Florida's Warmest Welcome

CITY OF POMPANO BEACH
REQUEST FOR LETTERS OF INTEREST
E-23-20

CONTINUING CONTRACT FOR ENGINEERING SERVICES FOR WATER AND REUSE TREATMENT PLANT PROJECTS

RLI OPENING: August 10, 2020, 2:00 P.M.
PURCHASING OFFICE
1190 N.E. 3RD AVENUE, BUILDING C (Front)
POMPANO BEACH, FLORIDA 33060

July 8, 2020

CITY OF POMPANO BEACH, FLORIDA

REQUEST FOR LETTERS OF INTEREST (RLI)
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CONTINUING CONTRACT FOR ENGINEERING SERVICES FOR WATER AND REUSE TREATMENT PLANT PROJECTS

Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites qualified engineering firms to submit Letters of Interest, qualifications and experience for consideration to provide Professional Engineering Consulting services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020.** Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: https://pompanobeachfl.ionwave.net. The City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

Introduction

The City intends to issue multiple contracts to engineering firms to provide continuing professional services to the City for various Water and Reuse Treatment Plant projects. Professional services under this contract will be restricted to those required for any project for which construction costs will not exceed $4 million, and for any study activity for which fees will not exceed $500,000

1. **The types of projects to be undertaken may include, but are not limited to**

   - Reuse Water Treatment Plant Expansion Projects
   - Reuse Water Treatment Plant Modification and/or Enhancement Projects
   - Water Treatment Plant Expansion Projects
   - Water Treatment Plant Modification and/or Enhancement Projects
   - The City's approved Capital Improvement Program maybe found here http://pompanobeachfl.gov/pages/department_directory/budget/budget.html.php

2. **The scope of services may include, but is not limited to, the following;**

   - Prepare studies and make recommendations on methods of operation and/or treatment.

- Prepare preliminary design reports and/or design alternative recommendations. This may include various types of utility modeling, surveying and field data analysis.
- Prepare all required bidding/construction documents for projects. This will include survey preparations, design plan preparations, technical specification preparations and cost estimate preparations. Attendance at all required pre-design, design, bidding and bid award meetings is required.
- Attend pre-bid conference, prepare possible bid addendums for plan revisions. Assist in making bid award recommendations for contracting/construction services.
- Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. State, County and City).
- Provide construction engineering/management services for projects. Services during construction may include shop drawing/contractor submittal reviews and approvals, inspection and approval of project improvements, possible plan revisions and review and approval of contractor pay applications.
- Provide project close-out services. This may include preliminary and final acceptance of projects, preparation and approval of punch list items and project certification as required to all permitting agencies.
- Firms must have previous experience in municipal water and reuse treatment plant projects and must be licensed to practice Professional Engineering in the State of Florida, Florida State Statute 471, by the Board of Professional Regulation.

3 Tasks/Deliverables

Tasks and deliverables will be determined per project. Each project shall require a signed Work Authorization (WA) form from the awarded firm to be provided to the City. Forms shall be completed in its entirety and include the agreed upon scope, tasks, schedule, cost, and deliverables for the project Consultant will be required to provide all applicable insurance requirements.

4. Term of Contract

The contracts will be for a term of five (5) years, commencing upon award by the appropriate City officials.

5. Local Business Program

On March 13, 2018, the City Commission approved Ordinance 2018-46, establishing a Local Business Program, a policy to increase the participation of City of Pompano Beach businesses in the City's procurement process.

For purposes of this solicitation, “Local Business” will be defined as follows:

1. **TIER 1 LOCAL VENDOR.** POMPANO BEACH BUSINESS EMPLOYING POMPANO BEACH RESIDENTS. A business entity which has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least ten percent who are residents of the City of Pompano Beach or includes

subcontracting commitments to Local Vendors Subcontractors for at least ten percent of the contract value. The permanent place of business may not be a post office box. The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

2. **TIER 2 LOCAL VENDOR.** BROWARD COUNTY BUSINESS EMPLOYING POMPANO BEACH RESIDENTS OR UTILIZING LOCAL VENDOR SUBCONTRACTORS. A business entity which has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach or includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value. The permanent place of business may not be a post office box. The business must be located in a non- residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the respective Broward County municipality for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

3. **LOCAL VENDOR SUBCONTRACTOR.** POMPANO BEACH BUSINESS. A business entity which has maintained a permanent place of business within the city limits of the City of Pompano Beach. The permanent place of business may not be a post office box. The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

You can view the list of City businesses that have a current Business Tax Receipt on the City's website, and locate local firms that are available to perform the work required by the bid specifications. The business information, sorted by business use classification, is posted on the webpage for the Business Tax Receipt Division: www.pompanobeachfl.gov by selecting the Pompano Beach Business Directory in the Shop Pompano! section.

The City of Pompano Beach is **strongly committed** to insuring the participation of City of Pompano Beach Businesses as contractors and subcontractors for the procurement of goods and services, including labor, materials and equipment. Proposers are required to participate in the City of Pompano Beach's Local Business Program by including, as part of their package, the Local Business Participation Form (Exhibit A,) listing the local businesses that will be used on the contract, and the Letter of Intent Form (Exhibit B) from each local business that will participate in the contract.

Please note that, while no goals have been established for this solicitation, the City encourages Local Business participation in *all* of its procurements.

If a Prime Contractor/Vendor is not able to achieve the level of goal attainment of the contract, the Prime Vendor will be requested to demonstrate and document that good faith efforts were made to achieve the goal by providing the Local Business Unavailability Form (Exhibit C), listing firms that were contacted but not available, and the Good Faith Effort Report (Exhibit D), describing the efforts made to include local business participation in the contract. This documentation shall be provided to the City Commission for acceptance.

The awarded proposer will be required to submit "Local Business Subcontractor Utilization Reports" during projects and after projects have been completed. The reports will be submitted to the assigned City project manager of the project. The Local Business Subcontractor Utilization Report template and instructions have been included in the bid document.

Failure to meet Local Vendor Goal commitments will result in "unsatisfactory" compliance rating. Unsatisfactory ratings may impact award of future projects if a sanction is imposed by the City Commission.

The city shall award a Local Vendor preference based upon vendors, contractors, or subcontractors who are local with a preference as follows:

1. For evaluation purposes, the Tier 1 and Tier 2 businesses shall be a criterion for award in this Solicitation. No business may qualify for more than one tier level.

2. For evaluation purposes, local vendors shall receive the following preferences:

   a. Tier 1 business as defined by this subsection shall be granted a preference in the amount of five percent of total score.

   b. Tier 2 business as defined by this subsection shall be granted a preference in the amount of two and one-half percent of total score.

3. It is the responsibility of the awarded vendor/contractor to comply with all Tier 1 and Tier 2 guidelines. The awarded vendor/contractor must ensure that all requirements are met before execution of a contract.

6. Required Proposal Submittal

Submission/Format Requirements

Sealed proposals shall be submitted electronically through the eBid System on or before the due date/time stated above. Proposer shall upload response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 250 MB the response must be split and uploaded as two (2) separate files.

Information to be included in the proposal: In order to maintain comparability and expedite the review process, it is required that proposals be organized in the manner specified below, with the sections clearly labeled:

Title page:

Show the project name and number, the name of the Proposer's firm, address, telephone number, name of contact person and the date.

Table of Contents:
Include a clear identification of the material by section and by page.

Letter of Transmittal:
Briefly state the Proposer's understanding of the project and express a positive commitment to provide the services described herein. State the name(s) of the person(s) who will be authorized to make representations for the Proposer, their title(s), office and E-mail addresses and telephone numbers. Please limit this section to two pages.

Technical Approach:
Firms or teams shall submit their technical approach to the tasks described in the scope, including details of how each phase of the project would be completed, and how their firm proposes to maintain time schedules and cost controls.

Schedule:
Proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines.

References:
References for past projects in the tri-county area (Broward, Palm Beach, and Miami-Dade.) Describe the scope of each project in physical terms and by cost, describe the respondent's responsibilities, and provide the contact information (name, email, telephone number) of an individual in a position of responsibility who can attest to respondent's activities in relation to the project.

List any prior projects performed for the City of Pompano Beach.

Project Team Form:
Submit a completed "Project Team" form. The purpose of this form is to identify the key members of your team, including any specialty subconsultants.

Organizational Chart:
Specifically identify the management plan (if needed) and provide an organizational chart for the team. The proposer must describe at a minimum, the basic approach to these projects, to include reporting hierarchy of staff and sub-consultants, clarify the individual(s) responsible for the co-ordination of separate components of the scope of services.

Statement of Skills and Experience of Project Team:
Describe the experience of the entire project team as it relates to the types of projects described in the Scope section of this solicitation. Include the experience of the prime consultants as well as other members of the project team; i.e., additional personnel, sub-consultants, branch office, team members, and other resources anticipated to be utilized for this project. Name specific projects (successfully completed within the past five years) where the team members have performed similar projects previously.

Resumes of Key Personnel
Include resumes for key personnel for prime and subconsultants.

Office Locations:
Identify the location of the office from which services will be rendered, and the number of professional and administrative staff at the prime office location. Also identify the location of office(s) of the prime and/or sub consultants that may be utilized to support any or all of the professional services listed above and the number of professional and administrative staff at the prime office location.

If firms are situated outside the local area, (Broward, Palm Beach, and Miami-Dade counties) include a brief statement as to whether or not the firm will arrange for a local office during the term of the contract, if necessary.

Local Businesses:
Completed Local Business program forms, Exhibits A-D.
NOTE: Form B must be signed by a representative of the subcontractor, NOT of the Prime.

Litigation:
Disclose any litigation within the past five (5) years arising out your firm's performance, including status/outcome.

City Forms:
The Proposer Information Page Form and any other required forms must be completed and submitted electronically through the City's eBid System. The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

Reviewed and Audited Financial Statements:

Proposers shall be financially solvent and appropriately capitalized to be able to service the City for the duration of the contract. Proposers shall provide a complete financial statement of the firm's most recent audited financial statements, indicating organization's financial condition. Must be uploaded to the Response Attachments tab in the eBid System as a separate file titled "Financial Statements" and marked "CONFIDENTIAL."

Financial statements provided shall not be older than twelve 12) months prior to the date of filing this solicitation response. The financial statements are to be reviewed and submitted with any accompanying notes and supplemental information. The City of Pompano Beach reserve the right to reject financial statements in which the financial condition shown is of a date twelve (12) months or more prior to the date of submittals.

The City is a public agency subject to Chapter 119, Florida's Public Records Law and is required to provide the public with access to public records, however, financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure.

The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for

additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

A combination of two (2) or more of the following may substitute for audited financial statements:

1) Bank letters/statements for the past 3 months
2) Balance sheet, profit and loss statement, cash flow report
3) IRS returns for the last 2 years
4) Letter from CPA showing profits and loss statements (certified)

7. Insurance

The insurance described herein reflects the insurance requirements deemed necessary for this contract by the City. It is not necessary to have this level of insurance in effect at the time of submittal, but certificates indicating that the insurance is currently carried or a letter from the Carrier indicating upgrade ability will speed the review process to determine the most qualified Proposer.

The successful Proposer(s) shall not commence operations until certification or proof of insurance, detailing terms and provisions of coverage, has been received and approved by the City of Pompano Beach Risk Manager.

The following insurance coverage shall be required.

a. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440, regardless of the size of the company (number of employees). The Contractor further agrees to be responsible for employment, control and conduct of its employees and for any injury sustained by such employees in the course of their employment.

b. Liability Insurance

1) Naming the City of Pompano Beach as an additional insured, on General Liability Insurance only, in connection with work being done under this contract.

2) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

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LIMITS OF LIABILITY

	Type of Insurance		each occurrence	aggregate
GENERAL LIABILITY: ***MINIMUM $1,000,000 per OCCURRENCE/$1,000,000 AGGREGATE***				
	* Policy to be written on a claims incurred basis			
XX	comprehensive form			
XX	premises - operations	bodily injury		
__	explosion & collapse hazard	property damage		
__	underground hazard	_____		
__	products/completed operations hazard	bodily injury and		
XX	contractual insurance	property damage		
XX	broad form property damage	combined		
		_____		
XX	independent contractors			
XX	personal injury	personal injury		
AUTOMOBILE LIABILITY: ***MINIMUM $1,000,000 per OCCURRENCE/$1,000,000 AGGREGATE***				
		bodily injury (each person)		
XX	comprehensive form	bodily injury (each accident)	_____	_____
XX	owned	property damage	_____	_____
XX	hired	bodily injury and		
XX	non-owned	property damage combined		
REAL & PERSONAL PROPERTY				
XX	comprehensive form	Consultant must show proof they have this coverage.		
EXCESS LIABILITY				
XX	umbrella form	bodily injury and property damage		
XX	other than umbrella	combined	$2,000,000.	$2,000,000.
XX	**PROFESSIONAL LIABILITY**	$2,000,000.	$2,000,000.	
	* Policy to be written on a claims made basis			

The certification or proof of insurance must contain a provision for notification to the City, and the City's contracted law enforcement provider if applicable, thirty (30) days in advance of any material change in coverage or cancellation.

The successful Proposer shall furnish to the City the certification or proof of insurance required by the provisions set forth above, within ten (10) days after notification of award of contract.

8. Selection/Evaluation Process

A Selection/Evaluation Committee will be appointed to select the most qualified firm(s). The Selection/Evaluation Committee will present their findings to the City Commission.

The Committee will rank responses based upon the following criteria.

	Criteria	Point Range
1.	Prior experience of the firm with projects of similar size and complexity: a. Number of similar projects b. Complexity of similar projects c. References from past projects performed by the firm d. Previous projects performed for the City (provide description) e. Litigation within the past 5 years arising out of firm's performance (list, describe outcome)	0-45 points
2.	Qualifications of personnel including sub consultants: a. Organizational chart for project b. Number of technical staff c. Qualifications of technical staff: (1) Number of licensed staff (2) Education of staff (3) Experience of staff on similar projects	0-35 points
3.	Proximity of the nearest office to the project location: a. Location b. Number of staff at the nearest office	0-10 points
4.	Is the firm a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act of 1985? (Certification of any sub-contractors should also be included with the response.)	0-10 points

Value of Work Previously Awarded to Firm (Tie-breaker) - In the event of a tie, the firm with the lowest value of work as a prime contractor on City of Pompano Beach projects within the last five years will receive the higher ranking, the firm with the next lowest value of work shall receive the next highest ranking, and so on. The analysis of past work will be based on the City's Purchase Order and payment records.

The Committee has the option to use the above criteria for the initial ranking to short-list Proposers and to use an ordinal ranking system to score short-listed Proposers following

presentations (if deemed necessary) with a score of "1" assigned to the short-listed Proposer deemed most qualified by the Committee.

Each firm should submit documentation that evidences the firm's capability to provide the services required for the Committee's review for short listing purposes. After an initial review of the Proposals, the City may invite Proposers for an interview to discuss the proposal and meet firm representatives, particularly key personnel who would be assigned to the project. Should interviews be deemed necessary, it is understood that the City shall incur no costs as a result of this interview, nor bear any obligation in further consideration of the submittal.

When more than three responses are received, the committee shall furnish the City Commission (for their approval) a listing, in ranked order, of no fewer than three firms deemed to be the most highly qualified to perform the service. If three or less firms respond to the RLI, the list will contain the ranking of all responses.

The City Commission has the authority to (including, but not limited to); approve the recommendation; reject the recommendation and direct staff to re-advertise the solicitation; or, review the responses themselves and/or request oral presentations and determine a ranking order that may be the same or different from what was originally presented to the City Commission.

9. Hold Harmless and Indemnification

Proposer covenants and agrees that it will indemnify and hold harmless the City and all of its officers, agents, and employees from any claim, loss, damage, cost, charge or expense arising out of any act, action, neglect or omission by the Proposer, whether direct or indirect, or whether to any person or property to which the City or said parties may be subject, except that neither the Proposer nor any of its subcontractors will be liable under this section for damages arising out of injury or damage to persons or property directly caused by or resulting from the sole negligence of the City or any of its officers, agents or employees.

10. Retention of Records and Right to Access

The selected firm shall maintain during the term of the contract all books of account, receipt invoices, reports and records in accordance with generally accepted accounting practices and standards. The form of all records and reports shall be subject to the approval of the City's Internal Auditor. The selected firm must comply with the Internal Auditor's recommendation for changes, additions, or deletions. The City's Internal Auditor must be permitted during normal business hours to audit and examine the books of account, reports, and records relating to this contract. The selected firm shall maintain and make available such records and files for the duration of the contract and retain them until the expiration of three years after final payment under the contract.

11. Communications

No negotiations, decisions, or actions shall be initiated or executed by the firm as a result of any discussions with any City employee. Only those communications, which are in writing from the City, may be considered as a duly authorized expression on behalf of the

City. In addition, only communications from firms that are signed and in writing will be recognized by the City as duly authorized expressions on behalf of firms.

12. No Discrimination

There shall be no discrimination as to race, sex, color, age, religion, or national origin in the operations conducted under any contract with the City.

13. Independent Contractor

The selected firm will conduct business as an independent contractor under the terms of this contract. Personnel services provided by the firm shall be by employees of the firm and subject to supervision by the firm, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures applicable to services rendered under this agreement shall be those of the firm.

14. Staff Assignment

The City of Pompano Beach reserves the right to approve or reject, for any reasons, Proposer's staff assigned to this project at any time. Background checks may be required.

15. Contract Terms

The contract resulting from this RLI shall include, but not be limited to the following terms:

The contract shall include as a minimum, the entirety of this RLI document, together with the successful Proposer's proposal. Contract shall be prepared by the City of Pompano Beach City Attorney.

If the City of Pompano Beach defends any claim, demand, cause of action, or lawsuit arising out of any act, action, negligent acts or negligent omissions, or willful misconduct of the contractor, its employees, agents or servants during the performance of the contract, whether directly or indirectly, contractor agrees to reimburse the City of Pompano Beach for all expenses, attorney's fees, and court costs incurred in defending such claim, cause of action or lawsuit.

16. Waiver

It is agreed that no waiver or modification of the contract resulting from this RLI, or of any covenant, condition or limitation contained in it shall be valid unless it is in writing and duly executed by the party to be charged with it, and that no evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting this contract, or the right or obligations of any party under it, unless such waiver or modification is in writing, duly executed as above. The parties agree that the provisions of this paragraph may not be waived except by a duly executed writing.

17. Survivorship Rights

This contract resulting from this RLI shall be binding on and inure to the benefit of the respective parties and their executors, administrators, heirs, personal representative, successors and assigns.

18. Termination

The contract resulting from this RLI may be terminated by the City of Pompano Beach without cause upon providing contractor with a least sixty (60) days prior written notice.

Should either party fail to perform any of its obligations under the contract resulting from this RLI for a period of thirty (30) days after receipt of written notice of such failure, the non-defaulting part will have the right to terminate the contract immediately upon delivery of written notice to the defaulting part of its election to do so. The foregoing rights of termination are in addition to any other rights and remedies that such party may have.

19. Manner of Performance

Proposer agrees to perform its duties and obligations under the contract resulting from this RLI in a professional manner and in accordance with all applicable local, federal and state laws, rules and regulations.

Proposer agrees that the services provided under the contract resulting from this RLI shall be provided by employees that are educated, trained and experienced, certified and licensed in all areas encompassed within their designated duties. Proposer agrees to furnish the City of Pompano Beach with all documentation, certification, authorization, license, permit, or registration currently required by applicable laws or rules and regulations. Proposer further certifies that it and its employees are now in and will maintain good standing with such governmental agencies and that it and its employees will keep all license, permits, registration, authorization or certification required by applicable laws or regulations in full force and effect during the term of this contract. Failure of Proposer to comply with this paragraph shall constitute a material breach of contract.

20. Acceptance Period

Proposals submitted in response to this RLI must be valid for a period no less than ninety (90) days from the closing date of this solicitation.

21. RLI Conditions and Provisions

The proposal must be submitted to the City on or before the time and date stated herein. All Proposers, by submission of a proposal, shall agree to comply with all of the conditions, requirements and instructions of this RLI as stated or implied herein. All proposals and supporting materials submitted will become the property of the City.

Exceptions or deviations to this solicitation may not be added after the submittal date.

All Proposers are required to provide all information requested in this RLI. Failure to do so may result in disqualification of the proposal.

The City reserves the right to postpone or cancel this RLI, or reject all proposals, if in its sole discretion it deems it to be in the best interest of the City to do so.

The City reserves the right to waive any technical or formal errors or omissions and to reject all proposals, or to award contract for the items herein, in part or whole, if it is determined to be in the best interests of the City to do so.

The City shall not be liable for any costs incurred by the Proposer in the preparation of proposals or for any work performed in connection therein.

22. Standard Provisions

a. Governing Law

Any agreement resulting from this RLI shall be governed by the laws of the State of Florida, and the venue for any legal action relating to such agreement will be in Broward County, Florida.

b. Licenses

In order to perform public work, the successful Proposer shall:
Be licensed to do business in Florida, if an entity, and hold or obtain such Contractor' and Business Licenses if required by State Statutes or local ordinances.

c. Conflict Of Interest

For purposes of determining any possible conflict of interest, each Proposer must disclose if any Elected Official, Appointed Official, or City Employee is also an owner, corporate officer, or an employee of the firm. If any Elected Official, Appointed Official, or City Employee is an owner, corporate officer, or an employee, the Proposer must file a statement with the Broward County Supervisor of Elections pursuant to §112.313, Florida Statutes.

d. Drug Free Workplace

The selected firm(s) will be required to verify they will operate a "Drug Free Workplace" as set forth in Florida Statute, 287.087.

e. Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute, Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

f. Patent Fees, Royalties, And Licenses

If the selected Proposer requires or desires to use any design, trademark, device, material or process covered by letters of patent or copyright, the selected Proposer and his surety shall indemnify and hold harmless the City from any and all claims for infringement by reason of the use of any such patented design, device, trademark, copyright, material or process in connection with the work agreed to be performed and shall indemnify the City from any cost, expense, royalty or damage which the City may be obligated to pay by reason of any infringement at any time during or after completion of the work.

g. Familiarity With Laws

It is assumed the selected firm(s) will be familiar with all federal, state and local laws, ordinances, rules and regulations that may affect its services pursuant to this RLI. Ignorance on the part of the firm will in no way relieve the firm from responsibility.

h. Withdrawal Of Proposals

A firm may withdraw its proposal without prejudice no later than the advertised deadline for submission of proposals by written communication to the General Services Department, 1190 N.E. 3rd Avenue, Building C, Pompano Beach, Florida 33060.

i. Composition Of Project Team

Firms are required to commit that the principals and personnel named in the proposal will perform the services throughout the contractual term unless otherwise provided for by way of a negotiated contract or written amendment to same executed by both parties. No diversion or substitution of principals or personnel will be allowed unless a written request that sets forth the qualifications and experience of the proposed replacement(s) is submitted to and approved by the City in writing.

j. Invoicing/Payment

All invoices should be sent to City of Pompano Beach, Accounts Payable, P.O. Drawer 1300, Pompano Beach, Florida, 33061. In accordance with Florida Statutes, Chapter 218, payment will be made within 45 days after receipt of a proper invoice.

k. Public Records

1. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:

    a. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service;

    b. Provide the public with access to such public records on the same terms and conditions that the City would provide the records and at a cost that

does not exceed that provided in chapter 119, Fla. Stat., or as otherwise provided by law;

c. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law; and

d. Meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the agency.

2. The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this Agreement and the City shall enforce the Default in accordance with the provisions set forth herein.

23. Questions and Communication

All questions regarding the RLI are to be submitted in writing to the Purchasing Office, 1190 N.E. 3rd Avenue, Building C (Front), Pompano Beach, Florida 33060, fax (954) 786-4168, or email purchasing@copbfl.com. All questions must include the inquiring firm's name, address, telephone number and RLI name and number. Questions must be received at least seven (7) calendar days before the scheduled solicitation opening. Oral and other interpretations or clarifications will be without legal effect. Any addendum necessary to answer questions will be posted to the City's website, and it is the Proposer's responsibility to obtain all addenda before submitting a response to the solicitation.

24. Addenda

The issuance of a written addendum is the only official method whereby interpretation, clarification, or additional information can be given. If any addenda are issued to this solicitation the City will attempt to notify all known prospective Proposers, however, it shall be the responsibility of each Proposer, prior to submitting their response, to contact the City Purchasing Office at (954) 786-4098 to determine if addenda were issued and to make such addenda a part of their proposal.

PROJECT TEAM

RLI NUMBER _____

Federal I.D.#_____

PRIME

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge			
Project Manager			
Asst. Project Manager			
Other Key Member			
Other Key Member			

SUB-CONSULTANT

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying		
Landscaping		
Engineering		
Other Key Member		
Other Key Member		
Other Key Member		
Other Key Member		

(use attachments if necessary)

EXHIBIT A
CITY OF POMPANO BEACH, FLORIDA
LOCAL BUSINESS PARTICIPATION FORM

RLI Number & Title: _____ Prime Contractor's Name: _____

Name of Firm, Address	Contact Person, Telephone Number	Type of Good/Service to be Purchase	% of Work

EXHIBIT B
LOCAL BUSINESS
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

RLI Number_____

TO: _____
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

_____ an individual _____ a corporation

_____ a partnership _____ a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____
(Date) (Name of Local Business Contractor)

BY: _____

EXHIBIT C
LOCAL BUSINESS
UNAVAILABILITY FORM

RLI #_____

I,_____
(Name and Title)

of_____, certify that on the _____day of

_____, _____, I invited the following LOCAL BUSINESSES to bid work items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)

Said Local Businesses:

___ Did not bid in response to the invitation

___ Submitted a bid which was not the low responsible bid

___ Other:_____

Signature: _____

Date: _____

Note: Attach additional documents as available.

EXHIBIT D
GOOD FAITH EFFORT REPORT
LOCAL BUSINESS PARTICIPATION

RLI #_____

1. What portions of the contract have you identified as Local Business opportunities?

   _____

   _____

   _____

   _____

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

   _____

   _____

   _____

3. Did you send written notices to Local Businesses?

   ____ Yes ____ No

   If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

   ____ Yes ____ No

   If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

   _____

   _____

7. List the Local Businesses you will utilize and subcontract percentage of work.

_____ _____

_____ _____

_____ _____

8. Other comments: _____

_____

_____

_____

_____

EXHIBIT E

MINORITY BUSINESS ENTERPRISE PARTICIPATION

RLI #_____

List all members of your team that are a certified Minority Business Enterprise (as defined by the State of Florida.) You must include copies of the MBE certificates for each firm listed.

Name of Firm	Certificate Included?

E-23-20
McCafferty Brinson Consulting, LLC
Supplier Response

Event Information

Number: E-23-20
Title: Continuing Contracts for Engineering Services for Water and Reuse Treatment Plant Projects
Type: Request for Letters of Interest
Issue Date: 7/8/2020
Deadline: 8/10/2020 02:00 PM (ET)
Notes: Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites qualified engineering firms to submit Letters of Interest, qualifications and experience for consideration to provide Professional Engineering Consulting services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020.** Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: https://pompanobeachfl.ionwave.net. The

City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

Contact Information

Contact: Jeff English
Address: Purchasing
1190 NE 3rd Avenue
Building C
Pompano Beach, FL 33060
Phone: (954) 786-4098
Fax: (954) 786-4168
Email: purchasing@copbfl.com

McCafferty Brinson Consulting, LLC Information

Address: 633 S. Andrews Ave.
Suite 402
Fort Lauderdale, FL 33301
Phone: (954) 797-7100

By submitting this Response I affirm I have received, read and agree to the all terms and conditions as set forth herein. I hereby recognize and agree that upon execution by an authorized officer of the City of Pompano Beach, this Response, together with all documents prepared by or on behalf of the City of Pompano Beach for this solicitation, and the resulting Contract shall become a binding agreement between the parties for the products and services to be provided in accordance with the terms and conditions set forth herein. I further affirm that all information and documentation contained within this response to be true and correct, and that I have the legal authority to submit this response on behalf of the named Supplier (Offeror).

Frank Brinson
Signature

fbrinson@mccaffertybrinson.com
Email

Submitted at 8/10/2020 9:00:02 AM

Requested Attachments

Proposal — McCafferty Brinson LOI E-23-20.pdf

Electronic version of proposal must be uploaded to the Response Attachments tab. The file size for uploads is limited to 250 MB. If the file size exceeds 250 MB the response must be split and uploaded as two (2) separate files.

Financial Statment — MBC Financial Statement.pdf

Will remain confidential pursuant to section 119.071 of the State of Florida Statutes.

Tier 1/ Tier 2 Local Business Form — T1_T2_Form sign.pdf

To comply with the City's Local Business Program as a Tier-1 or Tier-2 vendor, you must complete this form and upload it to the Response Attachments tab.

Local Business Program Forms — Local Business Program Forms - K&A.pdf

These forms are to be completed and uploaded to the Response Attachments tab. Online Only

Proposer Information Page — Proposer Information Page Form.pdf

Proposer Information Page Form is to be included in your proposal that must be uploaded to the Response Attachments Tab.

Minority Business Enterprise Participation Form — Minority Business Enterprise Participation Form - RLI.pdf

If your firm or any sub-consultant is a certified minority business enterprise this form must be completed and included with your proposal. If any members of your team are a certified Minority Business Enterprise copies of their certifications must be included in your submittal.

Project Team Form — Project Team Form.pdf

Project Team Form is to be included in your proposal that must be uploaded to the Response Attachments Tab.

Bid Attributes

1 Drug-Free Workplace

Whenever two or more bids which are equal with respect to price, quality, and service are received for the procurement of commodities or contractual service, a bid received from a business that certifies that it has implemented a Drug-free Workplace Program shall be given preference in the award process. If bidder's company has a Drug-free Workplace Program as outlined in General Conditions, section 32., indicate that by selecting yes in the drop down menu.

Yes

2 Conflict of Interest

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Pompano Beach employee is also an owner, corporate officer, or employee of their business. Indicate either "Yes" (a City employee is also associated with your business), or "No". (Note: If answer is "Yes", you must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.313.)Indicate yes or no below with the drop down menu.

No

3 Local Business Participation Percentage

If you have indicated local business participation on the Local Business Participation Form Exhibit A enter the percentage of the contract that will be performed by local Pompano Beach businesses.

10%

4 Terms & Conditions

Check the box indicating you agree to the terms and conditions of this solicitation.

Agree

5 Acknowledgement of Addenda

Check this box to acknowledge that you have reviewed all addenda issued for this solicitation.

Yes

CITY OF POMPANO BEACH

Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects (RLI E-23-20)

August 10, 2020
Purchasing Office
1190 NE 3rd Avenue, Building C
Pompano Beach, Florida 33060

pompano beach
Florida's Warmest Welcome

McCafferty Brinson
consulting

McCafferty Brinson consulting

Table of Contents

HCE

H E E
HILLERS ELECTRICAL ENGINEERING, INC.

KEITH
Engineering Inspired Design.

1. Letter of Transmittal

McCafferty Brinson
consulting

August 10, 2020

City of Pompano Beach
Purchasing Office
1190 N.E. 3rd Avenue, Building C
Pompano Beach, Florida 33060

Subject: Letter of Interest for Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects, Request for Letters of Interest (RLI) E-23-20

To Whom it May Concern:

On behalf of our team, McCafferty Brinson Consulting, LLC (MBC) is pleased to submit this Letter of Interest (LOI) for continuing engineering services for water and reuse treatment plant projects to the City of Pompano Beach. MBC has served the City since 2010 under previous continuing contracts, and MBC principals have been involved in projects for the City since 2006. MBC is a local, Broward County firm that has specialized in addressing the unique issues facing South Florida utilities since our founding in 2006, and our principals have been working in South Florida since the 1990s. MBC's philosophy has always been to focus on providing the highest level of service to a relatively small number of select local clients, and to maintain long-term, personal client-service relationships rather than indiscriminately "turning over" work volume. As reflected in our submittal and evidenced by the few examples noted below, MBC has a long history of consistently providing high-quality, responsive, and very cost-effective client service to the City of Pompano Beach.

In 2014, MBC assisted the City in obtaining a *Determination of Four-Log Virus Treatment of Ground Water* certification for the drinking water treatment plant from the Broward County Health Department. This certification provides an upgraded level of disinfection reliability, providing a safer drinking water supply to the City's customers and substantially reducing the City's exposure to the risk of noncompliance issues under the Federal Ground Water Rule (e.g., public notifications and/or boil water orders). The City of Pompano Beach was one of the first utilities in Broward County with this certification.

In March 2018, MBC successfully completed design, permitting, and construction of a fast-track emergency project at the City's reuse plant to maintain the City's ability to continue to meet the irrigation demands of the City's golf course and other reuse customers during a drought. This project was necessitated by an interruption of the supply of high quality effluent from the Broward County North Regional Wastewater Treatment Plant due to construction at that plant, which left the City's reuse plant without a reliable source of raw reuse water to treat and distribute. This project demonstrates MBC's local-firm agility and our strong commitment to be responsive to the City's needs.

Most recently, at the water treatment plant, MBC assisted the City in designing, permitting, and constructing a new nanofiltration (NF) membrane pilot plant, and in developing and conducting a pilot testing program to not only select new membrane elements for the City's scheduled periodic membrane element replacement, but to also develop a new treatment protocol that enables the complete elimination of chemical pretreatment (sulfuric acid and antiscalant) of the raw water supply. The pilot testing program was conducted over the course

McCafferty Brinson consulting

of ten months and not only identified a membrane element selection that meets all of the City's treated water quality goals, but demonstrated stable operation without chemical pretreatment. With MBC's assistance, the City completed the membrane element replacement in the full-scale plant in April 2020, and the plant has operated successfully since that date with no chemical pretreatment. The new membrane element selection, and the elimination of sulfuric acid and antiscalant from the process, have resulted in actual power and chemical cost savings of approximately $245,000 annually. Perhaps more importantly, this project has eliminated the need for the plant operators to handle large quantities of potentially dangerous chemicals (i.e., 93% sulfuric acid) on a daily basis, resulting in safer working conditions for plant operating staff and reducing liability to the City. The Pompano Beach plant is one of only two large NF drinking water facilities in Florida (and likely the country) that operate with no chemical pretreatment of the feedwater supply.

In preparation of this LOI, we have reviewed the City's 2021-2024 Utility Renewal and Replacement program in detail to further familiarize ourselves with the City's needs and upcoming projects. We have prepared our submittal to highlight our experience, expertise, and client service commitment relative to these projects. In reviewing our submittal, you will find that we have a history of successful projects and satisfied South Florida clients with work of this type. Leveraging our low overhead, intimate knowledge of your facilities, and match of experience and expertise to the City's needs, the MBC team is uniquely qualified to complete the City's scheduled capital improvement projects extremely cost-effectively, as well as assist the City in continuing to comply with changing regulations.

We have assembled a team that is not only highly qualified to meet the full range of services requested under this RLI, but is familiar with the City's drinking water and reuse water treatment facilities. Our team is lead by MBC as the primary firm (our address, telephone, and fax numbers are provided at the bottom of this letterhead, and our Federal Tax Identification Number is 20-4382371, as requested in the RLI). Holtz Consulting Engineers (HCE) will assist with the acquisition of loan and grant funding for projects, and will support MBC's design and construction administration services with selected reuse treatment facility projects. Hillers Electrical Engineering (HEE) will provide electrical and instrumentation and controls engineering support. Finally, surveying, underground utility locating, and landscape architecture services will be provided by Keith & Associates, Inc. (KA). As you will see in reviewing our submittal, we have assembled our team to maximize participation to achieve the City's goals under the Local Business Program.

Although City staff is welcome to communicate with any member of our team at any time, I will serve as the City's primary contact for this submission and throughout this contract assignment. We would like to thank you for this opportunity to present our qualifications for this contract. We remain fully committed to providing outstanding service to the City under this contract and are eagerly looking forward to continuing our service to the City of Pompano Beach.

Sincerely,

Frank A. Brinson, P.E., BCEE
Vice President
McCafferty Brinson Consulting, LLC
fbrinson@mccaffertybrinson.com

2. Technical Approach

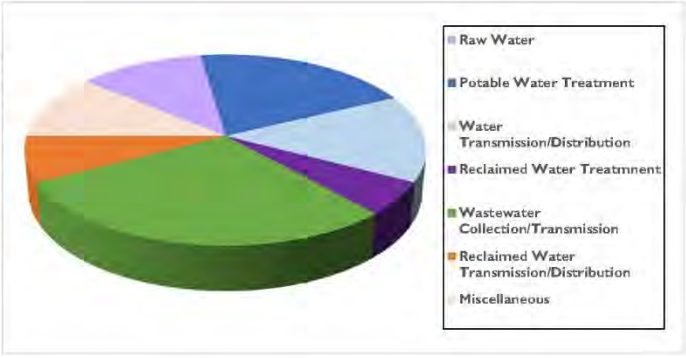
2.1 Summary of Capital Improvement Program

The scope of work requested under this continuing services contract can be divided into two general categories: (1) design and construction administration assistance for the City's upcoming water and reclaimed water capital projects, and (2) engineering planning, studies, and general consulting associated with these two systems. These sectors of the engineering consulting industry represent MBC's core business. As mentioned in our transmittal letter, MBC specializes in serving South Florida utilities with small to mid-size projects that require a high level of technical expertise. As a small, local firm, we have the ability to complete these projects very cost-effectively for our clients, without sacrificing quality or technical soundness.

In preparation of this proposal, we reviewed the City's 2021-2024 Utility Renewal & Replacement program to further familiarize ourselves with the City's scheduled projects and upcoming needs. The largest component of the City's 2021-2024 program is for wastewater collection/transmission system improvements, at about 29% of the total water and sewer budget. Although MBC has recently been involved primarily in treatment plant projects, historically our principals have a great deal of experience in infrastructure projects. We recognize the special challenges of these types of projects such as right-of-way permitting, coordination with other utilities located within street rights-of-way, as well as sensitivity to the needs and perceptions of homeowners and the community in general. We are prepared to assist the City with these projects if needed. However, we understand that most of these projects will fall under a separate continuing contract.

Summary of 2020-2024 Capital Improvement Program

Description	Budget	%Total
Raw Water	$3,145,000	12%
Potable Water Treatment	$5,465,000	20%
Water Transmission/Distribution	$4,024,500	15%
Reclaimed Water Treatmnent	$1,500,000	6%
Wastewater Collection/Transmission	$7,875,000	29%
Reclaimed Water Transmission/Distribution	$2,110,000	8%
Miscellaneous	$3,000,000	11%
	$27,119,500	



The next largest budget item in the program is for potable water treatment at approximately 20% of the total program budget. MBC has gained an unmatched knowledge and understanding of the of the City's drinking water treatment facility, and has assisted the City in becoming a technological and customer service leader in South Florida through the numerous design, construction, and process consulting projects that we have successfully completed for the City over the past fifteen years.

2.2 Non-Capital Engineering Consulting Needs

In addition to engineering design, permitting, and construction contract administration for the City's upcoming capital improvement projects, the City will have a need for "soft" engineering services such as for engineering planning, studies, and regulatory compliance. MBC has been involved in planning studies for municipal utilities ranging from utility master planning, hydraulic modeling of both potable water and wastewater systems, project financing, development of capital improvement programs, engineering bond reports, as well as regulation-mandated planning studies.

With these types of projects, it is critical that clear, explicitly defined goals and objectives are developed and agreed upon between the project team and the City during the scoping stage of the project. Without this, the project will lack clear direction, and the end work product is likely to miss the expectations of the City and be of little to no long-term value to the City. Next, a specific plan of action and project schedule should be developed, and a project team identified. During execution of the project, the project manager must continuously monitor the schedule, budget, and quality of the work product. To ensure the end result meets the City's goals and expectations for the project, clear and open communications must existing between the project team and the City. Perhaps most importantly, the City must have the opportunity to review work products at critical progress stages of the work and provide feedback to tailor the effort to the City's needs.

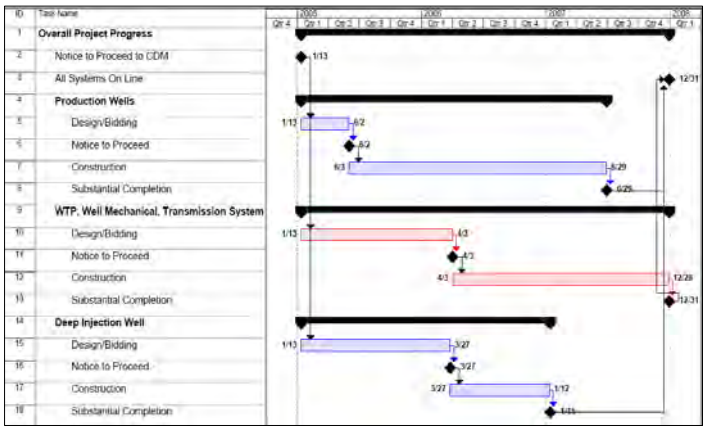
In addition to engineering planning, the City will have a need for regulatory compliance consulting to maintain continued compliance with changing water quality and operations-related regulations. As noted in our transmittal letter, in 2014 MBC assisted the City in obtaining certification by the Broward County Health Department of the Pompano Beach water treatment plant as a four-log virus treatment facility. As discussed in Section 7, MBC has proven the success of this approach to these types of projects on numerous projects for the City.

2.3 Design and Construction Projects

MBC's approach to design and construction projects focuses on three fundamental elements: schedule, cost, and quality control. These are the essential components of good project management, whether the project is a small, single-discipline, short-term project, or a large, complex, multi-million dollar project executed over a period of several years. Most of the individual projects that the City has scheduled over the next five years have a total value of $2 million or less. While MBC's principals have abundant experience in managing large, complex projects, it is critical to recognize the equal importance of schedule, cost, and quality control on smaller projects.

2.4 Schedule Control

In the regulatory environment, schedule control can make the difference between a utility consistently exceeding regulatory requirements and staying in compliance with rapidly changing regulations on one hand, and fines for violations on the other. In this context, "schedule control" involves continuously monitoring and anticipating changing regulatory demands, advance planning, developing and maintaining resources and scheduling tools, and timely implementation of compliance-related improvements. MBC understands and appreciates the importance of timely compliance with regulatory requirements to a municipality and public utility.



In the design and construction environment, schedule control has a direct impact on cost to the Owner. Delays in design not only increase design costs, but also construction costs through extended interest on project funding, material and equipment cost escalation, and general construction market variability. During construction, delays nearly always result in a direct and/or indirect increase in cost to the Owner. MBC recognizes that it is critical to the success of any project that a realistic schedule be developed at the inception of the project, that "buy-in" and commitment to the schedule is obtained from all major project stakeholders, and that the schedule is continually updated and monitored through the life of the project to avoid these cost increases. The schedule must identify all major tasks and their interdependency relationships. MBC leverages a range of experience, expertise, scheduling software, and other tools to develop realistic project schedules, track progress during the project, and maintain the schedule through completion of the project. We have a strong track record in bringing projects in on or ahead of schedule. As an example, the single largest design and "construction" project that MBC has completed for the City under our current contract is the NF membrane replacement project discussed above ($1,098,000). This project was completed well ahead of the original contract schedule and with no change orders.

2.5 Cost Control

MBC also has a strong track record in cost control in our recent projects. This stems from thorough planning at the inception of the project in developing the engineering budget and identifying project tasks and requirements, assembling and committing a qualified project team, and recognizing and controlling major influences on costs through the life of the project. To avoid surprises, it is critical that a detailed plan for project execution be developed at the earliest stage. The plan must identify and commit a qualified project team, with clear and non-overlapping divisions of responsibility. Identification, scheduling, staffing, and budgeting for all major tasks is necessary, as well as for all "incidental" project requirements (e.g., permitting, design support disciplines such as geotechnical engineering and surveying, any required environmental studies, planning and zoning requirements), since costs for these components tend to be magnified if they are not recognized early and planned for.

During execution of a project, there are several influences on cost that must be recognized and controlled. These include the efficiency of communications between the project team members, including communications between the engineer, Owner, and the Contractor if it is a construction project. It is critical that a good working relationship and clear lines of communication be developed early in the project, and maintained throughout the project. Another major influence on cost is the decision-making. Indecisiveness costs money. A clear chain of command and efficient decision-making process is necessary to avoid costly delays.

Pompano Beach Membrane Element Replacement, Pressure Vessel Replacement, and Cleaning System Modifications

Contract	Bid Price	Allowance	Final Price
Membrane Procurement	$1,072,892	$33,957	$1,056,849
Pressure Vessel Replacement	$1,583,800	$0	$1,583,800
Total:	**$2,657,000**	**$34,000**	**$2,641,000**

- ✓ No Cost Change Orders
- ✓ $16,000 Under Total Bid Price
- ✓ Completed Ahead of Schedule

The project manager must continually track progress of the project against the project plan, budget, and schedule, and make adjustments during the course of the project to control costs. Finally, follow-through in certification, commissioning, and close-out of a project must be completed to avoid residual, ongoing costs from loose ends.

MBC has a strong, demonstrated record in cost control in large, complex projects. This record is evidenced in the extremely low percentage of change orders presented in MBC's project descriptions in Section 9.

2.6 Quality Control

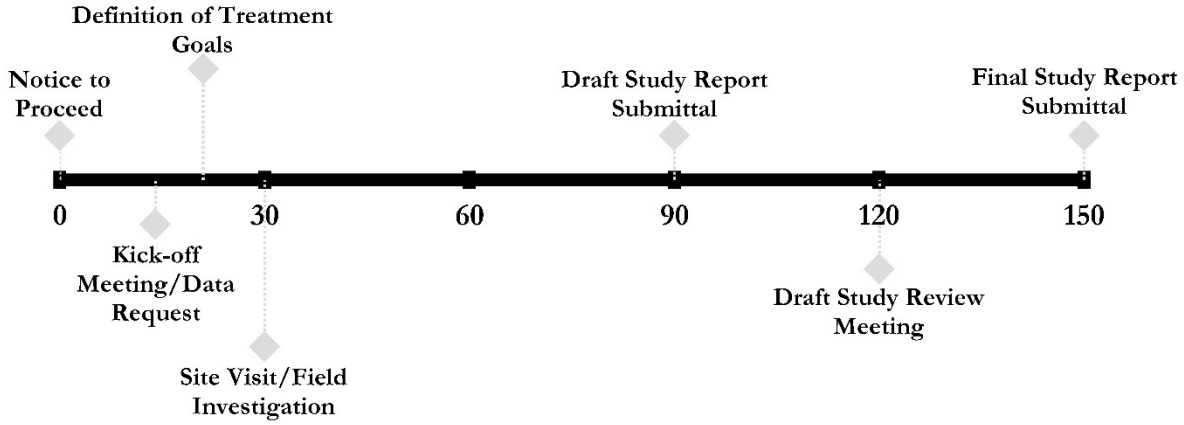
MBC takes great pride in the quality of the services and work product that we deliver to our clients. We employ a structured quality control program where deliverables (engineering documents or design documents) are reviewed at strategic stages of development (e.g., 30%, 60%, 90% completion) prior to delivery to our client. In some cases, we retain independent experts to peer review documents as part of our internal quality control program. Our record of completing projects with an extremely low level of change orders (as evidenced in our project profiles in Section 9) is an indication of the success of our quality control program.

MBC also believes that it is critical that plant operating staff be given the opportunity to provide input on the design from the earliest stages. These personnel have first-hand, hands-on knowledge of the existing facilities, and will be operating the new systems following completion of construction.

3. Schedule

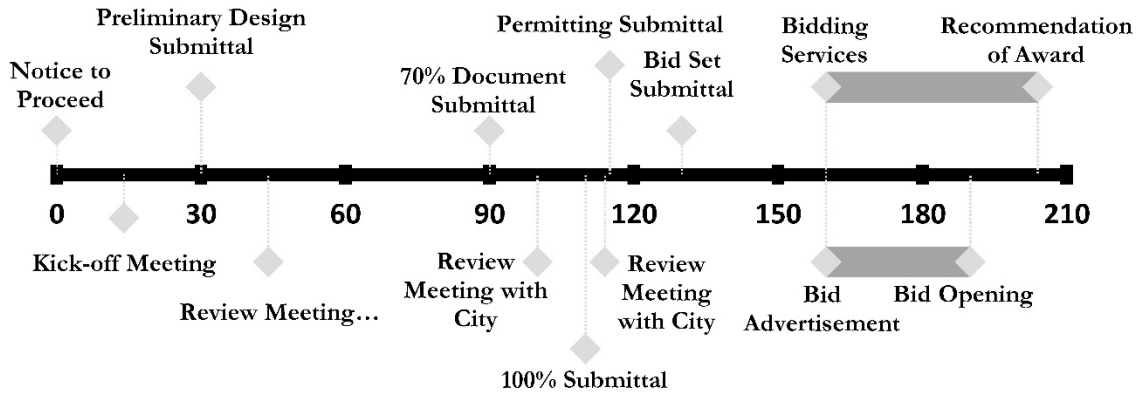
In reference to the two types of engineering projects discussed above in the City's CIP, the tasks, milestones, and factors that influence the schedule of a planning or study project are distinctly different from a design and construction project. Both require the defining of specific project milestones, tasks and subtasks, and close collaboration with City staff to ensure the project is completed on time and meets the City's objectives and expectations for the project. However, design and construction projects typically have more external influences (e.g., regulatory agency approval, major equipment lead times, etc.). For both types of projects, the duration of timeline will depend heavily on the project's complexity. For both types of projects, it is critical to the success of the project that a realistic and detailed schedule be developed at the earliest stage of the project. A typical timeline for each categorical project is illustrated below.

Plans and Study Projects



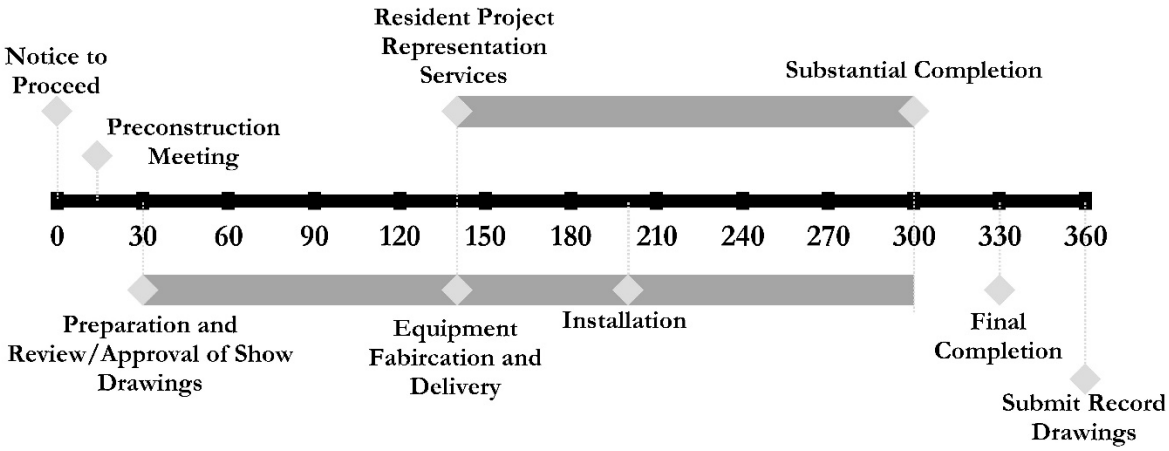
Task/Project Milestone	Days from NTP
Notice to Proceed	0
Kick-off Meeting/Data Request	14
Definition of Treatment Goals	21
Site Visit/Field Investigation	30
Draft Study Report Submittal	90
Draft Study Review Meeting	120
Final Study Report Submittal	150

Design Projects



Task/Project Milestone	Days from NTP
Notice to Proceed	0
Kick-off Meeting	14
Preliminary Design Submittal	30
Review Meeting with City	44
70% Document Submittal	90
Review Meeting with City	100
100% Submittal	110
Review Meeting with City	114
Permitting Submittal	115
Bid Set Submittal	130
Bid Advertisement	160
Bidding Services	160
Bid Opening	190
Recommendation of Award	204

Construction Administration Projects



Task/Project Milestone	Days from NTP
Notice to Proceed	0
Preconstruction Meeting	14
Preparation and Review/Approval of Show Drawings	30
Equipment Fabircation and Delivery	140
Resident Project Representation Services	140
Installation	200
Substantial Completion	300
Final Completion	330
Submit Record Drawings	360

4. References

MBC's team has a long, proven track record of working together to complete numerous projects in the tri-county area. References that were selected to best represent projects similar to the City's upcoming projects are listed below for each team member. Additional references are indicated on each of the following project sheets that demonstrate our team's experience and expertise in Section 7. We strongly encourage the City to contact these references.

	Firm	Public Entity	Project	Contact
1	MBC	City of Pompano Beach	NF Membrane Element Replacement and Pilot Testing	Phil Hyer 954.545.7030 Phil.Hyer@copbfl.com
2	MBC	City of Boca Raton	Rehabilitation of the Membrane Pretreatment Pressure Filters	Lauren Burack, P.E. 561.338.7329 lburack@myboca.us
3	MBC	Seacoast Utility Authority	30.5 mgd Hood Road Water Treatment Plant Membrane Conversion Chemical Systems Design, Plant Start-Up, and Operation Manual	Rim Bishop 561.627.2900 rbishop@sua.com
4	MBC	Broward County Water and Wastewater Services	Water Treatment Plant 1A 4-Log Virus Treatment and Anion Exchange Improvements	John Morra, P.E. 954.831.0902 jmorra@broward.org
5	HCE	Martin County Utilities	Tropical Farms WWTP Reclaimed Water Storage Tank and Pumping Improvements	Jeremy Covey, PE 772.221.2353 jcovey@martin.fl.us
6	HCE	South Martin Regional Utility	SMRU WWTP Chlorine Contact Basin and Filter Improvements	Monica Shaner, PE 772.546.6259 ext. 205 mshaner@tji.martin.fl.us
7	HCE	City of Lake Worth Beach	City of Lake Worth Beach Collection System Asset Management Project	Julie Parham, PE 561.586.1798 jparham@lakeworthbeachfl.gov
8	HCE	Seacoast Utility Authority	Seacoast Utility Authority Nanofiltration Concentrate Pipeline and Blending Pump Station	Rim Bishop 561.627.2900 rbishop@sua.com
9	HEE	City of Pompano Beach	Reclaimed WTP Piping Modifications & Production Improvements	Phil Hyer 954.545.7030 Phil.Hyer@copbfl.com

10	HEE	Broward County Water and Wastewater Services	NRWWTP Biogas Energy Project	Mark Darmanin, P.E. 954.831.0810 mdarmanin@broward.org
11	HEE	Palm Beach County Water Utilities Department	SRWRF Headworks and Effluent Transfer Pumping Improvements	Craig Irwin, P.E. 561.493.6024 cirwin@pbcwater.com
12	HEE	The Village of Wellington	Wellington WRF Telemetry Backhaul Radio Upgrade	Shannon LaRocque, P.E. 561.791.4008 slarocque@wellingtonfl.gov
13	Keith	City of Pompano Beach	City of Pompano Beach Continuing Engineering and Surveying Services	Horacio Danovich 954-786-7834 Horactio.Danovich@copbfl.com
14	Keith	Broward County Water and Wastewater Services	BCWWS Septic Tank Elimination Continuing Services	Rolando Nigaglioni, PE 954-831-0882 rnigaglioni@broward.org

5. Project Team Form

COMPLETE THE PROJECT TEAM FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB FOR THE RLI IN THE EBID SYSTEM.

PROJECT TEAM

RLI NUMBER E-23-20

Federal I.D.# 204382371

PRIME

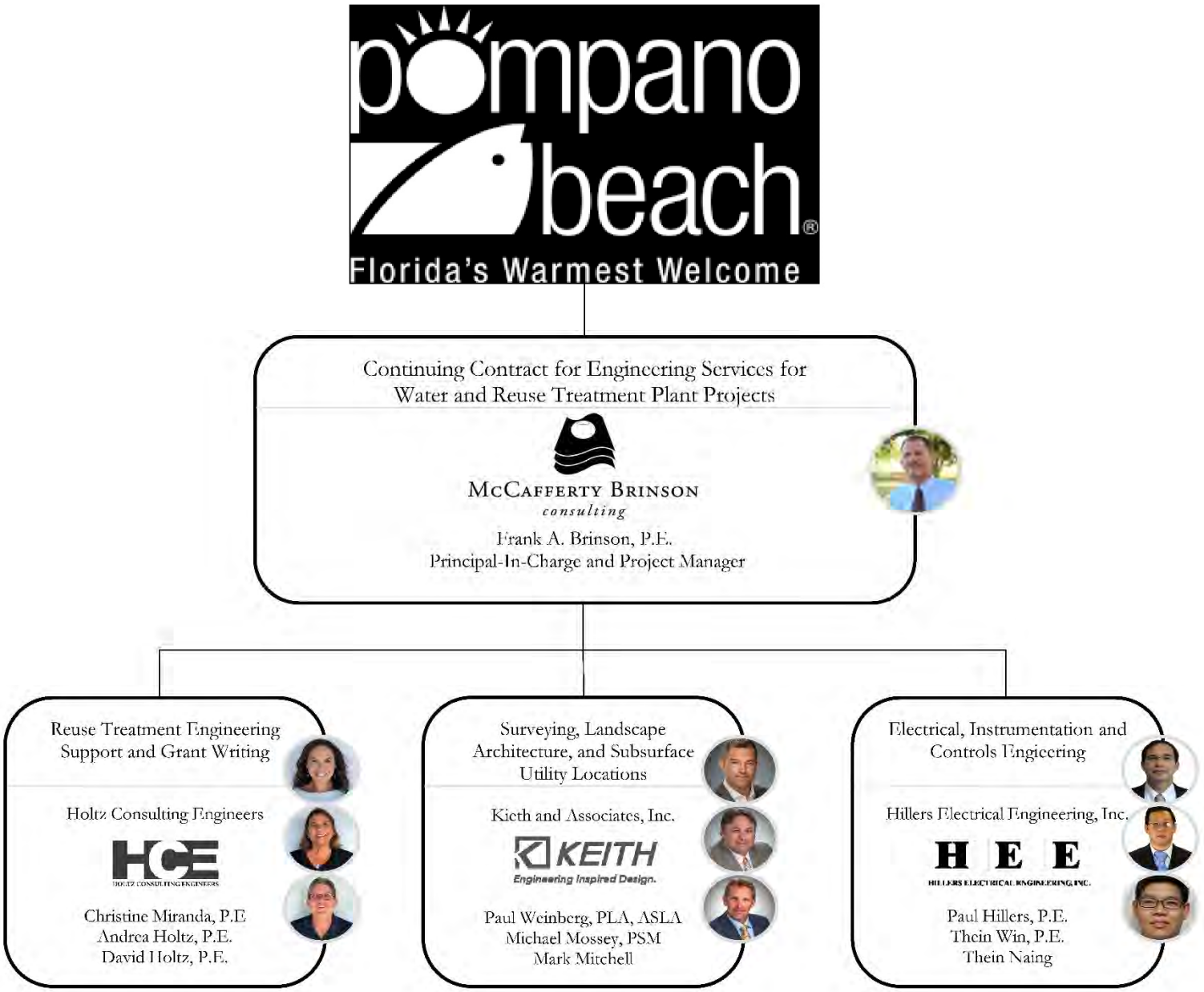
Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	Frank A. Brinson P.E.	29	Env. Eng.
Project Manager	Frank A. Brinson P.E.	29	Env. Eng.
Asst. Project Manager	Audra McCafferty P.E.	29	Env. Eng.
Other Key Member	Andrew Barba, E.I.	4	Env. Eng.
Other Key Member	Melissa Campbell, E.I.	4	Civil Eng.

SUB-CONSULTANT

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	Keith and Associates, Inc.	Paul Weinberg
Landscaping	Keith and Associates, Inc.	Paul Weinberg
Engineering	Holtz Consulting Engineers	David Holtz, P.E.
	Hillers Electrical Engineer	Paul Hillers, P.E.
Other Key Member		
Other Key Member		
Other Key Member		
Other Key Member		

(use attachments if necessary)

6. Organizational Chart



7. Statement of Skills and Experience of Project Team

7.1 Team Project Table

To demonstrate our team's long-standing working relationship, the project listing below highlights our teams recent project experience directly related to the water and reuse treatment plant projects proposed in the City's CIP. MBC works with highly qualified consultants that compliment MBC's talents and provides a full suite of services on a project by project basis. Each team member is either a women or minority owned business, three of which are certified with the State of Florida. MBC qualifies as a City of Pompano Beach Tier 2 local business and Keith and Associates, Inc. maintains an office less than three miles from the City's treatment plants.

Project	**McCafferty Brinson Consulting** (State of Florida WBE, Tier 2)	**Holtz Consulting Engineers** (State of Florida WBE)	**Hillers Electrical Engineering** (State of Florida MBE)	**Keith and Associates** (Woman Owned, Local Business)
Pompano Beach NF Membrane Element Replacement and Pilot Testing	✓			
Pompano Beach Gravity Filter Refurbishment and Alternative Treatment Technology Study	✓			
Pompano Beach Drinking Water State Revolving Funding Assistance	✓	✓		
Pompano Beach Clean Water State Revolving Funding Assistance	✓	✓		
Pompano Beach Reuse Water Treatment Plant Modifications	✓		✓	
Pompano Beach Water System Interconnect Upgrades	✓			✓
Boca Raton Country Club Village Infrastructure Upgrades (iSIP)	✓	✓		
Boca Raton 40 mgd NF Membrane Element Replacement	✓			
Boca Raton Rehabilitation of the Membrane Pretreatment Pressure Filters	✓		✓	
Boca Raton Lime Softening Backwash and Disinfection Upgrades	✓		✓	✓
Boca Raton Lime Building Needs Study	✓		✓	
Boca Raton Washwater Recovery Basin Improvements	✓		✓	✓
Seminole Tribe of Florida Hollywood Raw Water Supply Improvements	✓		✓	✓
City of Lake of Worth WTP Reverse Osmosis Membrane Replacement Evaluation and Selection	✓	✓		

7.2 MBC's Qualifications and Experience

MBC's experience with the City's facilities and our knowledge of your regulatory position, coupled with fact that we are a small local firm, makes our team uniquely qualified to meet the City's needs very cost-effectively under this contract. It is important to note that a large portion of the individual projects that the City has scheduled over the next five years have a total value of $2 million or less. While MBC's principals have abundant experience in managing large, complex projects, our firm targets small to mid-size projects that require a high level of technical expertise, but are under the threshold that most large firms would consider dedicating their top talent to.

The configuration of the Pompano Beach Water Treatment Plant is somewhat unusual in that it utilizes a combination of conventional lime softening and membrane softening (nanofiltration or NF) to treat the relatively highly colored Biscayne Aquifer raw water supply, which contains elevated levels of dissolved organics and disinfection by-product precursors. The product streams from these two processes are blended to produce the finished water supply, which meets all regulatory standards. Although this "combination" treatment strategy is not uncommon in South Florida, it is not common outside of South Florida, and presents a unique set of treatability, process optimization, and regulatory compliance-related challenges. It is critical that the City's consultant have the experience and expertise to meet these challenges.

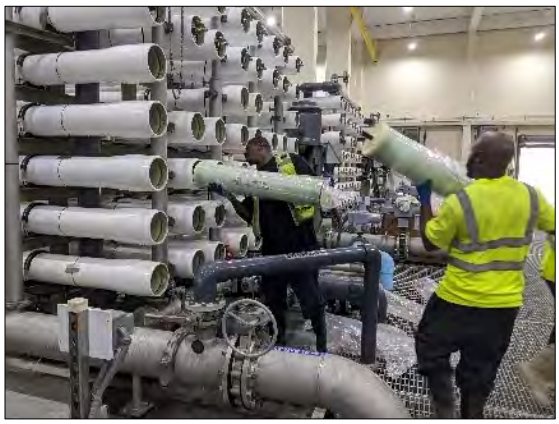
MBC has a wealth of experience in working on South Florida water treatment facilities that use a similar treatment strategy, combining membrane treatment with conventional lime softening to meet their treatment objectives. Utilities that we have worked with or are working with that either currently have a similar combined process, or are considering implementing membrane treatment to complement their exiting lime treatment process, include the Cities of Boca Raton, Lake Worth, Dania Beach, and the Town of Davie, as well as Broward County Water and Wastewater Services, and Seacoast Utility Authority.

A significant portion of the potable water treatment budget in the City's CIP is for maintenance and rehabilitation of the existing lime softening process equipment. Some of the major components of the lime softening process equipment are approaching their useful service lives. MBC recently assisted the City in replacing the drive unit on one of the plants solids-contact lime softening units (Infilco-Degremont Accellator), and is currently working with the City to rehabilitate the plants gravity sludge thickeners.

One of the primary challenges of treating the South Florida Biscayne Aquifer raw water supply, which is high in dissolved organics, color, and disinfection by-product precursors, is to cost-effectively produce a finished water supply that is aesthetically pleasing (e.g., free of color) and disinfected to regulatory standards (four-log virus treatment) without producing undesirable disinfection byproducts in the water supply. Historically, the City has successfully employed a strategy of combining conventional lime softening and NF to achieve these goals, and continues to strive to optimize the approach to improve finished water quality and the level of service to its customers. As discussed below, MBC has been a long-term partner to the City in these efforts.

Starting in 2018, the City and MBC undertook a project aimed at substantially improving the NF process by optimizing finished water quality, reducing power consumption (and associated costs), and optimizing chemical usage as part of the City's routine periodic NF membrane element replacement. MBC assisted the City in designing, permitting, and constructing a new NF membrane pilot plant that provides a near perfect pilot-scale representation of the City's full-scale NF process. The pilot unit was designed and permitted to be operated in parallel with the full-scale plant using the same raw water supply, but with the ability to adjust critical operating parameters such as chemical treatment regimens, membrane flux rates, and process recovery rates without affecting operation of the full-scale plant. Furthermore, the treated water from the pilot unit is recovered as treated potable water, and concentrate is disposed of in the City's existing injection well system, enabling the City to operate the pilot unit indefinitely without wasting water or creating a new by-product stream. This has given the City the unique ability to test any potential adjustment or improvement to the plant operating protocols without risk to the full-scale plant systems.

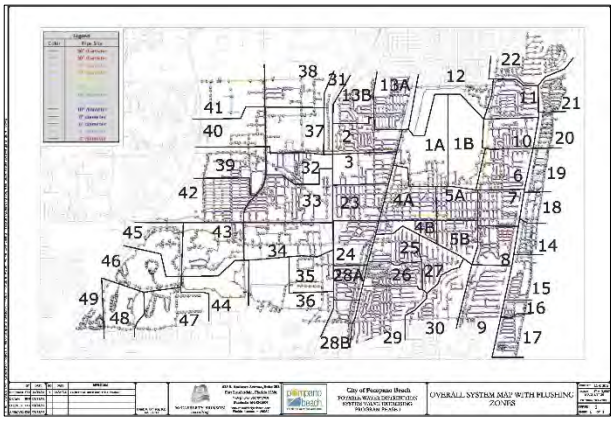
As part of the NF membrane replacement effort, MBC assisted the City in developing and conducting a pilot testing program to not only prequality manufacturers and select new membrane elements for the scheduled element replacement, but to also develop a new treatment protocol that enables the complete elimination of chemical pretreatment (sulfuric acid and antiscalant) of the raw water supply. The pilot testing program was conducted from April 2018 through January 2019. Through this testing, the City not only identified a membrane element selection that meets all of the City's treated water quality and performance goals, but demonstrated long-term, stable membrane operation with no chemical pretreatment of the raw water supply.



With MBC's assistance, the City completed the membrane element replacement in the full-scale plant in April 2020, and the plant has operating successfully since that date with no chemical pretreatment. The new membrane element selection, and the elimination of sulfuric acid and antiscalant from the process, have resulted in actual power and chemical cost savings of approximately $245,000 annually. Furthermore, this has eliminated the labor and expenses associated with maintaining these large chemical storage and feed systems at the plant. The annual cost savings resulting from this effort are expected to be well over $2 million over the life of the membranes. Perhaps most importantly, this project has eliminated the need for the plant operators to handle large quantities of potentially dangerous chemicals (i.e., 93% sulfuric acid) on a daily basis, resulting in safer working conditions for plant operating staff and reducing liability to the City. The Pompano Beach plant is one of only two large NF drinking water facilities in Florida (and likely the country) that operate with no chemical pretreatment of the feedwater supply.

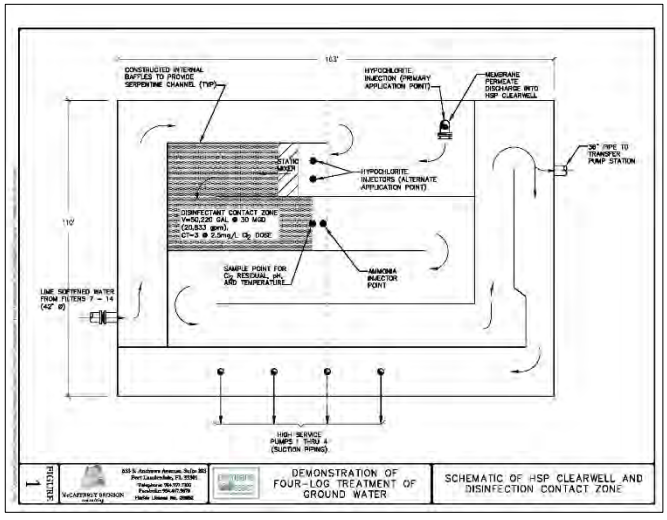
In 2019-2020, MBC prepared the *Gravity Filter Refurbishment and Alternative Treatment Technology Study* for the City's water treatment plant. This study identified the rehabilitation needs of the existing multimedia gravity filters and compared a conceptual rehabilitation project to other treatment technology alternatives (e.g., retrofitting the existing filter structures with ultrafiltration (UF) membrane systems based on several different UF system manufacturers.

These alternatives were evaluated on a capital, operating, and total project cost basis, as well as considering potential finish water quality improvements. These two scenarios were also evaluated relative to the alternative of expanding the City's existing NF process. This document provides a sound basis for long-term, strategic planning and decision-making for future renewal and replacement and upgrade projects at the water treatment plant.



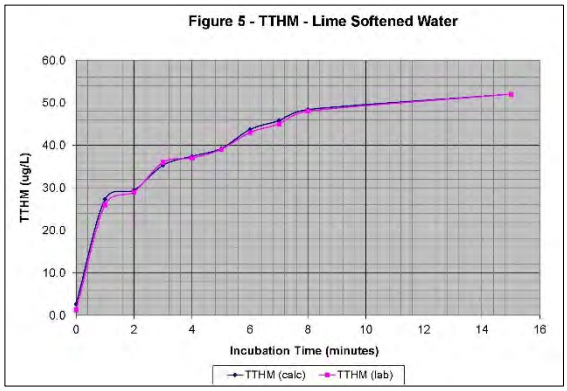
In 2013, MBC assisted the City in developing an integrated Unidirectional Flushing and Valve Exercising Program. This is an ongoing program, currently being executed by the City's water distribution system operating staff, which enables the City to maintain excellent drinking water quality in all areas of the distribution system as well as maintain the mechanical integrity and functionality of the distribution infrastructure. This is yet another example of MBC and the City's collaboration to continuously improve the already high level of service that the City provides to its customers.

In addition to engineering planning, the City will have a need for regulatory compliance consulting to maintain continued compliance with changing water quality and operations-related regulations. As noted in our transmittal letter, in 2014 MBC assisted the City in obtaining certification by the Broward County Health Department of the Pompano Beach water treatment plant as a four-log virus treatment facility. This certification documents that the water treatment plant provides an upgraded level of disinfection of the City's drinking water supply, providing a safer source of drinking water for the City's customers and substantially reducing the City's exposure to the risk of non-compliance actions under the Federal Ground Water Rule (e.g., public notifications and/or boil water orders).



Pompano Beach was one of the first utilities in Broward County to achieve this certification. Continued compliance with these requirements will likely require additional consulting services as the City continues to optimize and improve the water treatment process and related facilities.

In addition to the above-described disinfection-related regulatory compliance efforts, the City must continue compliance with the Disinfectant/Disinfection By-Product Rule (D/DBPR). The City has been very proactive and diligent in developing and implementing sound strategies to comply with these regulatory requirements. These efforts have included not only the recent treatment process improvement studies and process modifications, but the City's decision to leverage nanofiltration membrane technology to improve the finished water quality, aimed in part at ensuring compliance with the D/DBPR. As a result, the City of Pompano Beach is one of South Florida's leading utilities in compliance efforts with these recent regulations.



Because of the manner in which these sets of regulations are written, the City's plant operating staff (as with most utilities in South Florida) must maintain a delicate balance between maintaining sufficient free chlorine residual disinfectant contact time to provide 4-log disinfection, without "over disinfecting" and exceeding the DBP (i.e., trihalomethanes and haloacetic acids) maximum contaminant levels. The City's consultant must be familiar with the City's specific situation, and the specific characteristics of the City's treatment processes, with respect to these regulations. There is no other consulting engineering firm that has as much experience and background knowledge in this area, specifically with the Pompano Beach system, as MBC. Furthermore, MBC has demonstrated a willingness and ability to quickly and cost-effectively respond to the City's needs in this area.

Another regulatory initiative that likely will affect the City over the next five years is the South Florida Water Management District's (SFWMD) continued emphasis on the use of Alternative Water Supplies (AWS). The City of Pompano Beach is in a relatively good position with respect to this effort, having one of the few well-developed reclaimed water reuse programs in South Florida. Again, Pompano Beach was proactive in the implantation of reclaimed water reuse technology, and is leading South Florida utilities. Expansion of the City's reclaimed water system will assist the City in staying at the cutting edge of reclaimed water usage in South Florida.

General Information on MBC

MBC was incorporated as a Limited Liability Company (LLC) in Broward County on February 24, 2006. The founders and principals of MBC are Ms. Audra McCafferty, P.E., and Mr. Frank A. Brinson, P.E. Before starting MBC, Ms. McCafferty worked with Law Engineering & Environmental Services (LAW) for nine years in Orlando and Miami, Florida, and was an independent consultant for five years, working with leading engineering consulting firms including ARCADIS, LAW, and E Sciences, Inc. Ms. McCafferty has extensive experience in the areas of master planning, permitting, and regulatory compliance consulting for industrial wastewater, domestic wastewater, and potable water treatment systems. Ms. McCafferty has served in the public (utility system owners, school districts, and aviation departments) and private (agricultural, real estate, and banking) sectors. Ms. McCafferty has also worked in the area of contamination assessment and due diligence for large Real Estate Investment Trusts (REITs) throughout the United States and Puerto Rico.

Prior to joining MBC, Mr. Brinson worked with Hartman & Associates, Inc. from 1992 through 1999 in their Orlando and Plantation, Florida, offices. In 1999, Mr. Brinson joined Camp Dresser & McKee Inc. (CDM) in their Fort Lauderdale office, where he worked for approximately seven years. While with CDM, Mr. Brinson specialized in potable water treatment systems design and construction administration, with emphasis on membrane treatment systems for desalination of drinking water in the Caribbean, and membrane softening and low-pressure reverse

osmosis treatment systems for South Florida communities. Mr. Brinson's clients at CDM included the Cities of Pompano Beach, Boca Raton, Deerfield Beach, Clewiston, and Dania Beach, as well as the Water and Sewerage Corporation of the Bahamas and private developers in the Bahamas.

MBC's staff currently includes two licensed professional engineers, one engineer intern, and administrative staff. Our primary focus is on the municipal potable water, wastewater, and reclaimed water market sectors, with a specialty in membrane treatment applications. MBC also offers a range of environmental consulting, engineering design, and construction administration services, as well as permitting and regulatory compliance consulting.

Professional engineering services offered by MBC include:

- Water and wastewater treatment facilities design and consulting
- Utility regulatory compliance consulting
- Water transmission/distribution systems design
- Wastewater collection and transmission systems design
- Utility master planning
- Design–Build
- Construction management
- Treatability studies
- Hydraulic modeling
- Permitting and compliance
- Stormwater permitting and compliance

Being a small business, we rely heavily on repeat business and "word-of-mouth" advertising between our current and potential clients. We believe that our greatest marketing asset is our reputation, and we strive to build and maintain that reputation with every project. We are proud of our record, and we strongly encourage the City to contact any and all of our references.

McCafferty Brinson Consulting, led by Audra McCafferty and Frank Brinson, has provided the City of Boca Raton quality engineering services for over 10 years. We can count on every design from MBC to be detail-oriented, thorough, and place the City's best interests as a top priority. Their designs continuously result in the City receiving competitive bids from qualified contractors. Not only do they provide exceptional engineering services, but the MBC team is also easy to work with and adaptable to all of the City's operational needs. Their knowledge, experience, and customer service make MBC a top engineering firm for any public utility.
– Lauren Burack, P.E., Utility Services CIP Manager

7.3 Qualifications and Experience of MBC Team

MBC has selected our team not only for their experience and expertise to support MBC on this contract, but for their familiarity with the City of Pompano Beach and your facilities. In addition, we have selected our team to maximize participation under the City's Local Business Program. The following summarizes the skills and experience of each firm supporting MBC on this contract.

7.3.1 Holtz Consulting Engineers.

HCE was founded in Jupiter, Florida in 2006 to assist local clients with high-quality, responsive, and efficient engineering services on water and wastewater and general infrastructure improvement projects. HCE is a certified small business and minority business enterprise with several local cities, municipalities, and governing agencies including the Palm Beach County, City of West Palm Beach and South Florida Water Management District. The firm's founders and owners, David and Andrea Holtz, each bring to HCE's Clients over 30 years of comprehensive engineering and management experience. HCE's experienced staff consists of six professional engineers, four project engineers two designer/drafters, and two construction mangers/inspectors. HCE specializes in providing efficient and cost-effective utility engineering services to Clients located primarily in Southeast Florida. HCE's engineering and management expertise include the following areas:

- Wastewater treatment and disposal.

- Wastewater collection systems.
- Reclaimed water production, storage and distribution system.
- Grant writing and administration, including FEMA grant administration.
- Master planning, capital improvement planning, budgeting assistance and asset management.
- Hydraulic modeling of water distribution, wastewater collection, and reclaimed water distribution systems.
- Permitting of infrastructure improvements.
- Construction management services including inspection and start-up services.
- Pump station design and rehabilitation.
- Injection well system design, permitting, testing and monitoring.

HCE provides significant experience and capabilities in all phases of water and wastewater infrastructure improvement including planning, hydraulic modeling, preliminary engineering and final design, public relations and information, grant writing and administration, permitting, procurement, construction services, and project start-up and close-out. HCE prides itself on providing timely and cost-effective engineering and management service to local utilities, with an emphasis on listening and understanding the needs of its Clients on each assignment. As long-time residents of the area, and members of the community, we are committed to the success of all of our projects and the Clients that we serve. HCE is currently under contract to provide grant consulting services to the City of Pompano Beach, City of Stuart, City of West Palm Beach, City of Delray Beach, the Village of Golf, and Lakeport Water Association.

HCE staff has extensive grant writing and administration experience and has helped obtain and manage over 145 individual grants totaling over $82 million in funding for local utilities, municipalities and non-profit agencies. HCE staff also has extensive experience with the State Revolving Fund (SRF) loan program and has recently assisted the City of Stuart obtain a $5,900,000 low-interest SRF loan to fund critical water distribution system improvements and a $1,900,000 SRF loan with principal forgiveness for improvements at their water treatment plant. HCE is also currently assisting Okeechobee Utility Authority with an SRF loan for implementation of meter replacements throughout their service area and the City of Pompano Beach obtain SRF funding for both water distribution improvements for improvements to their interconnects with other municipalities and stormwater improvement projects. Through the USDA Rural Development Grant program, HCE is presently helping Lakeport Water Association obtain funding for providing wastewater service to the Lakeport Water Association service area. As part of the project development process, HCE can provide the following funding development support if requested:

- Research and review current and proposed grant opportunities utilizing online grant databases, and compare opportunities to the City's proposed infrastructure improvements program;
- Provide analysis identifying all grant requirements and restrictions including matching provisions, reporting requirements, and impact on existing grants or potential grant opportunities;
- Prepare and recommend application opportunities to the City for their approval prior to application development and coordinate, prepare and submit grant applications for review by the City prior to submittal to granting agencies;
- Following notice of award, coordinate and develop project scopes of work for grant contract development and execution by the City;
- Coordinate, prepare and submit as requested, all required grant compliance and project status reports;
- Coordinate, prepare and submit required documentation for invoicing of grants, including any required engineering certifications;
- Provide technical assistance to City on the administration of new grants;
- Coordinate and serve as the City liaison with Federal, State, District, Local Government, and private foundation funding agencies;
- Conduct public information meetings, surveys and environmental assessments as needed by granting agencies;
- Develop legal advertisements for grant opportunities as required by granting agencies;
- Perform grant compliance oversight and grant close-out documentation;
- Assist with audit reports or annual inspections as necessary.

7.3.2 Hillers Electrical Engineering, Inc.

Hillers Electrical Engineering, Inc. (HEE) has been in business since 1994 and is located in Boca Raton, Florida. Our staff offers unsurpassed experience, expertise, and personalized service in electrical engineering design, control application programming, and construction management. Our electrical design services include power, control, instrumentation, telemetry, start-up assistance, construction management services and PLC/computer programming for County and State municipal agencies as well as private industry.

Our office is fully equipped with state-of-the-art computer systems and engineering software to help ensure a quality and cost-effective product. Software programs include AutoCAD SKM fault current/coordination/arc flash program, generator sizing programs, and 3 - dimensional lighting calculations program.

HEE design staff brings vast electrical, instrumentation and telemetry design and project management experience in major expressway, DOT roadway systems, toll plaza and parking lot lighting systems; supervisory control and data acquisition (SCADA) systems; water/waste treatment plants, storm water pumping stations, lift stations, state-of-the-art distributed control systems, variable frequency speed drive analysis for facility efficiency improvements, ASR wells; implementation of commercial industrial load control program systems for large industrial power users, value engineering, energy audits, cost estimates, testing, start-ups, all types of security systems, fire alarm; low, medium and high voltage distribution systems, normal and stand by generation, short circuit calculations, fault current calculations, protective device coordination; professional and amateur sports complex lighting systems; power, control, instrumentation for major fuel storage and refining facilities in the U.S. and internationally.

HEE provides a variety of electrical, instrumentation and telemetry design and construction management tasks including: ow, Medium, and High Voltage Power Distribution Systems

- Motor Control Centers (MCCs)
- Distribution Panels
- Voltage Drop Calculations
- Variable Frequency Drive (VFD) Application
- Luminaire Calculations
- Short-Circuit Calculations, Protective Device Coordination & Arc Flash
- Standby Generator Systems
- Fire Alarm and Security Systems
- Instrumentation & Control Systems
- Telemetry Systems
- Supervisory Control and Data Acquisition (SCADA) Systems
- Shop Drawing Review
- Energy Audits
- Cost Estimates, Testing, and Start-Up

The nature of Consulting is such that responsiveness is the key to maintaining a long-term relationship. HEE takes great pride in ensuring that we are immediately accessible and responsive to our client's needs. This is demonstrated in the excellent relationship we have established over the last 26 years with many municipalities and environmental consulting firms.

7.3.3 Keith & Associates

KEITH was incorporated as a Florida corporation in 1998. As a mid-size close-knit firm of over 170 professionals, we provide civil engineering, traffic engineering, surveying and mapping, subsurface utility engineering, planning, landscape architecture, construction management and virtual design and construction services. The firm was founded on the principal of achieving success by combining the latest technology with client oriented business practices, and a staff of experienced and talented professionals.

KEITH understands the importance of community involvement and the necessity of working with local, state, and federal agencies in a hands-on cooperative manner to build consensus and receive subsequent approval of highly sensitive projects. This approach represents an underlying philosophy of the firm which results in a quality product, with emphasis on scheduling and cost effectiveness through team oriented management and quality control.

The professionals of KEITH continue to take great pride in the success of their undertakings. We look forward to the opportunity to provide you professional services.

FDOT Work Groups 3, 6, 7, 8, 10, 13, 15

KEITH is certified with the Florida Department of Transportation as follows:

3.1 Minor Highway Design
3.2 Major Highway Design
6.1 Traffic Engineering Studies
6.2 Traffic Signal Timing
7.1 Signing, Pavement Marking and Channelization
7.2 Lighting
7.3 Signalization
8.1 Control Surveying
8.2 Design, Right of Way & Construction Surveying
8.4 Right of Way Mapping
10.1 Roadway Construction Engineering Inspection
13.6 Land Planning/Engineering
15.0 Landscape Architecture

SURVEYING and MAPPING

The expertise of our Land Surveying staff is evidenced by Ms. Dodie Keith-Lazowick, PSM, Mr. Lee Powers, PSM, Mr. Eric Wilhjelm, PSM, Mr. Michael Mossey, PSM and Mr. Timothy Gray's, PSM combined South Florida surveying experience of over 100 years. This experience has resulted in a tremendous database of knowledge and information. The ability to offer in-house surveying and mapping capabilities provides for a more comprehensive unified team. Services include boundary, topographic, control, wetland, mitigation, route, aviation, bathymetric, Mobile LiDAR, GIS, GPS, as-built, American Land Title and coastal surveys, legal descriptions, right-of-way mapping, design base sheets, title review, DTMs, differential leveling, construction stakeout, platting, expert witness surveying, and mapping services.

The firm maintains eight full-time field crews to provide for our clients on an as-needed basis. Our entire field staff has received Maintenance of Traffic (M.O.T.) Safety Training currently required by the Florida Department of Transportation for work within public roadways. We understand the importance of these security requirements and are in 100% compliance for the safety of our staff and the public.

KEITH has placed a strong emphasis on quality surveying and mapping practices and procedures. This focus ensures that our surveying personnel are committed to exceeding your expectations.

SUBSURFACE UTILITY ENGINEERING (SUE)

Subsurface Utility Engineering (SUE) provides accurate mapping of existing underground utilities, eliminating the need to "find out the hard way" that plotted utility information was inaccurate. Performed during the project design process, Subsurface Utility Engineering can help utility owners, designers, engineers and contractors avoid conflicts or project delays. To avoid these issues, many clients turn to KEITH, a recognized leader in Subsurface Utility Engineering.

KEITH's staff has the expertise required to deliver accurate utility information needed by clients, engineers, contractors and designers to make informed decisions. Using KEITH's' SUE services will result in the enhanced accuracy of project designs and cost estimates by collecting and mapping underground utility data that was primarily unknown.

Our team of experts also includes utility coordination managers with extensive experience in working with facility owners, design teams and agencies to mitigate conflicts between existing facilities and proposed designs. Our relationships with area utility agencies serve to facilitate negotiations, expedite requests for available records and ultimately the successful certification of each project.

LANDSCAPE ARCHITECTURE

Our Landscape Architecture Department specializes in the creative fusion of architecture, landscape architecture and the environment. The ability to offer in-house landscape architecture design capabilities, ISA certified arborist and certified landscape inspector provides for a more comprehensive unified team.

Our team has provided innovative designs for institutional and commercial projects, residential and mixed-use developments, streetscape and roadway beautification, active and passive parks, plazas and various urban redevelopments. Whether it is in meeting the code of landscape ordinances with creativity or in creating spectacular lush destinations, we bring experience, knowledge, fresh energy and innovation to each project. Our approach is one of an extension of our clients' staff, offering guidance and assistance to make smart, long-term decisions that result in greater value for them, their projects, their stakeholders and our community as a whole. Regardless of the scope of the project, we pay special attention to architectural and landscape detail and welcome every opportunity to improve our environment.

7.4 Project Descriptions

McCafferty Brinson consulting

Client
City of Pompano Beach

Scope of Services
Membrane pilot testing, permitting, preparation of contract documents for direct procurement of membranes as well as membrane element loading, bidding, contract administration, on-site observation during loading, and review of membrane performance testing.

Contact
Mr. Phil Hyer
Utilities Treatment Plants Superintendent
City of Pompano Beach
1205 N.E. 5th Avenue
Pompano Beach, FL 33061
954.545.7030
Phil.hyer@copbfl.com

Start Date
03/2016

Completion Date
05/2020

Construction Cost
$1,098,000

Key MBC Staff
Frank A. Brinson, P.E.
Andrew Barba, E.I.

Key Features
- New membranes started up at a feed pressure of 73 psi, approximately 17 psi lower than the original membranes.
- Chemical pretreatment of feedwater completely eliminated and demonstrated during pilot testing.
- New membranes and operating protocol resulted in annual power and chemical cost savings of $245,000..

Nanofiltration Membrane Element Pilot Testing and Replacement

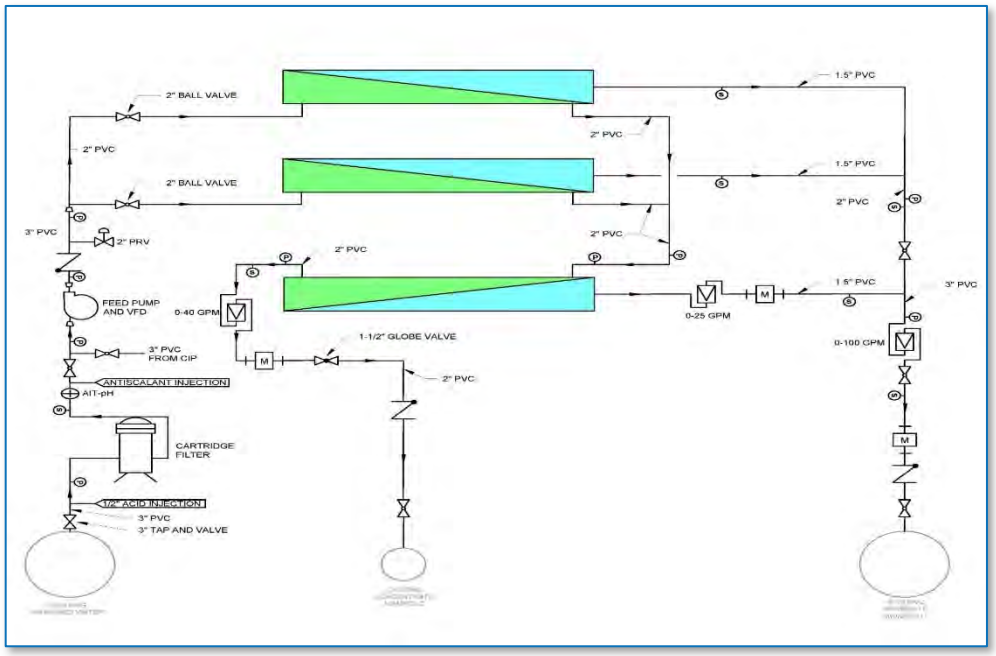
Pompano Beach, Florida

Background

The City of Pompano Beach owns and operates a 50 million gallon per day (mgd) capacity water treatment plant (WTP) which consists of a 10 mgd capacity nanofiltration (NF) process in parallel with a 40 mgd conventional lime softening process. The NF process includes five 2 mgd NF units arranged in a two-stage, 36:16 array, and the system was designed to operate at an 85% recovery rate with an average flux of 13.7 gallons per square foot per day (gfd). The NF units were populated with a hybrid of 1,820 membrane element models (Hydranautics ESNA1-LF and ESNA1-LF2), which were installed in 2009. NF membrane elements typically have a useful service life of 5 to 7 years. In 2016, The City was ready to begin replacing the existing NF membrane elements

Under this project the City was interested in investigating the possibility of reducing operating costs by taking advantage of advances in membrane technology to reduce power costs and eliminate chemical pretreatment of feedwater. To facilitate this, the City requested letters of interest (LOI) from three leading nanofiltration membrane element manufactures (MEM); Hydranautics, Dow Water and Process Solutions, Inc. (Dow), and Koch Membrane Systems, Inc. The City received responses from Hydranautics and Dow.

These LOI's requested membrane selections from the MEM's, in preparation for prequalification pilot testing, to verify that the membrane selections meet the City's specified permeate quality and membrane performance requirements. Meeting these permeate quality and membrane performance requirements during pilot testing allowed the MEM's proposed membrane element selections to prequalify for installation in the City's full-scale NF process skids under the Nanofiltration Membrane Element Replacement Project.



To facilitate pilot testing, the City and MBC designed, permitted, and constructed a pilot unit that utilized full-size (8-inch diameter, 7-element) pressure vessels in a 2:1 array with independent cartridge filters and pre-treatment chemical feed systems. The pilot unit was permitted to withdraw feedwater from the NF process raw water header and discharge permeate and concentrate to the plant's respective headers.

Pilot testing was conducted in two phases. Phase 1 was aimed at confirming that the City could meet the specified permeate quality and membrane performance requirements with the replacement membrane elements under the current operating conditions of full-scale NF process (acid and antiscalant chemical pretreatment, 85% recovery rate, and 13.7 gfd average flux). The objective of Phase 2 was to evaluate the performance of the membrane selection and potential fouling tendencies under modified operating conditions (no chemical pretreatment, an 82% recovery rate, and a 12.2 gfd average flux).

In short, the membrane elements provided by both MEM's met the specified permeate quality and membrane performance requirements under Phase 1 and 2 operating conditions which prequalified the proposed membrane element selections for installation in the City's full-scale NF process skids. In May 2019 the City advertised

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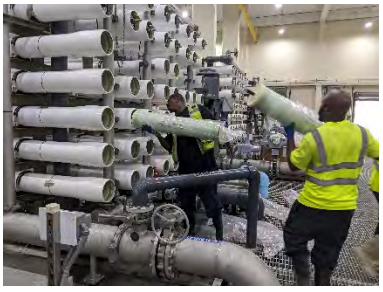
Membrane Element Replacement at the Water Treatment Plant
Pompano Beach, Florida

bid documents for the Nanofiltration Membrane Element Replacement Project and following evaluation of bid packages, Hydranautics was identified as the low bidder and the City issued a notice to proceed in December 2019.

The initial new membrane element loading configuration used on the full-sized was consistent with the pilot unit (first-stage: 7 ESPA 4-LD elements, second-stage: 7 ESNA-LF2-LD elements). However, when the first unit was started-up, it was found that this loading configuration did not meet the specified permeate quality requirements. First-stage: 3 ESPA 4-LD and 4 ESNA-LF2-LD Elements

- Second-stage: 7 ESNA-LF2-LD Elements



This modified loading configuration allowed the full-sized NF process to meet specified performance and permeate quality requirements. The project was completed in May 2020, 6 months ahead of schedule. All the membrane units were started-up under modified operating conditions (no chemical pretreatment) and the average feed pressure of the NF process skids was 73 psi with the new membrane elements, approximately 17 in an estimated operating power cost savings of approximately $27,000 per year. The NF process continues to operate effectively without chemical pretreatment, which results in an estimated chemical cost savings of approximately $218,000 per year. The combined power and chemical cost savings is estimated at $245,000 per year, for a total operating cost savings of well over $2 million over the expected life of the membranes.

The Project

MBC's scope of services for the project included the following:

- Design of a 2:1 array full-size element (8-inch diameter, 7-element) pilot plant.
- Pilot testing to confirm satisfactory operation of the selected membrane elements and to develop an operating strategy to allow stable membrane operation with no acid or antiscalant chemical pretreatment of the feedwater.
- Development of technical specifications for the replacement membrane elements and membrane performance requirements, and negotiations with the membrane element manufacturer for direct purchase of the elements.
- Permitting and bidding services.
- Contract administration during the loading period.
- Review and approval of membrane performance acceptance testing.

This project achieved substantial and final completion in May 2020.

McCafferty Brinson consulting

Client
City of Pompano Beach

Scope of Services
Professional engineering services for preparation of a needs assessment and conceptual designs.

Contact
Mr. Phil Hyer
Project Manager
City of Pompano Beach
1205 N.E. 5th Avenue
Pompano Beach, FL 33061
954.545.7030
phil.hyer@copbfl.com

Start Date
07/2018

Completion Date
03/2020

Key MBC Staff
Frank A. Brinson, P.E.
Andrew Barba, E.I.

Key Features
Evaluation of existing filter system needs, identification and evaluation of alternate treatment technologies, preliminary opinions of probable project and operating costs.

Gravity Filter Refurbishment and Alternative Treatment Technology Study

Pompano Beach, Florida

Background

The City of Pompano Beach owns and operates a 50 million gallon per day (mgd) capacity water treatment plant which utilizes a combination of conventional lime softening (40 mgd) and nanofiltration membrane treatment (10 mgd). The conventional lime softening process stream includes a multimedia gravity filtration system downstream of the lime softening units. The gravity filter system was constructed in 1983 and is exhibiting signs of age, deterioration, and is in need of repair and refurbishment. The City authorized MBC to conduct an engineering evaluation of the performance and condition of the gravity filter system (filters seven through fourteen) to determine specific repair and rehabilitation needs in preparation for a gravity filter refurbishment project. Additionally, under this study, MBC was authorized to identify and evaluate the alternate treatment technologies to potentially replace the gravity filter system.

The Project

The City authorized MBC to provide professional engineering services to complete a study that evaluated the existing gravity filter system and the feasibility of implementing alternate treatment technologies.

MBC's scope of services for the project included the following:

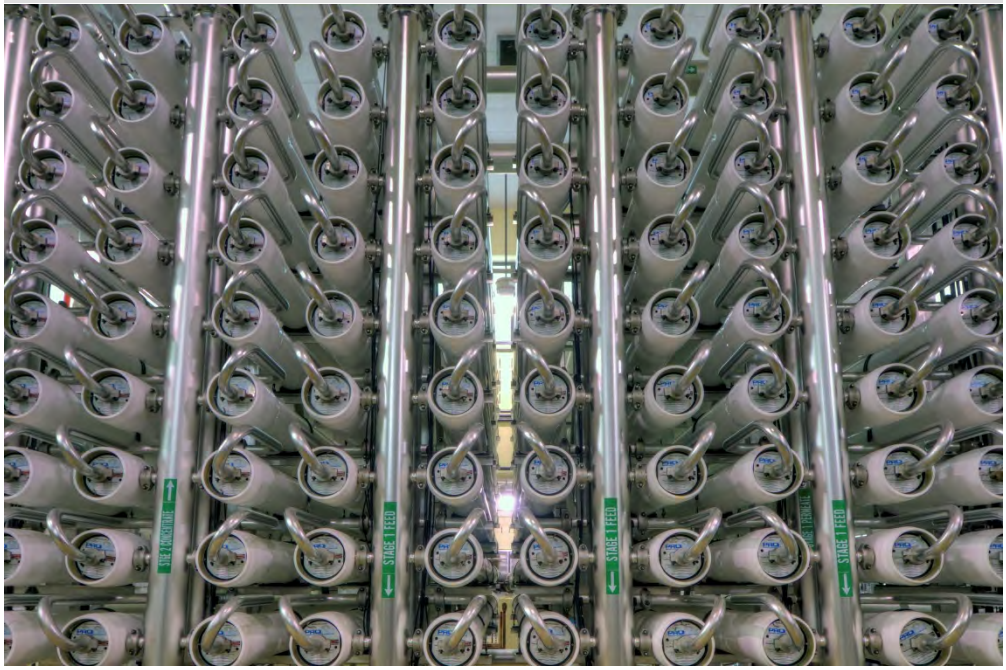
- Evaluation of Existing Filter System Needs
- Identification and Evaluation of Alternate Treatment Technologies
- Preliminary Opinions of Probable Project and Operating Costs
- Preparation of Draft and Final Study Reports

The Final Report was delivered to the City in March 2020 and provided treatment and cost analyses associated with rehabilitating the existing gravity filter system, implementing three separate alternate treatment technologies in the existing gravity filter basins, and expanding the Nanofiltration process.

McCafferty Brinson consulting

40 mgd Nanofiltration Membrane Element Replacement, Glades Road Water Treatment Plant

Boca Raton, Florida



Client
City of Boca Raton

Scope of Services
Membrane pilot testing, permitting, preparation of contract documents for direct procurement of membranes as well as membrane element loading, bidding, contract administration, on-site observation during loading, and review of membrane performance testing.

Contact
Mr. Chris Helfrich
Director of Utility Services
City of Boca Raton
1401 Glades Road
Boca Raton, Florida 33487
561.338.7303
chelfrich@ci.boca-ration.fl.us

Start Date
11/2011

Completion Date
07/2015

Construction Cost
$4 million

Key MBC Staff
Frank A. Brinson, P.E.
Andrew Barba, E.I.

Key Features
- Low-fouling membranes were originally developed during the design phase of the plant.
- Unique ability to operate without acid or antiscalant pretreatment
- New membranes started up at a feed pressure of 60 psi, approximately 23 psi lower than the original membranes, resulting in a substantial operating power cost savings

Background

In 2004, the City of Boca Raton completed construction and commissioning of the 40 million gallon per day (mgd) nanofiltration (NF) membrane process addition to the City's 70 mgd Glades Road Water Treatment Plant. This plant is currently the largest NF facility in operation in the world, and is the largest NF facility in South Florida that operates without acid or antiscalant pretreatment. MBC principal Frank Brinson served as project manager and engineer of record for design and construction of this project while an employee of CDM.

The original membrane elements for the plant were specially developed for the 2004 project by the membrane the membrane manufacturer, Hydranautics, which subsequently became the ESNA LF (low fouling) product line, the industry standard for South Florida NF facilities. These membrane elements were later installed at the Cities of Hollywood, Deerfield Beach, Pompano Beach, North Miami Beach, and Dania Beach.

McCafferty Brinson
consulting

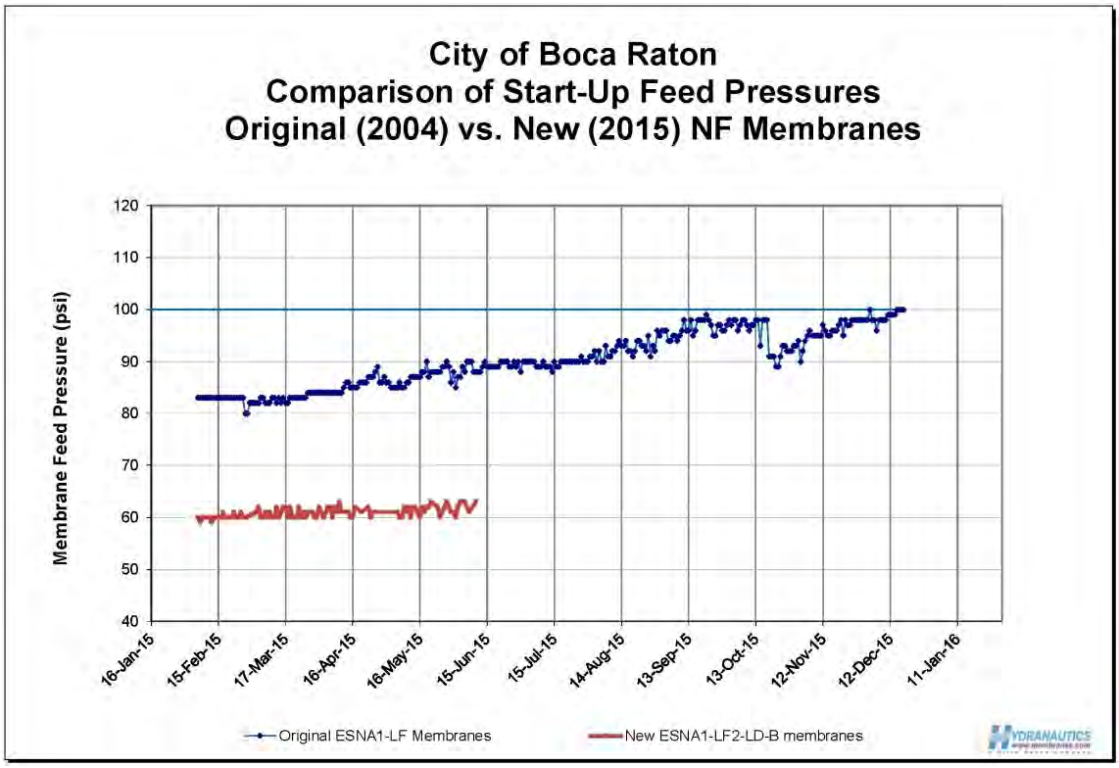
40 mgd Nanofiltration Membrane Element Replacement, Glades Road Water Treatment Plant

Boca Raton, Florida

MBC's scope of services for the project included the following:

- Design of a 2:1 array full-size element (8-inch diameter) pilot plant, and pilot-fouling NF product lines.
- Development of technical specifications for the replacement membrane elements and membrane performance requirements, and negotiations with the membrane element manufacturer for direct purchase of the elements.
- Development of technical specifications and bidding documents for a separate membrane loading contract by a qualified membrane systems contractor.
- Permitting and bidding services.
- Contract administration during the loading period
- On-site observation of membrane loading
- Review and approval of membrane performance acceptance testing

The project was completed in June 2014 with less than 1% change orders (for purchase of additional spare parts desired by the City). The start-up feed pressure for the new membranes was approximately 60 psi, approximately 23 psi lower than the start-up pressure of the original membranes, resulting in an estimated operating power cost savings of approximately $267,000 per year. The plant continues to operate successfully with no chemical pretreatment.



McCafferty Brinson consulting

Client
City of Boca Raton

Scope of Services
Preliminary and final design, permitting, bidding and services during construction.

Contact
Ms. Lauren Burack
Capital Improvement Project Manager
City of Boca Raton
1401 Glades Road
Boca Raton, Florida 33487
561.338.7329
lburack@myboca.us

Start Date
04/2016

Completion Date
07/2019

Construction Cost
$2.796 million

Key MBC Staff
Frank A. Brinson, P.E.
Andrew Barba, E.I.
Audra McCafferty, P.E.
Melissa Campbell. E.I.
Robert Landrum, E.I.

Key Features
Project included replacement of filter valves and actuators, and miscellaneous improvements of the City's 40 mgd membrane softening water treatment facility. During the construction phase, the City added rehabilitation of several multimedia gravity filters to the scope of the project.

Rehabilitation of the Membrane Pretreatment Pressure Filters

Boca Raton, Florida

Background

The City of Boca Raton owns and operates a 40-million gallon per day (mgd) membrane softening water treatment facility, which includes a granular media pressure filtration system upstream of the membrane process pretreatment cartridge filter system. The filters provide a cost-effective physical pretreatment of the raw water, as well as a reduction in the loading of suspended particulate contaminants that enter the membrane system, thus extending the normal service lives of the pretreatment cartridge filters.

The pretreatment pressure filter system was constructed in 2005 and has been in service since that date. The pressure filter process includes a system of automatic control valves and electric actuators that automatically controls the flow of water through the various operating sequences for each filter (e.g., normal filter mode, filter backwash, air backwash, filter-to-waste, etc.). Due to the age and condition of the existing valve actuators, the City planned to replace them with new, upgraded units. The scope of the project also included removal of the filter media, inspection of the underdrains, air lateral system, washwater troughs and other internal filter components, repair and refurbishment of the internal filter equipment, re-coating of the interior of the steel pressure vessels, and replacement of the filter media.

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Rehabilitation of the Membrane Pretreatment Pressure Filters
Boca Raton, Florida

The Project

The City contracted with MBC for professional engineering design and construction services. MBC's scope of services included reviewing record documents and drawings, preparing construction contract documents including drawings and technical specifications, permitting, bidding services, shop drawing review, general construction administration, and on-site resident project representative (RPR) services.

Design was completed in the third quarter of 2017. The construction contract was awarded to Florida Design Contractors. During the construction phase, the City added to the scope of the project via change order the rehabilitation and media replacement for three of the City's six multimedia gravity filters, which are an integral component of the City's conventional lime softening process at the water treatment plant. The project was substantially complete in July 2019 and achieved final completion in August 2019.

McCafferty Brinson consulting

Reclaimed Water Treatment Plant Modification Services During Construction

Pompano Beach, Florida

Client
City of Pompano Beach

Scope of Services
Design, permitting, preparation of technical specifications, permitting, and services during construction.

Contact
Mr. Phil Hyer
Utilities Treatment Plants Superintendent
City of Pompano Beach
1205 N.E. 5th Avenue
Pompano Beach, FL 33061
954.545.7030
Phil.hyer@copbfl.com

Start Date
02/2018

Completion Date
Ongoing

Construction Cost
TBD

Key MBC Staff
Frank A. Brinson, P.E.
Andrew Barba, E.I.
Melissa Campbell, E.I.
Robert Landrum, E.I.

Key Features
Design and construction services for removal and replacement of valves, actuators, modifications to bypass piping, and additive alternates to modify filter feed and lower pressure distribution pumps.

Background

The City of Pompano Beach owns and operates a 7.5 million gallon per day (mgd) capacity reuse water treatment plant which treats effluent from the Broward County Water and Wastewater Services (BCWWS) North Regional Wastewater Treatment Plant (NRWWTP), withdrawing from the ocean outfall pipeline. The Pompano Beach treatment plant produces reuse water suitable for public-access irrigation, and serves the City's municipal golf course, as well as residential areas within the City's service area. Recently, the plant has experienced difficulties in meeting reclaimed water demands due to elevated feedwater turbidity stemming from construction activities at the BCWWS NRWWTP, which are beyond the City's control. To continue to meet reuse water demands and maintain the existing viable customer users, the City desired to make certain near-term and long-term improvements and modifications at the reuse water treatment plant.

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Reclaimed Water Treatment Plant Modifications
Pompano Beach, Florida

The Project

The proposed improvements and modifications include the following:

- Installation of piping to allow the reclaimed water storage tanks to be filled with potable water to supplement the reclaimed water production during periods when the plant's production cannot meet demands. Piping will include appropriate accessories (e.g., flow metering, backflow prevention, etc.).
- Removal and replacement of existing valves and actuators.
- Modifications to existing filter bypass return piping.
- Addition of two new filter feed pumps in existing pump suction barrels.
- Removal and replacement of three existing and the addition of two new low pressure distribution pumps in existing pump suction barrels.

MBC's scope of services includes design, permitting, procurement, and construction phase engineering services to implement the improvements and modifications outlined above. The design, permitting, and installation of the potable water storage tank fill piping was completed it May 2018. The design phase of the remaining improvements is complete, and the project is currently out to bid. The construction phase is anticipated to begin in late 2020.

McCafferty Brinson consulting

Client
City of Pompano Beach

Scope of Services
Design and construction-phase services for upgrade of water system interconnect between the Cities of Margate and Pompano Beach.

Contact
Randolph Brown
Utilities Director
City of Pompano Beach
1205 NE 5th Avenue
Pompano Beach, FL 33060
randolph.brown@copbfl.com

Margate Interconnect
Start Date
06/2016

Completion Date
07/2017

Construction Fee
$135,868

Four Interconnects
Start Date
12/2017

Completion Date
Ongoing

Construction Fee
TBD

Key MBC Staff
Frank Brinson, P.E.
Audra McCafferty, P.E.
Andrew Barba, E.I.

Key Features
Interconnect design provides for bi-directional metering of transferred flow, backflow prevention, flushing of branch piping from either water system, as well as radio telemetry for flow meters.

Potable Water Interconnect Upgrades Design and Construction Phase Services

Pompano Beach, Florida

Background

The City of Pompano Beach owns and operates a water system consisting of a 50 million gallon per day (mgd) capacity water treatment plant, high service pump, finished water storage, and a finished water transmission/distribution system to provide water service to the customers within the City's water service area. The City maintains interconnects with several adjoining utilities for redundancy and supplemental water supply in the event of emergencies (e.g., unusual fire demands, hurricanes, etc.). The City has undertaken a program of "hardening" of the City's interconnects with adjacent systems to improve the resiliency of the system.

The Project

MBC's scope of services provides professional engineering for design, permitting, and construction-phase services to accomplish the following:

- Relocate the interconnect valve(s) from their current location to a location that is more easily accessible to City operation and maintenance crews.
- Adding upgraded design features such as two-way flow metering, backflow prevention (check valves), two-way blowoffs/flushing connections, and provision for future radio telemetry of the interconnect.

The Margate Interconnect project was completed in July 2017 on schedule and with zero change orders. Since then MBC has completed design for upgrading four interconnects. The project is currently pending the execution of interlocal agreements with Broward County Water and Wastewater Services and the City of Fort Lauderdale.

McCafferty Brinson consulting

Client
City of Pompano Beach

Scope of Services
Prepared and Submitted documentation to the FDEP to procure SRF loan.

Contact
Ms. Tammy Good
Utilities Treatment Plants
Project Manager
City of Pompano Beach
1205 N.E. 5th Avenue
Pompano Beach, FL 33061
954.786.5512
Tammy.Good@copbfl.com

Start Date
08/2017

Completion Date
Ongoing

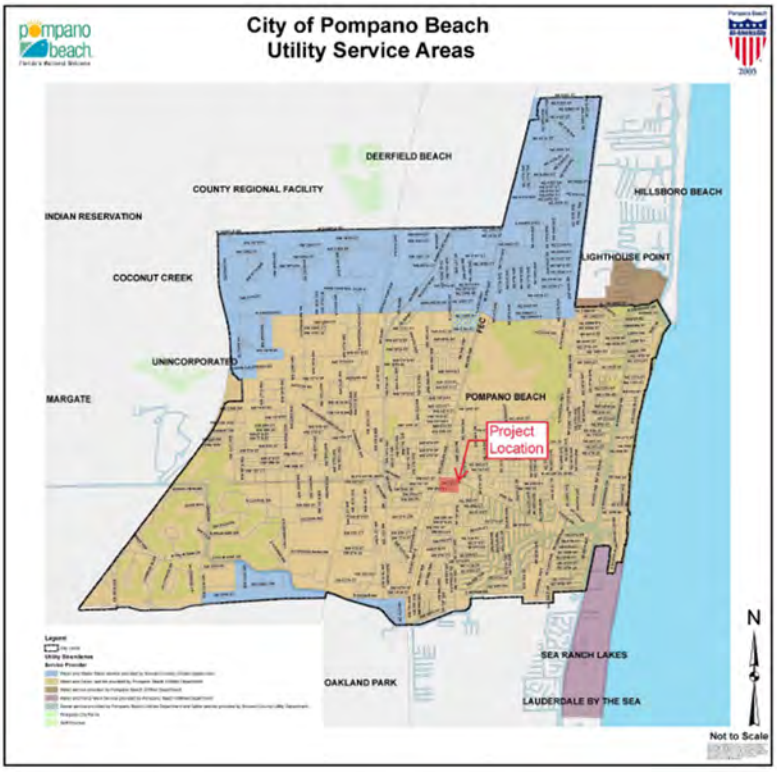
Construction Cost
TBD

Key MBC Staff
Frank A. Brinson, P.E.
Audra McCafferty, PE
Melissa Campbell, E.I.
Andrew Barba, E.I.

Key Features
Project included assistance to prepare and submit Request for Inclusion packages, Water Facilities Plans, Loan application and Agreement packages and coordinate the SRF-Compliance Components of Construction Contract Documents and Construction-Phase SRF Compliance Administration.

State Revolving Fund (SRF) Project Funding Assistance

Pompano Beach, Florida



Background

The City of Pompano Beach (City) owns and operates potable water, wastewater, and stormwater utility systems to serve customers within the City's service areas. The City intends to fund several projects planned in their 2019-2023 Capital Improvement Plan using State Revolving Fund (SRF) load funding. In August 2017, the City authorized MBC to assist with securing SRF funding. The City is currently considering utilizing SRF funding for several additional projects.

There are currently two SRF programs administered by the Florida Department of Environmental Protection (FDEP): The Clean Water State Revolving Fund created under the Clean Water Act, and the Drinking Water State Revolving Fund created under the Safe Drinking Water Act. Projects that involve wastewater collection, wastewater treatment or stormwater improvements may be submitted to the Clean Water SRF (CWSRF) program and projects that involve potable water distribution or water treatment may be submitted to the Drinking Water SRF program. MBC has assisted the City with construction loan funding through both programs.

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State Revolving Fund (SRF) Project Funding Assistance
Pompano Beach, Florida

The Project

The City authorized MBC to pursue SRF funding for construction of multiple projects that involve wastewater collection, stormwater improvements, submitted to the CWSRF program and projects that involve potable water distribution or water treatment, submitted to the DWSRF program.

To acquire SRF funding for the City, MBC's scope of services included the following:

- Prepare and Submit Request for Inclusion Packages.
- Prepare and Submit Water Facilities Plans.
- Conduct Public Meetings to present Water Facilities Plans
- Prepare, Submit, and Coordinate Loan Application and Agreement Packages.
- Assistance with SRF-Compliance Components of Construction Contract Documents.

McCafferty Brinson consulting

Client
City of Boca Raton

Scope of Services
Professional engineering services for preparation of a needs assessment and conceptual designs.

Contact
Lauren M. Burack, P.E.
Capital Improvement Project Manager
City of Boca Raton
1401 Glades Road
Boca Raton, Florida 33487
561.338.7329
lburack@ci.boca-raton.fl.us

Start Date
11/2018

Completion Date
07/2019

Key MBC Staff
Frank A. Brinson, P.E.
Audra McCafferty, P.E.
Andrew Barba, E.I.
Robert Landrum, E. I.
Mariell Soto, E.I.

Key Features
Project included investigation and evaluation of the current building structure and functioning to determine needed improvements.

Lime Softening Chemical Building Renovation Needs Study

Boca Raton, Florida

Background

The City of Boca Raton Glades Road Water Treatment Plant is a 70 million gallon per day (mgd) capacity facility that utilizes a combination of conventional lime softening and membrane softening to treat raw water from the Biscayne Aquifer. The lime softening treatment process includes a chemical building (Building 11) that houses the lime storage silos, lime slakers, lime feed equipment, a coagulant storage, preparation, and feed system, as well as other associated supporting systems and functions. Building 11 was constructed in the early 1970s and is in need of hurricane-hardening (specifically the lime silos) and renovation. The renovation will remove existing, out-of-service equipment and optimize the existing chemical processes, electrical systems, and the overall functions of the building.

Prior to performing the renovation design, the City wished to complete a comprehensive study on Building 11 to determine what upgrades are needed to hurricane-harden the building and silos, rehabilitate the building, modernize and upgrade the chemical handling, processing, and feed systems, and consolidate and optimize the electrical systems and other functions housed within the building.

McCafferty Brinson
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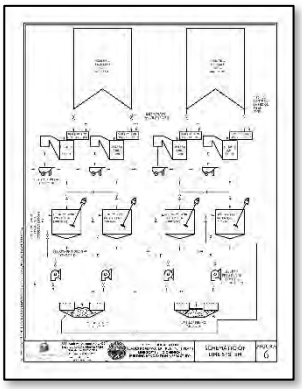
Lime Softening Chemical Building
Renovation Needs Study
Boca Raton, Florida

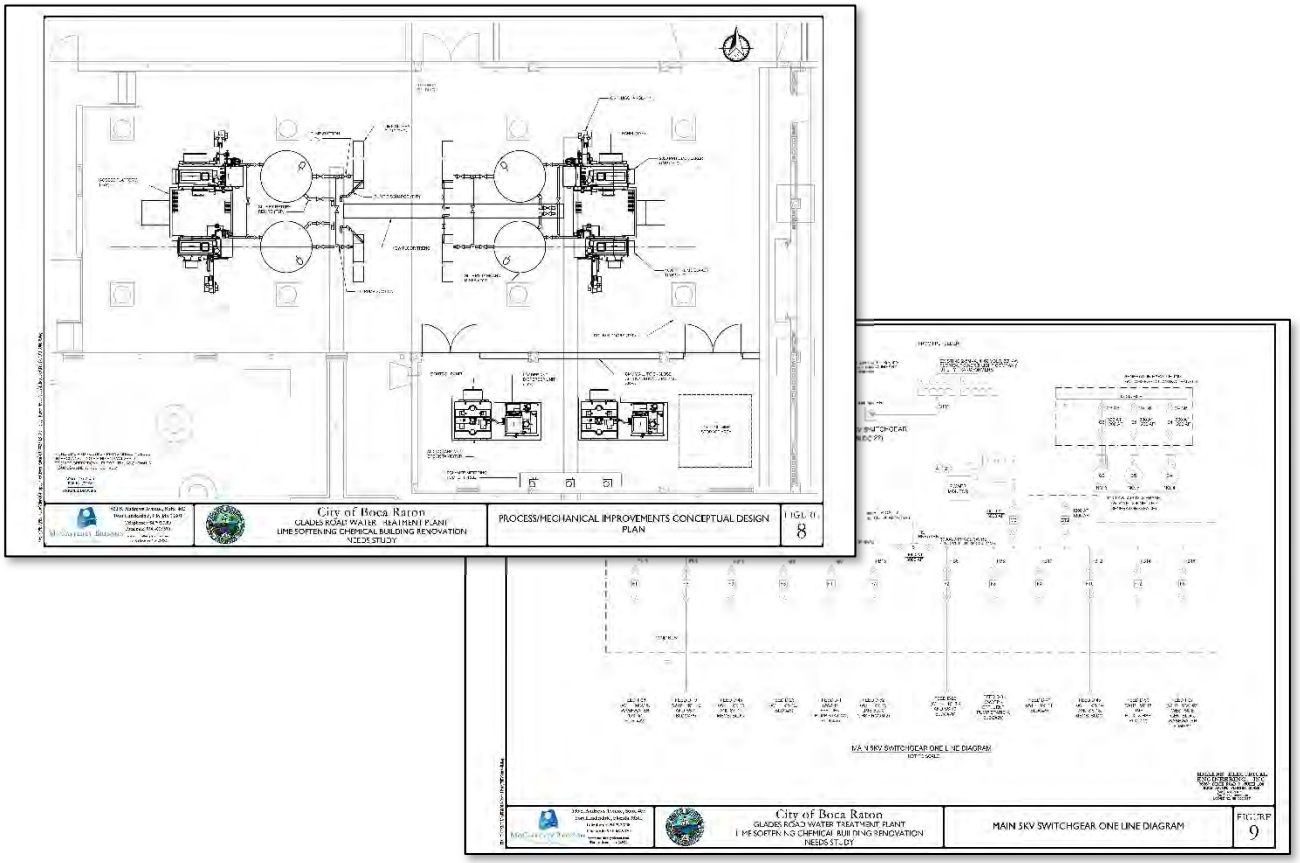
The Project

MBC was authorized to prepare the Needs Study in November 2018. The Needs Study and report included the following:



- Structural evaluation of the integrity of the building and associated structures and equipment, including the two 497-ton capacity steel lime silos.
- Identification of structural needs, design criteria, and standards applicable for process/mechanical systems, including a hurricane hardening analysis.
- Identification of treatment process/mechanical functions provided by the building and determination of needed improvements for the renovation. Major treatment process systems addressed include the lime storage, preparation, and Investigation and documentation of the existing electrical service and power distribution systems associated with the building.
- Evaluation of alternatives for upgrading and/or consolidating the electrical systems to improve efficiency reliability and identification of design criteria and standards applicable to the potential electrical modifications.

The Draft and Final reports were submitted to the City in July and August 2019, respectively. The City has utilized this report as a basis for rehabilitating and modifying the lime softening chemical building and the equipment within.



McCafferty Brinson consulting

Replacement of the Carbon Dioxide System

Boca Raton, Florida

Client
City of Boca Raton

Scope of Services
Engineering design, permitting, bidding, and construction administration, and resident project representative services.

Contact
Lauren M. Burack, P.E.
Capital Improvement Project Manager
City of Boca Raton
1401 Glades Road
Boca Raton, Florida 33487
561.338.7329
lburack@ci.boca-raton.fl.us

Start Date
10/2016

Completion Date
07/2019

Construction Cost
$1.28 million

Key MBC Staff
Frank A. Brinson, P.E.
Melissa Campbell, E.I
Andrew Barba, E.I.

Key Features
Project included demolition of the existing system, provision of a temporary carbon dioxide system storage system during construction, and installation of a new system consisting of two 18-ton storage tanks and two pressurized solution feed panels.

Background

The City of Boca Raton's Glades Road Water Treatment Plant utilizes a 45 million gallon per day (mgd) capacity conventional lime softening process in parallel with a 40 mgd membrane softening process. The lime softening process includes a recarbonation system to inject carbonic acid solution, prepared from gaseous carbon dioxide, downstream of the lime softening units, and upstream of the multimedia gravity filters for pH adjustment. The purpose of lowering the pH prior to the filters is to prevent the precipitation of calcium carbonate in the filters which can cause "cementing" of the filter media. Recarbonation maintains the quality of the filter media and improves filter performance. The existing recarbonation system had been in continuous operation since its installation in 2001 and had reached the end of its useful life. To provide enhanced system reliability and redundancy, the City elected to replace the existing single 60-ton storage tank with two 18-ton storage tanks, along with all system piping and two pressurized solution feed (PSF) solution injection panels.

McCafferty Brinson
consulting

WTP Recarbonation System Replacement and Services During Construction

Boca Raton, Florida

The Project

MBC's scope of services included preparation of construction drawings and technical specifications, opinions of probable construction cost, permitting, bidding services, construction contract administration, review of shop drawings, periodic site visits, review of pay applications, resident project representative (RPR) services, and project close-out. The technical specifications for the project included development of a detailed construction sequencing plan including the provision of a temporary carbon dioxide system and phased staging of the tank and panel replacement to complete construction without disrupting operation of the lime softening process. The key components of the project included the following:

- Replacement of the existing single 60-ton carbon dioxide storage tank with two 18-ton tanks.
- Replacement of the existing PSF panel for each of the City's two lime softening treatment units with new stainless steel PSF panels.
- Installation of new carbon dioxide gas lines from the storage tanks to each PSF panel and installation of new carbonic acid solution piping and diffusers from the PSF panels to the application points.
- Replacement of existing pH instruments and other control instrumentation for the system.

The contract for construction of the project was awarded to TLC Diversified, Inc with a Notice to Proceed issued June 4, 2018. The project reached final completion on December 18, 2019.

McCafferty Brinson consulting

Glades Road Rehabilitation of Steel Elevated Storage Tank Design, Bidding Services, and Construction Administration

Boca Raton, Florida

Client
City of Boca Raton

Scope of Services
Preliminary and Final Design, Permitting, Bidding Services, and Construction Administration.

Contact
Mr. Chris Helfrich
Director of Utility Services
City of Boca Raton
1401 Glades Road
Boca Raton, Florida 33487
561.338.7303
chelfrich@ci.boca-raton.fl.us

Start Date
02/2012

Completion Date
September 2014

Construction Cost
$277,000

Key MBC Staff
Frank A. Brinson, P.E.

Key Features
Project included rehabilitation and repair of the two City's steel elevated storage tanks and associated piping and related systems.

Background

The City of Boca Raton owns and operates two elevated steel tanks used to store finished potable water. The tanks are located at the Glades Road Water Treatment Plant. Both of the tanks were inspected by Tank Engineering and Management Consultants, Inc. (TEMC) in 2010, and recommendations were made for various repairs and rehabilitation work. The City contracted with MBC to provide engineering services to assist the City in preparing a set of contract documents, suitable for competitive bidding by qualified tank rehabilitation firms. The scope included rehabilitation and repair of the two on-site storage tanks, and MBC's assistance during the bidding period. The contract documents were based on the American Water Works Association (AWWA) Standard D100 and D102 (latest edition) for Welded Carbon Steel Tanks for Water Storage.

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consulting

Glades Road Rehabilitation of Steel Elevated Storage Tank Design, Bidding Services, and Construction Administration

The Project

The scope of the project included the following:

- Review of record drawings of the tanks and associated piping and related systems.
- Preparation of construction drawings of the proposed rehabilitation and repair.
- Preparation of technical specifications for the rehabilitation and repair.
- Determination of permits needed to proceed with the rehabilitation and repair of the tanks.
- Correspondence with the Palm Beach County Health Department regarding the work to be performed.
- Preparation of written addendums during bid phase.
- Assist the City in obtaining competitive bids from contractors.
- Construction Administration.

The contract for construction of the project was awarded to Utility Services with a Notice to Proceed dated November 6th, 2013. MBC provided contract administration services during construction. A deductive change order was issued to reconcile the contract for unused allowance funds lowering the original estimated cost from $277,000 to $188,275.

McCafferty Brinson consulting

Country Club Village Infrastructure Improvement

Boca Raton, Florida

Client
City of Boca Raton
As a subconsultant to the Prime

Scope of Services
Professional engineering services for survey, design, permitting, construction documents and bidding.

Contact
Lauren M. Burack, P.E.
Capital Improvement Project Manager
City of Boca Raton
1401 Glades Road
Boca Raton, Florida 33487
561.338.7329
lburack@ci.boca-raton.fl.us

Start Date
07/2018

Completion Date
Ongoing

Construction Cost
$5.63 million

Key MBC Staff
Frank A. Brinson, P.E.
Audra McCafferty, P.E.

Key Features
Project included geotechnical services, water main replacement, roadway and sidewalk improvements.

Background

In 2017, the City completed a critical infrastructure analysis to evaluate and prioritize the renewal or replacement of large-diameter pressurized pipelines within the City's service area. The vital assets studied consist of over 600 miles of water main as well as over 100 miles of force main. This analysis was performed to plan for the future of the utility system so that the City can continue to provide a high level-of-service to utility customers.

The infrastructure analysis results are the basis for the City's multi-year sustainable infrastructure initiative. The initiative's core principle is progress through planning, which is achieved by a comprehensive and proactive infrastructure review. The first phase of this initiative includes multiple neighborhood projects. The goal was to holistically upgrade the existing neighborhood infrastructure.

The City has selected the project team to complete the infrastructure improvements in the Country Club Village neighborhood. The Country Club Village upgrades generally include construction of larger diameter water mains to replace aged water mains, relocation and elimination of rear water service lines, as well as roadway, stormwater outfall, and sidewalk improvements. Additionally, a redundant water line was installed under Interstate-95, as deemed necessary by the infrastructure analysis.

The Project

The project includes the following improvements:

- Relocate and upsize approximately thirty-five thousand linear feet of existing domestic water mains from the rear yards to the rights-of-way. This will include abandonment of the existing water main system, relocation and reconnection of the water service from the new water main to the house as well as restoration of private and public property.
- Installation of approximately 2,500 of 16-inch water main on SW 18th Street from Juana Road west to the repump facility, which includes the crossing of Interstate-95.
- Work also includes sidewalk removal and replacement due to trip hazards, infill of any missing pieces of sidewalks to complete network if requested by City, mill and overlay all roadways, installation/replacement of ADA ramps (where ramps and sidewalks exist), and minor swale improvements. There are also three (3) stormwater outfalls in the L-47 canal, just to the north of NW 7th Street that will be improved with new mitered ends and end walls.

The scope of services for the project include:

- Topographic surveying, geotechnical services and underground locates.
- Water main replacement.
- Roadway and sidewalk improvements.
- Permitting and bidding assistance.

The project was advertised for bid in September 2019 and the notice to proceed was issued in April 2020. Construction is anticipated to be completed in July 2021.

7.5 MBC Team's Project Descriptions

In the following pages we have included MBC's subconsultants', Holtz Consulting Engineers, Hillers Electrical Engineering Inc., and Keith and Associates Inc. project descriptions that summarize services and experience of each firm.

RLI E-23-20

HCE

H E E

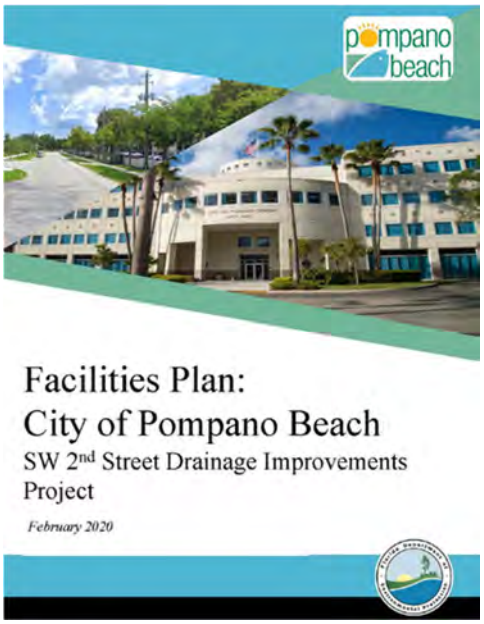
HILLERS ELECTRICAL ENGINEERING, INC.

KEITH

Engineering Inspired Design.

HOLTZ CONSULTING ENGINEERS

City of Pompano Beach State Revolving Fund Funding Assistance



As a subconsultant to McCafferty Brinson Consulting, HCE has been providing grant consulting services since 2017 to the City of Pompano Beach to assist in the procurement and administering of Florida Department of Environmental Protection (FDEP) State Revolving Fund (SRF) low-interest loans projects for the City. HCE assists the City of Pompano Beach with preparation of Requests for Inclusion and Facility Planning documents and all supporting documentation required for SRF funding. HCE is currently working on two SRF projects for the City, one for the Drinking Water Program and one for the Clean Water Program. The project for the Drinking Water Program has received a $496,400 loan with over 30% loan forgiveness. HCE is currently assisting the City with SRF assistance for $8 million dollars of stormwater and drainage improvement projects for the City.

City of Pompano Beach State Revolving Fund Funding Assistance	
Client/Owner	McCafferty Brinson Consulting/City of Pompano Beach
Contact	Randy Brown, Utility Director 1205 NE 5th Avenue Pompano Beach, FL 33060 954-545-7043 Randolph.brown@copbfl.com
Project Dates	September 2017 – Present
Engineering Fee	$84,980
Key HCE Staff	Christine Miranda, PE Andrea Holtz, PE

HOLTZ CONSULTING ENGINEERS

Martin County Utilities Reclaimed Water Storage Tank and Pumping Improvements

HCE provided preliminary and final design, permitting, bidding, and construction administrative services for a two-phase reclaimed water storage and pumping improvements project at the Tropical Farms Wastewater Treatment Plant. Phase I consisted of a new one-million-gallon prestressed concrete reclaimed water storage tank including vibroflotation compaction beneath the tank, bypass piping, and piping relocations. Phase II included a new reclaimed water distribution pump station including 18-inch through 36-inch suction and discharge piping and three vertical turbine pumps. An effluent transfer pump station with three new vertical turbine pumps located at the chlorine contact basin was also included. Phase II also consisted of replacing two existing Return Activated Sludge (RAS) pumps with new dry-pit mounted chopper-style pumps. Both phases were completed on schedule.

Martin County Utilities Reclaimed Water Storage Tank and Pumping Improvements	
Client/Owner	Martin County Utilities
Contact	Jeremy Covey PE, Technical Services Administrator PO Box 9000, Stuart, FL 34995 772-221-2353 jcovey@martin.fl.us
Project Dates	August 2015 – April 2018
Engineering Fee	$137,620
Key HCE Staff	Curtis Robinson, PE David Holtz, PE

HOLTZ CONSULTING ENGINEERS

Seacoast Utility Authority Nanofiltration Concentrate Pipeline and Blending Pump Station

The project included the design, permitting, bidding and construction administrative services of the installation of a new 3.8-mile, 16-inch pipeline from the Seacoast Utility Authority Hood Road Water Treatment Plant to the PGA Wastewater Treatment Plant for blending nanofiltration concentrate with reclaimed water and distribution to their reclaimed water customers. A 2-inch fiber optic conduit was installed in the same trench as the concentrate main for the future installation of a fiber optic cable. This project included the horizontal directional drilling of Military Trail, Interstate 95, Florida's Turnpike, Central Boulevard, and Jog Road. Work included coordination with permitting authorities, the FDOT, and home owner associations. HCE also performed design, permitting, bidding and construction administrative services of a nanofiltration concentrate pump station at the PGA WWTP. The blending station pumps nanofiltration concentrate from a lined holding pond at the PGA WWTP to the chlorine contact chamber at a controlled rate to optimize the conductivity/salinity of the blend water. A portion of this project was funded through an Alternative Water Supply Grant from the South Florida Water Management District.

Seacoast Utility Authority Nanofiltration Concentrate Pipeline and Blending Pump Station	
Client/Owner	Seacoast Utility Authority
Contact	Rim Bishop, Utility Director 4200 Hood Road Palm Beach Gardens, FL 33410 561-627-2900 rbishop@sua.com
Project Dates	June 2011 - November 2013
Engineering Fee	$284,980
Key HCE Staff	David Holtz, PE

HOLTZ CONSULTING ENGINEERS

City of Lake Worth Beach Collection System Asset Management Project

Holtz Consulting Engineers, Inc. (HCE) is currently providing the City of Lake Worth Beach (City) engineering services for various asset collection, assessment, and master planning tasks of the existing wastewater collection system. Each of these various tasks will be summarized in a report that outlines the City's implementation of its asset management plan and infrastructure prioritization and renewal program pursuant to the certification standards of a Blue Star Utility (contingent on the passage of proposed Florida House and Senate legislation).

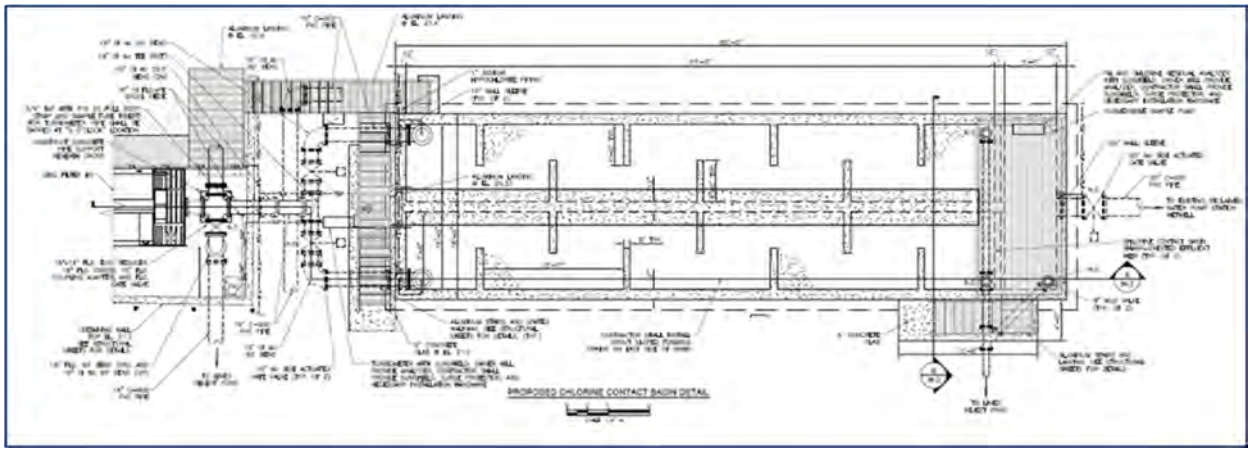
HCE assisted the City to collect asset, risk, and condition assessment data on the City's wastewater sewer system. HCE held a workshop with City staff to determine what types of wastewater assets, and corresponding asset attribute data, would be collected for this project. Additionally, the workshop determined what kind of tertiary information, such as information on the condition of an asset, was collected and how that data was to be defined. HCE worked with the City to develop a wastewater asset management database system within the ESRI Geographical Information System (GIS) platform and used the data from the workshop to establish the database schema. HCE and the City used ESRI's proprietary "ArcGIS Collector" application to develop a remote data collection tool that City staff would use to collect wastewater asset management data and transmit that data back to the City via the internet. HCE assisted the City to train City staff on how to properly perform the wastewater asset collection, risk, and condition assessments, in addition to training City staff on how to properly use the GIS remote collection tools.

HCE is in the process of developing a wastewater collection system master plan. HCE delineated wastewater sewer sheds using GIS for each of the City's cascading lift stations and created a cascading lift station network diagram. Using geocoded water use data and existing pump runtimes at the lift stations, HCE approximated the extent of inflow and infiltration (I&I) in the City's sewer network. HCE analyzed risk and condition assessment data collected by City staff on the City's lift stations and used that data to develop a prioritized list of lift stations in need of rehabilitation and repair. HCE is currently in the process of analyzing risk and condition assessment data on the City's manholes to develop of prioritized list of manholes in need of rehabilitation and repair. HCE is in the process of integrating the pipeline data collected by Redzone Robotics, the risk and condition assessments on the City's lift stations and manholes, and the I&I analysis to develop a full wastewater collection system master plan that includes proposed capital improvement projects and associated cost estimates.

City of Lake Worth Beach Collection System Asset Management Project	
Client/Owner	City of Lake Worth Beach
Contact	Julie Parham PE, Assistant Utility Director 301 College Street Lake Worth Beach, FL 33460 561-586-1798 jparham@lakeworthbeachfl.gov
Project Dates	August 2018 - Current
Engineering Fee	$110,420
Key HCE Staff	Stephen Fowler, PE and Andrea Holtz, PE

HOLTZ CONSULTING ENGINEERS

South Martin Regional Utility WWTP Chlorine Contact Basin and Filter Improvements



HCE is providing design, bidding, permitting, and construction administration services for a new chlorine contact basin and new disc filter at the SMRU wastewater treatment plant in Hobe Sound, Florida. The new chlorine contact basin (CCB) is being designed with two chambers operating in parallel and is sized such that one basin can continue to treat 50% of the total design flow with one chamber out of service, providing the plant with Class I reliability. The new CCB will replace the plant's existing series of chlorine contact chambers and provide the plant with greater disinfection capacity in anticipation of greater future flows. The new chlorine contact basin has been designed to include pH, chlorine residual, and turbidity monitoring instrumentation. Additionally, this project includes the installation of a third disc filter and associated piping to expand the plant's filtration capacity. This project includes significant re-routing of existing plant piping, demolition of existing structures, and construction of new facilities. In addition to providing engineering design, HCE assisted the utility in obtaining a minor permit modification for the project through the Florida Department of Environmental Protection and is currently in the process of assisting with contractor procurement. HCE is currently assisting SMRU with construction oversight for this project.

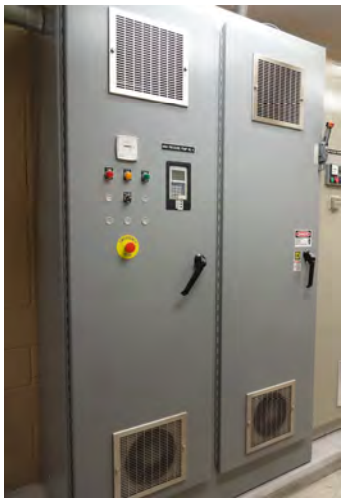
South Martin Regional Utility WWTP Chlorine Contact Basin and Filter Improvements	
Client/Owner	South Martin Regional Utility
Contact	Monica Shaner PE, Utility Director PO Box 395, Hobe Sound, FL 33475 772-546-6259 mshaner@tji.martin.fl.us
Project Dates	February 2019 - Current
Engineering Fee	$305,048
Key HCE Staff	Curtis Robinson, PE David Holtz, PE

City of Pompano Beach Utilities Treatment Plants
Reclaimed WTP Piping Modifications & Production Improvements

Hillers Electrical Engineering provided electrical and instrumentation and control design for the Reclaimed WTP project. This project consisted of adding 13 new motor operated valves, replacement of three existing low pressure distribution pumps and Variable Frequency Drives (VFD's), adding of two new low pressure distribution pumps, two filter feed pumps and VFD's and a new remote Programmable Logic Controller panel. This project is under bidding process. The construction inspection services will be provided at the time of construction phase.

Project Highlights:

- Design of a new electrical panel and provide power to 13 new motor operated valves
- Design of a new remote Programmable Logic Controller panel to provide control to 13 new motor operated valves
- Design replacement 480V feeder of existing low pressure distribution pumps
- Design replacement of three existing low pressure distribution pumps and VFD's
- Design adding of two new low pressure distribution pumps and VFD's
- Design adding of two new filter feed pumps and VFD's



Utilities Treatment Plants
1205 NE 5th Ave,
Pompano Beach, FL 33060
Phil Hyer
Phil.Hyer@copbfl.com
(954) 545-7016
Completed the design in 2020 – On-time

LOXAHATCHEE RIVER ENVIRONMENTAL CONTROL DISTRICT
RECLAIMED DEEP BED FILTERS PROJECT

Hillers Electrical Engineering, Inc. provided the electrical design and construction services for the Loxahatchee River Environmental Control District Reclaimed Deep Bed Filters Project.

Project Highlights:

- New FPL service with new pad mounted transformer for the Deep Bed Filter Electrical Building
- Designed new 3000A switchgear, automatic transfer switches (ATS's), manual transfer switches (MTS's), new motor control center (MCC), and new power and lighting panels.
- Designed new portable generator termination boxes for Electrical Building No.3 and the Deep Bed Filter Electrical Building.
- Designed new Kirk-key schematic interlock to enhance the connectivity from either FPL service 1 or service 2 to the entire power distribution system.
- Designed new LED lighting, convenience power system, UPS power system for PLC, SCADA and network devices at the Filter Structure and at the Electrical Building
- Designed new variable frequency drives (VFD's), solid state reduced voltage starters (SSRVS) for Filter Feed Pumps, Filter Blowers, and Filter Backwash pumps.

Design completed: August 2015
Construction completed: January 2019
Electrical Design & Construction Services Fee $8.45 million

H E E

Projects

Palm Beach County Water Utilities
WTP2 Filters Improvements

Hillers Electrical Engineering provided electrical, instrumentation and control, fire alarm design as well as construction inspection services for the WTP 2 New Filters project. This project consisted of a new filter building with 8 sand filters, 1 clearwell, one electrical room, one blower room, and transfer/backwash pump station.

Project Highlights:

- Design replacement 480V feeder of existing Hypochlorite Building
- Design of new 480V feeder from existing Hypochlorite Building to new filter building
- Design new electrical room with new switchboard, new Motor Control Center
- Design of new Variable Frequency Drives for transfers pumps
- Design of new Solid State Reduced Voltage Starters for backwash pumps and backwash blowers
- Design interior and exterior lighting, grounding and lightning protection systems
- Design new Filter PLC control panel and instruments associated with the filter system
- Design new Fire Alarm System for Filter Building

Palm Beach County Water Utilities Department
8100 Forest Hill Blvd
West Palm Beach, FL 33413
Krystin Berntsen, P.E.
kberntsen@pbcwater.com
(561) 493-6000
Total Project Cost: $14,000,000.00
Completed 2016 – On-time and within budget

PEMBROKE PINES WATER TREATMENT PLANT SODIUM HYPOCHLORITE REHABILITATION AND CO2 INJECTION SYSTEM

Hillers Electrical Engineering, Inc. provided the Instrumentation and Control, SCADA and Electrical Design and Construction services for the Rehabilitation of the Sodium Hypochlorite and CO2 Injection System at the Water Treatment Plant.

Project Highlights:

- Replacement of existing Sodium Hypochlorite metering pumps, bulk storage tank, and transfer pump.
- Update SCADA system for monitoring and control for Hypochlorite system.
- Design power and controls for temporary CO2 system.
- Design power and controls for permanent new CO2 storage tank and CO2 feed panels for monitoring and control of CO2 injection into the water system.
- Design power and controls for existing and new instruments associated with new CO2 system.

City of Pembroke Pines
8300 South Palm Drive
Pembroke Pines, FL 33025
George Wrves, P.E.
gwrves@ppines.com
(954) 435-7979
February 2018 – March 2019

Pompano Beach Reclaimed Water Distribution Main- Phase III

Project Location: Pompano Beach, FL
Project Completion: 2009

Client: City of Pompano Beach
Mr. Horacio Danovich, CIP
Engineer (954) 786-7834
Horacio.danovich@copbfl.com

Project Description: The proposed reclaimed water main improvements consisted of approximately 4,700 linear feet of a 24" reclaimed water main along NE 6th Street from NE 26th Avenue west to NE 23rd Avenue then south along NE 23rd Avenue to SE 5th Court. The project included the design of new services to individual properties along the design corridor, extensions of main line branches, utility relocations, and a 300-foot directional bore. As the prime consultant, KEITH performed civil engineering design and permitting, surveying, which included a topographic design survey requiring underground utility locating services, and construction administration and construction engineering inspection services. Engineering services included route planning, system sizing, design and preparation of construction plans and specifications for the proposed reclaimed water distribution system. An integral element of the project scope included a field review by KEITH in preparation of the pipeline routing analysis.

A conceptual plan was prepared for approval prior to proceeding with final design. Preparation and submittal of permit applications was conducted. Assistance was provided to the City during the bidding and award phase of the contract documents. Full time construction administration and inspections was provided throughout the project including schedule review/approval, payment application review and processing, full time inspection, owner- contractor-engineering progress meeting coordination, coordination of RFI's and proposed change orders (PCO's), utility coordination, as-built review, punch list preparation, and permit close-out/certification processing. The project was completed on time and within budget.

Pompano Beach Continuing Contracts

Project Location: Pompano Beach, Florida
Project Commencement: 2002
Project Completion: On-going

Client: City of Pompano Beach
Dr. Horacio Danovich, PE, CIP Manager
(954) 786-7834
Horactio.Danovich@copbfl.com

Project Description: KEITH is currently providing general engineering services to the municipality on an as-needed basis on this ongoing continuing services contract. KEITH has served as the General Engineering Consultant for the City for over 16 years. Some of the projects provided under this contract include:

- SE 8th Court Bridge Replacement
- Municipal Reclaimed Water Main Design
- Pompano Beach Sidewalk Construction Program
- Harbor Drive Beautification and Roadway Improvements
- Municipal golf course, cemetery, dog park and pier renovations
- Pompano Beach branch library renovations
- Oceanside Fire Station No. 11
- NE 4th Street Reuse Water Line Expansion
- Condition Assessments for Various City Owned Buildings and Facilities
- Pompano Beach Boulevard Water Main Design
- Municipal Chiller Plant
- Fire Station No. 103 Design
- SW 36th Avenue Sidewalk and Pedestrian Bridge
- Founders Park
- Pompano Air Park Maintenance Building Design

KEITH is currently providing general surveying and mapping services to the municipality on an as-needed basis on this ongoing continuing services contract. KEITH has served as the General Surveying Consultant for the City for over 16 years. Some of the projects provided under this contract include:

- South Cypress Road and SE 15th Court Intersection Design Survey
- Pompano Beach branch library Topographic Survey
- SE 13th Street Force Main Design Survey
- Utility Casting Federal Highway Design Survey
- SR A1A Survey and Subsurface Utility Engineering (SUE) services from Hillsboro Blvd to Terra Mar Drive
- Permanent Emergency Generators Design Survey for City Hall and Public Safety Building
- GIS Mapping Pilot Project
- North Riverside Drive Directional Drill Survey and SUE services
- Briny Avenue Survey and SUE services
- Palm Aire Park Topographic Survey
- SE 9th Avenue Bridge Replacement Design Survey
- Civic Campus/Old Pompano Topographic Survey and Updated Surveys
- Intracoastal Waterway Sign Surroundings Specific Purpose Survey
- Santa Barbara Reuse Water Line Expansion Topographic Survey
- Rustic Bridge Park Design Survey
- NE 4th Street Specific Purpose Survey

Pompano Beach Continuing Contracts

Project Location: Pompano Beach, Florida
Project Commencement: 2002
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- Utility Casting Federal Highway Design Survey
- SR A1A Survey and Subsurface Utility Engineering (SUE) services from Hillsboro Blvd to Terra Mar Drive
- Permanent Emergency Generators Design Survey for City Hall and Public Safety Building
- GIS Mapping Pilot Project
- North Riverside Drive Directional Drill Survey and SUE services
- Briny Avenue Survey and SUE services
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- SE 9th Avenue Bridge Replacement Design Survey
- Civic Campus/Old Pompano Topographic Survey and Updated Surveys
- Intracoastal Waterway Sign Surroundings Specific Purpose Survey
- Santa Barbara Reuse Water Line Expansion Topographic Survey
- Rustic Bridge Park Design Survey
- NE 4th Street Specific Purpose Survey

8. Resumes of Key Personnel

The project listing below highlights MBC's staff individuals' recent project experience directly related to the water and reuse treatment plant services proposed under this RLI. In the following pages we have included individual staff resumes summarizing education, training, and experience.

Project	Frank A. Brinson, P.E.	Audra McCafferty, P.E.	Andrew Barba, E. I.	Melissa Campbell, E.I.	Mariell Soto, E.I.	Robert Landrum, E.I.
Pompano Beach NF Membrane Element Replacement and Pilot Testing *	✓	✓	✓			
Pompano Beach Gravity Filter Refurbishment and Alternative Treatment Technology Study	✓		✓			✓
Pompano Beach State Revolving Fund (SRF) Project Funding Assistance	✓	✓	✓	✓		
Pompano Beach Reuse Water Treatment Plant Modifications	✓		✓	✓	✓	✓
Pompano Beach Water Interconnect Upgrades	✓		✓			
Pompano Beach Lime Softening Drive Replacement	✓	✓				
Boca Raton Country Club Village Infrastructure Upgrades		✓	✓	✓	✓	
Boca Raton 40 mgd NF Membrane Element Replacement	✓		✓			
Boca Raton Rehabilitation of the Membrane Pretreatment Pressure Filters *	✓	✓	✓	✓		✓
Boca Raton Lime Softening Backwash and Disinfection Upgrades	✓		✓	✓		✓
Boca Raton Replacement of the Carbon Dioxide System	✓		✓	✓		✓
Boca Raton Lime Softening Chemical Building Renovation Needs Study	✓	✓	✓		✓	✓
Boca Raton Washwater Recovery Basin Improvements	✓		✓			✓
Seminole Tribe of Florida Hollywood Raw Water Supply Improvements	✓		✓	✓	✓	✓
City of Lake of Worth WTP Reverse Osmosis Membrane Replacement Evaluation and Selection	✓		✓			
Clewiston LPRO Water Treatment Plant, Floridan Aquifer Wellfield and Deep Injection Well	✓	✓				

Frank Brinson, P.E., CDT
Vice President

McCafferty Brinson consulting

Experience Highlights
Mr. Brinson has more than 29 years of experience in a wide range of environmental engineering projects.

Specialties include water and wastewater treatment facilities, membrane treatment, pumping and hydraulic systems, and utility infrastructure.

Education
B.S. – Environmental Engineering, University of Florida, 1991

Professional Registration
State of Florida
Professional Engineer, No. 51313

Professional Certifications
CDT - Construction Document Technologist, Construction Specifications Institute

Professional Experience

Mr. Brinson is an environmental engineer with twenty-nine years of experience. He is experienced in both management and execution of projects with expertise in engineering analysis, modeling, utility master planning, design, permitting, preparation of bidding and construction documents, construction contract administration, and construction management. Specialties include water and wastewater treatment facilities, membrane treatment systems, pumping and hydraulic systems, and utility infrastructure. The following are some representative projects in which Mr. Brinson has been involved.

Project Experience

Project Manager / Engineer of Record, Membrane Element Replacement Pompano Beach, Florida. This project included the replacement of the 1,820 nanofiltration (NF) membrane elements in the 10 mgd capacity NF process at the City's water treatment plant. The project included pilot testing of membrane element selections from membrane element manufactures for prequalification for bidding and to optimize the chemical pretreatment protocol and element selection. Mr. Brinson was responsible of design and permitting of a 2:1 array pilot test unit utilizing 8-inch diameter, seven-element (full size) membrane pressure vessels, engineering assistance during bidding, membrane loading and proof testing. Testing was conducted under current plant operating conditions as well as without chemical pretreatment (i.e., without acid or antiscalant feed). As of July 2019, all design-phase work has been completed, and the City is preparing to initiate the procurement phase.

Project Manager / Engineer of Record, Reclaimed Water Treatment Plant Piping Modifications, City of Pompano Beach, Florida. Mr. Brinson was responsible of design and permitting of the installation of piping to allow the reuse water storage tanks to be filled with potable water to supplement the reuse water production during periods when the plant's production cannot meet demands, modifications to filter by-pass piping, and addition of distribution pumps in existing suction barrels. The reuse water storage tank fill piping was previously installed by the City and the remaining scope of this project is currently out to bid.

Project Manager / Engineer of Record, Potable Water Interconnect Upgrades Design and Construction Phase Services, City of Pompano Beach, Florida. This project consists of relocating and upgrading potable water interconnect valves, meters, and appetences to include redundancies and improve access for maintenance. Mr. Brinson was responsible of the design, permitting and construction-phase services. Construction of the interconnect with the City of Margate has been completed and has been in service as of September 2017. Since then MBC has completed the design for upgrading four interconnects. That project is currently pending the execution of interlocal agreements with Broward County Water and Wastewater Services and the City of Fort Lauderdale.

Project Manager, Gravity Filter Refurbishment and Alternative Technology Study, City of Pompano Beach, Florida. This project consisted of developing a study to evaluate the feasibility of rehabilitating the City's existing gravity filter system verses retrofitting the existing gravity filter cells for the installation of alternative treatment technologies. Mr. Brinson served as project manager of this project.

Project Manager / Engineer of Record, Glades Road Water Treatment Plant, 40 mgd Membrane Softening Process Addition, City of Boca Raton, Florida. This project included design and construction administration for a 40 mgd membrane softening process addition to the City's 70 mgd conventional lime softening plant. Mr. Brinson was engineer of record and was involved in engineering planning, preliminary and final design, permitting, financing, bidding, construction administration, electronic operation and maintenance manual preparation, operator training, and start-up of the facility. Bids for the project were received on May 16, 2001, and the low bid ($47.2 million) was approximately 10 percent below the original engineer's estimate. The plant was brought on line in August of 2004. This facility is currently the largest membrane softening facility in operation in the world. This project included raw water source evaluation and rehabilitation, evaluating pre- and post-treatment technologies, membrane pilot testing, preparation of construction documents for competitive bidding, and construction management. This project won the 2006 Florida Institute of Consulting Engineers (FICE) Grand Award for Engineering Excellence in Water and Wastewater.

Project Manager / Engineer of Record, Glades Road Water Treatment Plant, 40 mgd Nanofiltration (NF) Membrane Element Replacement, City of Boca Raton, Florida. After commissioning of the new Membrane Softening Process Addition to the Glades Road Water Treatment Plant (see above), the City operated the process successfully (with no chemical pretreatment) for approximately nine years. In 2014, the City elected to proceed with a scheduled replacement of the membrane elements for the NF process and hired McCafferty Brinson Consulting, LLC to assist with the project. The project included pilot testing, development of technical specifications and bidding documents for the replacement membrane elements as well as the membrane loading contract, permitting, engineering services during membrane loading, and engineering supervision of membrane performance testing. Mr. Brinson served as project manager during both the design- and replacement-phases of the project. The project was completed in June 2015.

Project Manager / Engineer of Record, Lime Softening Unit Drive Replacement, Pompano Beach, Florida. This project included design and construction services for replacement of the drive unit on an Infilco-Degremont Accelator unit.

Project Manager / Engineer of Record, Replacement of Carbon Dioxide System, City of Boca Raton, Florida. This project included replacement of a TomCO_2 carbon dioxide storage and feed system. Mr. Brinson was responsible for design- and construction-phase engineering services.

Project Manager / Engineer of Record, Seminole Tribe of Florida Hollywood Raw Water Supply Improvements, Hollywood, Florida. This project included installation of well pumps and approximately 1,050 linear feet of raw water main (8" to 16" diameter) from the new pumps to the existing main at the Hollywood Reservation Water Treatment Plant. A new acid injection point was installed to serve the new wells. Mr. Brinson was responsible for design- and construction-phase engineering services. Construction is currently on schedule to be substantially complete in August 2019.

Project Manager / Engineer of Record, Water Treatment Plant RO Membrane Element Replacement Evaluation and Selection, Lake Worth, Florida. This project included a Preliminary Design Report to develop an updated basis for selection of replacement membrane elements for the City's RO system, identify preliminary selections of replacement membrane elements for the City's existing RO membrane units, and present preliminary

technical specifications.

Project Manager / Engineer of Record, Glades Road Water Treatment Plant Finished Water Disinfection and Chemical System Improvements, City of Boca Raton, Florida. This project included the development of a compliance Plan for Chapter 62-555.320(12), Florida Administrative Code 4-Log Virus Removal/Inactivation requirement for the City of Boca Raton, the design of the improvements recommended in the Plan, and engineering construction administration services during the construction phase.

Project Manager / Engineer of Record, Glades Road Water Treatment Plant Replacement of Sodium Hydroxide Tanks and Chemical Systems Improvements, Boca Raton, Florida. This project included replacement of two 6,000-gallon sodium hydroxide bulk storage tanks, rehabilitation of the nanofiltration membrane process chemical storage and feed systems, replacement of nine sodium hydroxide and polymer chemical metering pumps, and rehabilitation of the membrane process pretreatment pressure filters. Mr. Brinson was responsible for design- and construction-phase services.

Project Manager / Rehabilitation of Five Finished Water Ground Storage Tanks, Design and Construction Services, City of Boca Raton, Florida. This project included preliminary and final design, permitting, bidding, and construction administration. The project consisted of miscellaneous structural and mechanical repairs and coatings of the five prestressed concrete finished water tanks, which ranged in age from 12 to 48 years old. This project included lead-based paint abatement.

Project Manager, Unidirectional Flushing (UDF) and Valve Exercising Program, City of Pompano Beach, Florida. City of Pompano Beach owns and operates a 50 million gallon per day water treatment plant and a finished water transmission and distribution system to provide water service to customers within the City's service area. The City required a long-term program to prevent age-related water quality issues by comprehensively flushing the City's transmission and distribution system according to a systematic and structured plan. The observed benefits of this program were removal of sediments and stale water, maintenance of good disinfectant residual levels, elimination of taste and odor issue, and reduction of bacteriological growth in the distribution system. Mr. Brinson developed the UDF program and a routine valve exercising program that was incorporated into the UDF program which can be performed concurrently in the field. The City is currently executing the program on a continuing basis and has reported substantial improvements in water quality and progress towards achieving the objectives of the program.

Project Manager / Engineer of Record, Southern Regional Wastewater Treatment Plant Oxygen Generation System Upgrade Design-Build, City of Hollywood, Florida. This project included rehabilitation and upgrades to the cryogenic pure oxygen generation system for the City's 48.75 mgd activated sludge wastewater treatment plant. Improvements included replacement of the main air compressors with three new 900 HP units, replacement of the main reversing heat exchangers, switch valve assembly, and expansion turbine in the cold box, replacement of the cooling water system including a new cooling tower and cooling water pumps, installation of three new ambient air vaporizers and other miscellaneous improvements. Mr. Brinson was the responsible for the management of the design and engineering team under the contractor-lead design-build team. Design was completed November 2008 and the project construction was completed in December 2011.

Project Manager / Engineer of Record, 3.0 mgd Reverse Osmosis Water Treatment Plant, Raw Water Wellfield, and Concentrate Disposal Injection Well, City of Clewiston, Florida. This project consisted of designing a new Floridian aquifer raw water supply wellfield, a 3.0 mgd low-pressure reverse osmosis water treatment plant, and concentrate disposal deep injection well. Mr. Brinson was engineer of record and was involved in preliminary and final design, pilot testing, permitting, construction administration, and start-up. Construction of the plant was initiated in April 2006, and the plant was brought on line in December 2007. Change orders at Substantial Completion were less than 1 percent of the original bid price.

Project Engineer / Broward County Alternative Water Supply Master Plan, Broward County, Florida. This project included the preparation of a master plan for the Broward County Water and Wastewater Services Utility outlining alternative water supply options. In 2008 the County received two 20 year Water Use Plans (WUP) from South Florida Water Management District (SFWMD) for the two wellfields within the county. Over the past several years several changes have occurred; promulgation of the Water Availability Rule, promulgation of Ocean Legislation, promulgation of year-round irrigation restrictions, and deterioration of the economy. From these events the need for an alternative water supply (AWS) master plan has arose. The AWS Master Plan took into consideration these factors while planning for the County's future water supply needs.

Project Manager / Design Engineer, Nanofiltration Process Addition to Water Treatment Plant 1A, Broward County Office of Environmental Services, Florida. This project included membrane process pilot testing and preliminary design for a nanofiltration process addition to the District 1A Water Treatment Plant for Broward County, Florida. Based on changes to applicable water quality regulations that occurred during preliminary design, a treatment process alternative analysis was performed under a scope amendment, which concluded that anion exchange was more cost-effective than nanofiltration in meeting the County's water quality goals. Mr. Brinson was also involved in design of the recommended anion exchange process improvements at Water Treatment Plant 1A.

Project Engineer, Blue Hills Seawater Reverse Osmosis Water Treatment Plant (SWRO WTP), Water and Sewerage Corporation of the Bahamas. This project included preliminary design and preparation of Tender Documents for a 20-year Build-Own-Operate (BOO) contract for a 6 million imperial gallons per day (migd) (7.2 US mgd) seawater reverse osmosis water treatment plant. The constructed facilities included seven raw water supply wells, chemical pretreatment and cartridge filtration, a 5 migd SWRO process (expandable to 6 migd), degasification, chemical post-treatment, finished water storage, and four concentrate disposal wells. Engineering services included preliminary design, preparation of Tender Documents, bidding services, review and evaluation of tenders, assistance with execution of contracts, shop drawing review, construction observation, and miscellaneous construction administration services. The plant was placed on line in 2006.

Project Manager / Design of a 7 mgd Lime Softening Water Treatment Plan, City of Bartow, Florida. This project consisted of engineering planning, raw water source evaluation and development, site selection and acquisition, bench-scale treatability studies, financial planning, preliminary and final design, and permitting.

Project Manager / Glades Road Water Treatment Plant Compliance Study for 62-555 FAC 4-Log Virus Removal/Inactivation Requirement, City of Boca Raton, Florida. This project included data collection and review, regulatory compliance review, development of compliance alternatives, and recommendations.

Project Manager / Pompano Beach Water Treatment Plant Compliance Study for 62-555 FAC 4-Log Virus Removal/Inactivation Requirement, City of Pompano Beach, Florida. This project included data collection and review, regulatory compliance review, development of compliance alternatives, and recommendations.

Project Manager / Disinfection and Finished Water Blending Yard Piping Improvements, City of Pompano Beach, Florida. This project included identification of potential improvements to the plant yard piping, a study to identify the most cost-effective means of complying with the 62-555.320 Florida Administrative Code 4-Log Virus Removal/Inactivation requirements, and the design of the ammonia and hypochlorite system improvements.

Project Manager / South Florida Water Management District Water Supply Cost Estimation Study (Phases I and II), West Palm Beach, Florida. This project included estimating the costs of various alternative water supplies in the District's four planning areas in terms of capital, operation and maintenance (O&M), and total capacity. Potable water treatment technologies considered included microfiltration/ultrafiltration (MF/UF),

nanofiltration (NF), low pressure reverse osmosis (LPRO) with a groundwater supply, LPRO with a surface water supply, and sea water reverse osmosis (SWRO). Wastewater treatment technologies included advanced wastewater treatment (AWT), Bardenpho process, membrane bioreactors (MBR), and microfiltration/reverse osmosis (MF/RO). This document is considered the definite basis of comparison by the SFWMD in evaluating alternative water supply projects from cost perspective.

Project Engineer, Arawak Cay Seawater Reverse Osmosis Water Treatment Plant (SWRO WTP), Water and Sewerage Corporation of the Bahamas. This project included preliminary design and preparation of Tender Documents for a 20-year Build-Own-Operate (BOO) contract for a 4 million imperial gallons per day (migd) (4.8 US mgd) seawater reverse osmosis water treatment plant. The proposed facilities included five raw water supply wells, chemical pretreatment and cartridge filtration, a 4 migd SWRO process (expandable to 6 migd), degasification, chemical post-treatment, finished water storage, and three concentrate disposal wells. Engineering services included preliminary design, preparation of Tender Documents.

Project Engineer, Anion Exchange Facility, Water Treatment Plant 1A, Broward County Water and Wastewater Services. This project included a 9 mgd capacity anion exchange system to remove organics, disinfection by-product (DBP) precursors, and color from the lime softened water to comply with applicable water quality regulations. The design also included improvements to provide blending of the anion exchange-treated water with the lime softened water, and to comply with the 4-log virus inactivation/removal requirements under Chapter 62-555.320(12)(b), Florida Administrative Code. Substantial completion of construction was October 2011. Substantial Completion was less than 1 % of the original bid price and there was approximately 3% in change orders for the project.

Project Engineer, Hood Road Water Treatment Plant Membrane Conversion, Seacoast Utility Authority (SUA). This project included design of a 26.0 mgd nanofiltration membrane process and a 3.5 mgd low pressure reverse osmosis membrane process at SUA's existing Hood Road Water Treatment Plant. Mr. Brinson was responsible for design of the sulfuric acid, antiscalant, sodium hydroxide, sodium hypochlorite, and corrosion inhibitor chemical storage and feed systems for pretreatment of the membrane feedwater and post-treatment of the finished water, with McCafferty Brinson Consulting, LLC, serving as a subconsultant to the prime engineer.

Project Engineer, Membrane Process Improvements, City of Pompano Beach. This project consisted of two construction contracts. The first contract was for procurement and replacement of the membrane elements. The second contract was for replacement of the membrane pressure vessels as well as modifications to the cleaning piping on the individual membrane units and membrane cleaning system to improve operational flexibility, efficiency, and safety of the cleaning system arrangement and membrane cleaning operations. Mr. Brinson assisted with design of the improvements and provided construction administration services with McCafferty Brinson Consulting, LLC, serving as a subconsultant to the prime engineer. Work under the two contracts was coordinated and completed concurrently. The project was completed in September 2009.

Project Manager / Engineer of Record, Ground Storage Tank and High Service Pump Station, City of Dania Beach. This project included a 2 million gallon prestressed concrete finished water ground storage tank, a high service pump station consisting of five vertical turbine pumps with variable frequency drives, and an emergency power generator. The system was brought on line in June 2008.

Project Engineer, City of Port St. Lucie Water Treatment Plant Treatability Study. Mr. Brinson was a project engineer for the laboratory field work (jar testing), data analysis, and preparation of a report summarizing the findings of an on-site treatability and chemical optimization study for enhanced lime softening for THM/HAA reduction and color removal (involvement primarily in field and laboratory portion of project). The results of the study provided the design basis for subsequent expansion of the plant and process optimization.

Professional Society Memberships

Design-Build Institute of America (DBIA)
American Membrane Technology Association (AMTA)
American Society of Civil Engineers (ASCE)
American Water Works Association (AWWA)
Southeast Desalting Association (SEDA)

Publications

"Upgraded Disinfection: Providing Four-log Virus Treatment of a finished water supply for a consecutive water system", *Florida Section AWWA Annual Conference,* Orlando, FL, November 2016.

"Optimizing Four-Log Virus Treatment with Chemical Disinfection Relative to the Disinfectants and Disinfection Byproducts Rule", *Florida Water Resources Journal,* April 2012.

"Construction and Start-Up of a 3.0 MGD Low Pressure Reverse Osmosis Water Treatment Plant for Clewiston, Florida", *AWWA Annual Conference and Exposition,* Atlanta, GA, June 2008.

"Construction and Start-Up of the Clewiston Reverse Osmosis Plant", *AMTA/SEDA 2008 Joint Conference, Membrane Week*, Naples, FL, July 2008.

"Clewiston Installs Reverse Osmosis to Get Off Sugar", *AWWA Annual Conference and Exposition,* San Antonio, TX, June 2006.

"Process Optimization at New Nanofiltration Plant Meets Water-Quality Goals, Saves Money for Boca Raton" (co-author), *Florida Section AWWA Annual Conference*, Orlando, FL, November 2005 (received Top Paper award and was published in the March issue of the Florida Water Resources Journal).

"Process Optimization During the First Year of Operation of a 40-mgd Nanofiltration Plant" (co-author), *AWWA Annual Conference*, San Francisco, CA, June 2005.

"Start-Up of the World's Largest Nanofiltration Plant" (co-author), *American Membrane Technology Association Biennial Conference*, San Antonio, Texas, 2004.

"Evaluating Nanofiltration, Reverse Osmosis, and Ion Exchange to Meet Consumptive Use Constraints and Finished Water Quality Goals for Broward County" (co-author), *American Membrane Technology Association Biennial Conference*, San Antonio, Texas, 2004.

"Optimizing the Performance of Low Fouling Membranes for the World's Largest Nanofiltration Plant" (co-author), *AWWA Membrane Technology Conference*, Atlanta, Georgia, 2003.

Professional History

1999 to 2006 Camp Dresser & McKee Inc. – Fort Lauderdale, Florida

Senior Project Manager for nationally recognized engineering design and utility management consulting firm. Responsibilities included project scope, schedule, and budget development and negotiation, project management and execution, client service management, staff training and mentoring, quality control reviews, marketing and business development, and firm representation at conferences and other industry events.

1992 to 1999 Hartman & Associates, Inc. - Orlando, Florida

Project Manager for engineering design and utility management consulting firm.

Audra McCafferty, P.E., ENV SP, LEED AP BD+C

McCafferty Brinson consulting

President

Experience Highlights
Ms. McCafferty has more than 29 years of experience in general environmental consulting and is co-founder of McCafferty Brinson Consulting, LLC.

Specialties include water and wastewater facilities design, environmental related projects, regulatory compliance strategies, permitting, cost estimating and scheduling.

Education
B.S. – Environmental Engineering, University of Florida, 1991

Professional Registration
State of Florida
Professional Engineer No. 54737

ENV SP-ISI Envision Sustainability Professional

LEED BD+C Accredited Professional

Professional Society Memberships
USGBC – United States Green Building Council Member

Institute for Sustainable Infrastructure Member

Southeast Florida Utility Council (SEFLUC)

Smart Growth Partnership of Ft. Lauderdale

Member of the Technical Subcommittee for the Broward County Climate Change Task Force in 2010

Professional Experience

Ms. McCafferty is an environmental engineer with twenty-nine years of experience including twelve years with McCafferty Brinson Consulting, Inc. In 2006, Ms. McCafferty co-founded McCafferty Brinson Consulting, LLC. Since that time, Ms. McCafferty has assumed a major role in the day to day operation of the company while maintaining her technical role as Project Manager and Principal Engineer. Her experience includes environmental consulting, environmental and utility permitting, regulatory compliance, water, wastewater and reuse facilities design, environmental assessments, and funding assistance.

Ms. McCafferty has a broad range of professional experience, including work execution in the Principal Engineer role, project management and project delivery, including cost estimating, scheduling, senior technical review, quality assurance/quality control (QA/QC) management, staffing and resource management, and business development. The following are some representative technical projects in which Ms. McCafferty has been involved.

Project Experience

Project Manager, Clean Water State Revolving Fund Program, City of Pompano Beach. The project provides professional engineering assistance to prepare and submit documentation to the State of Florida to procure loan funding for the projects and for assistance in complying with SRF funding requirements during construction of the projects. The City intends to seek funding assistance for a drainage project for clean water projects planned in the City's 2019-2023 Capital Improvement Plan.

Project Manager, Drinking Water State Revolving Fund Program, City of Pompano Beach. The project provides professional engineering assistance to prepare and submit documentation to the State of Florida to procure loan funding for the projects and for assistance in complying with SRF funding requirements during construction of the projects. The City intends to fund a drinking water project planned in the City's 2018-2022 Capital Improvement Plan.

Project Manager, Country Club Village Infrastructure Improvement, Boca Raton, Florida. Assisting the project manager to relocate and upsize approximately thirty-five thousand linear feet of existing domestic water mains from the rear yards to the rights-of-way, installation of approximately 2,500 of 16-inch water main, removal and replacement of sidewalks, roadways, ramps, and the improvement of three stormwater outfalls.

Principal Engineer, Lime Softening Unit Drive Replacement, Pompano Beach, Florida. This project included development of a bid evaluation and recommendation of award for one new lime softening gearbox unit, and the installation of the unit through start-up, performance testing, and project closeout. Ms. McCafferty was assisted the project manager in preparing a technical specification for the replacement drive unit.

Project Engineer, Regulatory Review, City of Pompano Beach, Florida. The City owns and maintains several bulk storage tanks throughout the City's facilities. Ms. McCafferty's tasks included researching and interpreting federal, state, and county regulations regarding the procedures for registration, incident notification, closure, and demolition of various chemical storage tanks which include; mineral acids, petroleum products, and hazardous and extremely hazardous substances.

Project Manager, FDOT District 4 Sanitary Sewer Overflow Geodatabase, Florida. Project included contacted local and state regulatory agencies to compile a database of sanitary sewer overflows for WBIDs in Broward and Palm Beach Counties. This database is intended to assist the FDOT with identifying possible sources of fecal bacteria for the development of Bacterial Pollution Control Plans

Project Manager, Stormwater Permitting Projects. Projects include NPDES stormwater permitting for various industrial sectors. NPDES permits were obtained from the EPA and FDEP and include individual permits as well as multi-section general (generic) permits (MSGP). Projects have included evaluation of a client's need for an individual permit or MSGP, and in some cases conversion from the former to the latter. Other stormwater regulatory projects include the development of Stormwater Pollution Prevention Plans (SWWP) for agricultural (citrus, mushrooms, salt), bulk fuel, aviation, vehicle maintenance facilities, and waste reduction (incinerators) clients. Other services include compliance with the SWWP, stormwater dry-weather inspection, and spill-cleanup and reporting. Although not a stormwater activity, closely related projects include development of spill prevention, control, and countermeasure plans (SPCC) for many of the same clients.

Project Engineer, Broward County Retail Potable Water and Wastewater Master Plan. Broward County authorized the Prime Consultant to provide services for developing a Retail Potable Water and Wastewater Master Plan (Master Plan). MBC was hired as a subconsultant and was tasked with assisting with some of the components of the scope of work. Ms. McCafferty has assisted with the preparation of the Master Plan report sections associated with potable water source alternative for discrete services areas. The project is ongoing, additional anticipated activities include development of potable water system improvements.

Project Engineer, Broward County Reclaimed Water Treatment Plant Expansion. Broward County authorized the Prime Consultant to provide services for developing a design for improvements at the North Regional Wastewater Treatment plant. MBC was hired as a subconsultant and was tasked with assisting with various components of the scope of work. Ms. McCafferty is assisting with regulatory permitting efforts for the improvements. Coordination with various state and local agencies is required to obtain operating and construction permits for the project.

Project Engineer, Broward County Water and Wastewater Services (BCWWS) WTP 3A, Storage Tank Sizing, Broward County, Florida, BCWWS is in the design phase of a project consisting of the construction of a second finished water ground storage tank and a new high service pump station at the WTP 3A site. MBC assisted in determining the appropriate storage capacity for the proposed finished water ground storage tank. Ms. McCafferty's tasks included a data request and review, storage sizing calculations, and preparation of a technical memorandum.

P**roject Engineer, Broward County Alternative Water Supply**. Broward County authorized the Prime Consultant to provide services for developing an Alternative Water Supply (AWS) Master Plan. MBC was hired as a subconsultant and was tasked with providing assistance with various components of the scope of work. Ms. McCafferty prepared Master Plan report sections associated with discrete analysis of various AWS options such as implementation of conventional reuse for demand reduction, groundwater recharge reuse offset application, and Biscayne Aquifer allocation expansion via other offset approaches.

Andrew Barba, E.I., CDT
Staff Professional

McCafferty Brinson consulting

Experience Highlights
Mr. Barba has experience in drafting and designing water treatment plant components and providing services during construction.

Education
B.S. – Environmental Engineering, University of Florida, 2016

Professional Registration
State of Florida
Engineer Intern, No. 1100020393

Professional Certifications
Construction Document Technologist (CDT)

Professional Society Memberships
CSI – Construction Specifications Institute

Professional Experience

Mr. Barba is a staff professional with four years of experience. He is experienced with CAD drafting, engineering analysis, pilot studies, design, permitting, and preparation of bidding and construction contract documents, construction contract administration, and resident project representation. He has been involved in various water, reuse water, wastewater treatment plant, storm sewer, and collection/distribution system related projects.

Project Experience

Staff Professional, Membrane Element Replacement, City of Pompano Beach, Florida. This project included the replacement of the 1,820 nanofiltration (NF) membrane elements in the 10 million gallon per day (mgd) capacity NF process at the City's water treatment plant. Plot testing of membrane element selection from membrane element manufactures (MEM) for prequalification for bidding and to optimize the chemical pretreatment protocol and element selection. Mr. Barba's responsibilities include assisting the project manager with drafting construction documents, permitting, start-up, and analysis of membrane element performance for a full-scale pilot unit. Additionally, Mr. Barba provided services during membrane element replacement by administrating the construction contract, coordinating membrane loading and start-up, and reviewing performance testing results.

Staff Professional, Reclaimed Water Treatment Plant Piping Modifications, City of Pompano Beach, Florida. Provided drafting and design support, assisted with permitting and preparing construction documents to facilitate the installation of piping to allow the reuse water storage tanks to be filled with potable water to supplement the reuse water production during periods when the plant's production cannot meet demands, modifications to filter by-pass piping, and additional of distribution pumps in existing suction barrels. Mr. Barba performed site visits during construction for the installation of piping to allow the recuse water storage tanks to be filled with potable water. The remaining scope of this project is currently out to bid.

Staff Professional, Potable Water Interconnect Upgrades Design and Construction Phase Services, City of Pompano Beach, Florida. Providing engineering support during design and construction by; drafting construction documents, providing permitting support, reviewing, and approving shop drawings and pay applications, and field reviewing construction. The project consists of relocating and upgrading potable water interconnect valves, meters, and appetences to include redundancies and improve access for maintenance. Construction of the interconnect has been completed and has been placed into service as of September 2017. Since then MBC has completed the design for upgrading four interconnects. The project is currently pending the execution of interlocal agreements with Broward County Water and Wastewater Services and the City of Fort Lauderdale.

Staff Professional, Gravity Filter Refurbishment and Alternative Technology Study, City of Pompano Beach, Florida. This project consisted of developing a study to evaluate the feasibility of rehabilitating the City's existing gravity filter system verses retrofitting the existing gravity filter cells for the installation of alternative treatment technologies. Mr. Barba assisted the project manager with review of record documents, evaluating alternative treatment technologies, and estimating costs for the proposed rehabilitation and retrofitting.

Staff Professional, Glades Road Water Treatment Plant Rehabilitation of the Membrane Pretreatment Pressure Filters, City of Boca Raton, Florida. Drafting construction documents for the replacement of valve actuators, backwash air inlet check valves, air release valves and filter media in six filter cells, installation of a drain loop and drain valve in the existing main steel air feed piping; along with other renewal and replacement activities and electrical and I&C improvements. This project also consisted of the rehabilitation of three gravity filters which included media replacement and inspect. Mr. Barba has provided services during construction including; resident project representation, pump start-up testing and analysis, review of contractor's submittals, requests for information, and pay applications.

Staff Professional, Lime Softening Chemical Building Renovation Needs Study, City of Boca Raton, Florida. The lime softening treatment process includes a chemical building (Building 11) that houses the lime storage silos, lime slakers, lime feed equipment, a coagulant storage, preparation, and feed system, as well as other associated supporting systems and functions. This complete comprehensive study on Building 11 identify and catalog the treatment process/mechanical functions provided by the building, investigate and document the existing electrical service and power distribution systems associated with the building, and evaluate the structural integrity of the building and associated structures and equipment, specifically the lime silos. Mr. Barba assisted the project manager by reviewing record documents, attending site visits, preparing figures and assisting with the draft report. This project has been complete and the City is proceeding with renovation under a separate project.

Staff Professional, Regulatory Review, City of Pompano Beach, Florida. The City owns and maintains several bulk storage tanks throughout the City's facilities. Mr. Barba assisted the project manager in researching and interpreting federal, state, and county regulations regarding the procedures for registration, incident notification, closure, and demolition of various chemical storage tanks which include; mineral acids, petroleum products, and hazardous and extremely hazardous substances**.**

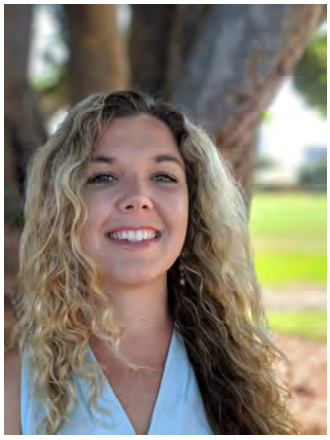
Staff Professional, WTP and RWTP Flow Meter Replacement Project, City of Pompano Beach, Florida. Assisting the project manager in drafting construction and contract documents and providing services during construction which include; shop drawing review and field reviewing construction. The project consists of replacing of five magnetic flow meters at the City's water treatment plant, and the replacement of one flow meter and one ultrasonic flow transducer with weir and stilling well at the City's reclaimed water treatment plant. This project reached final completion in August 2018.

Publications

"Upgraded Disinfection: Providing Four-Log Virus Treatment of a Finished Water Supply for a Consecutive System" (Co-Author) *Florida Section AWWA Annual Conference*, Orlando, FL, November 2016.

Melissa Campbell, E.I.
Staff Professional

McCafferty Brinson consulting



Experience Highlights
Ms. Campbell has experience in designing water treatment plant components and providing construction administration services.

Education
B.S. – Civil Engineering, University of Massachusetts, 2016
B.A. – Environmental Science Clark University, 2011

Professional Registration
State of Florida
Engineer Intern No. 1100020745

Professional Experience

Ms. Campbell is a staff professional whose responsibilities include engineering design, permitting, preparation of construction drawings and technical specifications, and construction administration. Ms. Campbell has been responsible for all aspects of construction administration, including reviewing and approving shop drawings and pay applications, responding to contractor's requests for information, and field observation of construction activities to ensure conformance with contract documents. She has been involved in various water and reuse water treatment plant, storm sewer, and collection/distribution system related projects.

Project Experience

Staff Professional, Clean Water State Revolving Fund Program, City of Pompano Beach. The project provides professional engineering assistance to prepare and submit documentation to the State of Florida to procure loan funding for the projects and for assistance in complying with SRF funding requirements during construction of the projects. The City intends to seek funding assistance for a drainage project for clean water projects planned in the City's 2019-2023 Capital Improvement Plan.

Staff Professional, Reclaimed Water Treatment Plant Piping Modifications, City of Pompano Beach, Florida. Provided drafting and design support for the installation of piping to allow the reuse water storage tanks to be filled with potable water to supplement the reuse water production during periods when the plant's production cannot meet demands. The project consisted of the installation of a 6-inch potable water fill line. This project is currently out to bid.

Staff Professional, Country Club Village Infrastructure Improvement, City of Boca Raton, Florida. Assisting the project manager by designing, field verification and drafting construction documents and attending meetings and site visits for the relocation and upsizing of approximately thirty-five thousand linear feet of existing domestic water mains from the rear yards to the rights-of-way, installation of approximately 2,500 of 16-inch water main, removal and replacement of sidewalks, roadways and ADA ramps, and the improvement of three stormwater outfalls.

Staff Professional, Lime Softening Chemical Building Renovation Needs Study, City of Boca Raton, Florida. The lime softening treatment process includes a chemical building (Building 11) that houses the lime storage silos, lime slakers, lime feed equipment, a coagulant storage, preparation, and feed system, as well as other associated supporting systems and functions. This complete comprehensive study on Building 11 identify and catalog the treatment process/mechanical functions provided by the building, investigate and document the existing electrical service and power distribution systems associated with the building, and evaluate the structural integrity of the building and associated structures and equipment, specifically the lime silos. Ms. Campbell assisted the project manager by reviewing record documents, attending meetings and site visits. This project has been complete and the City is proceeding with renovation under a separate project.

Staff Professional, Glades Road Water Treatment Plant Washwater Recovery Upgrades, City of Boca Raton, Florida. Assisting the project manager by drafting construction documents for the construction of a circular concrete, open-top washwater recovery basin to receive and treat plant recycle streams; a supernatant decanting system, settled sludge handling, and washwater return pumping system; yard piping improvements to connect the new system to the filter washwater waste piping, sludge thickener feed piping, and washwater return piping; an associated sitework, geotechnical and foundation construction; electrical improvements to provide power to the washwater return pump station and Instrumentation and controls associated with the recovery basin and return pumping system. This project is currently ongoing.

Staff Professional, Glades Road Water Treatment Plant Replacement of the Carbon Dioxide System, City of Boca Raton, Florida. This project included replacement of the recarbonation system, and all of its piping and ancillary components. Prior to demolition of the existing system and construction of the new system, a temporary system was used to maintain water treatment during construction. The new carbon dioxide packaged system includes, the installation of two (2) new 18-ton horizontal liquid carbon dioxide storage tanks, refrigeration units, electric vaporizers and vapor heaters, first stage carbon dioxide regulators, associated piping systems, two (2) pressurized solution feed (PSF) carbonic acid feed panels, and all related electrical and instrumentation and controls components. Maintenance of continuous plant operation and coordination with City operational staff were required. Ms. Campbell assisted the project manager by designing and drafting construction documents for the replacement of a 50-ton storage tank with two (2) 18-ton storage tanks and demonstrating that the proposed chemical storage tanks will meet the plants average day carbon dioxide demand using monthly operating report data provided by the City. Ms. Campbell has provided services during construction including resident project representation, tank start-up and testing and analysis, review of contractor's submittals, requests for information, and pay applications. This project reached final completion in December 2019

Staff Professional, Glades Road Water Treatment Plant Rehabilitation of the Membrane Pretreatment Pressure Filters, City of Boca Raton, Florida. This project entailed drafting construction documents for the replacement of valve actuators, backwash air inlet check valves, air release valves and filter media in six filter cells, installation of a drain loop and drain valve in the existing main steel air feed piping; along with other renewal and replacement activities and electrical and I&C improvements. This project also consisted of the rehabilitation of three gravity filters which included media replacement and inspection. Ms. Campbell has provided services during construction including; resident project representation, review of contractor's submittals, requests for information, pay applications, attended meetings and site visits. This project reached final completion in August 2019.

Staff Professional, Seminole Tribe of Florida Raw Water Supply Improvements, Hollywood, Florida. This project included installation of well pumps and approximately 1,050 linear feet of raw water main (8" to 16" diameter) from the new pumps to the existing main at the Hollywood Reservation Water Treatment Plant. Each well head is per STOF's standard design including valve train with flow metering and adjacent control and power panels. Standby power is provided to the well pumps from existing generators at the treatment plant. A new acid injection point was installed to serve the new wells. Ms. Campbell provided services during construction including; resident project representation, review of contractor's submittals, requests for information, and pay applications. This project is complete and the new raw water wells were placed into service in August 2019.

Professional History

2017 to 2018 *TRC Worldwide Engineering Restoration and Inspection LLC – Plantation, Florida*

Field Inspector/Engineer Intern at a structural engineering firm. Performed engineering design and analysis. Preformed project management including construction document management, estimating, payment applications, contract writing and coordinating between contractors and owners. Performed field inspections including report writing, transmittal preparation and providing contract and city with most current reports.

Mariell Soto, E.I.
Staff Professional

McCafferty Brinson consulting

Experience Highlights
Ms. Soto has experience in drafting and designing water treatment plant components.

Education
B.S. – Environmental Engineering, Florida International University, 2017

Professional Registration
State of Florida
Engineer Intern, No. 1100023622

Professional Experience

Ms. Mariell Soto is a staff professional whose responsibilities include; CAD drafting and design support of various water and reuse water treatment plant components, writing reports, permitting, preliminary design memorandums, technical specifications, and preparing contract documents. She has been involved in various water and reuse water treatment plant, storm sewer, and collection/distribution system related projects.

Project Experience

Staff Professional, Reclaimed Water Treatment Plant Piping Modifications, City of Pompano Beach, Florida. Assisting the project manager by design and drafting construction document for the installation of a 6-inch potable water fill line to allow the reuse water storage tanks to be filled with potable water to supplement the reuse water production during periods when the plant's production cannot meet demands. The project consisted of the installation of a 6-inch potable water fill line. This project is currently out to bid.

Staff Professional, Gravity Filter Refurbishment and Alternative Technology Study, City of Pompano Beach, Florida. This project consisted of developing a study to evaluate the feasibility of rehabilitating the City's existing gravity filter system verses retrofitting the existing gravity filter cells for the installation of alternative treatment technologies. Ms. Soto provided assistance with processing data and preparing the report.

Staff Professional, Country Club Village Infrastructure Improvement, City of Boca Raton, Florida. Assisting the project manager by designing and drafting construction document for the relocation and upsizing of approximately thirty-five thousand linear feet of existing domestic water mains from the rear yards to the rights-of-way, installation of approximately 2,500 of 16-inch water main, removal and replacement of sidewalks, roadways and ADA ramps, and the improvement of three stormwater outfalls.

Staff Professional, Glades Road Water Treatment Plant Lime Softening Building Renovation Needs Study, City of Boca Raton, Florida. The lime softening treatment process includes a chemical building (Building 11) that houses the lime storage silos, lime slakers, lime feed equipment, a coagulant storage, preparation, and feed system, as well as other associated supporting systems and functions. This complete comprehensive study on Building 11 identify and catalog the treatment process/mechanical functions provided by the building, investigate and document the existing electrical service and power distribution systems associated with the building, and evaluate the structural integrity of the building and associated structures and equipment, specifically the lime silos. Ms. Soto Assisted the project manager by reviewing record documents, processing data and preparing figures for the report. This project has been complete and the City is proceeding with renovation under a separate project.

Staff Professional, Glades Road Water Treatment Plant Rehabilitation of the Membrane Pretreatment Pressure Filters, City of Boca Raton, Florida. Drafting construction documents for the replacement of valve actuators, backwash air inlet check valves, air release valves and filter media in six filter, installation of a drain loop and drain valve in the existing main steel air feed piping; along with other renewal and replacement activities and electrical and I&C improvements for a pressure filter installed in 2015. This project reached final completion in August 2019.

Staff Professional, Glades Road Water Treatment Plant Replacement of the Carbon Dioxide System, City of Boca Raton, Florida. This project included replacement of the recarbonation system. Prior to demolition of the existing system and construction of the new system, a temporary system was used to maintain water treatment during construction. The new carbon dioxide packaged system includes, the installation of two (2) new 18-ton horizontal liquid carbon dioxide storage tanks, refrigeration units, electric vaporizers and vapor heaters, first stage carbon dioxide regulators, associated piping systems, two (2) pressurized solution feed (PSF) carbonic acid feed panels, and all related electrical and instrumentation and controls components. Components are required for a complete and operating system. Ms. Soto has provided services during construction including resident project representation. This project reached final completion in December 2019.

Staff Professional, Glades Road Water Treatment Plant Washwater Recovery Upgrades, City of Boca Raton, Florida. Assisting the project manager by drafting construction documents for the construction of a circular concrete, open-top washwater recovery basin to receive and treat plant recycle streams; a supernatant decanting system, settled sludge handling, and washwater return pumping system; yard piping improvements to connect the new system to the filter washwater waste piping, sludge thickener feed piping, and washwater return piping; an associated sitework, geotechnical and foundation construction; electrical improvements to provide power to the washwater return pump station and instrumentation and controls associated with the recovery basin and return pumping system. This project is currently ongoing.

Staff Professional, FDOT District 4 NPDES Stormwater Facility and Outfall Inspections and Reports, Florida. Performing inspections and preparing reports on stormwater drainage systems and their water quality, structural integrity, performance and maintenance requirements to comply with the Municipal Separate Storm Sewer System (MS4) permit requirement. Ms. Soto has been participating in the project since the Winter of 2018 and this project is currently ongoing.

Staff Professional, Water Treatment Plant RO Membrane Element Replacement Evaluation and Selection, Lake Worth, Florida. This project included a Preliminary Design Report to develop an updated basis for selection of replacement membrane elements for the City's RO system, identify preliminary selections of replacement membrane elements for the City's existing RO membrane units, and present preliminary technical specifications. Ms. Soto has provided assistance processing data and preparing figures for the report.

Staff Professional, Seminole Tribe of Florida Raw Water Supply Improvements, Hollywood, Florida. Assisting the project manager during construction including; preparation of monthly reports, meeting minutes and review of shop drawings for the addition of new raw water wells and pumping systems and the relocation of a chemical injection system. Worked on record drawings for delivery to client.

Staff Professional, BCWWS Corrosion Control Study for District 1 and 2, Broward County, Florida. Assisting the project manager in developing a water quality data and a treatability study. This includes estimating the theoretical solubility of lead and copper, calcium carbonate related indices (LSI, CCPP, and RI), and the dissolved inorganic carbon, which was analyzed to select an optimum corrosion control treatment.

Professional History

2018 to 2018 Unipharama – Tamarac, Florida

Quality Control Laboratory Technician at a pharmaceutical manufacturing facility in South Florida. Performed a Qualification Protocol for Water For Injection (WFI) and Purified water (PW), following procedures and testing for parameters of conductivity, bacterial endotoxin and microbial limits. Carrying Environmental monitoring which includes testing of viable and non-viable pollutants and analysis of the microbiologic tests.

Robert Landrum, E.I.
Staff Professional

McCafferty Brinson consulting

Experience Highlights
Mr. Landrum has experience in designing water treatment plant components and providing construction administration services.

Education
B.S. – Biological Engineering, University of Florida, 2018

Professional Registration
State of Florida
Engineer Intern, No. 1100022256

Professional Certifications
An Introduction to Hazardous Materials (FEMA)

Professional Society Memberships
ASABE-American Society of Agricultural and Biological Engineers

Professional Experience

Mr. Landrum is a staff professional whose responsibilities include engineering design and construction administration, writing reports, permitting, preliminary design memorandums, technical specifications, and preparing contract documents. Mr. Landrum has experience in all aspects of construction administration, including reviewing and approving pay applications, and field reviewing construction to ensure conformance with contract documents. He has been involved in various water and reclaimed water treatment plant, storm sewer, and collection/distribution system related projects.

Project Experience

Staff Professional, Reclaimed Water Treatment Plant Piping Modifications, City of Pompano Beach, Florida. Provided drafting and design support, assisted with permitting and preparing construction documents to facilitate the installation of potable water piping to facilitate cleaning and flushing of the filters during high turbidity episodes, and additional of distribution pumps in existing suction barrels. This project is currently out to bid.

Staff Professional, Gravity Filter Refurbishment and Alternative Technology Study, City of Pompano Beach, Florida. This project consisted of developing a study to evaluate the feasibility of rehabilitating the City's existing gravity filter system verses retrofitting the existing gravity filter cells for the installation of alternative treatment technologies. Mr. Landrum assisted the project manager with review of record documents, evaluating alternative treatment technologies, and estimating costs for the proposed rehabilitation and retrofitting.

Staff Professional, Membrane Element Replacement Pilot Test, City of Pompano Beach, Florida. Provided internal quality assurance on data inputted into reports.

Staff Professional, Glades Road Water Treatment Plant Lime Softening Building Renovation Needs Study, City of Boca Raton, Florida. The lime softening treatment process includes a chemical building (Building 11) that houses the lime storage silos, lime slakers, lime feed equipment, a coagulant storage, preparation, and feed system, as well as other associated supporting systems and functions. This complete comprehensive study on Building 11 identify and catalog the treatment process/mechanical functions provided by the building, investigate and document the existing electrical service and power distribution systems associated with the building, and evaluate the structural integrity of the building and associated structures and equipment, specifically the lime silos. Mr. Landrum assisted the project manager by reviewing record documents, attending site visits, and preparing figures for the draft report. This project has been complete and the City is proceeding with renovation under a separate project.

Staff Professional, Glades Road Water Treatment Plant Replacement of the Carbon Dioxide System, City of Boca Raton, Florida. This project included replacement of the recarbonation system. Prior to demolition of the existing system and construction of the new system, a temporary system was used to maintain

water treatment during construction. The new carbon dioxide packaged system includes, the installation of two (2) new 18-ton horizontal liquid carbon dioxide storage tanks, refrigeration units, electric vaporizers and vapor heaters, first stage carbon dioxide regulators, associated piping systems, two (2) pressurized solution feed (PSF) carbonic acid feed panels, and all related electrical and instrumentation and controls components. Components are required for a complete and operating system. Mr. Landrum provided construct administration services including preparing drawings in relation to request for proposals, field observations of work being performed. Worked on record drawings for delivery to client. This project reached final completion in December 2019.

Staff Professional, Country Club Village Infrastructure Upgrades, City of Boca Raton, Florida. This project consists the of relocation and upsizing of approximately 35,000 linear feet of existing domestic water mains from the rear yards to rights-of-ways, installation of approximately 2,500 of 16-inch water main, removal and replacement of sidewalks, roadways, ramps, and the improvement of three stormwater outfalls. Mr. Landrum provided support for permitting the project with the Palm Beach County Utility Permit office

Staff Professional, Glades Road Water Treatment Plant Washwater Recovery Upgrades, City of Boca Raton, Florida. This project included the construction of a circular concrete, open-top washwater recovery basin to receive and treat plant recycle streams; a supernatant decanting system, settled sludge handling, and washwater return pumping system; yard piping improvements to connect the new system to the filter washwater waste piping, sludge thickener feed piping, and washwater return piping; an associated sitework, geotechnical and foundation construction; electrical improvements to provide power to the washwater return pump station and Instrumentation and controls associated with the recovery basin and return pumping system. Mr. Landrum is assisting the project manager by drafting construction documents, designing components for the construction of a new washwater recovery basin, and aiding in equipment selection related to the basin cleaning system. This project is currently ongoing.

Staff Professional, Glades Road Water Treatment Plant Rehabilitation of the Membrane Pretreatment Pressure Filters, City of Boca Raton, Florida. This project entailed the replacement of valve actuators, backwash air inlet check valves, air release valves and filter media in six filter cells, installation of a drain loop and drain valve in the existing main steel air feed piping; along with other renewal and replacement activities and electrical and I&C improvements. Mr. Landrum performed construction administration services including preparing drawings in relation to request for proposals and field observations of work being performed. This project reached final completion in August 2019.

Staff Professional, Reverse Osmosis Water Treatment Plant Cleaning Assistance, Town of Davie, Florida. The Town of Davie owns and operates an 8 mgd Reverse Osmosis Water Treatment Plant that treats water from the Floridan Aquifer. The plant includes four RO treatment units with a capacity of 2 mgd each. The plant was designed to be expandable to 14 mgd. The existing system for connecting the RO units to the cleaning system piping mounted on the exterior wall of the RO building is cumbersome for the plant operators. Mr. Landrum assisted the project manager by drafting construction documents and designing components for the upgrade of the current clean in place system. This project reached final completion in February 2020.

Professional History

2018 to 2019 Traders Hill Farm – Hilliard, Florida

Engineer Associate for commercial aquaponics facility in Northeast Florida. Designed and oversaw the build of a new water distribution system for the greenhouse operations, upgrades to existing water treatment systems and water circulation systems. Did preliminary design of automated cleaning systems for daily operations and conveyor system for planting and harvesting within greenhouses.

8.1 MBC Team's Resumes of Key Personnel

RLI E-23-20

In the following pages we have included MBC's subconsultants', Holtz Consulting Engineers, Hillers Electrical Engineering Inc., and Keith and Associates Inc. individual staff resumes summarizing education, training, and experience.

Christine Miranda, P.E.
Principal Engineer

Holtz Consulting Engineers, Inc.

Christine Miranda joined Holtz Consulting Engineers, Inc. in 2012. Ms. Miranda is experienced in successfully managing multiple projects, from small, fast paced projects to large projects with numerous disciplines and subconsultants. She brings over 20 years of experience in the design of water treatment and distribution systems, wastewater treatment and collection systems, pumping stations, effluent disposal systems, and biosolids management.

Project Related Experience

Water Main Interconnects SRF Assistance – City of Pompano Beach HCE assisted the City of Pompano Beach with the preparation and submittal of the required documentation for the procurement of an SRF loan with principal forgiveness for the construction of upgrades to four existing unmetered interconnections with adjacent water distribution systems. The new upgrades included two-way metered flow capabilities, check valves for backflow prevention, and flushing valves.

2nd Street, Gateway Drive, and Kendall Lakes Drainage Improvements SRF Assistance – City of Pompano Beach HCE assisted the City of Pompano Beach with the preparation and submittal of the required documentation for the procurement of an Clean Water SRF loan for the construction of drainage improvements. Work includes Work included preparing and submitting the Request for Inclusion (RFI), Water Facilities Plan, holding the public meeting, and assistance with the loan application, loan agreement and business plans.

Loxahatchee River Road IQ Main and Force Main-Loxahatchee River District – HCE provided survey, design, permitting, bidding and construction engineering services for 3,200 linear feet of 36-inch raw water main located in easements and right-of-ways along Hood Road in Palm Beach Gardens, Florida. Over 3,600 linear feet of fiber optic conduit was also designed and constructed as part of the project. The project includes PVC, HDPE and ductile iron pipe installed both via open-cut and directional drill methods. Horizontal directional drills were designed beneath major thoroughfares. The project was designed to accommodate the future widening of Hood Road. Permits were obtained from multiple agencies.

Water Distribution Improvement - City of Stuart Project included design, permitting, and Florida Department of Environmental Protection (FDEP) State Revolving Fund funding assistance, of approximately 59,000 linear feet of 6-inch through 12-inch water mains in existing residential neighborhoods and commercial developments for the City of Stuart. The new mains replaced inadequately sized mains, looped dead ends, old mains, and increase fire protection for the City. The mains are located in City, County, and Florida Department of Transportation right-of-ways.

Lift Station #82 Modeling and Rehabilitation-Loxahatchee River District – LRD Lift Station No. 82 is a large wastewater pump station located off Indiantown Road. This pump station currently operates as a "dry can" station and is in need of rehabilitation and improvements to increase the station's wastewater pumping capacity and operational flexibility. HCE is providing both hydraulic modeling and design services to assist LRD with the rehabilitation and improvements to this pump station. HCE utilized Innovyze modeling software to develop a model of LRD's wastewater system associated with Lift Station No. 82, and prepared a technical memorandum detailing the capabilities of the station if proposed pumping modifications were implemented. HCE is currently utilizing the results of the hydraulic model to assist with the development of engineering plans for the rehabilitation and improvements to Lift Station No. 82.

Education

Bachelor of Science in BioResource Engineering, Rutgers University, 1999

Registration

Professional Engineer, Registration No. 60906, State of Florida

Professional Affiliations

FWEA, Past Director-At-Large, AWWA, Member, St. Lucie County Leadership, Graduate Class 26

Andrea Holtz, P.E.
President

Holtz Consulting Engineers, Inc.

Andrea Holtz co-founded Holtz Consulting Engineers, Inc. in 2006. With over 33 years of progressive design and management experience, she is responsible for overall management of the firm and specializes in funding analysis and grant consulting services, master planning and asset management, permitting, and program management services.

Project Related Experience

Grant Writing, Management and Compliance - Multiple Clients – Ms. Holtz has successfully provided grant writing, grant management and grant compliance services for the City of West Palm Beach for over 15 years on over 140 individual grants totaling over $80 million in funding. The grants obtained include federal, state, regional and local grants from multiple agencies including U.S. Department of Energy, Department of Labor, U.S. Environmental Protection Agency, Federal Highway Administration, Federal Emergency Management Agency, Florida Department of Transportation, State of Florida Department of Environmental Protection, South Florida Water Management District, Palm Beach County, the Quantum Foundation, and the Community Foundation of Palm Beach and Martin Counties. Ms. Holtz has also provided grant writing assistance to South Martin Regional Utilities and grant consultation services to the Town of Jupiter Island, Florida Power and Light and the City of Stuart.

Lift Station Rehabilitation Program- Palm Beach County Water Utilities Department – HCE is responsible for the rehabilitation of 60 of Palm Beach County's wastewater pump stations. This effort has consisted of assessment and prioritization of the County's lift stations based on condition and risk of failure, followed by a variety of rehabilitation and upgrades to the sewage pumping system. As part of this effort, civil, mechanical, and electrical items have been assessed and identified for replacement in order to meet PBC minimum design standards where possible. HCE has provided survey, design, and bidding assistance in two phased bid packages, as well as assistance with shop drawing review and building department permitting during the construction phase.

Industrial Pretreatment Program- Martin County Utilities and Solid Waste Department – HCE provided professional engineering services for MCU to review and reevaluate the local limits at the wastewater treatment plants in regard to the established Industrial Pretreatment Program for each plant. The re-evaluation analysis was completed using the FDEP's Local Limit Information Development System to establish local limits for eighteen pollutants of concern (POCs). The limits were based upon a detailed evaluation of plant operational data, POC concentrations, and industrial user flows. The new limits are representative of considerable plant upgrades at the Tropical Farms plant and provide distinct and protective limits for the North facility.

Aerial Force Main Replacement Program- Riviera Beach Utility Special District – This project included the replacement of the existing M-Canal and C-17 force main aerial crossings, which were at the end of their useful life. HCE is responsible for the design, permitting, and bidding of a new 42-inch subaqueous HDPE force main under the M-Canal and the installation of a new 12-inch subaqueous HDPE force main under the C-17 Canal. Both mains will be installed via horizontal directional drill method and connect to the existing force main on either side of the canal.

Jupiter Plantation Force Main Replacement- Loxahatchee River District – This project included the utility locating, surveying, geotechnical investigation, design, permitting, bidding and services during construction for the replacement of 1,100 linear feet of 4- inch cast iron force main from Lift Station #13 to the discharge connection at the manhole on Center Street west of Plantation Way. Installation of the new force main was both via open-cut and horizontal direction drill methods. This project included work with the Palm Beach County Right-of-Way. The design and construction of this project is complete.

Education

Bachelor of Science in Environmental Engineering, University of Florida, 1986

Registration

Professional Engineer, Registration No. 45246, State of Florida

Professional Affiliations

AWWA Member

David Holtz, P.E., BCEE
Vice President

Holtz Consulting Engineers, Inc.

David Holtz is co-founder of Holtz Consulting Engineers and helps oversee the management of the company and execution and quality control for capital improvement projects for numerous public utilities in Southeast Florida. He has over 33 years of comprehensive water, wastewater and reclaimed water engineering experience in Florida and has been the Engineer of Record for numerous significant utility improvement projects.

Project Related Experience

Martin County Utilities – Mr. Holtz has assisted Martin County Utilities with general engineering consulting and implementation of numerous utility and infrastructure improvements projects. Utility improvement projects that Mr. Holtz helped implement include new return sludge and waste activated sludge pumping facilities at the North and Tropical Farms Wastewater Treatment Plants, an in-line wastewater booster pump station at the Martin Downs site, new reclaimed water storage and pumping facilities at the Tropical Farms WWTP, biological odor control systems for two existing lift stations, and assistance with biosolids treatment facilities at both WWTPs. Mr. Holtz has also assisted with wastewater treatment plant permit renewals, deep-well mechanical integrity testing and replacement of a dual-zone monitor well and updating of the wastewater and reclaimed water master plan.

Seacoast Utility Authority – Mr. Holtz manages HCE's general consulting services for the Seacoast Utility Authority (SUA). He has served as Client Service Manager for improvements to the wastewater treatment plant, a nanofiltration WTP nanofiltration force main, lined storage tanks and pump station to blend with reclaimed water, raw wastewater collection and force main replacements, water distribution system improvements and numerous raw water production wells and raw water mains.

East Central Regional Water Reclamation Facility Board – HCE is one of the general engineering consultants to the East Central Regional Water Reclamation Facility (ECRWRF) Board, which manages the 70-mgd ECRWRF Mr. Holtz has served in this capacity since the Board's inception in 1992. He has successfully assisted in the management and operation of the ECRWRF and implementation of numerous improvements to and expansion of the facility. His responsibilities include implementation of projects, regulatory support, planning and budgeting assistance and assisting with operations and maintenance.

Water Main Extension Connecting SR15 to SR80-Palm Beach County Water Utilities Department – HCE performed survey, geotechnical, permitting, and design services for a new 1.3 mile 16-inch water main in the City of Belle Glade. This main looped the existing water system between State Road 80 and State Road 15 to provide water service and fire protection to the proposed industrial and commercial parcels at the location of the BGI Group LLC property (formerly the Glades Correctional Institute). Hydrants and stub-outs for future connections with isolation valves were installed approximately every 1,500 feet and air release or combination valves were provided at high points along the main. This project included permitting with the FDEP, FDOT, F.E.C. Railroad, South Florida Conservancy District, City of Belle Glade, and Palm Beach County Fire/Rescue Department.

Concentrate Force Main and Blending Pump Station – Seacoast Utility Authority – Mr. Holtz provided oversight and quality assurance for a project to convey nanofiltration concentrate 3.8 miles from the Hood Road WTP to the PGA WWTP where it is discharged into a 5-MG line storage pond. The 16-inch HDPE force main included directional drilling of Interstate 95, Florida's Turnpike and several other large local roads. Concentrate is then pumped from the storage pond using two vertical-turbine can pumps to the end of the chlorine contact chambers where it is blended with reclaimed water for beneficial use by SUA's reuse customers. The project was completed on time and under budget and was partially funded with a grant from the SFWMD.

Education

Bachelor of Science in Environmental Engineering, University of Florida, 1985

Masters of Engineering in Environmental Engineering, University of Florida, 1987

Registration

Professional Engineer, Registration No. 42595, Florida

Stephen Fowler, P.E.
Project Engineer

Holtz Consulting Engineers, Inc.

Stephen Fowler joined Holtz Consulting Engineers, Inc. in September 2013. Mr. Fowler has over 16 years of experience in the design, permitting, and construction of water, wastewater and reclaimed water projects. He has been involved in projects that include water and wastewater treatment, pipelines, pump stations, and reclaimed water production. Mr. Fowler also has experience in estimating and project management for underground utility general contractors, and in 2016 received his General Contractor's license.

Project Related Experience

Lift Station Rehabilitation- Palm Beach County Water Utilities Department – HCE is responsible for the rehabilitation of 60 of Palm Beach County's wastewater pump stations. This effort has consisted of assessment and prioritization of the County's lift stations based on condition and risk of failure, followed by a variety of rehabilitation and upgrades to the sewage pumping system. As part of this effort, civil, mechanical, and electrical items have been assessed and identified for replacement in order to meet PBC minimum design standards where possible. HCE has provided survey, design, and bidding assistance in two phased bid packages, as well as assistance with shop drawing review and building department permitting during the construction phase.

Aerial Force Main Replacement Program- Riviera Beach Utility Special District – This project included the replacement of the existing M-Canal and C-17 force main aerial crossings, which were at the end of their useful life. HCE is responsible for the design, permitting, and bidding of a new 42-inch subaqueous HDPE force main under the M-Canal and the installation of a new 12-inch subaqueous HDPE force main under the C-17 Canal. Both mains will be installed via horizontal directional drill method and connect to the existing force main on either side of the canal.

PGA National Force Main Slip Lining- Seacoast Utility Authority – This project included surveying and engineering services for the design, bidding, and construction of approximately 4,300 linear feet of new 8-inch DIP force main within an existing 12-inch DIP force main within PGA National via slip-lining methods from Lift Station No.76, along Avenue of the Masters, Avenue of the Champions, and Tournament Boulevard to Lift Station No. 68.

Lift Station Improvement Projects- City of Lake Worth Beach – This project includes utility locating, surveying, geotechnical investigation, and design engineering services for the rehabilitation of two existing lift stations in the Lake Worth service area. The rehabilitation of Lift Station No. 12 involves a complete station replacement, including a new wet well, valve vault, piping, and electrical installation as well as demolition of the existing station and associated building and pump room. Lift Station No. 14 is to receive mechanical and civil site upgrades including new pumps, piping, fencing, pump station slab, and upgraded electrical equipment. Construction is anticipated to begin in 2020.

Martin Downs In-Line Booster Pump Station- Martin County Utilities and Solid Waste Department – HCE provided professional engineering services for MCU to review and reevaluate the local limits at the wastewater treatment plants in regard to the established Industrial Pretreatment Program for each plant. The re-evaluation analysis was completed using the FDEP's Local Limit Information Development System to establish local limits for eighteen pollutants of concern (POCs). The limits were based upon a detailed evaluation of plant operational data, POC concentrations, and industrial user flows. The new limits are representative of considerable plant upgrades at the Tropical Farms plant and provide distinct and protective limits for the North facility.

Education

Bachelor of Science in Environmental Engineering, University of Florida, 2003

Registration

Professional Engineer, Registration No. 69039, State of Florida

Certified General Contractor, Florida, Registration No. CGC1525114

Professional Affiliations

Member, Design Build Institute of America

Curtis Robinson, P.E.
Project Manager

Holtz Consulting Engineers, Inc.

Curtis Robinson joined Holtz Consulting Engineers, Inc. in 2009. Mr. Robinson has over 17 years of experience in the design, permitting and construction administration of water, wastewater, and reclaimed water projects. He has worked on projects in Martin County and neighboring counties totaling over $100 million.

Project Related Experience

Tropical Farms and North Wastewater Treatment Plant Headworks Rehabilitation- Martin County Utilities and Solid Waste Department – HCE provided design, permitting, bidding, and construction administrative services for headworks and lift station improvements at both the Tropical Farms and North WWTPs. The Tropical Farms WWTP improvements include a new mechanical self-cleaning bar screen, two solids dewatering presses, grit dewatering and handling system, isolation slide gates, odor control ductwork, and a new pump and above-grade piping at Lift Station No. 3. Improvements at the North WWTP include a new grit classifier, grit transfer pumps, grit flushing system, two solids dewatering presses, and a new duplex submersible Lift Station No. 302.

Filter, WAS, and NaOCl Improvements- Martin County Utilities and Solid Waste Department – HCE is providing professional engineering services required to implement sodium hypochlorite storage and feed systems improvements including a new 12.5% sodium hypochlorite solution, which will be diluted to approximately 6% solution. HCE is also providing professional engineering services for the installation of three new disc filters that will ultimately replace the existing traveling bridge filters. The third component of this project for which HCE is providing services is improvements to the existing biosolids systems at the county's wastewater treatment plants.

Wastewater Treatment Plant Chlorine Contact Basin and Filters – South Martin Regional Utility – This project included a new chlorine contact basin and new disc filter at the SMRU wastewater treatment plant. The new chlorine contact basin (CCB) is being designed with two chambers operating in parallel and is sized such that one basin can continue to treat 50% of the total design flow with one chamber out of service, providing the plant with Class I reliability. This project also includes the installation of a third disc filter and associated piping to expand the plant's filtration capacity.

Wastewater Treatment Plant Blowers and NRCY Pump Station- Seacoast Utility Authority – HCE is providing design, permitting, bidding, and construction administration services for Seacoast Utility Authority to demolish existing buildings at their wastewater treatment plant, construct a new blower building, including the installation of six new blowers, replace the existing nitrified recycle pump station, and improve various electrical components at the site including VFDs, motor control centers, and lighting. This project serves to replace and upgrade existing plant infrastructure to increase operational flexibility, decrease electric power consumption, and maintain reliable production of reclaimed water.

Wastewater Treatment Plant Reclaimed Water Storage Tank and Pumps- Martin County Utilities and Solid Waste Department – Project included a two-phase reclaimed water storage and pumping improvements project at the Tropical Farms Wastewater Treatment Plant. Phase I consisted of a new one-million-gallon prestressed concrete reclaimed water storage tank including vibroflotation compaction beneath the tank, bypass piping, and piping relocations. Phase II included a new reclaimed water distribution pump station including 18-inch through 36-inch suction and discharge piping and three vertical turbine pumps. Phase II also consisted of replacing two existing Return Activated Sludge (RAS) pumps with new dry-pit mounted chopper-style pumps.

Education

Bachelor of Science in Civil Engineering, Missouri S&T, 2001
Master of Science in Engineering Management, Missouri S&T, 2003

Registration

Professional Engineer, Registration No. 65685, State of Florida

H E E

Resume

Paul F. Hillers, P.E., President
Hillers Electrical Engineering, Inc.

Education

Master of Science in Electrical Engineering, 1981
Louisiana State University
Bachelor of Science in Electrical Engineering, 1979
Cum Laude
Louisiana State University

Professional Registration

Registered Electrical Engineer, Florida No. 41022

Experience

39 years of electrical, instrumentation & control system design and construction management.

Hillers Electrical Engineering, Inc., 1994 to present

Design and construction services experience includes high, medium and low voltage electrical distribution systems; process instrumentation and control systems; complete supervisory control and data acquisition (SCADA) systems; PLC/computer programming; fire alarm, security and security camera systems; time & attendance systems; normal and standby generation systems.

Areas of practice include: water and wastewater treatment facilities; master lift stations; water reuse facilities; storm water pumping stations; operational and maintenance complexes; water control structures; aquifer storage and recovery (ASR) wells; solid waste facilities.

Transportation experience includes lighting and power distribution design for Florida Department of Transportation major roadways, interchanges and toll plaza systems, including illumination and voltage drop calculations, pole locations, power supply and distribution, 100% plans and project review process, coordination with utilities departments, writing specifications and completing estimates and tabulation quantities for state, county, and municipal agencies in the state of Florida.

Skills include: specification creation; value engineering; energy analysis; testing; cost estimates; start-up; onsite inspections.

Project Manager, Co-generation System, NRWWTP, Broward County Water and Wastewater Services

Performed electrical, instrumentation and control system engineering and design to integrate a single 1999 kW internal combustion gas engine-generators operating on digester gas into the plant power distribution and SCADA system. Generator output is 4.16kV, three-phase, 60 hertz and is integrated with plant main power distribution system. Project also included the design of a new fats, oils and grease (FOG) facility.

H E E

Resume

Project Manager, WTP 9 Emergency Generator Replacement, Palm Beach County, FL

Provided electrical design and construction inspection services for replacement emergency generator that meets current EPA requirements (Tier 4 Final rating). Project includes designing new Tier 4 Final generator, new After-treatment system, Urea system, exhaust silencers, as well as temporary generator during the construction period.

Project Manager, WTP 2 Filter Replacement, Palm Beach County, FL

Provided Electrical, Fire Alarm, and instrumentation & control design for New Filters at WTP2, including designing new electrical distribution for the Filter Building and process, new switchboard, new motor control center (MCC), new variable frequency drives (VFD's), new solid state reduced voltage starters (SSRVS). Instrumentation and control/SCADA and new PLC control panel, RIO panel. New Fire Alarm System compliance with County ESS department requirements is also included.

Project Manager, WTP 9 SCADA and PLC Improvements, Palm Beach County, FL

Provided the instrumentation design, PLC programming and construction services for the PBC WTP 9 PLC replacement project. The PLC-5 system was replaced with a newer generation Control Logix PLC system. Designed and identified the replacement components for each existing PLC-5 and the related remote I/O (RIO) parts and performed a temporary installation to keep both the existing and the new PLC systems running in parallel. The existing system was replaced one-by-one to minimize the downtime and interruption of the existing RO water treatment process. A new PLC program was written for the Control Logix PLC system

Electrical, Instrumentation and Control Chief Electrical Engineer, Everglades Agricultural Area (EAA) A-1 Flow Equalization (FEB) Project, South Florida Water Management District, FL

The EAA A-1 FEB Project design and construction created approximately 15,000 acres of shallow detention basin with an estimated design average depth of four (4) feet. Performed the Electrical, Instrumentation and Control, SCADA and Telemetry design and construction management services for the EAA A-1 Flow Equalization Basin Project. Project electrical design components included two roller gate inflow structures, slide gate outflow structure, ten solar powered slide gate outflow structures. SCADA design included instrumentation and control for monitoring FEB water levels and remote operation of the inflow and outflow structures from South Florida Water Management District Headquarters. Telemetry designed for radio communication via Motorola ACE and CR1000 Remote Telemetry Units (RTU) to communicate with the South Florida Water Management District existing backbone microwave communication infrastructure.

H E E

Resume

Thein Win, P.E., Senior Electrical and Instrumentation Engineer
Hillers Electrical Engineering, Inc.

Education

Bachelor of Science in Electrical Engineering, 2001
Alfred University, Alfred, NY

Professional Registration

Registered Electrical Engineer: Florida No. 65722

Experience

19 years electrical and I&C design, programming, and construction management.

Hillers Electrical Engineering, Inc., 2001 to present

Engineering, design and construction services experience includes medium and low voltage electrical distribution systems, instrumentation and control systems design and implementation. Supervisory control and data acquisition (SCADA) systems experience in water treatment facilities and wastewater treatment facilities.

Electrical and I&C design for projects of nanofiltration treatment, reverse osmosis treatment, lime softening and wastewater treatment plants including reclaimed water systems. Programming of PLC and HMI for lift stations, raw water wells, water and wastewater treatment plants.

Performed design and construction services for various fire detection/suppression and alarm systems, communication networks, and telephone networks. Designed and supervised construction of remote gate operators, card readers, and remotely operated CCTV security systems and process monitoring systems.

Performed lighting and power distribution design for roadways, parks, sport fields, parking lots, including point-by-point illumination calculation and voltage drop calculations.

Skills include: preparation and presentation of specifications, value engineering, energy analysis, testing, cost estimates, start-up, onsite inspections for water and wastewater treatment projects.Proficiency with SKM Power Tools™ for Windows Dappers, CAPTOR and TMS; AutoCAD, SolidWorks, LitePRO, PLC programming, and HMI programming.

Professional Membership
Institute of Electrical and Electronic Engineers (IEEE)
Instrument Society of America (ISA)
LEED Accredited Professional

H E E

Resume

Project Experience

Electrical, Fire Alarm, Instrumentation and Control
East Central Regional Water Reclamation Facility Improvements
Performed Electrical, Fire Alarm, Instrumentation and Control, SCADA and Telemetry design and construction management services for 27 MGD reclaimed water facility that consist of 4 - 600HP rated 18-pulse Variable Frequency Drives and 6 deep bed filters.

Palm Beach County WUD – WTP 11 Clearwell Modifications and Miscellaneous Improvements
Performed Electrical and Instrumentation & Control Systems design and construction inspection services for construction WTP 11 design-build project. Project consists of new power distribution panel, mini-power zone panel, new variable frequency drives (VFD's), new RIO panel, fiber optic communication data highway, and new instruments.

Palm Beach County Water Utilities Department – WTP 2 Filter
Performed Electrical, Fire Alarm, Instrumentation and Control design and construction management services for new filters at WTP2, including designing new electrical distribution, new switchboard, new motor control center (MCC), new variable frequency drives (VFD's), new blowers for filter backwash, new instrumentation and control, new PLC system, and new fire alarm system.

Palm Beach County WUD – WTP 3 PLC Replacement
Provided project management, implementation design, installation and replacement of existing Allen-Bradley PLC-5 model with new up-to-date Allen-Bradley ControlLogix PLC model and associated I/O modules. Project consists of redesigning new communication loop while existing loop is still in operation, identifying what correct model for PLC-5 template adapter to replace with new I/O modules to minimize the re-wiring of the I/O points and implementing replacement of PLC by process area to minimize the system downtime.

Palm Beach County WUD – WTP 9 Emergency Generator Replacement
Provided electrical design and construction inspection services for replacement emergency generator that meets current EPA requirements (Tier 4 Final rating). Project includes designing new Tier 4 Final generator, new After-treatment system, Urea system, exhaust silencers, as well as temporary generator during the construction period.

H E E

Resume

Thein Naing

Electrical and Instrumentation Design Engineer & Field Engineering Inspector
Hillers Electrical Engineering, Inc.

Education

Bachelor of Electrical Engineering, 2006
University of Hertfordshire, Hatfield, UK

Experience

14 years electrical and I&C design, and construction management.

Hillers Electrical Engineering, Inc., 2007 to present

Electrical and I&C design for projects of water treatment facilities and wastewater treatment facilities, and storm water pump stations including Supervisory control and data acquisition (SCADA) systems, Remote Telemetry Units (RTU), and communication systems.

Performed lighting and power distribution design for roadways, parks, sport fields, parking lots, including point-by-point illumination calculation and voltage drop calculations.

Skills include: preparation of specifications, value engineering, energy analysis, testing, cost estimates, start-up, onsite inspections for water and wastewater treatment projects. Proficiency with AutoCAD, and LitePRO.

Professional Membership

Institute of Electrical and Electronic Engineers (IEEE)

Project Experience

Electrical Design & Field Engineering Inspector, Palm Beach County Water Utilities Department, WTP 9 Wellfield Control Panel and RTU Improvements

Mr. Naing served as Electrical Design & Field Engineer for the electrical design and construction inspection services for WTP 9, Wells 17 thru 25. The design included VFDs to control the well motors and a PLC based control system to control the flow rates, the pressures and the speeds.
The instrumentation design monitored flows, pressures, level and motor speed and all the alarm signals.
During the construction phase of the project, we had to work closely with the Owner, contractor and equipment suppliers to fine tune the electrical equipment and the PLC programming to achieve the operation of the wells required by the Owner.

Electrical Design & Field Engineering Inspector, Palm Beach County Water Utilities Department, System Wide Wellfield Improvements Phase 1

Mr. Naing served as Electrical Design & Field Engineer for the electrical design and construction inspection services for 11 wells located at WTP 3, and 9.

The design included VFDs to control the well motors and a PLC based control system to control the flow rates, the pressures and the speeds.
The instrumentation design monitored flows, pressures, level and motor speed and all the alarm signals.
During the construction phase of the project, we had to work closely with the Owner, contractor and equipment suppliers to fine tune the electrical equipment and the PLC programming to achieve the operation of the wells required by the Owner.

Electrical Field Engineering Inspector, Palm Beach County Water Utilities Department, Priority 3 and Lift Station Rehabilitation

Mr. Naing served as Electrical Field Engineer for the construction inspection services for 19 wells located throughout the Palm Beach County.
The construction inspection services included regularly inspections of installations, coordination, and lift station start-ups.

Electrical Design & Field Engineering Inspector, Miami Beach Capital Improvement Project, Venetian Islands Roadway Lighting

Mr. Naing served as Electrical Design & Field Engineer for the roadway lighting design and construction inspection services for San Marino, Dilido, and Rivo Alto Islands.
The design included point-by-point illumination calculations, voltage drop calculations, electrical services, electrical panels, surge protections and lighting circuits.
The construction phase of the project includes coordination with the Owner, the residents, and the contractor to overcome the unforeseen utility conflicts, coordination with the power company for the electrical service and inspection of electrical and light pole installations.

Electrical Design & Field Engineering Inspector, Miami Beach Capital Improvement Project, Venetian Islands Storm Water Pump Stations

Mr. Naing served as Electrical Design & Field Engineer for the pump station design and construction inspection services for San Marino, Dilido, and Rivo Alto Islands.
The design included VFDs to control the motors depending on the wet well levels and a PLC based control system.
During the construction phase of the project, we had to work closely with the Owner, contractor and equipment suppliers to fine tune the electrical equipment and the PLC programming to achieve the operation of the pump stations required by the Owner.

PAUL WEINBERG, PLA, ASLA

Vice President of Planning and Landscape Architecture

Mr. Paul Weinberg is a multi-talented designer and team leader who has been based in South Florida since 2000. During this time, he has worked with a variety of significant public and private sector projects including urban parks, hotels, campuses, plazas, mixed-use development, entertainment districts, streetscapes, waterfront and residential projects that provide meaning and purpose to the community. He has a unique understanding of how to create immersive, authentic and memorable spaces that create place identity to bring vitality to each district. He is committed to a team-based approach that delivers creative, thought-provoking solutions tailored to the distinct character of each project. This collaboration starts with the multi-disciplinary approach at KEITH and builds to include other partners, consultants, and co-collaborators.

Years of Experience
18

Education
B.S. Landscape Architecture, Michigan State University, 2000

Professional Registrations
Registered Landscape Architect, State of Florida, #LA6666804 (2005)

Council of Landscape Architecture Registration Boards (CLARB Certified)

Professional Affiliations
Urban Land Institute, Member

American Society of Landscape Architects (ASLA), Member

American Resort Development Association (ARDA), Member

Riverwalk Trust, Board Member

MSU Landscape Architecture Advisory Board, Board Member

RELEVANT PROJECT EXPERIENCE

Pompano Beach Ali Cultural Center, Pompano Beach, FL: KEITH, as subconsultant to DK Architects, provided civil engineering and landscape architecture services to the Pompano Beach Community Redevelopment Agency (CRA) for the renovation of the 2-story, 7,000-SF building and new addition to this historically significant cultural center located on MLK Boulevard in Downtown Pompano. The existing historical building was renovated and enhanced by the addition of an outdoor performance space and concession facilities, as well as a new multi-purpose building including exhibit space, offices and a conference room to form a cultural campus. The landscape architecture department performed full site analysis and evaluation to prepare tree disposition plans showing tree preservation and tree removal and subsequently prepared landscape and hardscape plans for the outdoor amenities. The property has exterior plazas for events and exterior pedestrian corridors to connect the neighborhoods with the commercial area on MLK Boulevard. KEITH's efforts for this project within historical context included extensive coordination with the CRA and the City to coordinate the project with the Downtown Connectivity Plans. Civil engineering department prepared the design including water, sanitary sewer and storm drainage to service the new site plan, parking lot and driveway connections to the existing right-of-ways and permitting through the regulatory agencies.

Pompano Beach Charlotte Burrie Civic Center, Pompano Beach, FL: KEITH provided civil engineering, permitting, landscape architecture and construction administration and coordination services for the 8,712-SF Charlotte J. Burrie Community/Civic Center location at 2669 North Federal Highway in Pompano Beach's Cresthaven neighborhood. The Civic Center was designed with multipurpose meeting spaces for civic, social, and recreational activities, easy pedestrian access with ADA compliance, porte-cochère entrance for inclement weather protection, and 48 vehicular and 20 bicycle parking spots. The interior of the Civic Center includes a lobby/pre-function area, reception area, administrative offices, small conference room, large assembly space accommodating up to 250 people, fixed platform performance stage, warming kitchen, storage areas and two activity rooms. The Civic Center building is LEED-certified. The engineering requirements include LEED templates, permitting, engineering plans including water and sewer, on-site paving, grading and drainage, signing and pavement marking, stormwater pollution prevention, bidding assistance and construction observation. Landscape services included tree inventory and appraisal, a tree disposition plan, landscape and irrigation plans, and landscape construction observation.

Fast Forward Fort Lauderdale Design and Construction Manual, Fort Lauderdale, FL: KEITH is working with renowned architecture firm Brooks + Scarpa to develop a design and construction manual for a sustainable and resilient community and cohesive public realm that could potentially impact every facet of infrastructure and design within the city. Mr. Weinberg is responsible for the planning and landscape architecture elements of the manual.

Fort Lauderdale Aquatics Center, Fort Lauderdale, FL: The Fort Lauderdale Aquatic Center is situated on a man-made pier which extends approximately 600 feet into the Intracoastal Waterway. The City of Fort Lauderdale and its CRA is looking to renovate the facility and ensure it meets aquatic competition requirements. KEITH's tasks include surveying, subsurface utility engineering, planning services, landscape architecture, and civil engineering. The intent of the project is to restore the Aquatic Center to remain as one of the icons of Fort Lauderdale Beach

Atlantic Boulevard Streetscape Improvements, Margate, FL: The CRA requested the KEITH Team develop a branded approach to several of the city's ROW and streetscapes. The request includes multiple miles of streetscape, medians, walls, walkways, landscape, lighting, signage and a signature fountain feature. The team worked to create a brand or identity that can be utilized throughout the City in these public realm areas. The signature element for this streetscape initiative is the addition of a roundabout and fountain feature. The CRA requested that a theme of a child fishing along the edge of the canal be utilized for inspiration. KEITH had to work around existing infrastructure items and yet was able to develop a creative approach for the fountain. The result was a combination of water, sculpture, landscape and hardscape to make a statement for the City and CRA of Margate.

Hallandale Fire Station No. 7 and EOC Headquarters, Hallandale Beach, FL: The building program and design for the City's new main fire rescue headquarters and emergency management facility were developed to achieve LEED Silver Certification and include a 25,000 SF, two-story complex with four apparatus bays and living quarters for up to 16 firefighters. In addition to on-duty fire rescue staff, the building will house the City's Fire Prevention Bureau including office space for fire inspectors, plans review and public education. KEITH is providing Civil Engineering, Landscape Architecture and SUE services.

City of Fort Lauderdale Tunnel Top Park, Fort Lauderdale, FL: The Riverwalk and Downtown Development Authority of Fort Lauderdale have been studying a number of visionary projects to connect and active the downtown riverfront district corridor. Mr. Weinberg lead the team to the visioning for several key projects including Tunnel Top Park. The project is set to create a stage within the public realm that links the surrounding context together. The Tunnel Top Park will be a mini Klyde Warren Park or High Line for the City and bridge the gap between Laura Ward Plaza, the riverfront and the Las Olas Corridor. Currently the project is being coordinated through the FDOT and is seeking to be implemented through a multi-agency effort.

City of Fort Lauderdale Cemetery Master Plan, Fort Lauderdale, FL: KEITH assisted the City of Fort Lauderdale to develop a master plan for its four (4) cemeteries that range in size from 5 to 50 acres. The charge for the plan was to develop an inventory of the existing facilities, create a strategy to develop additional components and analyze the existing care fund that is in place for preservation. Through working with the cemetery advisory board our team created the master plan and it was unanimously approved. The pilot projects have been identified in the master plan and next steps to implementation are under way.

DC Alexander Park Improvements, Fort Lauderdale, FL: The DC Alexander Park is viewed as the "front yard" of the Fort Lauderdale Aquatic Center and occupies a prominent location on Fort Lauderdale Beach. Mr. Weinberg is leading the design, planning and permitting of this improvement project in conjunction with the City's CRA. He is managing a multi-disciplinary team to create a legacy project that will serve as an iconic, memorable place. (10046.M0)

Isle Casino, Pompano Beach, FL: Mr. Weinberg served as Principal-In-Charge working with the Cordish and El Dorado Resort companies to develop a campus wide master plan for the nearly 250 acre campus. Partnering with Elkus Manfredi architects KEITH is responsible for comprehensive planning documents, rezoning, traffic analysis, agency coordination, civil engineering and stakeholder/public engagement. The plan will be transformative to the campus as well as the overall neighborhood.

Plantation Fire Station No. 1, Plantation, FL: KEITH was responsible for the development of the site plan and is currently coordinating with the design architect to develop the Landscape and Civil Engineering for the project. The intention is to utilize xericscape and low maintenance materials that will provide aesthetics, as well as include CPTED principles for safety.

MICHAEL MOSSEY, PSM

Senior Surveyor & Mapper

Mr. Mossey has over 40 years of experience in land surveying and mapping in South Florida. He has extensive senior project management experience for large-scale projects and continuing service, on-call type contracts for both public and private sector clients. He is a highly talented Quality Surveyor with a successful track record in budget estimation, valuation of items and completing projects on time. Mr. Mossey's experience includes a wide range of projects incorporating GIS deliverables for various agencies including Broward County, the Federal Aviation Administration (FAA) and municipalities.

Years of Experience
40

Education
Maryville College, Maryville, Tennesee

Professional Registrations
State of Florida Professional Surveyor & Mapper #5660

Professional Affiliations
Florida Society of Professional Surveyors & Mappers

Secretary, Broward Chapter FSMS, 1999-2000 and 2000-2001

RELEVANT PROJECT EXPERIENCE

A-1-A / S.R 814 Atlantic Boulevard, Pompano Beach, FL: As Survey Project Manager, Mr. Mossey prepared extensive Topographic Design Surveys for this Pompano Beach CRA roadway improvement project. Project included design and right-of-way survey as well as a FDEP Coastal Topographic Survey required for design and permitting of coastal roadways, pedestrian walkways, and beach and dune beautification improvements. Concept includes reconstruction of roadway, water, sewer and drainage, streetscapes and beatifications.

Pompano Beach Boulevard Streetscape, Pompano Beach, FL: Mr. Mossey was responsible for the Coastal Hydrographic and Topographic Surveys for Florida Department of Environmental Protection (FDEP) Permitting for the design and construction of the roadway and pedestrian pathways adjacent to the beachfront. The project was situated seaward of the Coastal Construction Control Line therefore the design required extensive hydrographic and topographic survey in accordance with the requirements of the Florida Department of Environmental Protection-Division of Beaches and Shores as set forth in Section 62B-33.0081.

Pompano Beach Oceanside Fire Station #11, Pompano Beach, FL: KEITH is working with a team of consultants with the primary responsibility of surveying and platting to construct a new barrier island Oceanside Fire Station (Station # 11) in Pompano Beach. The proposed site required a land use plan amendment, rezoning, platting and site plan approval before the station could be permitted. KEITH coordinated with City staff and other consultants to properly time the plat approval in conjunction with the plan amendment as well as coordinating with the architect and FDOT for the plat opening along A-1-A for the fire station driveway. As Survey Project Manager, Mr. Mossey prepared Boundary and Topographic Design Survey including tree locations and identifications for this new public facility station on A-1-A including offsite improvements. Services included easement vacations plat preparation, processing and recordation.

Pompano Beach Fire Station #103, Pompano Beach, FL: As a sub-consultant to Currie Sowards Aguila Architects, KEITH responsibilities included the following services: preparing boundary and topographic surveys; plat preparation and processing; preparation of documents and attendance meetings for the site plan approval; pre-application meeting with agencies having jurisdiction; prepare all required bidding and construction documents for the projects, design plans, supplementary contract requirements, technical specifications and cost estimates; provide assistance for LEED BD+C rating documentation and processing; prepare and process all required plat permit applications and submittal packages as required for permit issuance of all agency permits.

General Engineering/Surveying Services Contract, Pompano Beach, FL: Through our continuing services contract, KEITH has provided surveying and mapping services for multiple parks and publics spaces within the City. As Survey Project Manager Mr. Mossey prepared Boundary and Topographic surveys, as well as sketches of description for Pompano Community Park, Highlands Park, Alsdorf Park, Rustic Bridge Park, Founders Park and Lovely Park.

Pompano Beach Oceanside Fire Station #11, Pompano Beach, FL: KEITH is working with a team of consultants with the primary responsibility of surveying and platting to construct a new barrier island Oceanside Fire Station (Station # 11) in Pompano Beach. The proposed site required a land use plan amendment, rezoning, platting and site plan approval before the station could be permitted. KEITH coordinated with City staff and other consultants to properly time the plat approval in conjunction with the plan amendment as well as coordinating with the architect and FDOT for the plat opening along A-1-A for the fire station driveway. As Survey Project Manager, Mr. Mossey prepared Boundary and Topographic Design Survey including tree locations and identifications for this new public facility station on A-1-A including offsite improvements. Services included easement vacations plat preparation, processing and recordation.

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Pompano Beach GIS Mapping Services Pilot Project, Pompano Beach, FL: KEITH was tasked to locate all water meters and valves, sanitary manholes and cleanouts, and storm drainage inlet structures and manholes with at least sub-meter grade GPS (Global Positioning System). The general limits of the project are from McNab Road (SE 15th Street) to the southerly edge of water of Lettuce Lake (just North of SE 8th Street) and from the easterly right-of-way of Federal Highway to the westerly edge of water of the Intracoastal Waterway. Mr. Mossey served as Senior Project Surveyor for this GIS project and is currently working in this geographic area and progress up to 1,550 data points. Once completed, KEITH will edit the files by moving the existing utilities, including any pipes, services or laterals that connect to the structure, to the true, GPS-verified location. The attribute data attached to each utility will remain unchanged.

S.E. 8th Court Bridge Replacement, Pompano Beach, FL: The project consisted of the replacement of the existing bridge at S.E. 8th Court across Santa Barbara Shores Canal, in the City of Pompano Beach. The project consists of demolition of existing structure and installation of a new bridge structure, headwalls, concrete deck, handrails, guardrails, and existing utilities. As Survey Project Manager, Mr. Mossey prepared the topographic and right of way survey including channel sounding and utility locations.

FDOT District 4 Districtwide Survey Services, Broward County, FL: KEITH provided surveying and mapping, and engineering services including water, sewer, paving grading & drainage design, permitting and construction inspection for this new $4 million community facility in the City of Dania Beach.

Broward County Water Reclaimed Water Plant Expansion, Broward County, FL: As a subconsultant to Brown and Caldwell, KEITH was tasked with surveying activities to supplement the existing topographic survey provided by Broward County and verifying the elevation of select hydraulic process structures such as top of weir/wall/floor and overflow elements of existing structures.

Broward County Water and Wastewater Services Sanitary Improvements Survey, Hillsboro Beach, FL: As a Sub-Consultant to Brown and Caldwell, KEITH provided surveying and mapping services for the Sanitary Sewer Improvement Project along Hillsboro Mile (A-1-A). The scope included preparing a Topographic/Design survey from right-of-way to right-of-way along Hillsboro Mile starting at the inlet bridge and extending north to S.E. 10th Street. The survey included the acquisition and mapping of the above ground improvements and utilities within the survey corridor approximately 16,000 linear feet.

Broward County District 1A Water Treatment Plant Preliminary Design Phase I, Lauderdale Lakes, FL: Mr. Mossey provided surveying services associated with expansion and development new well sites for the Broward County Water Treatment Plant No 1A Property generally located at 3701 North State Road 7 in the City of Lauderdale Lakes, Broward County. KEITH provided Topographic surveys for the 2 Floridian well sites and pipeline alignment routes to the plant, a topographic survey for the injection well, and utilized all available existing record utility as-built information provided by utility companies, from the most reliable source, to identify underground utilities.

MARK MITCHELL

Director of Subsurface Utility Engineering

Years of Experience
20

As Director of Subsurface Utility Engineering for KEITH's SUE/subsurface utility engineering division, Mr. Mitchell is responsible for the oversight of the day to day operations of all subsurface utility engineering projects. Mr. Mitchell's role allows him to review and determine if additional utility investigation is needed for assigned projects in South Florida. He completed projects from beginning phases to final delivery; which included preparing and submitting fee proposals, coordinating with clients. Mr. Mitchell performs quality control and finalizes the delivery while keeping clients informed on a daily basis. His experience also includes creating DTM's, Topo's, Tin Models, PNC's and Test Hole summary spread sheets. Mr. Mitchell provides a liaison between designers, utility agencies and owners on behalf of clients to provide utility coordination services, providing documentation, inter-coordination and maintenance of files of all activities for each utility agency.

RELEVANT PROJECT EXPERIENCE

City of Pompano Beach CRA Miscellaneous Engineering and Surveying Services, Pompano Beach, FL: KEITH is currently providing general engineering and surveying and mapping services to the CRA on an as needed basis on this ongoing continuing services contracts. Some projects provided under this contract include: MLK Boulevard Study & Boundary Survey, MLK Boulevard Planning & Design, FEC Railroad Right-of-Way Study, Municipal Pier Restaurant Redevelopment, MLK Boulevard Street Vacation Services, Pompano Beach Boulevard Streetscape & Dune Revitalization, East Atlantic Boulevard/Pompano Beach Boulevard Surveys, Old Pompano Area Design Survey (North of Atlantic Boulevard), MLK Boulevard Survey (I-95 to Dixie Highway), Right-of-Way Vacations & Dedications for NW CRA (NW 4th Street and NW 4th Avenue), Professional Services for Mixed-Use Downtown Pompano Connectivity Plan, NW 6th Street Topographic Survey and Street Light Locations, Pompano Springs Utility Easements, Ortanique Boundary Survey, NW Corner of NW 6th Avenue/MLK Boulevard Plat & Re-Plat, FPL Utility Easements, MLK Boulevard Update Survey, Professional Services for the Development of 731 Hammondville Road, Professional Services for MLK Boulevard Streetscape Improvements, FEC Flagler Corridor Landscape Easements, Pompano Beach Library Branch Relocation Survey, Rezoning of NE Corner of MLK Boulevard & NW 6th Avenue, Atlantic Point Boundary and Topographic Surveys, Trafficway Plan Amendment for MLK Boulevard/Hammondville Road, Bailey Hotel Boundary Survey, Old Pompano Area Water and Sewer Improvements for Future Development Restaurants, and MLK Boulevard Water Main Design.

Fire Station #11, Pompano Beach, FL: As the field supervisor, Mr. Mitchell was tasked with providing ASCE Standard Quality Level B (Designating) and Quality Level A (Locating) Subsurface Utility Engineering services to assist the design engineer on accurately identifying the existing utilities in order to mitigate conflicts with the proposed design.

Fire Stations #24 and #61, Pompano Beach, FL: As the field supervisor, Mr. Mitchell was tasked with providing ASCE Standard Quality Level B (Designating) and Quality Level A (Locating) Subsurface Utility Engineering services to assist the City of Pompano Beach Project Manager on preparing the design build documents to be released for bid.

SR A1A Conversion, Pompano Beach, FL: As the field supervisor, Mr. Mitchell was tasked with providing ASCE Standard Quality Level B (Designating) and Quality Level A (Locating) Subsurface Utility Engineering services to assist the City of Pompano Beach Project Manager on preparing the design build documents to be released for bid.

Martin Luther King Jr. Boulevard, Pompano Beach, FL: As the field supervisor, Mr. Mitchell was tasked with providing ASCE Standard Quality Level B (Designating) and Quality Level A (Locating) Subsurface Utility Engineering services to assist the design engineer on accurately identifying the existing utilities in order to mitigate conflicts with the proposed design.

City of Deerfield Beach Miscellaneous Engineering, Planning and Surveying Services, Deerfield Beach, FL: KEITH has served as the General Engineering Consultant for the City of Deerfield Beach for over 14 years. KEITH is providing on-going continuing serves as needed including engineering and surveying and mapping services to the municipality. KEITH also provided plan review services Some projects provided under these contracts include: Hillsboro Blvd and A1A "S-Curve" Beach Roadway, Drainage and Beautification (Phase I and II), Ocean Way Café Luna Improvement, Ocean Way Drainage, Infrastructure, and Beautification Improvements, Deerfield Beach Sand and Dune Stabilization Re-nourishment and Erosion Control, Deerfield Beach Boardwalk, Volleyball Courts and Artificial, Reef Improvements, Main Beach Parking Lot Improvements, Intersection Improvement Design of Goolsby Blvd/Hillsboro Blvd, Intersection Improvement Design of Century Blvd/Hillsboro Blvd, Hillsboro Blvd Streetscape Improvements, SW 15th Street Roadway Improvements.

Briny Avenue Streetscape Improvements, Pompano Beach, FL: This project involved the reconstruction of East Atlantic Boulevard from A1A to Pompano Beach Boulevard/Briny Avenue including wider sidewalks, revised parking configurations and lanes. KEITH provided professional services for a design survey as well as the designation and location of subsurface utilities along Briny Avenue from the south right-of-way line of Atlantic Boulevard to the south end of Briny Avenue.

FDOT District 4 Dixie Highway Flyover Design-Build, Broward County, FL: Originally this project was expected to follow the traditional Design, Bid, Build process, but was converted to a Design-Build. In order to meet the Department's aggressive schedule for advertisement, the bid package creation was placed on a fast track. Being part of the original design team providing Subsurface Utility Engineering and design survey services, Mr. Mitchell was contracted to provide additional Subsurface Utility Engineering and survey services required to help finalize the bid plans. It was his past experience and vast available resources that made it possible to meet the designer's needs and schedule and ultimately those of the Department.

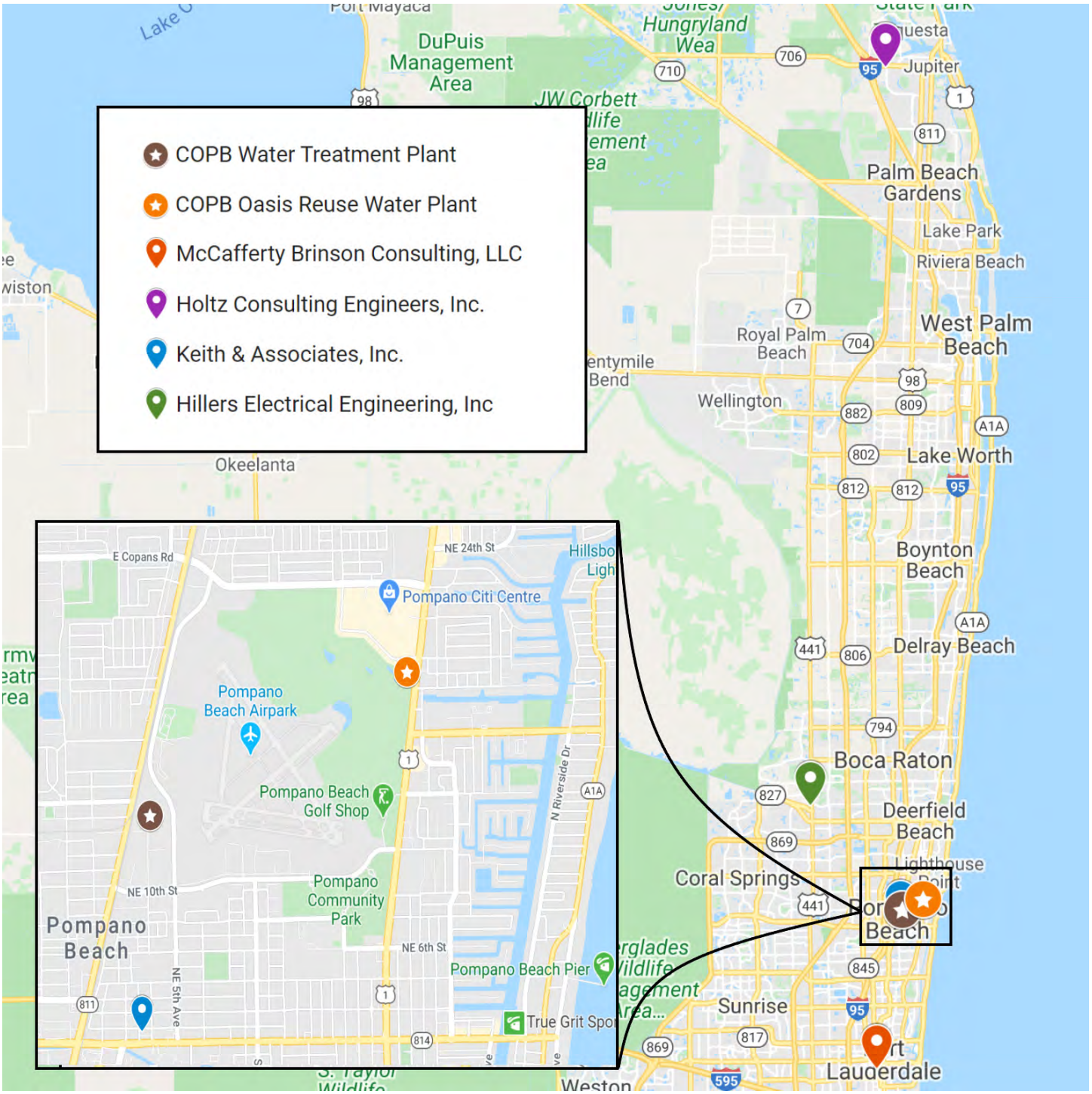
John Knox Village Health Center, Pompano Beach, FL: The John Knox Village Health Center is a seven story "Green House" skilled nursing facility. The state of the art center is one of Florida's first of its kind. It is located on their 65 acre campus in Pompano Beach and can house a total of 144 residents in the building. KEITH provided planning, surveying, civil engineering, landscape architecture, construction administration and SUE services. KEITH was responsible for processing the site plan, civil design, and processing construction permits.

Fort Lauderdale-Hollywood International Airport SUE Services, Broward County, FL: As the field supervisor, Mr. Mitchell was responsible for providing ASCE Standard Quality Level B (Designating) and Quality Level A (Locating) Subsurface Utility Engineering services as a subconsultant on many projects for the airport such as Phase 1 Utility Atlas Update for South Runway Expansion, Phase 2 Utility Atlas for South Runway Expansion, Terminal 4 Fuel Line Relocation, 9R/27L Runway Expansion, Perimeter Road Water and Sewer Utility Improvements, Eastside Watermain Improvements, Westside Watermain Improvements, North Perry Airport HWO Wayfinding, Terminals 2 and 3, etc.

BCWWS Septic Tank Elimination Continuing Services, Broward County, FL: Broward County Water and Wastewater Services is implementing a new septic tank elimination program which consists of short sanitary sewer runs to serve small pockets of previously unserved properties. KEITH is providing engineering services for water distribution, wastewater collection and storm water collection systems. As the Prime consultant, KEITH is providing design and construction support services throughout the county related to the septic tank elimination program.

Miami International Airport Chiller Plant Building, Miami, FL: KEITH provided Quality Level "B" utility designation, Quality Level "A" utility locates and mapping services for this Chiller Plant Building 3099 at MIA for ES Consultants. KEITH designated the above horizontal alignment of any existing known/unknown, toneable and non-toneable utilities using combination of geo physical prospecting equipment and Ground Penetrating Radar. This information was then collected and used by the design team to identify the activities of existing subsurface facilities. The firm was then requested to perform utility verifications of the facilities by using non-destructive/non-intrusive vacuum excavation services. The Utilities we exposed and cataloged to help the design team resolved potential conflicts with proposed design improvements.

9. Office Locations



10. Local Businesses

LOCAL BUSINESS EXHIBIT "A"
CITY OF POMPANO BEACH, FLORIDA
LOCAL BUSINESS PARTICIPATION FORM

Solicitation Number & Title: E-23-30 Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects

Prime Contractor's Name: McCaffetry Brinson Consulting, LLC

Name of Firm, Address	Contact Person, Telephone Number	Type of Work to be Performed/Material to be Purchased	Contract Amount or %
Keith and Assoc., 301 East Atlantic Blvd, Pompano Beach, FL 33060	Paul Weinberg, 954.788.3400	Surveying, Landscape Architecture, and Subsurface Utility Engineering	10*
* Estimated percentage. Actual participation will be based upon specific scope.			

LOCAL BUSINESS EXHIBIT "A"

LOCAL BUSINESS EXHIBIT "B"
LOCAL BUSINESS
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number E-23-20

TO: McCafferty Brinson Consulting, LLC
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

_____ an individual
X a corporation
_____ a partnership
_____ a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

Keith will provide surveying, landscaping architecture and subsurface utility engineering to support MBC's under the Continuing Services Contract for Water and Reuse Treatment Plant projects.

at the following price: To be determined based on work authentication for he contract.

7/14/2020
(Date)

Kieth
(Print Name of Local Business Contractor)

301 East Atlantic Boulevard
(Street Address)

Pompano Beach, Florida 33060
(City, State Zip Code)

BY: _____
(Signature)

IMPORTANT NOTE: Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

Not Applicable

LOCAL BUSINESS EXHIBIT "C

LOCAL BUSINESS
UNAVAILABILITY FORM

BID #_____

I,_____
(Name and Title)

of_____, certify that on the _____day of

_____, _____, I invited the following LOCAL BUSINESSES to bid work items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)

Said Local Businesses:

___ Did not bid in response to the invitation

___ Submitted a bid which was not the low responsible bid

___ Other:_____

Name and Title: _____

Date: _____

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "D"
GOOD FAITH EFFORT REPORT
LOCAL BUSINESS PARTICIPATION

BID # E-23-20

1. What portions of the contract have you identified as Local Business opportunities?

Surveying, landscape architecture, and subsurface utility engieereing.

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

Yes, the local business was contacted by email and provided the RLI documents.

3. Did you send written notices to Local Businesses?

X Yes ____ No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

____ Yes X No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

We contacted a local business that MBC has a working relationship and who is known for their high quality services.

7. List the Local Businesses you will utilize and subcontract amount.

Keith and Associates $ 10% of contract, TBD on a project basis.

$

$

8. Other comments: Keith and Associates was MBC 's sub consultant on a previous City of Pompano Beach continuing service contract.

LOCAL BUSINESS EXHIBIT "D" – Page 2

_____

_____

_____

From: Frank Brinson
To: amccafferty@mccaffertybrinson.com
Subject: FW: Pompano RFP
Date: Monday, July 13, 2020 9:58:53 AM
Attachments: KEITH_a74e728a-cec9-4444-a088-f417dfb3fdcf.png
E-23-20 Continuing Contract for Water and Reuse Treatment Plant Projects.pdf

---

Frank A. Brinson, P.E. | Principal Engineer
McCafferty Brinson Consulting, LLC
954 797 7100 Office
954 802 3058 Cell

From: Mark Mitchell <MMitchell@keithteam.com>
Sent: Friday, July 10, 2020 11:48 AM
To: Frank Brinson <fbrinson@mccaffertybrinson.com>
Cc: Kristen Lawlor <KLawlor@keithteam.com>
Subject: RE: Pompano RFP

Hello Frank,

Yes, we would privileged to join your team. I've cc'd Kristen who can assist with any relevant documents you may need moving forward.

Thanks again and we look forward to being on your team.

Kind Regards, Mark

Mark Mitchell
Director of Subsurface Utility Engineering
301 East Atlantic Blvd, Pompano Beach
Office: 954.788.3400 | Mobile: 954.593.0566
Email: MMitchell@keithteam.com
www.KEITHteam.com

From: Frank Brinson <fbrinson@mccaffertybrinson.com>
Sent: Friday, July 10, 2020 10:11 AM
To: Mark Mitchell <MMitchell@keithteam.com>
Subject: Pompano RFP

Mark-
This is the RFP I was talking about.

Best Regards

Frank A. Brinson, P.E. | Principal Engineer
Vice-President

McCafferty Brinson Consulting, LLC
633 S Andrews Ave, Suite 402, Fort Lauderdale, Florida 33301 - 954 797 7100
1031 Ives Dairy Road, Suite 228, Miami, Florida 33179 - 305 459 0757
954 802 3058 Cell
www.mccaffertybrinson.com

Please consider the environment before printing this email.

11. Litigation

Please find the following litigation statements from our team below.

McCafferty Brinson consulting

MBC has not been involved with litigation procedures since its founding in 2006.

HCE HOLTZ CONSULTING ENGINEERS

HCE has never been involved in any litigation, nor is there any pending litigation arising out of HCE's performance.

H E E HILLERS ELECTRICAL ENGINEERING, INC.

Hillers Electrical Engineering, Inc. has been in business since February of 1994. Over the past five years, Hillers Electrical Engineering, Inc., the business, and all current employees have not been involved in any type of litigation (civil or criminal). Also, none of the current employees with Hillers Electrical Engineering, Inc. has been indicted for, or convicted of a felony.

KEITH Engineering Inspired Design.

In 2016, KEITH was involved in a material case (No. 14-14525(12)) as a third-party defendant in a dispute between a client of ours and a neighboring property owner. The case was settled, and all parties involved have received resolution. KEITH has not been involved in any other litigation over the past 5 years.

12.0 City Forms

COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE THE FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB FOR THE RFP IN THE EBID SYSTEM.

PROPOSER INFORMATION PAGE

RFP E-23-20, Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects

(number) (RFP name)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the RFP. I have read the RFP and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by:

Name (printed) Frank Brinson, P.E. Title Vice President

Company (Legal Registered) McCafferty Brinson Consulting, LLC

Federal Tax Identification Number 20-4382371

Address 633 S. Andrews Avenue, Suite 402

City/State/Zip Fort Lauderdale, FL 33301

Telephone No. 954-797-7100 Fax No. N/A

Email Address fbrinson@mccaffertybrinson.com

TIER 1/TIER 2 COMPLIANCE FORM

IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

TIER 1 LOCAL VENDOR

_____ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

_____ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

__✓__ My firm does not qualify as a Tier 1 Vendor.

TIER 2 LOCAL VENDOR

__✓__ My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

_____ My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

Or

_____ My firm does not qualify as a Tier 2 Vendor.

I certify that the above information is true to the best of my knowledge.

7-13-20
(Date)

McCafferty Brinson Consulting, LLC
(Name of Firm)

BY: Frank A. Brinson Frank A. Brinson, P.E. 2020.07.13 13:08:59 -04'00'
(Name)

BIDDERS ARE TO COMPLETE FORM AND UPLOAD COMPLETED FORM TO THE EBID SYSTEM

EXHIBIT E

MINORITY BUSINESS ENTERPRISE PARTICIPATION

RLI # E-23-20

List all members of your team that are a certified Minority Business Enterprise (as defined by the State of Florida.) You must include copies of the MBE certificates for each firm listed with your electronic submittal.

Name of Firm	Certificate Included?
McCafferty Brinson Consulting, LLC	Yes
Holtz Consulting Engineers, Inc.	Yes
Hillers Electrical Engineering, Inc.	Yes

State of Florida

Minority Business Certification

Hillers Electrical Engineering Inc

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:

09/11/2019 to 09/11/2021

Jonathan R. Satter, Secretary
Florida Department of Management Services

Department of MANAGEMENT SERVICES
Office of Supplier Diversity

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd

State of Florida

Woman & Minority Business Certification

Holtz Consulting Engineers, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:

09/25/2018 to 09/25/2020

Erin Rock, Secretary
Florida Department of Management Services

office of supplier DIVERSITY

Office of Supplier Diversity • 4050 Esplanade Way, Suite 380 • Tallahassee, FL 32399 • 850-487-0915 • www.dms.myflorida.com/osd

State of Florida

Minority Business Certification

Hillers Electrical Engineering Inc

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:

09/11/2019 to 09/11/2021

Jonathan R. Satter, Secretary
Florida Department of Management Services

Department of MANAGEMENT SERVICES
Office of Supplier Diversity

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd

13. Reviewed and Audited Financial Statements

MCCAFFERTYS 02/21/2019

Tax Schedules and additional information avialable upon request.

Form **1120S**

Department of the Treasury
Internal Revenue Service

U.S. Income Tax Return for an S Corporation

▶ Do not file this form unless the corporation has filed or is attaching Form 2553 to elect to be an S corporation.

▶ Go to *www.irs.gov/Form1120S* for instructions and the latest information.

OMB No. 1545-0123

2018

For calendar year 2018 or tax year beginning , ending

A S election effective date: 01/01/17	TYPE	Name: MCCAFFERTY BRINSON CONSULTING LLC	D Employer identification number: 20-4382371
B Business activity code number (see instructions): 541330	OR	Number, street, and room or suite no. If a P.O. box, see instructions.: 633 S. ANDREWS AVENUE, SUITE 402	E Date incorporated: 02/24/2006
C Check if Sch. M-3 attached ☐	PRINT	City or town, state or province, country, and ZIP or foreign postal code: FT. LAUDERDALE FL 33301	F Total assets (see instructions): $ [redacted]6

G Is the corporation electing to be an S corporation beginning with this tax year? ☐ Yes ☒ No If "Yes," attach Form 2553 if not already filed

H Check if: (1) ☐ Final return (2) ☐ Name change (3) ☐ Address change (4) ☐ Amended return (5) ☐ S election termination or revocation

I Enter the number of shareholders who were shareholders during any part of the tax year ▶ 2

Caution: Include **only** trade or business income and expenses on lines 1a through 21. See the instructions for more information.

Income	1a	Gross receipts or sales	1a	[redacted]	
	b	Returns and allowances	1b		
	c	Balance. Subtract line 1b from line 1a			1c
	2	Cost of goods sold (attach Form 1125-A)			2
	3	Gross profit. Subtract line 2 from line 1c			3
	4	Net gain (loss) from Form 4797, line 17 (attach Form 4797)			4
	5	Other income (loss) (see instructions—attach statement)		[redacted]	5
	6	**Total income (loss).** Add lines 3 through 5 ▶			6
Deductions (see instructions for limitations)	7	Compensation of officers (see instructions–attach Form 1125-E)			7
	8	Salaries and wages (less employment credits)			8
	9	Repairs and maintenance			9
	10	Bad debts			10
	11	Rents			11
	12	Taxes and licenses			12
	13	Interest (see instructions)			13
	14	Depreciation not claimed on Form 1125-A or elsewhere on return (attach Form 4562)			14
	15	Depletion **(Do not deduct oil and gas depletion.)**			15
	16	Advertising			16
	17	Pension, profit-sharing, etc., plans			17
	18	Employee benefit programs			18
	19	Other deductions (attach statement)		[redacted]	19
	20	**Total deductions.** Add lines 7 through 19 ▶			20
	21	**Ordinary business income (loss).** Subtract line 20 from line 6			21
Tax and Payments	22a	Excess net passive income or LIFO recapture tax (see instructions)	22a		
	b	Tax from Schedule D (Form 1120S)	22b		
	c	Add lines 22a and 22b (see instructions for additional taxes)			22c
	23a	2018 estimated tax payments and 2017 overpayment credited to 2018	23a		
	b	Tax deposited with Form 7004	23b		
	c	Credit for federal tax paid on fuels (attach Form 4136)	23c		
	d	Refundable credit from Form 8827, line 8c	23d		
	e	Add lines 23a through 23d			23e
	24	Estimated tax penalty (see instructions). Check if Form 2220 is attached ▶ ☐			24
	25	**Amount owed.** If line 23e is smaller than the total of lines 22c and 24, enter amount owed			25
	26	**Overpayment.** If line 23e is larger than the total of lines 22c and 24, enter amount overpaid			26
	27	Enter amount from line 26: **Credited to 2019 estimated tax** ▶ **Refunded** ▶			27

Sign Here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Signature of officer **AUDRA MCCAFFERTY** Date

PRESIDENT Title

May the IRS discuss this return with the preparer shown below (see instructions)? ☒ Yes ☐ No

Paid Preparer Use Only

Print/Type preparer's name	Preparer's signature	Date	Check ☐ if self-employed	PTIN
JUDY O'CONNOR, CPA	JUDY O'CONNOR, CPA	02/21/19		P01218704

Firm's name ▶ O'CONNOR & RODRIGUEZ, PA — Firm's EIN ▶ 14-1849923

Firm's address ▶ 660 NE 95TH ST # 7 MIAMI SHORES, FL 33138 — Phone no. 305-754-6212

For Paperwork Reduction Act Notice, see separate instructions. Form **1120S** (2018)

DAA

MCCAFFERTYS 02/21/2019

Form 1120S (2018) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 2

Schedule B Other Information (see instructions)

		Yes	No
1	Check accounting method: a [X] Cash b [ ] Accrual c [ ] Other (specify) ▶		
2	See the instructions and enter the: a Business activity ▶ ENGINEERS b Product or service ▶ CONSULTING		
3	At any time during the tax year, was any shareholder of the corporation a disregarded entity, a trust, an estate, or a nominee or similar person? If "Yes," attach Schedule B-1, Information on Certain Shareholders of an S Corporation		X
4	At the end of the tax year, did the corporation:		
a	Own directly 20% or more, or own, directly or indirectly, 50% or more of the total stock issued and outstanding of any foreign or domestic corporation? For rules of constructive ownership, see instructions. If "Yes," complete (i) through (v) below		X

(i) Name of Corporation	(ii) Employer Identification Number (if any)	(iii) Country of Incorporation	(iv) Percentage of Stock Owned	(v) If Percentage in (iv) is 100%, Enter the Date (if any) a Qualified Subchapter S Subsidiary Election Was Made

b	Own directly an interest of 20% or more, or own, directly or indirectly, an interest of 50% or more in the profit, loss, or capital in any foreign or domestic partnership (including an entity treated as a partnership) or in the beneficial interest of a trust? For rules of constructive ownership, see instructions. If "Yes," complete (i) through (v) below		X

(i) Name of Entity	(ii) Employer Identification Number (if any)	(iii) Type of Entity	(iv) Country of Organization	(v) Maximum Percentage Owned in Profit, Loss, or Capital

5 a	At the end of the tax year, did the corporation have any outstanding shares of restricted stock? If "Yes," complete lines (i) and (ii) below.		X
	(i) Total shares of restricted stock ▶		
	(ii) Total shares of non-restricted stock ▶		
b	At the end of the tax year, did the corporation have any outstanding stock options, warrants, or similar instruments? If "Yes," complete lines (i) and (ii) below.		X
	(i) Total shares of stock outstanding at the end of the tax year ▶		
	(ii) Total shares of stock outstanding if all instruments were executed ▶		
6	Has this corporation filed, or is it required to file, **Form 8918,** Material Advisor Disclosure Statement, to provide information on any reportable transaction?		X
7	Check this box if the corporation issued publicly offered debt instruments with original issue discount ▶ [ ] If checked, the corporation may have to file **Form 8281,** Information Return for Publicly Offered Original Issue Discount Instruments.		
8	If the corporation: **(a)** was a C corporation before it elected to be an S corporation **or** the corporation acquired an asset with a basis determined by reference to the basis of the asset (or the basis of any other property) in the hands of a C corporation **and (b)** has net unrealized built-in gain in excess of the net recognized built-in gain from prior years, enter the net unrealized built-in gain reduced by net recognized built-in gain from prior years (see instructions) ▶ $		
9	Did the corporation have an election under section 163(j) for any real property trade or business or any farming business in effect during the tax year? See instructions		X
10	Does the corporation satisfy one of the following conditions and the corporation doesn't own a pass-through entity with current year, or prior year carryover, excess business interest expense? See instructions	X	
a	The corporation's aggregate average annual gross receipts (determined under section 448(c)) for the 3 tax years preceding the current tax year don't exceed $25 million, and the corporation isn't a tax shelter; or		
b	The corporation only has business interest expense from (1) an electing real property trade or business, (2) an electing farming business, or (3) certain utility businesses under section 163(j)(7). If "No," complete and attach Form 8990.		
11	Does the corporation satisfy **both** of the following conditions?		
a	The corporation's total receipts (see instructions) for the tax year were less than $250,000		X
b	The corporation's total assets at the end of the tax year were less than $250,000 If "Yes," the corporation is not required to complete Schedules L and M-1.		

DAA Form **1120S** (2018)

MCCAFFERTYS 02/21/2019

Form 1120S (2018) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 3

Schedule B Other Information (see instructions) *(continued)*

		Yes	No
12	During the tax year, did the corporation have any non-shareholder debt that was canceled, was forgiven, or had the terms modified so as to reduce the principal amount of the debt?		X
	If "Yes," enter the amount of principal reduction ▶ $		
13	During the tax year, was a qualified subchapter S subsidiary election terminated or revoked? If "Yes," see instructions		X
14a	Did the corporation make any payments in 2018 that would require it to file Form(s) 1099?		X
b	If "Yes," did the corporation file or will it file required Forms 1099?		
15	Is the corporation attaching Form 8996 to certify as a Qualified Opportunity Fund?		X
	If "Yes," enter the amount from Form 8996, line 13 ▶ $		

Schedule K Shareholders' Pro Rata Share Items

				Total amount
Income (Loss)	1	Ordinary business income (loss) (page 1, line 21)	1	[redacted]
	2	Net rental real estate income (loss) (attach Form 8825)	2	
	3a	Other gross rental income (loss)	3a	
	b	Expenses from other rental activities (attach statement)	3b	
	c	Other net rental income (loss). Subtract line 3b from line 3a	3c	
	4	Interest income	4	
	5	Dividends: a Ordinary dividends	5a	
		b Qualified dividends	5b	
	6	Royalties	6	
	7	Net short-term capital gain (loss) (attach Schedule D (Form 1120S))	7	
	8a	Net long-term capital gain (loss) (attach Schedule D (Form 1120S))	8a	
	b	Collectibles (28%) gain (loss)	8b	
	c	Unrecaptured section 1250 gain (attach statement)	8c	
	9	Net section 1231 gain (loss) (attach Form 4797)	9	
	10	Other income (loss) (see instructions) Type ▶	10	
Deductions	11	Section 179 deduction (attach Form 4562)	11	
	12a	Charitable contributions SEE STMT 3	12a	[redacted]
	b	Investment interest expense	12b	
	c	Section 59(e)(2) expenditures (1) Type ▶ (2) Amount ▶	12c(2)	
	d	Other deductions (see instructions) Type ▶	12d	
Credits	13a	Low-income housing credit (section 42(j)(5))	13a	
	b	Low-income housing credit (other)	13b	
	c	Qualified rehabilitation expenditures (rental real estate) (attach Form 3468, if applicable)	13c	
	d	Other rental real estate credits (see instructions) Type ▶	13d	
	e	Other rental credits (see instructions) Type ▶	13e	
	f	Biofuel producer credit (attach Form 6478)	13f	
	g	Other credits (see instructions) Type ▶	13g	
Foreign Transactions	14a	Name of country or U.S. possession ▶		
	b	Gross income from all sources	14b	
	c	Gross income sourced at shareholder level	14c	
		Foreign gross income sourced at corporate level		
	d	Section 951A category	14d	
	e	Foreign branch category	14e	
	f	Passive category	14f	
	g	General category	14g	
	h	Other (attach statement)	14h	
		Deductions allocated and apportioned at shareholder level		
	i	Interest expense	14i	
	j	Other	14j	
		Deductions allocated and apportioned at corporate level to foreign source income		
	k	Section 951A category	14k	
	l	Foreign branch category	14l	
	m	Passive category	14m	
	n	General category	14n	
	o	Other (attach statement)	14o	
		Other information		
	p	Total foreign taxes (check one): ▶ ☐ Paid ☐ Accrued	14p	
	q	Reduction in taxes available for credit (attach statement)	14q	
	r	Other foreign tax information (attach statement)		

DAA

Form **1120S** (2018)

MCCAFFERTYS 02/21/2019

Form 1120S (2018) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 4

Schedule K Shareholders' Pro Rata Share Items *(continued)*

			Total amount
Alternative Minimum Tax (AMT) Items	15a Post-1986 depreciation adjustment	15a	1
	b Adjusted gain or loss	15b	
	c Depletion (other than oil and gas)	15c	
	d Oil, gas, and geothermal properties – gross income	15d	
	e Oil, gas, and geothermal properties – deductions	15e	
	f Other AMT items (attach statement)	15f	
Items Affecting Shareholder Basis	16a Tax-exempt interest income	16a	
	b Other tax-exempt income	16b	
	c Nondeductible expenses	16c	[redacted]
	d Distributions (attach statement if required) (see instructions)	16d	[redacted]
	e Repayment of loans from shareholders	16e	
Other Information	17a Investment income	17a	
	b Investment expenses	17b	
	c Dividend distributions paid from accumulated earnings and profits	17c	
	d Other items and amounts (attach statement) SEE STATEMENT 4		
Reconciliation	18 **Income/loss reconciliation.** Combine the amounts on lines 1 through 10 in the far right column. From the result, subtract the sum of the amounts on lines 11 through 12d and 14p	18	[redacted]

Schedule L Balance Sheets per Books

Assets	Beginning of tax year (a)	Beginning of tax year (b)	End of tax year (c)	End of tax year (d)
1 Cash				[redacted]
2a Trade notes and accounts receivable				
b Less allowance for bad debts	( )		( )	
3 Inventories				
4 U.S. government obligations				
5 Tax-exempt securities (see instructions)				
6 Other current assets (attach statement) STMT 5		[redacted]		[redacted]
7 Loans to shareholders				
8 Mortgage and real estate loans				
9 Other investments (attach statement)				
10a Buildings and other depreciable assets	[redacted]		[redacted]	
b Less accumulated depreciation	( )	[redacted]	( )	[redacted]
11a Depletable assets				
b Less accumulated depletion	( )		( )	
12 Land (net of any amortization)				
13a Intangible assets (amortizable only)				
b Less accumulated amortization	( )		( )	
14 Other assets (attach statement)				
15 Total assets		[redacted]		[redacted]
Liabilities and Shareholders' Equity				
16 Accounts payable				
17 Mortgages, notes, bonds payable in less than 1 year				
18 Other current liabilities (attach statement) STMT 6		[redacted]		[redacted]
19 Loans from shareholders		[redacted]		
20 Mortgages, notes, bonds payable in 1 year or more				
21 Other liabilities (attach statement)				
22 Capital stock				
23 Additional paid-in capital				[redacted]
24 Retained earnings		[redacted]		[redacted]
25 Adjustments to shareholders' equity (attach statement)				
26 Less cost of treasury stock		( )		( )
27 Total liabilities and shareholders' equity		[redacted]		[redacted]

Form 1120S (2018)

DAA

MCCAFFERTYS 02/21/2019

Form 1120S (2018) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 5

Schedule M-1 **Reconciliation of Income (Loss) per Books With Income (Loss) per Return**

Note: The corporation may be required to file Schedule M-3 (see instructions)

1	Net income (loss) per books	[redacted]	5	Income recorded on books this year not included on Schedule K, lines 1 through 10 (itemize):	
2	Income included on Schedule K, lines 1, 2, 3c, 4, 5a, 6, 7, 8a, 9, and 10, not recorded on books this year (itemize)		a	Tax-exempt interest $	
3	Expenses recorded on books this year not included on Schedule K, lines 1 through 12 and 14p (itemize):		6	Deductions included on Schedule K, lines 1 through 12 and 14p, not charged against book income this year (itemize):	
a	Depreciation $		a	Depreciation $	
b	Travel and entertainment $ STMT 7	[redacted]	7	Add lines 5 and 6	
4	Add lines 1 through 3	[redacted]	8	Income (loss) (Schedule K, line 18). Line 4 less line 7	[redacted]

Schedule M-2 **Analysis of Accumulated Adjustments Account, Shareholders' Undistributed Taxable Income Previously Taxed, Accumulated Earnings and Profits, and Other Adjustments Account** (see instructions)

		(a) Accumulated adjustments account	(b) Shareholders' undistributed taxable income previously taxed	(c) Accumulated earnings and profits	(d) Other adjustments account
1	Balance at beginning of tax year	[redacted]			
2	Ordinary income from page 1, line 21				
3	Other additions				
4	Loss from page 1, line 21	( )			
5	Other reductions STMT 8	([redacted])			( )
6	Combine lines 1 through 5				
7	Distributions				
8	Balance at end of tax year. Subtract line 7 from line 6				

Form **1120S** (2018)

DAA

MCCAFFERTYS 02/05/2020

Tax Schedules and additional information available upon request.

Form **1120-S**

Department of the Treasury
Internal Revenue Service

U.S. Income Tax Return for an S Corporation

▶ Do not file this form unless the corporation has filed or is attaching Form 2553 to elect to be an S corporation.

▶ Go to *www.irs.gov/Form1120S* for instructions and the latest information.

OMB No. 1545-0123

2019

For calendar year 2019 or tax year beginning , ending

A S election effective date: 01/01/17	TYPE OR PRINT	Name: MCCAFFERTY BRINSON CONSULTING LLC	D Employer identification number: 20-4382371
B Business activity code number (see instructions): 541330		Number, street, and room or suite no. If a P.O. box, see instructions.: 633 S. ANDREWS AVENUE, SUITE 402	E Date incorporated: 02/24/2006
C Check if Sch. M-3 attached ☐		City or town, state or province, country, and ZIP or foreign postal code: FT. LAUDERDALE FL 33301	F Total assets (see instructions): $ [redacted]

G Is the corporation electing to be an S corporation beginning with this tax year? ☐ Yes ☒ No If "Yes," attach Form 2553 if not already filed

H Check if: (1) ☐ Final return (2) ☐ Name change (3) ☐ Address change (4) ☐ Amended return (5) ☐ S election termination or revocation

I Enter the number of shareholders who were shareholders during any part of the tax year ▶ 2

J Check if corporation: (1) ☐ Aggregated activities for section 465 at-risk purposes (2) ☐ Grouped activities for section 469 passive activity purposes

Caution: Include **only** trade or business income and expenses on lines 1a through 21. See the instructions for more information.

Income	1a	Gross receipts or sales	1a [redacted]		
	b	Returns and allowances	1b		
	c	Balance. Subtract line 1b from line 1a		1c	[redacted]
	2	Cost of goods sold (attach Form 1125-A)		2	
	3	Gross profit. Subtract line 2 from line 1c		3	
	4	Net gain (loss) from Form 4797, line 17 (attach Form 4797)		4	
	5	Other income (loss) (see instructions—attach statement) SEE STMT 1		5	[redacted]
	6	**Total income (loss).** Add lines 3 through 5 ▶		6	
Deductions (see instructions for limitations)	7	Compensation of officers (see instructions–attach Form 1125-E)		7	[redacted]
	8	Salaries and wages (less employment credits)		8	
	9	Repairs and maintenance		9	
	10	Bad debts		10	
	11	Rents		11	[redacted]
	12	Taxes and licenses		12	
	13	Interest (see instructions)		13	
	14	Depreciation not claimed on Form 1125-A or elsewhere on return (attach Form 4562)		14	[redacted]
	15	Depletion **(Do not deduct oil and gas depletion.)**		15	
	16	Advertising		16	
	17	Pension, profit-sharing, etc., plans		17	[redacted]
	18	Employee benefit programs		18	
	19	Other deductions (attach statement) SEE STMT 2		19	[redacted]
	20	**Total deductions.** Add lines 7 through 19 ▶		20	[redacted]
	21	**Ordinary business income (loss).** Subtract line 20 from line 6		21	
Tax and Payments	22a	Excess net passive income or LIFO recapture tax (see instructions)	22a		
	b	Tax from Schedule D (Form 1120-S)	22b		
	c	Add lines 22a and 22b (see instructions for additional taxes)		22c	
	23a	2019 estimated tax payments and 2018 overpayment credited to 2019	23a		
	b	Tax deposited with Form 7004	23b		
	c	Credit for federal tax paid on fuels (attach Form 4136)	23c		
	d	Reserved for future use	23d		
	e	Add lines 23a through 23d		23e	
	24	Estimated tax penalty (see instructions). Check if Form 2220 is attached ▶ ☐		24	
	25	**Amount owed.** If line 23e is smaller than the total of lines 22c and 24, enter amount owed		25	
	26	**Overpayment.** If line 23e is larger than the total of lines 22c and 24, enter amount overpaid		26	
	27	Enter amount from line 26: **Credited to 2020 estimated tax** ▶ **Refunded** ▶		27	

Sign Here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief, it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Signature of officer AUDRA MCCAFFERTY Date

PRESIDENT Title

May the IRS discuss this return with the preparer shown below? See instructions. ☒ Yes ☐ No

Paid Preparer Use Only

Print/Type preparer's name	Preparer's signature	Date	Check ☐ if self-employed	PTIN
JUDY O'CONNOR, CPA	JUDY O'CONNOR, CPA	02/05/20		P01218704

Firm's name ▶ O'CONNOR & RODRIGUEZ, PA — Firm's EIN ▶ 14-1849923

Firm's address ▶ 660 NE 95TH ST # 7, MIAMI SHORES, FL 33138 — Phone no. 305-754-6212

For Paperwork Reduction Act Notice, see separate instructions. Form **1120-S** (2019)

DAA

MCCAFFERTYS 02/05/2020

Form 1120-S (2019) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 2

Schedule B **Other Information** (see instructions)

		Yes	No
1	Check accounting method: a [X] Cash b [ ] Accrual c [ ] Other (specify) ▶		
2	See the instructions and enter the: a Business activity ▶ **ENGINEERS** b Product or service ▶ **CONSULTING**		
3	At any time during the tax year, was any shareholder of the corporation a disregarded entity, a trust, an estate, or a nominee or similar person? If "Yes," attach Schedule B-1, Information on Certain Shareholders of an S Corporation		X
4	At the end of the tax year, did the corporation:		
a	Own directly 20% or more, or own, directly or indirectly, 50% or more of the total stock issued and outstanding of any foreign or domestic corporation? For rules of constructive ownership, see instructions. If "Yes," complete (i) through (v) below		X

(i) Name of Corporation	(ii) Employer Identification Number (if any)	(iii) Country of Incorporation	(iv) Percentage of Stock Owned	(v) If Percentage in (iv) Is 100%, Enter the Date (if any) a Qualified Subchapter S Subsidiary Election Was Made

b	Own directly an interest of 20% or more, or own, directly or indirectly, an interest of 50% or more in the profit, loss, or capital in any foreign or domestic partnership (including an entity treated as a partnership) or in the beneficial interest of a trust? For rules of constructive ownership, see instructions. If "Yes," complete (i) through (v) below		X

(i) Name of Entity	(ii) Employer Identification Number (if any)	(iii) Type of Entity	(iv) Country of Organization	(v) Maximum Percentage Owned in Profit, Loss, or Capital

5a	At the end of the tax year, did the corporation have any outstanding shares of restricted stock? If "Yes," complete lines (i) and (ii) below.		X
	(i) Total shares of restricted stock ▶		
	(ii) Total shares of non-restricted stock ▶		
b	At the end of the tax year, did the corporation have any outstanding stock options, warrants, or similar instruments? If "Yes," complete lines (i) and (ii) below.		X
	(i) Total shares of stock outstanding at the end of the tax year ▶		
	(ii) Total shares of stock outstanding if all instruments were executed ▶		
6	Has this corporation filed, or is it required to file, **Form 8918,** Material Advisor Disclosure Statement, to provide information on any reportable transaction?		X
7	Check this box if the corporation issued publicly offered debt instruments with original issue discount ▶ [ ] If checked, the corporation may have to file **Form 8281,** Information Return for Publicly Offered Original Issue Discount Instruments.		
8	If the corporation **(a)** was a C corporation before it elected to be an S corporation **or** the corporation acquired an asset with a basis determined by reference to the basis of the asset (or the basis of any other property) in the hands of a C corporation **and (b)** has net unrealized built-in gain in excess of the net recognized built-in gain from prior years, enter the net unrealized built-in gain reduced by net recognized built-in gain from prior years. See instructions ▶ $		
9	Did the corporation have an election under section 163(j) for any real property trade or business or any farming business in effect during the tax year? See instructions		X
10	Does the corporation satisfy one or more of the following? See instructions		X
a	The corporation owns a pass-through entity with current, or prior year carryover, excess business interest expense.		
b	The corporation's aggregate average annual gross receipts (determined under section 448(c)) for the 3 tax years preceding the current tax year are more than $26 million and the corporation has business interest expense.		
c	The corporation is a tax shelter and the corporation has business interest expense. If "Yes," complete and attach Form 8990.		
11	Does the corporation satisfy **both** of the following conditions?		X
a	The corporation's total receipts (see instructions) for the tax year were less than $250,000.		
b	The corporation's total assets at the end of the tax year were less than $250,000. If "Yes," the corporation is not required to complete Schedules L and M-1.		

Form **1120-S** (2019)

DAA

MCCAFFERTYS 02/05/2020

Form 1120-S (2019) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 3

Schedule B Other Information (see instructions) *(continued)*

		Yes	No
12	During the tax year, did the corporation have any non-shareholder debt that was canceled, was forgiven, or had the terms modified so as to reduce the principal amount of the debt?		X
	If "Yes," enter the amount of principal reduction ▶ $		
13	During the tax year, was a qualified subchapter S subsidiary election terminated or revoked? If "Yes," see instructions		X
14a	Did the corporation make any payments in 2019 that would require it to file Form(s) 1099?		X
b	If "Yes," did the corporation file or will it file required Forms 1099?		
15	Is the corporation attaching Form 8996 to certify as a Qualified Opportunity Fund?		X
	If "Yes," enter the amount from Form 8996, line 14 ▶ $		

Schedule K Shareholders' Pro Rata Share Items

				Total amount
Income (Loss)	1	Ordinary business income (loss) (page 1, line 21)	1	[redacted]
	2	Net rental real estate income (loss) (attach Form 8825)	2	
	3a	Other gross rental income (loss)	3a	
	b	Expenses from other rental activities (attach statement)	3b	
	c	Other net rental income (loss). Subtract line 3b from line 3a	3c	
	4	Interest income	4	
	5	Dividends: a Ordinary dividends	5a	
		b Qualified dividends	5b	
	6	Royalties	6	
	7	Net short-term capital gain (loss) (attach Schedule D (Form 1120-S))	7	
	8a	Net long-term capital gain (loss) (attach Schedule D (Form 1120-S))	8a	
	b	Collectibles (28%) gain (loss)	8b	
	c	Unrecaptured section 1250 gain (attach statement)	8c	
	9	Net section 1231 gain (loss) (attach Form 4797)	9	
	10	Other income (loss) (see instructions) Type ▶	10	
Deductions	11	Section 179 deduction (attach Form 4562)	11	
	12a	Charitable contributions SEE STMT 3	12a	[redacted]
	b	Investment interest expense	12b	
	c	Section 59(e)(2) expenditures (1) Type ▶ (2) Amount ▶	12c(2)	
	d	Other deductions (see instructions) Type ▶	12d	
Credits	13a	Low-income housing credit (section 42(j)(5))	13a	
	b	Low-income housing credit (other)	13b	
	c	Qualified rehabilitation expenditures (rental real estate) (attach Form 3468, if applicable)	13c	
	d	Other rental real estate credits (see instructions) Type ▶	13d	
	e	Other rental credits (see instructions) Type ▶	13e	
	f	Biofuel producer credit (attach Form 6478)	13f	
	g	Other credits (see instructions) Type ▶	13g	
Foreign Transactions	14a	Name of country or U.S. possession ▶		
	b	Gross income from all sources	14b	
	c	Gross income sourced at shareholder level	14c	
		Foreign gross income sourced at corporate level		
	d	Reserved for future use	14d	
	e	Foreign branch category	14e	
	f	Passive category	14f	
	g	General category	14g	
	h	Other (attach statement)	14h	
		Deductions allocated and apportioned at shareholder level		
	i	Interest expense	14i	
	j	Other	14j	
		Deductions allocated and apportioned at corporate level to foreign source income		
	k	Reserved for future use	14k	
	l	Foreign branch category	14l	
	m	Passive category	14m	
	n	General category	14n	
	o	Other (attach statement)	14o	
		Other information		
	p	Total foreign taxes (check one): ▶ ☐ Paid ☐ Accrued ▶	14p	
	q	Reduction in taxes available for credit (attach statement)	14q	
	r	Other foreign tax information (attach statement)		

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Form **1120-S** (2019)

MCCAFFERTYS 02/05/2020

Form 1120-S (2019) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 4

Schedule K Shareholders' Pro Rata Share Items *(continued)*

			Total amount
Alternative Minimum Tax (AMT) Items	15a	Post-1986 depreciation adjustment	15a
	b	Adjusted gain or loss	15b
	c	Depletion (other than oil and gas)	15c
	d	Oil, gas, and geothermal properties – gross income	15d
	e	Oil, gas, and geothermal properties – deductions	15e
	f	Other AMT items (attach statement)	15f
Items Affecting Shareholder Basis	16a	Tax-exempt interest income	16a
	b	Other tax-exempt income	16b
	c	Nondeductible expenses	16c [redacted]
	d	Distributions (attach statement if required) (see instructions)	16d [redacted]
	e	Repayment of loans from shareholders	16e
Other Information	17a	Investment income	17a
	b	Investment expenses	17b
	c	Dividend distributions paid from accumulated earnings and profits	17c
	d	Other items and amounts (attach statement) SEE STATEMENT 4	
Reconciliation	18	**Income/loss reconciliation.** Combine the amounts on lines 1 through 10 in the far right column. From the result, subtract the sum of the amounts on lines 11 through 12d and 14p	18 [redacted]

Schedule L Balance Sheets per Books

Assets	Beginning of tax year (a)	Beginning of tax year (b)	End of tax year (c)	End of tax year (d)
1 Cash		[redacted]		[redacted]
2a Trade notes and accounts receivable				
b Less allowance for bad debts	( )		( )	
3 Inventories				
4 U.S. government obligations				
5 Tax-exempt securities (see instructions)				
6 Other current assets (attach statement) STMT 5		[redacted]		[redacted]
7 Loans to shareholders				
8 Mortgage and real estate loans				
9 Other investments (attach statement)				
10a Buildings and other depreciable assets	[redacted]		[redacted]	
b Less accumulated depreciation	( )	[redacted]	( )	[redacted]
11a Depletable assets				
b Less accumulated depletion	( )		( )	
12 Land (net of any amortization)				
13a Intangible assets (amortizable only)				
b Less accumulated amortization	( )		( )	
14 Other assets (attach statement)				
15 Total assets		[redacted]		[redacted]
Liabilities and Shareholders' Equity				
16 Accounts payable				
17 Mortgages, notes, bonds payable in less than 1 year				
18 Other current liabilities (attach statement) STMT 6		[redacted]		[redacted]
19 Loans from shareholders				
20 Mortgages, notes, bonds payable in 1 year or more				
21 Other liabilities (attach statement)				
22 Capital stock				
23 Additional paid-in capital		[redacted]		[redacted]
24 Retained earnings		[redacted]		[redacted]
25 Adjustments to shareholders' equity (attach statement)				
26 Less cost of treasury stock		( )		( )
27 Total liabilities and shareholders' equity		[redacted]		[redacted]

Form **1120-S** (2019)

DAA

MCCAFFERTYS 02/05/2020

Form 1120-S (2019) MCCAFFERTY BRINSON CONSULTING LLC 20-4382371 Page 5

Schedule M-1 **Reconciliation of Income (Loss) per Books With Income (Loss) per Return**

Note: The corporation may be required to file Schedule M-3. See instructions.

1	Net income (loss) per books	[redacted]	5	Income recorded on books this year not included on Schedule K, lines 1 through 10 (itemize):	
2	Income included on Schedule K, lines 1, 2, 3c, 4, 5a, 6, 7, 8a, 9, and 10, not recorded on books this year (itemize)		a	Tax-exempt interest $	
3	Expenses recorded on books this year not included on Schedule K, lines 1 through 12 and 14p (itemize):		6	Deductions included on Schedule K, lines 1 through 12 and 14p, not charged against book income this year (itemize):	
a	Depreciation $		a	Depreciation $	
b	Travel and entertainment $ 2,070		7	Add lines 5 and 6	
4	Add lines 1 through 3	[redacted]	8	Income (loss) (Schedule K, line 18). Subtract line 7 from line 1	[redacted]

Schedule M-2 **Analysis of Accumulated Adjustments Account, Shareholders' Undistributed Taxable Income Previously Taxed, Accumulated Earnings and Profits, and Other Adjustments Account** (see instructions)

		(a) Accumulated adjustments account	(b) Shareholders' undistributed taxable income previously taxed	(c) Accumulated earnings and profits	(d) Other adjustments account
1	Balance at beginning of tax year	[redacted]			
2	Ordinary income from page 1, line 21				
3	Other additions				
4	Loss from page 1, line 21	( )			
5	Other reductions STMT 7	([redacted])			( )
6	Combine lines 1 through 5	[redacted]			
7	Distributions				
8	Balance at end of tax year. Subtract line 7 from line 6	[redacted]			

Form **1120-S** (2019)

DAA

McCafferty Brinson Consulting
CONFIDENTIAL

10:11 AM
07/16/20
Accrual Basis

McCafferty Brinson Consulting, LLC
Profit & Loss
January 1 through July 16, 2020

	Jan 1 - Jul 16, 20
Ordinary Income/Expense	
Income	
4100 · Project Revenue	[redacted]
4900 · Reimbursed Expenses - Income	
4990 · Vendor Refunds	
49900 · Uncategorized Income	
Total Income	
Cost of Goods Sold	
5000 · Project Related Costs	
5100 · Subconsultants	
5200 · Reimbursable Expenses	
Total 5000 · Project Related Costs	
Total COGS	
Gross Profit	
Expense	
6101 · Sub Consultant	
6115 · Bank Service Charges	
6120 · Business License & Fees	
6130 · Car/Truck Expense	
6132 · Gas & Tolls	
6134 · Auto Repairs & Maintenan	
6138 · Auto Lease	
Total 6130 · Car/Truck Expense	
6155 · Dues and Subscriptions	
6156 · IT and Software	
6155 · Dues and Subscriptions - Other	
Total 6155 · Dues and Subscriptions	
6160 · Employee Simple IRA Match	
6180 · Insurance	
6181 · Disability Insurance	
6182 · Life Insurance	
6184 · Auto Insurance	
6188 · General Liability Insurance	
6189 · Worker's Compensation	
6190 · Umbrella Insurance	
Total 6180 · Insurance	
6238 · Marketing	
6245 · Miscellaneous	
6250 · Office Equipment	
6255 · Postage and Delivery	
6265 · Printing and Reproduction	
6270 · Professional Development	
6275 · Professional Fees	
6276 · Legal Fees	
Total 6275 · Professional Fees	
6295 · Rent	
6310 · Office Expenses	
6320 · Telephone & Fax	

10:12 AM
07/16/20
Accrual Basis

McCafferty Brinson Consulting, LLC
Balance Sheet
As of July 16, 2020

McCafferty Brinson Consulting
CONFIDENTIAL

	Jul 16, 20
ASSETS	
Current Assets	
Checking/Savings	
10000 · Checking	[redacted]
10001 · ES Payment Account	
10002 · CNB Checking	
Total Checking/Savings	
Accounts Receivable	
1200 · Accounts Receivable	
Total Accounts Receivable	
Other Current Assets	
1499 · Undeposited Funds	
Total Other Current Assets	
Total Current Assets	
Fixed Assets	
1500 · Accumulated Depreciaton	
1501 · Technology	
1502 · Autos	
1503 · Furniture and Equipment	
Total Fixed Assets	
TOTAL ASSETS	
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
2000 · Accounts Payable	
Total Accounts Payable	
Credit Cards	
2327 · Am Ex	
2332 · MBC Credit Line 9226	
Total Credit Cards	
Other Current Liabilities	
2001 · Account Payable - Tax Return	
2100 · Payroll Liabilities	
2102 · FICA & MED	
2104 · FUTA	
2106 · Federal Withholding	
2108 · Florida SUTA	
2110 · IRA Payable	
2100 · Payroll Liabilities - Other	
Total 2100 · Payroll Liabilities	
Total Other Current Liabilities	
Total Current Liabilities	
Total Liabilities	

10:12 AM
07/16/20
Accrual Basis

McCafferty Brinson Consulting, LLC
Balance Sheet
As of July 16, 2020

	Jul 16, 20
Equity	
3300 · Contributions	[redacted]
3600 · Shareholders Distribution	
3900 · Equity	
Net Income	
Total Equity	
TOTAL LIABILITIES & EQUITY	

10:13 AM
07/16/20

McCafferty Brinson Consulting, LLC
Statement of Cash Flows
January 1 through July 16, 2020

McCafferty Brinson Consulting
CONFIDENTIAL

	Jan 1 - Jul 16, 20
OPERATING ACTIVITIES	
Net Income	[redacted]
Adjustments to reconcile Net Income to net cash provided by operations:	
1200 · Accounts Receivable	
2000 · Accounts Payable	
2327 · Am Ex	
2100 · Payroll Liabilities	
2100 · Payroll Liabilities:2102 · FICA & MED	
2100 · Payroll Liabilities:2104 · FUTA	
2100 · Payroll Liabilities:2106 · Federal Withholding	
2100 · Payroll Liabilities:2108 · Florida SUTA	
2100 · Payroll Liabilities:2110 · IRA Payable	
Net cash provided by Operating Activities	
INVESTING ACTIVITIES	
1502 · Autos	
1503 · Furniture and Equipment	
Net cash provided by Investing Activities	
FINANCING ACTIVITIES	
3600 · Shareholders Distribution	
Net cash provided by Financing Activities	
Net cash increase for period	
Cash at beginning of period	
Cash at end of period	

14.0 Insurance

MCCABRI-01 KSNELLING

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 8/4/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
Corporate Insurance Advisors, LLC 1401 E. Broward Blvd. Suite 103 Fort Lauderdale, FL 33301	PHONE (A/C, No, Ext): (954) 315-5000	FAX (A/C, No): (954) 315-5050
	E-MAIL ADDRESS: service@ciafl.net	

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Crum & Forster Specialty Ins.	
INSURER B : Charter Oak Fire Insurance Company	25615
INSURER C : Transportation Insurance Co	20494
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
McCafferty Brinson Consulting, LLC
633 S. Andrews Ave.
Suite 402
Fort Lauderdale, FL 33301

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR	X		EPK130722	4/11/2020	4/11/2021	DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	X See Add'l Coverages						MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 1,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 1,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO	X		BA-8810X181-20-SEL	4/11/2020	4/11/2021	BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	UMBRELLA LIAB X OCCUR						EACH OCCURRENCE	$ 2,000,000
	X EXCESS LIAB CLAIMS-MADE			EFX115064	4/11/2020	4/11/2021	AGGREGATE	$ 2,000,000
	DED X RETENTION $ 10,000							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						X PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y	N / A		WC431076569	10/30/2019	10/30/2020	E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
A	Errors & Omissions			EPK130722	4/11/2020	4/11/2021	Each Claim	1,000,000
A	Errors & Omissions			EPK130722	4/11/2020	4/11/2021	Aggregate	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
(Incidental Contractors Pollution Liab. (ICPL)-Occurrence. ENV01 200 (04/07) Contractor's Pollution Liab. Endt. ENV01300 (08/10) Cov. D- Environmental Consultants Prof. Liab. RE: RLI#H-49-10 $2,500 per Occ. Deductible Continuing Contract for Civil Engineering Services for Various City Projects. City of Pompano Beach is included as additional insured with respect to General Liability and Auto Liability as required by written contract.;

CERTIFICATE HOLDER

City of Pompano Beach
Post Office Drawer 1300
Pompano Beach, FL 33061

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

ACORD 25 (2016/03)