113,100.00	788	\$99,288.00	788	\$88,256.00	1,958	\$250,624.00	2,038	\$228,256.00	308	\$19,404.00	9,156	\$1,270,152
1	Additional Data Collection	24	\$5,808.00	72	\$14,040.00	72	\$12,600.00	88	\$14,960.00	80	\$11,600.00	88	\$11,088.00	88	\$9,856.00	0	\$0.00	88	\$9,856.00	44	\$2,772.00	644	\$92,580.00
	Neighborhoods	8	\$1,936.00	32	\$6,240.00	32	\$5,600.00	40	\$6,800.00	40	\$5,800.00	40	\$5,040.00	40	\$4,480.00	0	\$0.00	40	\$4,480.00	20	\$1,260.00	292	\$41,636.00
	Seawalls	8	\$1,936.00	32	\$6,240.00	32	\$5,600.00	40	\$6,800.00	40	\$5,800.00	40	\$5,040.00	40	\$4,480.00	0	\$0.00	40	\$4,480.00	20	\$1,260.00	292	\$41,636.00
	Geotechnical	8	\$1,936.00	8	\$1,560.00	8	\$1,400.00	8	\$1,360.00	0	\$0.00	8	\$1,008.00	8	\$896.00	0	\$0.00	8	\$896.00	4	\$252.00	60	\$9,308.00
2	Final Design	304	\$73,568.00	604	\$117,780.00	500	\$87,500.00	588	\$99,960.00	600	\$87,000.00	600	\$75,600.00	600	\$67,200.00	1,758	\$225,024.00	1,750	\$196,000.00	204	\$12,852.00	7,508	\$1,042,484.00
	Renderings	4	\$968.00	4	\$780.00	0	\$0.00	8	\$1,360.00	0	\$0.00	0	\$0.00	0	\$0.00	8	\$1,024.00	0	\$0.00	4	\$252.00	28	\$4,384.00
	60% Design	120	\$29,040.00	240	\$46,800.00	200	\$35,000.00	230	\$39,100.00	240	\$34,800.00	240	\$30,240.00	240	\$26,880.00	700	\$89,600.00	700	\$78,400.00	80	\$5,040.00	2,990	\$414,900.00
	90% Design	120	\$29,040.00	240	\$46,800.00	200	\$35,000.00	230	\$39,100.00	240	\$34,800.00	240	\$30,240.00	240	\$26,880.00	700	\$89,600.00	700	\$78,400.00	80	\$5,040.00	2,990	\$414,900.00
	100% Design	60	\$14,520.00	120	\$23,400.00	100	\$17,500.00	120	\$20,400.00	120	\$17,400.00	120	\$15,120.00	120	\$13,440.00	350	\$44,800.00	350	\$39,200.00	40	\$2,520.00	1,500	\$208,300.00
3	Permitting	24	\$5,808.00	60	\$11,700.00	60	\$10,500.00	100	\$17,000.00	100	\$14,500.00	100	\$12,600.00	100	\$11,200.00	200	\$25,600.00	200	\$22,400.00	60	\$3,780.00	1,004	\$135,088.00
	Totals	352	\$85,184.00	736	\$143,520.00	632	\$110,600.00	776	\$131,920.00	780	\$113,100.00	788	\$99,288.00	788	\$88,256.00	1,958	\$250,624.00	2,038	\$228,256.00	308	\$19,404.00	9,156	\$1,270,152.00

Sub-Consultant (included Above)

B. Reimbursables (included above)

C. Other Costs (not used)

HAZEN AND SAWYER TOTAL ESTIMATED FEE \$1,270,152.00

Anticipated Roles (Note: these roles and the time/fee allocation may change during the course of final design)

- Overall Management/coordination
- Edgewood Final Design
- SE Isles Final Design

**EXHIBIT A
FEE ESTIMATE
City of Fort Lauderdale**

Hazen and Sawyer, P.C.
TASK ORDER NO. 4
HDR Engineering, Inc.

A. Fee Schedule

The fee schedule below is based upon an estimate of the personnel to work on the project. The actual personnel may vary based upon availability and area of expertise. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform the services set forth in the Task Order for total compensation in the amount of or less than the stated total.

Consultant - HDR Engineering

Fee Schedule																			
Labor Category		Principal		Project Manager		Senior Engineer		Staff Engineer		Project Engineer		Senior Designer		Designer		Administrative Assistant		HDR Total Hours	HDR Labor Cost
Percent Utilization		3%		8%		13%		14%		17%		20%		22%		2%			
Labor Rate		\$242/hr		\$196.00/hr		\$187.00/hr		\$156/hr		\$120.00/hr		\$110.00/hr		\$67.00/hr		\$45.00/hr			
Sub-Task No	Task Title	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)		
	Preliminary Design	188	\$45,496.00	488	\$95,648.00	822	\$153,714.00	868	\$135,408.00	1,018	\$122,160.00	1,224	\$134,640.00	1,378	\$92,326.00	148	\$6,660.00	6,134	\$786,052.00
1	Additional Data Collection	4	\$968.00	8	\$1,568.00	12	\$2,244.00	28	\$4,368.00	28	\$3,360.00	24	\$2,640.00	8	\$536.00	8	\$360.00	120	\$16,044.00
	Neighborhoods	4	\$968.00	4	\$784.00	8	\$1,496.00	24	\$3,744.00	24	\$2,880.00	24	\$2,640.00	0	\$0.00	8	\$360.00	96	\$12,872.00
	Seawalls	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	Geotechnical	0	\$0.00	4	\$784.00	4	\$748.00	4	\$624.00	4	\$480.00		\$0.00	8	\$536.00	0	\$0.00	24	\$3,172.00
2	Final Design	170	\$41,140.00	450	\$88,200.00	750	\$140,250.00	750	\$117,000.00	900	\$108,000.00	1,100	\$121,000.00	1,250	\$83,750.00	100	\$4,500.00	5,470	\$703,840.00
	Renderings	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	60% Design	70	\$16,940.00	180	\$35,280.00	300	\$56,100.00	300	\$46,800.00	360	\$43,200.00	450	\$49,500.00	500	\$33,500.00	40	\$1,800.00	2,200	\$283,120.00
	90% Design	70	\$16,940.00	180	\$35,280.00	300	\$56,100.00	300	\$46,800.00	360	\$43,200.00	450	\$49,500.00	500	\$33,500.00	40	\$1,800.00	2,200	\$283,120.00
	100% Design	30	\$7,260.00	90	\$17,640.00	150	\$28,050.00	150	\$23,400.00	180	\$21,600.00	200	\$22,000.00	250	\$16,750.00	20	\$900.00	1,070	\$137,600.00
3	Permitting	14	\$3,388.00	30	\$5,880.00	60	\$11,220.00	90	\$14,040.00	90	\$10,800.00	100	\$11,000.00	120	\$8,040.00	40	\$1,800.00	544	\$66,168.00
	Totals	188	\$45,496.00	488	\$95,648.00	822	\$153,714.00	868	\$135,408.00	1,018	\$122,160.00	1,224	\$134,640.00	1,378	\$92,326.00	148	\$6,660.00	6,134	\$786,052.00

Sub-Consultant (included Above)

B. Reimbursables (included above)

C. Other Costs (not used)

HDR ENGINEERING TOTAL ESTIMATED FEE \$786,052.00

Anticipated Roles (Note: these roles and the time/fee allocation may change during the course of final design)

Dorsey Riverbend Final Design
Progresso Final Design

**EXHIBIT A
FEE ESTIMATE
City of Fort Lauderdale**

Hazen and Sawyer, P.C.
TASK ORDER NO. 4
Craven Thompson Associates, Inc. (CTA)

A. Fee Schedule

The fee schedule below is based upon an estimate of the personnel to work on the project. The actual personnel may vary based upon availability and area of expertise. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform the services set forth in the Task Order for total compensation in the amount of or less than the stated total.

Consultant - Craven Thompson & Associates

Fee Schedule															
Labor Category		Principal Engineer		Senior Supervising Engineer		Senior Engineer		Project Engineer		Engineering Senior CADD Technician		Clerical		CTA Total Hours	CTA Labor Cost
Percent Utilization		3%		6%		20%		27%		41%		3%			
Labor Rate		\$180/hr		\$175.00/hr		\$130/hr		\$110.00/hr		\$85.00/hr		\$65.00/hr			
Sub-Task No	Task Title	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)		
	Preliminary Design	184	\$33,120.00	342	\$59,850.00	1,128	\$146,640.00	1,526	\$167,860.00	2,276	\$193,460.00	152	\$9,880.00	5,608	\$610,810.00
1	Additional Data Collection	10	\$1,800.00	28	\$4,900.00	20	\$2,600.00	48	\$5,280.00	48	\$4,080.00	12	\$780.00	166	\$19,440.00
	Neighborhoods	8	\$1,440.00	20	\$3,500.00	20	\$2,600.00	40	\$4,400.00	40	\$3,400.00	12	\$780.00	140	\$16,120.00
	Seawalls	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	Geotechnical	2	\$360.00	8	\$1,400.00	0	\$0.00	8	\$880.00	8	\$680.00	0	\$0.00	26	\$3,320.00
2	Final Design	154	\$27,720.00	254	\$44,450.00	1,048	\$136,240.00	1,358	\$149,380.00	2,008	\$170,680.00	100	\$6,500.00	4,922	\$534,970.00
	Renderings	4	\$720.00	4	\$700.00	0	\$0.00	8	\$880.00	8	\$680.00	0	\$0.00	24	\$2,980.00
	60% Design	60	\$10,800.00	100	\$17,500.00	400	\$52,000.00	540	\$59,400.00	800	\$68,000.00	40	\$2,600.00	1,940	\$210,300.00
	90% Design	60	\$10,800.00	100	\$17,500.00	400	\$52,000.00	540	\$59,400.00	800	\$68,000.00	40	\$2,600.00	1,940	\$210,300.00
	100% Design	30	\$5,400.00	50	\$8,750.00	248	\$32,240.00	270	\$29,700.00	400	\$34,000.00	20	\$1,300.00	1,018	\$111,390.00
3	Permitting	20	\$3,600.00	60	\$10,500.00	60	\$7,800.00	120	\$13,200.00	220	\$18,700.00	40	\$2,600.00	520	\$56,400.00
	Totals	184	\$33,120.00	342	\$59,850.00	1,128	\$146,640.00	1,526	\$167,860.00	2,276	\$193,460.00	152	\$9,880.00	5,608	\$610,810.00

Sub-Consultant (included Above)

B. Reimbursables (included above)

C. Other Costs (not used)

CRAVEN THOMPSON AND ASSOCIATES TOTAL ESTIMATED FEE

\$610,810.00

Anticipated Roles

(Note: these roles and the time/fee allocation may change during the course of final design)

Durrs Final Design
River Oaks Final Design

**EXHIBIT A
FEE ESTIMATE
City of Fort Lauderdale**

Hazen and Sawyer, P.C.
TASK ORDER NO. 4
Chen Moore and Associates, Inc.

A. Fee Schedule

The fee schedule below is based upon an estimate of the personnel to work on the project. The actual personnel may vary based upon availability and area of expertise. It is agreed that the method of compensation is that of "Not to Exceed Amount" which means that CONSULTANT shall perform the services set forth in the Task Order for total compensation in the amount of or less than the stated total.

Consultant - Chen Moore and Associates

Fee Schedule																			
Labor Category		Principal		Senior Project Manager		Senior Engineer/ Senior Landscape		Project Engineer/ Project Landscape		Engineer/Designer/ Planner		Senior Technician		Technician		Project Administrator/Clerical		Chen Total Hours	Chen Labor Cost
Percent Utilization		3%		5%		13%		18%		19%		19%		4%					
Labor Rate		\$230/hr		\$185.00/hr		\$165.00/hr		\$125/hr		\$90.00/hr		\$91.00/hr		\$70.00/hr		\$55.00/hr			
Sub-Task No	Task Title	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)		
	Preliminary Design	104	\$23,920.00	208	\$38,480.00	536	\$88,440.00	730	\$91,250.00	758	\$68,220.00	780	\$70,980.00	788	\$55,160.00	148	\$8,140.00	4,052	\$444,590.00
1	Additional Data Collection	4	\$920.00	24	\$4,440.00	16	\$2,640.00	20	\$2,500.00	48	\$4,320.00	20	\$1,820.00	8	\$560.00	8	\$440.00	148	\$17,640.00
	Neighborhoods	4	\$920.00	16	\$2,960.00	16	\$2,640.00	20	\$2,500.00	40	\$3,600.00	20	\$1,820.00	0	\$0.00	8	\$440.00	124	\$14,880.00
	Seawalls	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	Geotechnical	0	\$0.00	8	\$1,480.00	0	\$0.00	0	\$0.00	8	\$720.00		\$0.00	8	\$560.00	0	\$0.00	24	\$2,760.00
2	Final Design	92	\$21,160.00	160	\$29,600.00	460	\$75,900.00	650	\$81,250.00	650	\$58,500.00	700	\$63,700.00	700	\$49,000.00	100	\$5,500.00	3,512	\$384,610.00
	Renderings	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00
	60% Design	36	\$8,280.00	64	\$11,840.00	180	\$29,700.00	260	\$32,500.00	260	\$23,400.00	280	\$25,480.00	280	\$19,600.00	40	\$2,200.00	1,400	\$153,000.00
	90% Design	36	\$8,280.00	64	\$11,840.00	180	\$29,700.00	260	\$32,500.00	260	\$23,400.00	280	\$25,480.00	280	\$19,600.00	40	\$2,200.00	1,400	\$153,000.00
	100% Design	20	\$4,600.00	32	\$5,920.00	100	\$16,500.00	130	\$16,250.00	130	\$11,700.00	140	\$12,740.00	140	\$9,800.00	20	\$1,100.00	712	\$78,610.00
3	Permitting	8	\$1,840.00	24	\$4,440.00	60	\$9,900.00	60	\$7,500.00	60	\$5,400.00	60	\$5,460.00	80	\$5,600.00	40	\$2,200.00	392	\$42,340.00
	Totals	104	\$23,920.00	208	\$38,480.00	536	\$88,440.00	730	\$91,250.00	758	\$68,220.00	780	\$70,980.00	788	\$55,160.00	148	\$8,140.00	4,052	\$444,590.00

Sub-Consultant (included Above)

B. Reimbursables (included above)

C. Other Costs (not used)

CHEN MOORE AND ASSOCIATES TOTAL ESTIMATED FEE **\$444,590.00**

Anticipated Roles (Note: these roles and the time/fee allocation may change during the course of final design)

Victoria Park Final Design

20 SEP 17 8:28A

**Exhibit A
Fee Estimate
City of Fort Lauderdale**

Hazen and Sawyer, P.C.
Task Order No. 4
Craven Thompson Associates, Inc. - Surveying

	Principal Surveyor		Professional Land Surveyor		Project Surveyor		Senior CAD/GIS Technician		Survey 1 Man Crew		Survey 2 Man Crew		Survey 3 Man Crew		Total	Total Cost
	\$150/hr		\$115/hr		\$105/hr		\$80/hr		\$75/hr		\$125/hr		\$145/hr			
Task Areas	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)	Hours	Subtotal (\$)		
Neighborhoods	58	\$8,700.00	132	\$15,180.00	220	\$23,100.00	700	\$56,000.00	64	\$4,800.00	488	\$61,000.00	436	\$63,220.00	2,098	\$232,000.00
	58	8,700	132	15,180	220	23,100	700	56,000	64	4,800	488	61,000	436	63,220	2,098	232,000

FEE BREAKDOWN
Proposal for Geotechnical Engineering Services
City of Fort Lauderdale Stormwater Master Plan Modeling and Design Improvements - 12 Seawalls & 7 neighborhoods
Broward County, Florida
RADISE Project No: Hazen and Sawyer - TBD

29-Aug-17

		Qty	Unit	Unit Price	Total
A. FIELD EXPLORATION					
FIELD MARKING AND UTILITY LOCATE/CLEARANCE COORDINATION/MEETINGS					
	Staff Engineer	120	Hour	\$100.00	\$12,000.00
SOIL BORINGS - Est. 86 SPT's locations					
SPT Borings (34 borings to 50 feet, 17 borings to 15 feet, and 35 borings to 12 feet) - Est. 25 days to complete					
	Work Coordination (Project Engineer)	40	Hour	\$115.00	\$4,600.00
	Mobilize Equipment-Drill Rig (Truck) (<50 miles travel) - 1 Trip/week	5	Trip	\$350.00	\$1,750.00
	Asphalt Pavement Coring and Repair	86	EA	\$65.00	\$5,590.00
	SPT Borings - 34 @ 50', 17 @ 15', and 35 @ 12'	2375	LF	\$12.00	\$28,500.00
	Casing of Boreholes	2375	LF	\$5.00	\$11,875.00
	Grout Seal Boreholes	2375	LF	\$5.00	\$11,875.00
	Engineering Technicians (2) - Flagman for MOT - 25 days at 10 hrs./ea	500	Hours	\$68.00	\$34,000.00
	Staff Engineer logging boreholes - Est. 25 days at 12 hrs./each	300	Hour	\$100.00	\$30,000.00
	SUBTOTAL - FIELD EXPLORATION				\$140,190.00
B. LABORATORY SERVICES					
	Visual Soil Class. (Staff Eng) - 2 hrs for 50', 1 hr for 15' and 13' borings	120	Hour	\$100.00	\$12,000.00
	Natural Moisture Test - Est. 1 per Boring	86	Test	\$18.00	\$1,548.00
	Full Grain Size Analysis including No. 200 sieve wash - Est. 1 per Boring	70	Test	\$75.00	\$5,250.00
	Grain Size Analysis (P200) - Est. 1 per Boring	68	Test	\$55.00	\$3,740.00
	Organic content test - Est. 0.5 per Boring	43	Test	\$58.00	\$2,494.00
	SUBTOTAL - LABORATORY SERVICES				\$25,032.00
C. PROFESSIONAL SERVICES					
	Principle Engineer	38	Hour	\$185.00	\$7,030.00
	Senior Geotechnical Engineer	76	Hour	\$155.00	\$11,780.00
	Project Engineer, PE	128	Hour	\$115.00	\$14,720.00
	Staff Engineer	72	Hour	\$100.00	\$7,200.00
	Drafter/CADD Technician (Boring logs, Maps, etc.)	90	Hour	\$70.00	\$6,300.00
	SUBTOTAL - PROFESSIONAL SERVICES				\$47,030.00
	SUBTOTAL - GEOTECHNICAL DESIGN SERVICES				\$212,252.00
D. PROFESSIONAL SERVICES - DESIGN COORDINATION/REVIEW					
	Principle Engineer	20	Hour	\$185.00	\$3,700.00
	Senior Geotechnical Engineer	32	Hour	\$155.00	\$4,960.00
	Project Engineer, PE	32	Hour	\$115.00	\$3,680.00
	SUBTOTAL - PROFESSIONAL SERVICES				\$12,340.00
	TOTAL PROJECT GEOTECHNICAL ENGINEERING SERVICES				\$224,592.00

Note: Recommended program for the seawalls assumes boring are taken on closet landside drive lane adjacent to bulkhead and away from overhead power lines. If required, borings can be performed on the waterside with a floatation capable barge rig at a cost of \$25,000 partially offset by savings in MOT cost for an adjusted total of +6,750.



Exhibit B-1 – Seven Neighborhoods

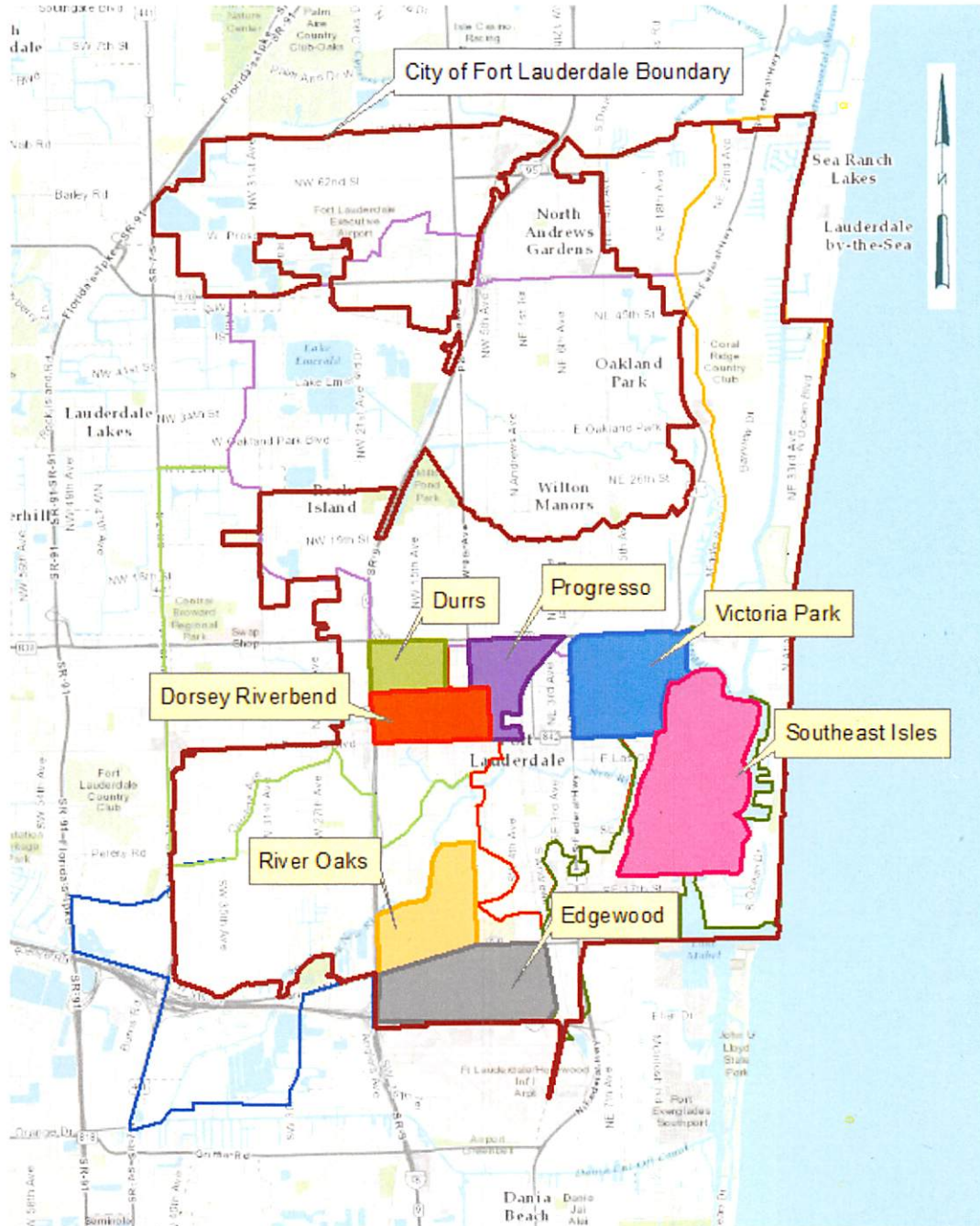


Exhibit B-2 – Contaminated Sites

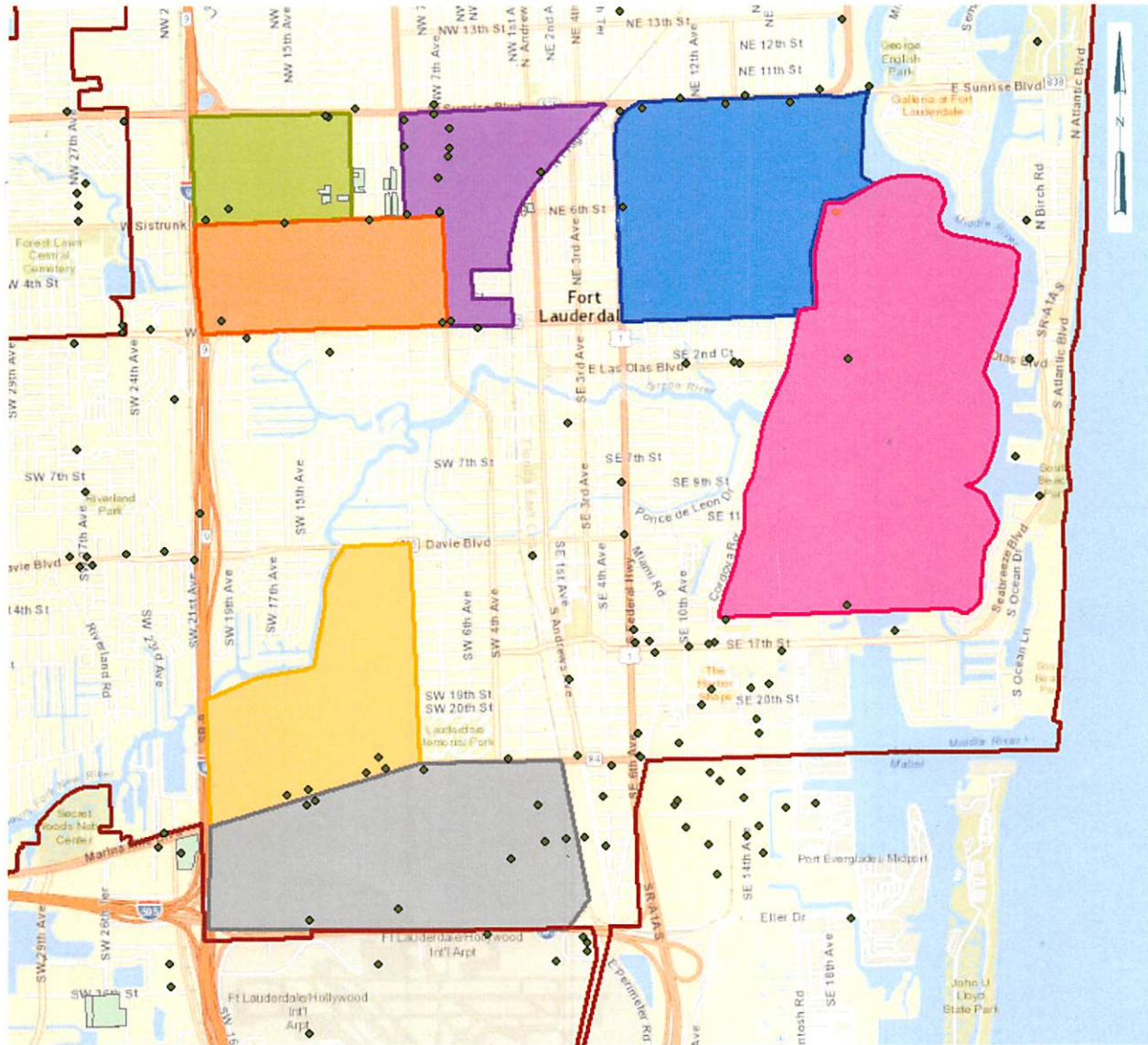


Exhibit B-3 – Seawalls Location Map

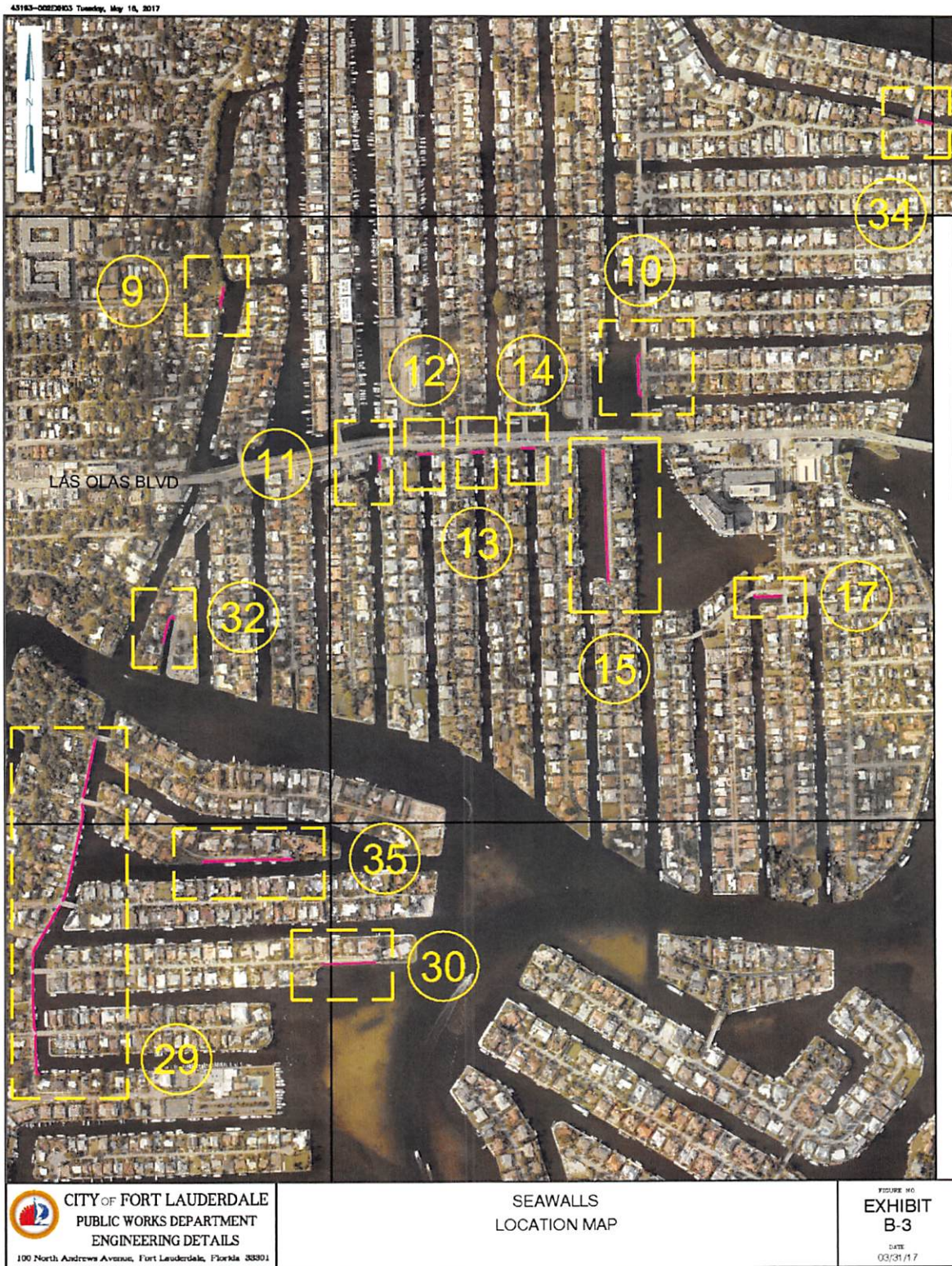


Exhibit B-4 – Seawall No. 29 – Topographic Survey Area

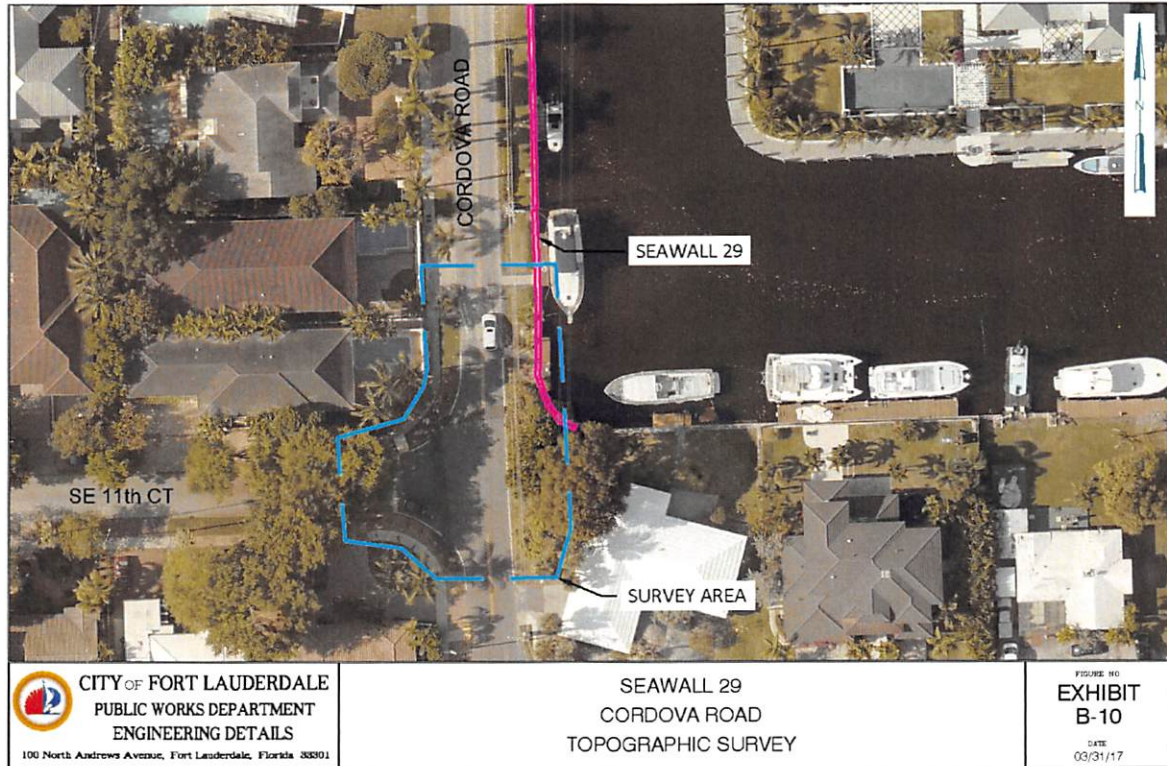


Exhibit B-5 – Seawall No. 32 – Topographic Survey Area

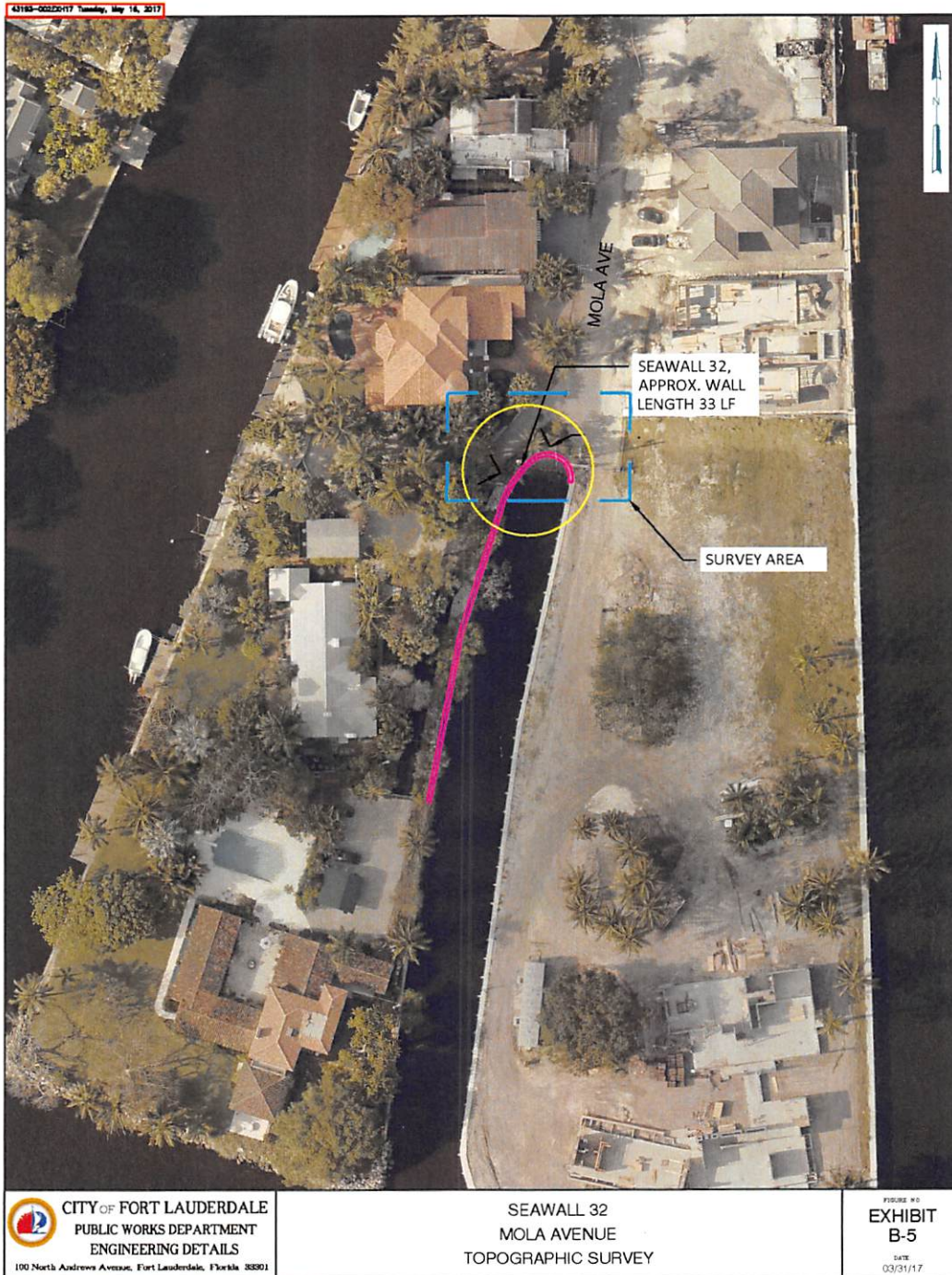


Exhibit B-6 – Seawalls No. 11, 12, 13, and 14 – Topographic Survey Area



Exhibit B-7 – Seawall No. 10 – Topographic Survey Area

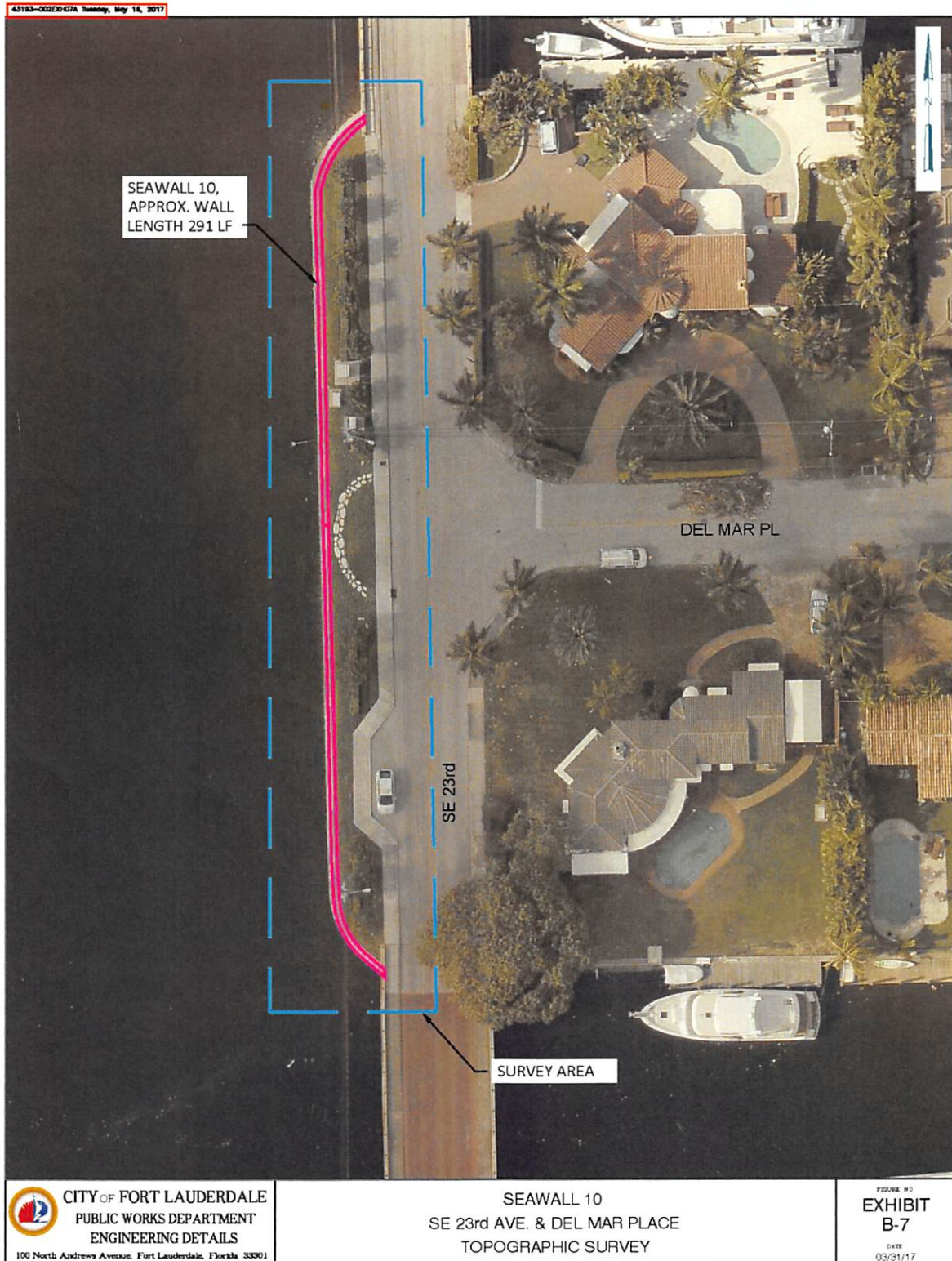
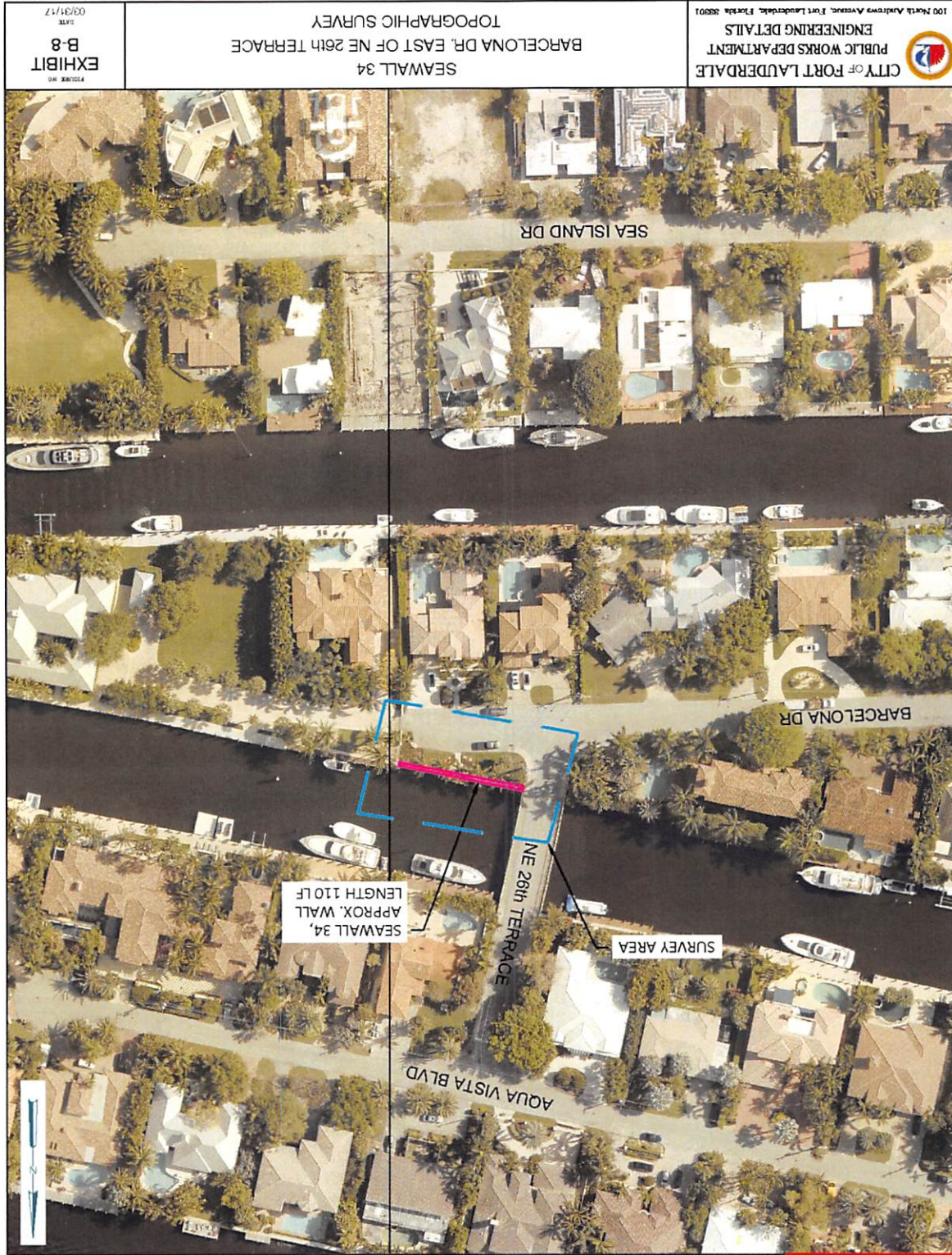


Exhibit B-8 – Seawall No. 34 – Topographic Survey Area



CITY OF FORT LAUDERDALE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DETAILS
 100 North Andrews Avenue, Fort Lauderdale, Florida 33301

SEAWALL 34
 BARCELONA DR, EAST OF NE 26th TERRACE
 TOPOGRAPHIC SURVEY

EXHIBIT
 B-8
 DATE: 09/21/17

Hazen and Sawyer, P.C. #256-11660
Contract Term 4/19/16 - 4/18/21
Contract Cap \$7,578,756.00
16--0408, 17

T.O. No.	Amount Expended	Contract Amount	Remaining Allocation	
1	\$ 3,208,357.00	\$ 7,578,756.00	16-0408	4/19/2016
2	\$ 2,074,560.00			
3	\$ 338,842.00			
4	\$ 4,255,056.00	\$ 2,321,244.00	17-0939	8/22/2017
5				
	\$ 9,876,815.00	\$ 9,900,000.00	\$	23,185.00

Hazen and Sawyer Task Order No. 4 Funding Breakdown

ACCOUNT NUMBER	INDEX NAME (Program)	AMOUNT
470-P11842.470-6534	Edgewood Stormwater Improvements	\$700,000
470-P11868.470-6534	River Oaks Stormwater Improvements	\$250,000
470-P12082.470-6534	Victoria Park Tidal and Stormwater Improvements	\$2,195,056
470-P11843.470-6534	Progresso Stormwater Improvements	\$210,000
470-P11844.470-6534	Durrs Area Stormwater Improvements	\$120,000
470-P11845.470-6534	Dorsey Riverbend Stormwater Improvements	\$150,000
470-P12074.470-6534	Southeast Isles Tidal and Stormwater Improvements	\$630,000
		\$4,255,056

**Task Order PW Finance Checklist
Annual Contract or Consultant**

SMEG

Date: 9/20/17

Applicable CC-Authorized CAM printed and attached?

Verify contract unit prices.

Verify all calculations and totals.

Verify contract sub-contractors and prices

If not a listed sub-contractor, PM must obtain approval letter from the consultant to PW Director must be submitted and approved.

Verify T.O. # and log into the Annuals - Unit Cost Contracts log

~~Annuals (by program) (Z)~~ Annuals - Unit Cost Contracts

OR

whichever applies.

Verify this T.O. amount is within the Contract Capacity (cap)

If it is not within the available contract capacity, return the T.O. to the Project Manager in writing, indicating that an expenditure capacity increase must be requested for Commission approval (usually through the Procurement agenda) to accommodate the cost and the time-frame to meet the City's needs.

Identify and confirm funding with Project Manager and

FAMIS (6450) or ETS (Monthly Project Report)

Is the scope of work a capital project expense? Or operational?

Capital projects must meet all 3 of the following criteria:

- 1) \$50k value, 2) new or replacement tangible asset, and 3) a useful life of 10 or more years? Or is it operational; repairs and maintenance? Repairing existing system or asset to maintain the original useful life?

Initial routing form and forward to Administrative Assistant II (Shannon) for signature.

Forward to Administrative Aide (Kian) for continued authorization routing.



ROUTING FORM FOR TASK ORDERS – CITY MANAGER’S APPROVAL

for Project #'s (See Attached)

Project/Contract Number: _____ CMO Log #: _____
 Document Title: Task Order #4 : Final Engineering Design Attached: 3 original
 Department: Public Works - Engineering Contact: Rares Petrica
 Corresponding CAM #: 17-0939 Contact #: 954-828-6720
 Commission Date: August 22nd, 2017

Purpose: The development of final engineering documents and estimates for seven distinct neighborhoods in according to the water quality/quantity requirements resulting from Task Orders No.1 and No.2. The final engineering plans shall be substantially complete by December 31st, 2017.

FUNDING INFORMATION

CIP Funded Project: Yes No
 Amount Required by Task Order: \$4,255,056.00
 Index/Sub Object Code: See attached
 Engineering Finance Approval Sign: Shaun Graham 9/20/17

APPROVAL ROUTING –PUBLIC WORKS

	Approved:	Disapproved:	Signature/Date
Rares Petrica, P.E. Senior Project Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Rares Petrica 8/31/17</u>
Christopher Bennett, P.E. Assistant City Engineer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Chris Bennett 9/25/17</u>
Alan Dodd Deputy Public Works Director	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Alan Dodd 9/26/17</u>
Paul Berg, Public Works Director	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Paul Berg 9-27-17</u>

APPROVAL ROUTING –FINANCE DEPARTMENT

	Recommend Approval:	Disapproved:	Signature/Date
Kirk W. Buffington, C.P.M., Finance Director	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Kirk W. Buffington 10/2/17</u>

APPROVAL ROUTING – CITY ATTORNEY’S OFFICE

	Approved as to form:	Disapproved:	Signature/Date
City Attorney	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>[Signature]</u>

APPROVAL ROUTING – CITY MANAGER’S OFFICE

	Approved:	Disapproved:	Signature/Date
Lee R. Feldman, ICMA-CM, City Manager	<input type="checkbox"/>	<input type="checkbox"/>	

CITY CLERK’S OFFICE Upon approval by the City Manager, please route this form along with Task Order to PW- Engineering, **Kian Movafaghi** (Ext. 7818).



COMMISSION AGENDA ITEM
DOCUMENT ROUTING FORM

306
10/31/17

Today's Date: 10/25/17

DOCUMENT TITLE: Task Order No. 4 / Hazen and Sawyer, P.C.

COMM. MTG. DATE: 08/22/2017 CAM #: 17-0939 ITEM #: PUR-1 CAM attached: YES NO

Routing Origin: CAO Router Name/Ext: Lizardo Coronado

CIP FUNDED: YES NO

Capital Investment / Community Improvement Projects defined as having a life of at least 10 years and a cost of at least \$50,000 and shall mean improvements to real property (land, buildings, or fixtures) that add value and/or extend useful life, including major repairs such as roof replacement, etc. Term "Real Property" include: land, real estate, realty, or real.

1) City Attorney's Office # of originals attached: 3 Approved as to Form: YES NO

Date to CCO: 10/25/17 RMH
Initials

2) City Clerk's Office: # of originals: 3 Routed to: Gina Ri/CMO/X5013 Date: 10/30/17

3) City Manager's Office: CMO LOG #: Oct-140 Date received from CCO: 10/30/17

Assigned to: L. FELDMAN S. HAWTHORNE C. LAGERBLOOM
L. FELDMAN as CRA Executive Director

APPROVED FOR LEE FELDMAN'S SIGNATURE N/A FOR L. FELDMAN TO SIGN

PER ACM: S. HAWTHORNE (Initial/Date) C. LAGERBLOOM (Initial/Date) PENDING APPROVAL (See comments below)

Comments/Questions:

Forward 3 originals to Mayor CCO Date: 10/31/17

4) Mayor/CRA Chairman: Please sign as indicated. Forward ___ originals to CCO for attestation/City seal (as applicable) Date: _____

INSTRUCTIONS TO CLERK'S OFFICE

City Clerk: Retains ___ original and forwards 3 original/copy to: Kian M./PW/Ext. 7818

Attach ___ certified Reso # ___ YES NO