

The services rendered pursuant to this Scope of Work are in accordance with the terms and conditions of the Contract for Professional Services between the City of Pompano Beach and Mathews Consulting for Single Project Contract for Engineering Services for Kendall Lake Neighborhood Stormwater Improvements and as set forth in the RLI No. E-38-15 dated April 15, 2016.

Kendall Lake Neighborhood Stormwater Improvements – Engineering Design, Permitting, Bidding & Construction Services

A. Background

The City of Pompano Beach (CITY) selected Mathews Consulting (CONSULTANT) to prepare a Drainage Preliminary Design Report for the Kendall Lake Neighborhood under RLI E-38-15. The Preliminary Design Report provided the recommended improvements to address widespread roadway ponding, lack of area drainage and high lake stages. The Kendall Lake Neighborhood project limits are bounded on the north by NW 21st Street, on the south by NW 16th Street, NW 5th Way on the west and NW 1st Avenue on the east (Project Area).

As discussed in the Preliminary Design Report, Alternative 6 was our recommended drainage alternative since it provides the most overall benefit in terms of reducing roadway flooding and provide a positive drainage outfall for Kendall Lake. Refer to **Figure 4-7** (attached) that shows the recommended drainage facilities.

B. Scope of Services

The CONSULTANT will provide professional engineering services to the CITY for the installation of new Drainage System within the project area. The Engineering Services of CONSULTANT shall include the following tasks:

- Task 1 – Project Management
- Task 2 – Data Collection
- Task 3 – Design
- Task 4 – Permitting
- Task 5 – Public Outreach
- Task 6 – Bidding
- Task 7 – Construction Administration
- Task 8 – Periodic Inspections

The specific scope of services to be provided by CONSULTANT includes the following:

Task 1 – Project Management

Subtask 1.1 Overall Project Management

CONSULTANT shall provide overall project management during the Design Phase which includes monitoring progress of work on a weekly basis for billing and compliance with established schedule, budget and work quality requirements, and coordination with CITY and team subconsultant(s) to ensure timely project deliverables and budget management.

Subtask 1.2 Design Workshop Meetings

CONSULTANT shall attend one (1) kick-off meeting and up to three (3) design workshop meetings with the CITY and provide a written summary of the issues discussed.

Task 2 - Data Collection

Subtask 2.1 Topographic Survey

CONSULTANT shall utilize the survey data obtained during preparation of the Preliminary Design Report which included the Project Area within the black box shown on attached **Figure 4-7**. Additional survey is proposed along the proposed 48-inch outfall pipe; along NW 18th Street and NW 5th Terrace where additional exfiltration trench was added subsequent to the completion of the original survey; and within the park area along I-95 for the drainage system outfall improvements.

For this additional survey, the CONSULTANT shall provide survey services consisting of field topography, locating existing vertical and horizontal control (GPS Localization), baseline stationing and locating all above ground existing facilities and utilities within the right-of-way or proposed drainage easements of the established construction limits. Grate and invert elevations of the existing drainage system will be obtained along NW 20th Street, and swale and control structure information along the east side of I-95 will be obtained. The horizontal control will be referenced from the North American Datum of 1983/90 (*NAVD 83/90*). The vertical control will be referenced to the North American Vertical Datum of 1988 (*NAVD 88*). Survey baseline will be provided. The survey work shall subsidize the survey information obtained during the preparation of the Preliminary Design Report and shall include the following:

1. Topography survey at 50-foot intervals and at major ground elevation changes to depict existing ground profile along the following road rights-of-way:
 - Along NW 3rd Avenue from north of NW 19th Court to the north side of 2011 NW 3rd Avenue (160 LF)
 - Along NW 18th Street from NW 1st Avenue approximately 270 LF east.
 - Along NW 5th Terrace from NW 5th Way to NW 19th Street (400 LF)
2. Topography survey at 100-foot intervals and at major ground elevation changes to depict existing ground profile along the following proposed 15-foot wide easements:
 - Along the north property line of 2011 NW 3rd Avenue.
 - Along the west property line of 2011 NW 3rd Avenue, extending approximately 20 LF into the lake (to toe of slope).
3. Pertinent topographic data to be collected shall include the following:
 - a. Location of all visible fixed improvements within the right-of-ways (including visible fixed improvements that would pertain to engineering design lying 10 feet outside of R-O-W on each side), easements and parcels of the project limits, including physical objects, roadway pavement, driveways, sidewalks, walls, curb, drainage swales, shrubs, trees with diameter (use approved tree symbols), sprinkler heads and control valves, lift stations, signs, fences, pavement radius through intersections, canals, bridges, power poles, buildings, and any other encumbrances.

- b. Location of all known above and below ground existing utilities: FP&L, AT&T, Cable TV, Natural Gas, Potable Water (pipe diameter, TOP, valves TON, fire hydrants, and meters), Force Mains (pipe diameter, TOP, and valves TON), Sanitary Sewer (pipe diameter, manhole inverts and direction, rim elevations, laterals, and clean-outs w/in 10-ft. R-O-W), outline of Lift Stations, Storm Sewers (pipe diameter, manhole inverts and direction, catch basins, and rim/grate elevations), and all other accessible structures.
 - c. This will include coordination with Sunshine, Caltrop and City of Pompano Beach.
 - d. Identify all platted rights-of-way lines within the project limits (including bearing and distances for centerline), lot numbers, house/building address, ownership lines, block numbers and dedicated easements according to recorded plats.
 - e. Cross-section elevations shall be indicated every 50 feet (every 100 feet outside road ROW), at a minimum, to indicate centerline grades, edge of pavement grades and shoulder grades, low points and all right-of-way lines. Intermediate grades shall be indicated at all grade breaks, driveways and sidewalks. Two grades (one at the right-of-way line and one 10 feet back) shall be indicated on the driveways to indicate direction of grade.
 - f. The survey shall show the data for any lift stations in the project area.
 - g. Provide and reference benchmarks at **maximum 600-foot intervals**. Elevations to be referenced to an existing established City or County Benchmark.
4. Obtain existing drainage pipe diameter, grate and invert elevations for the system along NW 20th Street, extending from the existing lake to the swale along the east side of Interstate 95.
 5. Obtain bottom of swale elevations at 100' o.c. extending from NW 20th Street to the control structure located at the discharge to the canal. Obtain weir elevation and other control structure dimensions.
 6. CONSULTANT shall prepare the sketch and description document to describe the permanent easement required for installation of the proposed drainage outfall north and west of 2011 NW 3rd Avenue and into the lake. The CITY will be responsible for title work and recordation of the easement documents. CONSULTANT shall provide coordination and meet with the appropriate land owner(s) regarding the request for the easement to be obtained by the CITY. Four (4) copies of the signed and sealed documents will be provided to the CITY.

Subtask 2.2 Field Verification (soft digs)

CONSULTANT shall furnish the services of a professional underground services company to provide underground field locations of affected existing utilities. The work shall consist of measuring and recording the approximate horizontal, vertical, width and depth data of affected utilities within the project limits. It is estimated that approximately twenty (20) utility locations will need to be pot-holed. The cost of providing the professional underground services company will be treated as a utility allowance with an authorized upper limit (\$9,000).

Task 3 - Design Services

Subtask 3.1 Utility Coordination

Coordination with utility agencies (electric, phone, gas, cable TV, and fiber optics, etc.) shall be performed to collect record information. This Subtask includes reconciling apparent discrepancies between record information and existing photographic and field-verification information.

Subtask 3.2 Design Drawings

Preparation of construction documents shall include contract drawings and technical specifications. Contract drawings shall include: cover sheet, general notes, plan/profile drawings, and miscellaneous detail sheets. The drawing scale shall be 1-inch equals 20 feet for pipeline plan and 1-inch equals 2 feet for pipeline profile. CONSULTANT shall prepare the engineering design elements on topographic survey information in an AutoCAD release 2016 format. Drawings shall be submitted for CITY review at 60% (plan view only), 95% (plan/profile) and 100% (plan/profile) stages. CONSULTANT shall meet with the CITY to discuss comments, and incorporate comments into final documents. The 60%, 95% and 100% plans shall be provided to the CITY in .pdf format. CONSULTANT shall also furnish with the 100% design drawings, one (1) set of AutoCAD Version 2016 files in electronic format on CD.

Subtask 3.3 Technical Specifications

Specifications are to be prepared by CONSULTANT for bidding purposes for the proposed improvements. The Front-End Contract Documents are to be prepared by the CITY. Specifications shall be submitted for CITY review at 60%, 95% and 100% stages. CONSULTANT shall meet with the CITY to discuss comments, and incorporate comments into final documents. The technical specifications shall be provided to the CITY in electronic .pdf format.

Subtask 3.4 Construction Cost Opinion

An opinion of probable construction cost will be prepared for the 60%, 95% and 100% drawings and specifications. The cost estimate format will be consistent with the bid proposal tabulation sheet for the project.

Subtask 3.5 Quality Assurance

CONSULTANT shall provide internal QA/QC reviews on the 60%, 95% and 100% Design Documents (e.g. drawings, specifications, and cost estimates).

Task 4 - Permitting

During the Design Phase the CONSULTANT shall meet with the potential permitting and other interested agencies to determine all potential design permitting requirements. Agencies anticipated to have interest in the project include:

- South Florida Water Management District (Water Use Application for Dewatering).
- Florida Department of Transportation – Drainage notification
- Broward County Environmental Licensing & Building Permitting Division (Surface Water Management License Application).

- Broward County Environmental Licensing & Building Permitting Division (Environmental Resource Permit Application).
- Broward County Water Control District #3
- Broward County Traffic Division – signing and marking approval
- Pompano Beach Building Department Permit.

Permit applications shall be completed for each of the permitting agencies. Associated permit application fees shall be determined by CONSULTANT and paid by CITY.

In addition to preparing the permit applications for appropriate agencies, CONSULTANT shall assist CITY in consultations with the appropriate authorities. Consultation services shall include the following:

- Attend up to one (1) pre-application meeting with the staff of each regulatory agency.
- Attend up to one (1) meeting with each of the regulatory agencies during review of the final permit applications.
- Respond to request(s) for additional information from each regulatory agency.

Subtask 4.1 Dewatering Permit (SFWMD)

CONSULTANT shall prepare and submit “Water Use Permit Application” for dewatering to South Florida Water Management District (SFWMD).

Subtask 4.2 FDOT Drainage Notification

CONSULTANT shall prepare and submit plans to the Florida Department of Transportation for their review of the proposed drainage improvements. No improvements are proposed within the FDOT right-of-way and therefore a formal permit application is not anticipated to be required.

Subtask 4.3 Surface Water Management License (Broward County)

CONSULTANT shall prepare and submit “Surface Water Management License Application” to Broward County Environmental Licensing & Building Permitting Division. This application will also be reviewed as an Environmental Resource Permit (ERP) application on behalf of the SFWMD.

Subtask 4.4 Environmental Resource Permit (Broward County)

CONSULTANT shall prepare and submit “Environmental Resource Permit Application” to Broward County Environmental Licensing & Building Permitting Division.

Subtask 4.5 Broward County Water Control District #3

CONSULTANT shall prepare and submit plans of the proposed work to the Broward County Water Control District #3 for their notification and approval.

Subtask 4.6 Broward County Traffic Division

CONSULTANT shall submit an application package to Broward County Traffic Division for review and approval of the proposed traffic signing and pavement marking.

Subtask 4.7 Pompano Beach Building Department

CONSULTANT shall prepare the Zoning Compliance Building Permit Application for the CITY's signature.

CONSULTANT shall furnish the services of an arborist sub-consultant to complete the worksheet information including a listing of trees to be removed, their condition and estimated value. The CITY shall determine the location for the replacement trees and assist CONSULTANT in coordination with the Building Department.

CONSULTANT shall prepare a tabular listing of the fencing proposed to be removed and replaced in conjunction with the improvements and include on the plans. A Broward County Uniform Building Permit application shall be prepared for each fence replacement location/address for CITY's signature as applicant.

Task 5 – Public Outreach**Subtask 5.1 Public Meetings**

CONSULTANT shall attend up to one (1) meeting prior to construction with the property owners in the project area. The meetings shall be coordinated by the CITY and the meeting shall also be attended by the Contractor. This will also include assistance with the development of presentation materials for the public meeting for the affected property owners and businesses.

Task 6 - Bid Phase Services**Subtask 6.1 Prepare Bid Documents**

Prepare Contract Document packages (i.e. drawings and specification) for CITY advertisement and bidding purposes. Drawings to be full size (22" x 34") format. CONSULTANT shall also provide the CITY with a copy of Contract Documents in pdf format.

Subtask 6.2 Pre-Bid Conference

CONSULTANT shall prepare agenda and conduct pre-bid conference with interested contractors and CITY staff. CONSULTANT shall prepare and distribute meeting minutes.

Subtask 6.3 Bid Clarification

Respond to questions from prospective bidders and suppliers. CONSULTANT shall prepare addenda and shall provide supplemental information or clarification as appropriate, to interpret, clarify, or expand the bidding documents to the CITY for distribution to all prospective bidders during the bid period.

Subtask 6.4 Contract Award

CONSULTANT shall attend the bid opening, review bid packages received, prepare bid tabulation sheet and prepare a letter of recommend of award to the CITY.

Subtask 6.5 Conformed Contract Documents

CONSULTANT shall prepare conformed Contract Documents for use by the Contractor and CITY during construction.

Task 7 - Construction Services**Subtask 7.1 Preconstruction Conference**

CONSULTANT shall attend a preconstruction conference with representatives of CITY, contractors and major subcontractors for the construction contract. CONSULTANT shall prepare, in writing, minutes of conference.

Subtask 7.2 Submittal Review

CONSULTANT shall review and process shop drawings, samples, schedules, certifications and any other data which the construction contractor is required to submit. The review will be for general conformance with the design intent and compliance with the construction contract documents. Review of up to 30 submittals (which includes submittals and re-submittals, if required) is included in the budget for this subtask. Consultant will submit reviewed shop drawings/submittals to CITY for their records. Shop drawings shall be processed as electronic copies unless otherwise requested or for samples.

Subtask 7.3 Construction Clarifications

Respond in writing to Contractor's Request for Information (RFI) regarding design documents during the 11-month construction period. A total of eight (8) RFI responses have been included in this task. CONSULTANT shall issue interpretations and clarifications of the Contract Documents, along with associated support materials, such as Change orders and Field Change Orders, as necessary. Those interpretations will be rendered and a response prepared and submitted to the Contractor within 3 to 5 working days.

Subtask 7.4 Monthly Meetings

Consultant shall attend construction progress meetings with the CITY and Contractor monthly and provide an agenda and written summary of the issues discussed. Project meetings will be conducted by the Construction Manager with the Resident Project Representative also in attendance. Following the meeting, the Construction Manager will prepare and distribute meeting minutes (within 3 days after meeting) to the City and other attendees. Meetings will be held at the City facilities. Eleven (11) progress meetings are included in the budget for this task.

Subtask 7.5 Substantial and Final Inspections

In conjunction with City staff, Consultant shall make preliminary and final inspections and assist in the preparation of a Contractor "punch list" to achieve Substantial Completion. Consultant shall review completion of identified punch list items to assist in the determination that Substantial Completion has been achieved by the Contractor. Consultant shall advise the City that Final Acceptance of the project has been reached in accordance with the Contract Documents.

Subtask 7.6 Certification of Construction Completion

CONSULTANT shall certify to Broward County, BCWCD#3 and SFWMD based on the visible project features; CITY's part-time inspections; MC's periodic inspections; and review of the testing reports, that the project was constructed in accordance with the plans and specifications submitted in the permit applications. The CITY's landscape inspector shall determine whether final compliance is met regarding the landscape work. The Contractor shall provide all record drawings at the completion of construction. The record drawing review shall be reviewed on a month basis by the CITY.

Task 8 – Resident Project Representative

The Resident Project Representative Phase services to be provided by the Consultant include the following:

Subtask 8.1 Inspections

Consultant shall provide a part-time (on average 20 hours/week) Resident Project Representative (RPR) during the construction (assumed average 9-months of the 11-month construction duration) of the work in the total period, estimated to be 720 hours of inspection time in the field for the construction contract. Activities performed by Consultant under this task consist of furnishing an RPR during the construction of the project, to observe the quality of the construction work, and to determine, in general, if the construction is proceeding in accordance with the contract documents so that an engineering certification can be made regarding the construction of the proposed improvements.

The Resident Project Representative (RPR) shall:

- Serve as Consultant's liaison with construction contractor, working principally through the contractor's superintendent and assisting him in understanding the intent of the contract documents.
- Conduct on-site observations of the work in progress to assist in determining if the work is proceeding in accordance with the contract documents and that completed work conforms to the contract documents. Consultant's Project Manager shall report, in writing to the City, whenever Consultant believes that work is unsatisfactory, faulty or defective, or does not conform to the contract documents, or does not meet the requirements of inspections, tests or approval required to be made, or has been damaged prior to final payment.
- Accompany visiting inspectors representing public or regulatory agencies having jurisdiction over the project. Record, in writing, the outcome of these inspections and report same to City.
- Consider and evaluate construction contractor's suggestions for modifications in drawings or specifications and report them to the City, in writing. Consultant shall make recommendation for action by the City.
- Review Contractor As-Built information on a monthly basis to confirm proper updates are being made.

- Assist the Contractor in coordinating all required density testing, etc. as required by the Construction Documents.
- RPR shall work with the Contractor and develop a Daily Quantity Sheet (based on the approved Schedule of Values) to be reviewed and accepted each day agreeing to the quantities of Schedule of Value items installed.

LIMITATIONS OF AUTHORITY

Limitations of Resident Project Representative Authority. Except upon written instructions of Consultant, the RPR:

1. Shall not exceed limitations on Consultant's authority as set forth in the Contract Documents.
2. Shall not undertake any of the responsibilities of Contractor, Subcontractors or Construction Manager, or expedite the Work.
3. Shall not issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
4. Shall observe but not participate in specialized field or laboratory tests.

C. Assumptions

In addition to, the work items discussed above, the following assumptions were made in establishing the scope of this Work and associated fee. Changes and/ or modifications in the above work items or these assumptions are considered an Additional Services Item under the terms of the contract. Assumptions include:

1. The scope and budget are based on the design, permitting and bidding of a stormwater system only. If additional underground utilities are added to the project, an Amendment will be executed for this work.
2. CITY will provide CONSULTANT available record drawings, prior to NTP date, of facilities within the project area which have been modified since the Preliminary Design Report was prepared.
3. CONSULTANT shall utilize the survey data obtained during preparation of the Preliminary Design Report. Additional survey is proposed along the proposed 48-inch outfall pipe; along NW 18th Street and NW 5th Terrace where additional exfiltration trench was added subsequent to the completion of the original survey; and within the park area along I-95 for the drainage system outfall improvements.
4. The CITY will provide CONSULTANT an electronic version of their standard construction contract documents in MICROSOFT "WORD" version format. These include the City's standard bid document forms, construction contract, General and Special Conditions, surety, schedules, retainage and other contract forms specific to City construction contracts. CONSULTANT shall provide the Technical Specification sections.
5. The CITY is responsible for all permitting fees, including costs of public notification in local newspapers.
6. A single bidding effort is assumed for the project. Re-bidding of the project is considered an Additional Services item.
7. The design is to be based on the federal, state and local codes and standards in effect at the beginning of the project. Revisions required for compliance with any subsequent changes to those regulations is considered an Additional Services Item.

8. The City will be responsible for review and approval of all pay applications. The CONSULTANT's RPR shall provide assistance to the CITY for monthly review of the Contractor's monthly application for payment quantities.
9. The CITY is responsible for review and approval of the Contractor's schedule.
10. During construction, CITY Staff will be onsite daily and will be the Contractor's primary point of contact. CITY will provide CONSULTANT with daily inspection reports and digital project photos. The CITY's inspection efforts will be coordinated with the CONSULTANT's periodic inspections in order to provide the required review of the Contractor's work.
11. Deviations from the Final Design Drawings will be compiled by the Contractor and electronically incorporated onto the drawing files. Two sets of signed and sealed RECORD drawings by Florida Registered Surveyor will then be submitted by the Contractor to the CITY. One set of RECORD drawings for each permit certification (total of 3) will be provided to CONSULTANT for submittal to the permitting agencies.
12. The construction duration is estimated to be 11 months.
13. Part-time inspections are based on an average of 20 hrs/week (Monday-Friday) over the construction period when construction is ongoing.
14. Assisting the City in the settlement of construction contract claims is considered Additional Services and is not included in this Scope of Services

D. Additional Services

Consultant shall provide additional engineering services relating to the provision of geotechnical studies to the project area that are not covered under this Scope of Work. These additional services may be required due to uncertainties discovered during survey, soils, investigations, field verification of existing facilities and conditions, and potential property or easement acquisitions.

Additional services will be performed on as-directed basis in accordance with a written Notice-to-Proceed (NTP) from the City Manager. The Notice-to-Proceed shall contain the following information and requirements in accordance with the Contractor for Consulting/Professional Services:

- A detailed description of the additional services to be undertaken.
- A budget establishing the amount of the fee to be paid.
- A time established for completion of the work.

E. Obligations of the CITY

With assistance by CONSULTANT, as described herein, the CITY, as applicant shall obtain approvals and permits from all governmental authorities having jurisdiction over the project. The CITY is responsible for the payment of all permit application fees.

F. Compensation

Compensation by the CITY to the CONSULTANT for all tasks will be on a Lump Sum, Not-to-Exceed basis in accordance with the terms and conditions of the Contract for Consulting/Professional Services between the City of Pompano Beach and Mathews Consulting for Single Project Contract for the Kendall Lake Neighborhood Stormwater Improvements. The estimated compensation for the services described in this Scope of Work is **\$252,062.00** as shown in **Table 1** below.

TABLE 1: LABOR AND EXPENSE SUMMARY

<u>Engineering Services</u>	<u>Estimated Fees</u>
Task 1 – Project Management	\$ 14,369.00
Task 2 – Data Collection	\$ 24,847.00
Task 3 – Design Services	\$ 79,216.00
Task 4 – Permitting	\$ 22,207.00
Task 5 – Public Outreach	\$ 1,505.00
Task 6 – Bidding	\$ 4,826.00
Task 7 – Construction Administration	\$ 30,892.00
Task 8 – Resident Project Representative	\$ 64,800.00
Reimbursables (NTE)	\$ 9,400.00
TOTAL PROJECT COST	\$252,062.00

G. Schedule

The completion dates for this work will be as follows (starting at time that CONSULTANT receives the hardcopy of the executed Contract).

Engineering Services	Time per Phase	Cumulative Time
Task 1 – Project Management	On-going	On-going
Task 2 – Data Collection	8 weeks	8 weeks
Task 3 – Design	24 weeks	32 weeks
Task 4 – Permitting	8 weeks ⁽¹⁾	40 weeks
Task 5 – Public Outreach	As required	As required
Task 6 – Bidding	8 weeks	48 weeks
Task 7 – Construction Administration	44 weeks	92 weeks
Task 8 – Resident Project Representative	36 weeks	92 weeks

⁽¹⁾ Estimated, based upon usual regulatory agency review period.

H. Deliverables

TASKS	DELIVERABLES	QUANTITY
2 Data Collection	Signed & sealed Sketch & Description	4 copies
3 Design	60% Drawings 95% Drawings & Specs 100% Drawings & Specs Cost Estimate @ 60%, 95% and 100%	Electronically in .pdf Electronically in .pdf Electronically in .pdf & Autocadd & 2 Sets plans (22" x 34") & 2 copies book 2 copies each & .pdf
4 Permitting	Permit Application Package(s)	Electronic submittal
6 Bidding	Bid Sets	2 – Sets (22" x 34")& .pdf
6 Conformed Documents	City Sets Contractor Construction Sets	4 – Sets (22" x 34")& .pdf 2 – Sets (22" x 34")& .pdf

Attachment A
City of Pompano Beach
Kendall Lake Neighborhood Stormwater Improvements

Engineering Fee Proposal

		Labor Classification and Hourly Rates											
Task No.	Task Description	Principal Engineer \$165.00	Senior Project Engineer II \$142.00	Engineer I \$115.00	Cadd Tech \$95.00	Sr Prof Surveyor \$145.00	Survey Crew 2-party \$130.00	Senior Inspector \$110.00	Inspector \$90.00	Clerical \$65.00	Total Labor	Sub-Consultant Services	Task Total (Including Sub Markup)
1	Project Management												
1.1	Overall PM	15	50										
1.2	Design Workshop Meetings (up to 4 meetings)	8	12	12							\$9,575		
	Subtotal Task 1	23	62	12	0	0	0	0	0	6	\$4,794		
										6	\$14,369	\$0	\$14,369
2	Data Collection												
2.1	Field Survey-Outfall Alignment, Sketch & Description		6		34	25	46				\$13,687		
2.2	Field Verification (soft-digs)			6	6						\$1,260	\$9,000	
	Subtotal Task 2	0	6	6	40	25	46	0	0	0	\$14,947	\$9,000	\$24,847
3	Design Services												
3.1	Utility Coordination		5	8	4								
3.2a	60% Design Drawings	15	50	90	100					4	\$2,270		
3.2b	95% Design Drawings	10	40	70	80						\$29,425		
3.2c	100% Design (Bid) Drawings	5	20	20	10						\$22,980		
3.3	Technical Specifications (60% & 100%)		15	25							\$6,915		
3.4	Construction Cost Opinion (60%, 95% & 100%)	8	18	25	10					30	\$6,955		
3.5	Quality Assurance	8						15			\$7,701		
	Subtotal Task 3	46	148	238	204	0	0	15	0	34	\$79,216	\$0	\$79,216
4	Permitting												
4.1	SFWM D Water Use Permit (dewatering)	3	15	6						2	\$3,445		
4.2	FDOT Notification	3	3		4					2	\$1,431		
4.3	Broward County Surface Water Mgmt License	10	20		4					2	\$5,000		
4.4	Broward County Environmental Resource Permit	3	15		4					2	\$3,135		
4.5	BCWCD #3 Approval		3							2	\$556		
4.6	Broward County Traffic Signing & Marking Approval	3		4						2	\$1,085		
4.7	Pompano Beach Building Dept Permit	10		12	4					2	\$3,540	\$3,650	
	Subtotal Task 4	32	56	22	16	0	0	0	0	14	\$18,192	\$3,650	\$22,207
5	Public Outreach												
5.1	Public Meetings (total of 1)	4		4	2					3	\$1,505		
	Subtotal Task 5	4	0	4	2	0	0	0	0	3	\$1,505	\$0	\$1,505
6	Bidding												
6.1	Prepare Bid Documents			3	3					3	\$825		
6.2	Pre-Bid Conference	3	3	3						1	\$1,331		
6.3	Bid Clarification		3	3						2	\$901		
6.4	Contract Award	2						3			\$660		
6.5	Conformed Contract Documents		2	3	3					3	\$1,109		
	Subtotal Task 6	5	8	12	6	0	0	3	0	9	\$4,826	\$0	\$4,826
7	Construction Administration												
7.1	Preconstruction Conference		3					6		2	\$1,216		
7.2	Submittal Review		10					40			\$5,820		
7.3	Construction Clarifications		40					40		2	\$10,210		
7.4	Progress Meetings (total of 11)		30					30		6	\$7,950		
7.5	Substantial & Final Punchlist Inspections		8						8	2	\$1,986		
7.6	Certify Permits to Agencies		15		4			5		10	\$3,710		
	Subtotal Task 7	0	106	0	4	0	0	121	8	22	\$30,892	\$0	\$30,892
8	Construction Inspection												
8.1	Site Inspections								720		\$64,800		
	Subtotal Task 8	0	0	0	0	0	0	0	720	0	\$64,800	\$0	\$64,800
	Labor Subtotal Hours	110	386	294	272	25	46	139	728	88			
	Labor Subtotal Costs	\$18,150	\$54,812	\$33,810	\$25,840	\$3,625	\$5,980	\$15,290	\$65,520	\$5,720	\$228,747	\$12,650	\$242,662
	Labor Total Costs	\$228,747											
	Subconsultant Costs Total	\$12,650											
	Subconsultant Multiplier	1.1											
	Subconsultant Total	\$13,915											
	Reimbursable Expenses	\$9,400											
	Project Total	\$252,062											

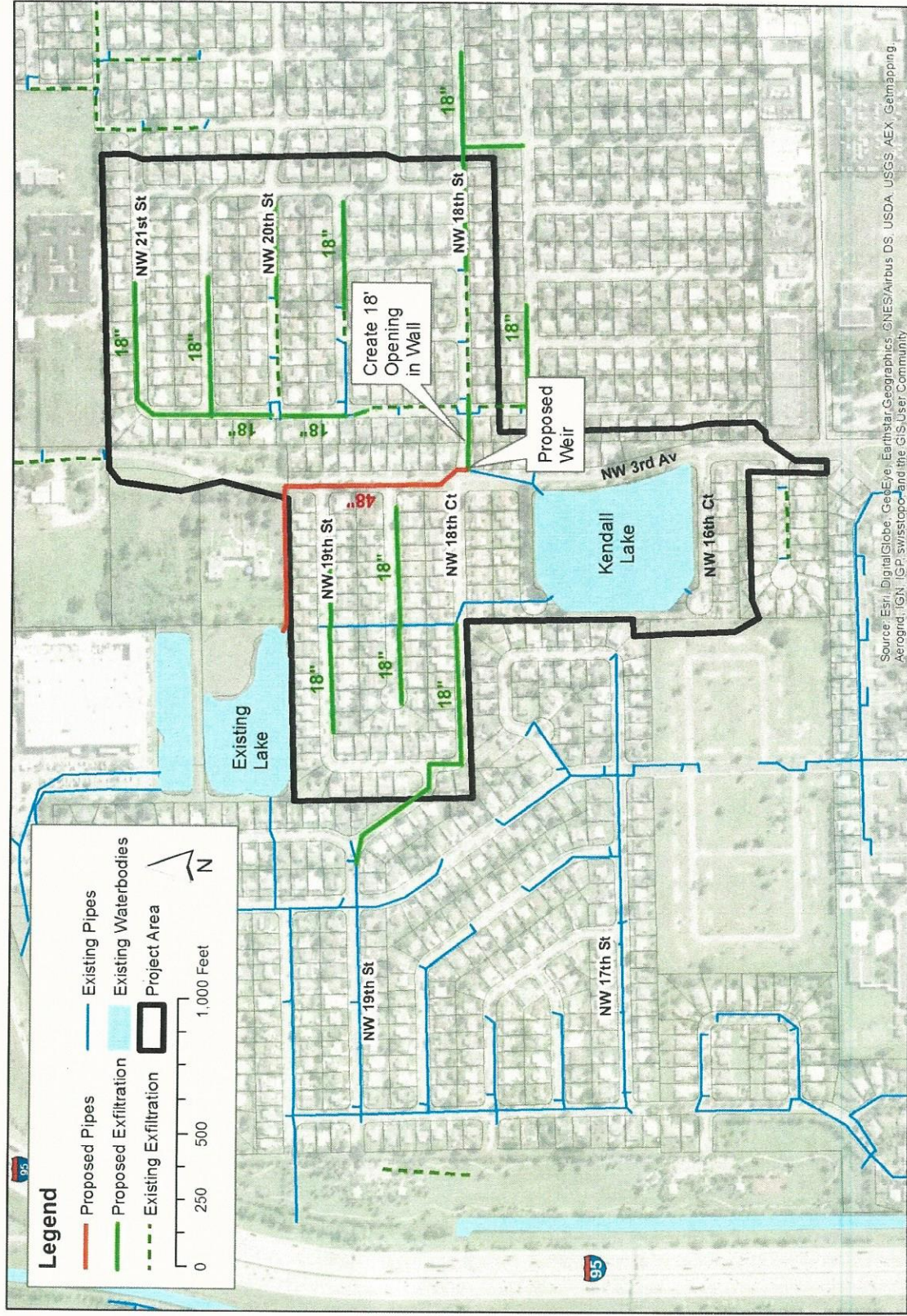


Figure 4-7: Option 6 Drainage Improvements