CITY OF POMPANO BEACH,
FLORIDA

PROFESSIONAL CONSULTING AGREEMENT

with

AECOM TECHNICAL SERVICES, INC.

CONTINUING CONTRACT FOR ENVIROMENTAL TESTING SERVICES FOR VARIOUS CITY PROJECTS E-22-20

CONTRACT FOR
PROFESSIONAL CONSULTING SERVICES

This Contract is made on _____, by and between the CITY OF POMPANO BEACH, a municipal corporation of the State of Florida, hereinafter referred to as "CITY," and AECOM TECHNICAL SERVICES, INC. a California corporation, authorized to do business in the State of Florida, hereinafter referred to as the "Consultant".

WHEREAS, the Consultant is able and prepared to provide such services as City requires under the terms and conditions set forth herein; and

WHEREAS, the City Commission has approved the recommendation that Consultant be employed by the City and authorized the negotiation of contractual terms.

NOW, THEREFORE, in consideration of the mutual promises herein, the City and the Consultant agree as follows:

ARTICLE 1 – SERVICES/CONSULTANT AND CITY REPRESENTATIVES

The Consultant's responsibility under this Contract is to provide professional consulting services as more specifically set forth in RLI No. E-22-20 attached hereto as Exhibit A and incorporated herein in its entirety.

The Consultant's representative shall be Vivek Kamath, P.E.

The CITY's representative shall be City Engineer or designee,

ARTICLE 2 – TERM

The CONSULTANT shall adhere to the schedule given in each work authorization after receiving the "Notice to Proceed."

Reports and other items shall be delivered or completed in accordance with the detailed schedule set forth in individual Work Authorizations as negotiated.

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

ARTICLE 3 – PAYMENTS TO CONSULTANT

A. City agrees to pay Consultant in consideration for its services described herein. It is the intention of the parties hereby to ensure that unless otherwise directed by the City in writing, Consultant will continue to provide services as specified in Exhibit A for the term of this Contract.

B. Price Formula. City agrees to pay Consultant as negotiated on a Work Authorization basis. Each work authorization shall specifically identify the scope of the work to be performed and the fees for said services. As set forth in RLI No. E-22-20, professional services under this contract will be restricted to those required for any project for which construction costs will not exceed four million dollars ($4,000,000.00), and for any study activity fees shall not exceed five hundred thousand dollars ($500,000.00).

C. Fee Determination. Each individual Work Authorization may be negotiated for fees to be earned by Time and Materials with a Not to Exceed Amount, Lump Sum, or a combination of both methods for subtasks contained therein. The total amount to be paid by the City under a Work Authorization shall not exceed specified amounts for all services and materials including "out of pocket" expenses as specified in Paragraph E below and also including any approved subcontracts unless otherwise agreed in writing by both parties. The Consultant shall notify the City's Representative in writing when 90% of the "not to exceed amount" for the total Work Authorization has been reached. The Consultant will bill the City on a monthly basis, or as otherwise provided. Time and Materials billing will be made at the amounts set forth in Exhibit B for services rendered toward the completion of the Scope of Work. Where incremental billings for partially completed items are permitted, the total billings shall not exceed the estimated percentage of completion as of the billing date. It is acknowledged and agreed to by the Consultant that the dollar limitation set forth in this section is a limitation upon and describes the maximum extent of City's obligation to pay Consultant, but does not include a limitation upon Consultant's duty to perform all services set forth in Exhibit A for the total compensation in the amount or less than the guaranteed maximum stated above.

D. Invoices received by the City from the Consultant pursuant to this Contract will be reviewed and approved in writing by the City's Representative, indicating that services have been rendered in conformity with the Contract, and then will be sent to the City's Finance Department for payment. All invoices shall contain a detailed breakdown of the services provided for which payment is being requested. In addition to detailed invoices, upon request of the City's representative, Consultant shall provide City with detailed periodic Status Reports on the project. All invoice payments by City shall be made after the Work has been verified and completed. Unless disputed by City as provided herein, upon City's receipt of a Proper Invoice as defined in §218.72, Florida Statutes, as amended, City shall forward Consultant payment for work performed within forty five (45) days for all goods and services provided.

City may temporarily remove for review any disputed amount, by line item, from an invoice and shall timely provide Consultant written notification of any such disputed charge. Consultant shall provide clarification and a satisfactory explanation to City, along with revised copies of all such documents if inaccuracies or errors are discovered, within ten (10) days of receipt of City's notice of the disputed amount

In the event City has a claim against Consultant for Work performed hereunder which has not been timely remedied in accordance with the provisions of this Article 3, City may withhold payment for the contested amount, in whole or in part, to protect itself from loss on account of defective Work, claims filed or reasonable evidence indicating probable filing of claims by other parties against Consultant, and/or Consultant's failure to make proper payments to subcontractors or vendors for material or labor. When the reason(s) for withholding payment are removed or resolved in a manner satisfactory to City, payment shall be made.

E. "Out-of-pocket" expenses shall be reimbursed up to an amount not to exceed amounts included in each Work Authorization. All requests for payment of "out-of-pocket" expenses eligible for reimbursement under the terms of this Contract shall include copies of paid receipts, invoices, or other documentation acceptable to the City's Representative and to the Finance Department. Such documentation shall be sufficient to establish that the expense was actually incurred and necessary in the performance of the Scope of Work described in a Work Authorization and this Contract. All out-of- pocket, reimbursables and expenses shall be billed at actual amount paid by Consultant, with no markup.

F. Final Invoice. In order for both parties herein to close their books and records, the Consultant will clearly state "Final Invoice" on the Consultant's final/last billing to the City. This final invoice shall also certify that all services provided by Consultant have been properly performed and all charges and costs have been invoiced to the City. Because this account will thereupon be closed, any and other further charges not properly included on this final invoice are waived by the Consultant.

ARTICLE 4 – TRUTH-IN-NEGOTIATION CERTIFICATE

Signature of this Contract by the Consultant shall also act as the execution of a truth in negotiation certificate, certifying that the wage rates, overhead charges, and other costs used to determine the compensation provided for this Contract are accurate, complete and current as of the date of the Contract and no higher than those charged the Consultant's most favored customer for the same or substantially similar service. Should the City determine that said rates and costs were significantly increased due to incomplete, non-current or inaccurate representation, then said rates shall be adjusted accordingly.

ARTICLE 5 – TERMINATION

City shall have the right to terminate this Contract, in whole or in part, for convenience, cause, default or negligence on Consultant's part, upon ten (10) business days advance written notice to Consultant. Such Notice of Termination may include City's proposed Transition Plan and timeline for terminating the Work, requests for certain Work product documents and materials, and other provisions regarding winding down concerns and activities.

If there is any material breach or default in Consultant's performance of any covenant or obligation hereunder which has not been remedied within ten (10) business days after City's

written Notice of Termination, City, in its sole discretion, may terminate this Contract immediately and Consultant shall not be entitled to receive further payment for services rendered from the effective date of the Notice of Termination.

In the event of termination, City shall compensate Consultant for all authorized Work satisfactorily performed through the termination date under the payment terms set forth in Article 3 above and all Work product documents and materials shall be delivered to City within ten (10) business days from the Notice of Termination. If any Work hereunder is in progress but not completed as of the date of the termination, then upon City's written approval, this Contract may be extended until said Work is completed and accepted by City.

This Contract may be cancelled by the Consultant, upon thirty (30) days prior written notice to the City's Representative, in the event of substantial failure by the City to perform in accordance with the terms of this Contract through no fault of the Consultant.

ARTICLE 6 – PERSONNEL

The Consultant is, and shall be, in the performance of all work services and activities under this Contract, an independent Contractor, and not an employee, agent or servant of the City. All persons engaged in any of the work or services performed pursuant to this Contract shall at all times, and in all places, be subject to the Consultant's sole direction, supervision, and control and shall not in any manner be deemed to be employees of the City. The Consultant shall exercise control over the means and manner in which it and its employees perform the work. This contract does not create a partnership or joint venture between the parties.

The Consultant represents that it has, or will secure at its own expense, all necessary personnel required to perform the services under this Contract. Such personnel shall not be employees of or have any contractual relationship with the City, nor shall such personnel be subject to any withholding for tax, Social Security or other purposes by the City, nor be entitled to any benefits of the City including, but not limited to, sick leave, pension benefits, vacation, medical benefits, life insurance, workers or unemployment compensation benefits, or the like from the City.

All of the services required hereunder shall be performed by the Consultant or under its supervision, and all personnel engaged in performing the services shall be fully qualified and, if required, authorized or permitted under state and local law to perform such services.

Any changes or substitutions in the Consultant's key personnel, as may be listed in Article 1, must be made known to the City's Representative at the time substitution becomes effective.

The Consultant warrants that all services shall be performed by skilled and competent personnel to the degree exercised by consultants performing the same or similar services in the same location at the time the services are provided.

ARTICLE 7 – SUBCONTRACTING

Consultant may subcontract any services or work to be provided to City with the prior written approval of the City's Representative. The City reserves the right to accept the use of a subcontractor or to reject the selection of a particular subcontractor and to inspect all facilities of any subcontractors in order to make determination as to the capability of the subcontractor to perform properly under this Contract. The City's acceptance of a subcontractor shall not be unreasonably withheld. The Consultant is encouraged to seek small business enterprises and to utilize businesses that are physically located in the City of Pompano Beach with a current Business Tax Receipt for participation in its subcontracting opportunities.

ARTICLE 8 – FEDERAL AND STATE TAX

The City is exempt from payment of Florida State Sales and Use Taxes. The City will provide the Consultant with the current state issued exemption certificate. The Consultant shall not be exempted from paying sales tax to its suppliers for materials used to fulfill contractual obligations with the City, nor is the Consultant authorized to use the City's Tax Exemption Number in securing such materials.

The Consultant shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes and benefits with respect to this Contract

ARTICLE 9 – AVAILABILITY OF FUNDS

The City's performance and obligation to pay under this contract is contingent upon appropriation for various projects, tasks and other professional services by the City Commission.

ARTICLE 10 - INSURANCE REQUIREMENTS

The Consultant shall not commence work under this Contract until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the City, nor shall the Consultant allow any Subcontractor to commence work on its sub-contract until the aforementioned approval is obtained.

CERTIFICATE OF INSURANCE, reflecting evidence of the required insurance, shall be filed with the Risk Manager prior to the commencement of the work. The Certificate shall contain a provision that coverage afforded under these policies will not be cancelled, will not expire and will not be materially modified until at least thirty (30) days prior written notice has been given to the City. Policies shall be issued by companies authorized to conduct business under the laws of the State of Florida and shall have adequate Policyholders and Financial ratings in the latest ratings of A. M. Best and be part of the **Florida Insurance Guarantee Association Act**.

Insurance shall be in force until all work required to be performed under the terms of the Contract is satisfactorily completed as evidenced by the formal acceptance by the City. In the event the Insurance Certificate provided indicates that the insurance shall terminate and lapse during the period of this Contract, the Consultant shall furnish, at least ten (10) days prior to the

expiration of the date of such insurance, a renewed Certificate of Insurance as proof that equal and like coverage for the balance of the period of the Contract and extension thereunder is in effect. The Consultant shall not continue to work pursuant to this Contract unless all required insurance remains in full force and effect.

Limits of Liability for required insurance are shown in Exhibit C.

The City of Pompano Beach must be named as an additional insured for the Automobile and Commercial General Liability Coverage.

For Professional Liability, if coverage is provided on a claims made basis, then coverage must be continued for the duration of this Contract and for not less than one (1) year thereafter, or in lieu of continuation, provide an "extended reporting clause" for one (1) year.

Consultant shall notify the City Risk Manager in writing within thirty (30) days of any claims filed or made against the Professional Liability Insurance Policy.

For Workers' Compensation Insurance, coverage shall be maintained during the life of this Contract to comply with statutory limits for all employees, and in the case of any work sublet, the Consultant shall require any Subcontractors similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the Consultant. The Consultant and his Subcontractors shall maintain during the life of this Contract Employer Liability Insurance.

ARTICLE 11 – INDEMNIFICATION

A. Consultant shall at all times indemnify, hold harmless the City, its officials, employees, volunteers and other authorized agents from and against any and all claims, demands, suit, damages, attorneys' fees, fines, losses, penalties, defense costs or liabilities suffered by the City to the extent caused by any negligent act, omission, breach, recklessness or misconduct of Consultant and/or any of its agents, officers, or employees hereunder, including any inaccuracy in or breach of any of the representations, warranties or covenants made by the Consultant, its agents, officers and/or employees, in the performance of services of this contract. To the extent considered necessary by City, any sums due Consultant hereunder may be retained by City until all of City's claims for indemnification hereunder have been settled or otherwise resolved, and any amount withheld shall not be subject to payment or interest by City.

B. Consultant acknowledges and agrees that City would not enter into this Contract without this indemnification of City by Consultant. The parties agree that one percent (1%) of the total compensation paid to Consultant hereunder shall constitute specific consideration to Consultant for the indemnification provided under this Article and these provisions shall survive expiration or early termination of this Contract.

C. Nothing in this Agreement shall constitute a waiver by the City of its sovereign immunity limits as set forth in section 768.28, Florida Statutes. Nothing herein shall be construed as consent from either party to be sued by third parties.

ARTICLE 12 – SUCCESSORS AND ASSIGNS

The City and the Consultant each binds itself and its partners, successors, executors, administrators and assigns to the other party of this Contract and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Contract. Except as above, neither the City nor the Consultant shall assign, sublet, encumber, convey or transfer its interest in this Contract without prior written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the City, which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the City and the Consultant.

ARTICLE 13 – REMEDIES

The laws of the State of Florida shall govern this Contract. Any and all legal action between the parties arising out of the Contract will be held in Broward County. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power or remedy hereunder shall preclude any other or further exercise thereof.

ARTICLE 14 – CONFLICT OF INTEREST

The Consultant represents that it has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder, as provided for in the Code of Ethics for Public Officers and Employees (Chapter 112, Part III, Florida Statutes). The Consultant further represents that no person having any interest shall be employed for said performance.

The Consultant shall promptly notify the City's representative, in writing, by certified mail, of a potential conflict(s) of interest for any prospective business association, interest or other circumstance, which may influence or appear to influence the Consultant's judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the Consultant may undertake and request an opinion of the City as to whether the association, interest or circumstance would, in the opinion of the City, constitute a conflict of interest if entered into by the Consultant. The City agrees to notify the Consultant of its opinion by certified mail within thirty (30) days of receipt of notice by the Consultant. If, in the opinion of the City, the prospective business association, interest, or circumstance would not constitute a conflict of interest by the Consultant, the City shall so state in the notice and the Consultant shall at its option, enter into said association, interest or circumstance and it shall be deemed not a conflict of interest with respect to services provided to the City by the Consultant under the terms of this Contract.

ARTICLE 15 – EXCUSABLE DELAYS

The Consultant shall not be considered in default by reason of any failure in performance if such failure arises out of causes reasonably beyond the control of the Consultant or its subcontractors and without their fault or negligence. Such causes include, but are not limited to, acts of God; natural or public health emergencies; freight embargoes; and abnormally severe and unusual weather conditions.

Upon the Consultant's request, the City shall consider the facts and extent of any failure to perform the work and, if the Consultant's failure to perform was without it, or its subcontractors' fault or negligence, the Contract Schedule and/or any other affected provision of this Contract shall be revised accordingly; subject to the City's rights to change, terminate, or stop any or all of the work at any time.

ARTICLE 16 – DEBT

The Consultant shall not pledge the City's credit or attempt to make it a guarantor of payment or surety for any contract, debt, obligation, judgment, lien or any form of indebtedness. The Consultant further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Contract.

ARTICLE 17 – DISCLOSURE AND OWNERSHIP OF DOCUMENTS

The Consultant shall deliver to the City's representatives for approval and acceptance, and before being eligible for final payment of any amounts due, all documents and materials prepared by and for the City under this Contract.

All written and oral information not in the public domain or not previously known, and all information and data obtained, developed, or supplied by the City or at its expense will be kept confidential by the Consultant and will not be disclosed to any other party, directly or indirectly, without the City's prior written consent unless required by a lawful order. All drawings, maps, sketches, programs, data base, reports and other data developed, or purchased, under this Contract for or at the City's expense shall be and remain the City's property and may be reproduced and reused at the discretion of the City.

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

1. Keep and maintain public records required by the City in order to perform the service.

2. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Consultant does not transfer the records to the City.

4. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Consultant, or keep and maintain public records required by the City to perform the service. If the Consultant transfers all public records to the City upon completion of the contract, the Consultant shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Consultant keeps and maintains public records upon completion of the contract, the Consultant shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

B. Failure of the Consultant to provide the above described public records to the City within a reasonable time may subject Consultant to penalties under 119.10, Florida Statutes, as amended.

PUBLIC RECORDS CUSTODIAN

IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK
100 W. Atlantic Blvd., Suite 253
Pompano Beach, Florida 33060
(954) 786-4611
RecordsCustodian@copbfl.com

All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to any representations made herein relating to disclosure or ownership of documents, shall survive the execution and delivery of this Contract and the consummation of the transactions contemplated thereby.

ARTICLE 18 – CONTINGENT FEES

The Consultant warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant to solicit or secure this Contract and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Consultant, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Contract. Violation of this Article shall constitute a forfeiture of this Contract by Consultant.

ARTICLE 19 – ACCESS AND AUDITS

The Consultant shall maintain adequate records to justify all charges, expenses, and cost incurred in estimating and performing the work for at least three (3) years after completion of this Contract. The City shall have access to such books, records and documents as required in this section for the purpose of inspection or audit during normal business hours, at the Consultant's place of business.

ARTICLE 20 – NONDISCRIMINATION

The Consultant warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status and sexual orientation.

ARTICLE 21 – INTERPRETATION

The language of this Contract has been agreed to by both parties to express their mutual intent and no rule of strict construction shall be applied to either party hereto. The headings are for reference purposes only and shall not affect in any way the meaning or interpretation of this Contract. All personal pronouns used in this Contract shall include the other gender, and the singular, the plural, and vice versa, unless the context otherwise requires.

ARTICLE 22 – AUTHORITY TO PRACTICE

The Consultant hereby represents and warrants that it has and will continue to maintain all licenses and approvals required conducting its business, and that it will at all times conduct its business activities in a reputable manner. Proof of such licenses and approvals shall be submitted to the City's representative upon request.

ARTICLE 23 – SEVERABILITY

If any term or provision of this Contract, or the application thereof to any person or circumstances shall, to any extent be held invalid or unenforceable, to remainder of this Contract, or the application of such terms or provision, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and every other term and provision of this Contract shall be deemed valid and enforceable to the extent permitted by law.

ARTICLE 24 – ENTIRETY OF CONTRACTUAL AGREEMENT

The City and the Consultant agree that this Contract, together with the Exhibits hereto, sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein. It is further agreed that no modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and off equal dignity herewith. None of the provisions, terms and conditions contained in this Contract may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto in accordance with Article 25 – Modification of Work. In the event of any conflict or inconsistency between this Contract and the provisions in the incorporated Exhibits, the terms of this Contract shall supersede and prevail over the terms in the Exhibits.

ARTICLE 25 – MODIFICATION OF SCOPE OF WORK

The City reserves the right to make changes in the Scope of Work, including alterations, reductions therein or additions thereto. Upon receipt by the Consultant of the City's notification of a contemplated change, the Consultant shall, in writing: (1) provide a detailed estimate for the increase or decrease in cost due to the contemplated change; (2) notify the City of any estimated change in the completion date; and (3) advise the City if the contemplated change shall affect the Consultant's ability to meet the completion dates or schedules of this Contract.

If the City so instructs in writing, the Consultant shall suspend work on that portion of the Scope of Work affected by a contemplated change, pending the City's decision to proceed with the change.

If the City elects to make the change, the City shall initiate a Work Authorization Amendment and the Consultant shall not commence work on any such change until such written amendment is signed by the Consultant and the City Manager, and if such amendment is in excess of $75,000, it must also first be approved by the City Commission and signed by the appropriate City Official authorized by the City Commission

The City shall not be liable for payment of any additional or modified work, which is not authorized in the manner provided for by this Article.

ARTICLE 26 – NOTICE

All notices required in this Contract shall be sent by certified mail, return receipt requested, to the following:

FOR CITY:

City Manager
City of Pompano Beach
Post Office Drawer 1300
Pompano Beach, Florida 33061

FOR CONSULTANT:

AECOM Technical Services, Inc.
300 South Grand Avenue
9th Floor
Los Angeles, CA 90071

ARTICLE 27 – OWNERSHIP OF DOCUMENTS

All finished or unfinished documents, data, reports, studies, surveys, drawings, maps, models and photographs prepared or provided by the Consultant in connection with this Contract shall become property of the City, whether the project for which they are made is completed or not, and shall be delivered by Consultant to City within ten (10) days of notice of termination. If applicable, City may withhold any payments then due to Consultant until Consultant complies with the provisions of this section.

ARTICLE 28 – PROMOTING PROJECT OBJECTIVES

Consultant, its employees, subcontractors, and agents shall refrain from acting adverse to the City's interest in promoting the goals and objectives of the projects. Consultant shall take all reasonable measures necessary to effectuate these assurances. In the event Consultant determines it is unable to meet or promote the goals and objectives of the projects, it shall immediately notify the City and the City, may then in its discretion, terminate this Contract.

ARTICLE 29 – PUBLIC ENTITY CRIMES ACT

As of the full execution of this Contract, Consultant certifies that in accordance with §287.133, Florida Statutes, it is not on the Convicted Vendors List maintained by the State of Florida, Department of General Services. If Consultant is subsequently listed on the Convicted Vendors List during the term of this Contract, Consultant agrees it shall immediately provide City written notice of such designation in accordance with Article 26 above.

ARTICLE 30 – GOVERNING LAW

This Contract must be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement will be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit will be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.

ARTICLE 31 - BINDING EFFECT

The benefits and obligations imposed pursuant to this Contract shall be binding and enforceable by and against the parties hereto.

THE REMAINDER OF THE PAGE IS INTENTIONALLY LEFT BLANK

"CITY"

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year hereinabove written.

Attest:

CITY OF POMPANO BEACH

_____
ASCELETA HAMMOND, CITY CLERK

By:_____
REX HARDIN, MAYOR

By:_____
GREGORY P. HARRISON, CITY MANAGER

(SEAL)

APPROVED AS TO FORM:

_____
MARK E. BERMAN, CITY ATTORNEY

"CONSULTANT"

AECOM TECHNICAL SERVICES, INC.

Witnesses:

Lorena V Claure

Signature

Lorena Claure

Name Typed, Printed or Stamped

Ed Leding

Signature

Ed Leding

Name Type Printed or Stamped

By: Vivek Kamath

Vivek Kamath, P.E., Authorized Signatory

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me, by means of ☑ physical presence or ☐ online notarization, this 24th day of March, 2021, by Vivek Kamath, P.E. as an Authorized Signatory of AECOM TECHNICAL SERVICES, INC., a California corporation, authorized to do business in Florida, on behalf of the corporation. They are personally known to me or who has produced N/A (type of identification) as identification.

NOTARY'S SEAL:

SHIRLEY STARK
Notary Public - State of Florida
Commission # GG 287902
My Comm. Expires Mar 22, 2023
Bonded through National Notary Assn.

Shirley Stark

NOTARY PUBLIC, STATE OF

SHIRLEY STARK

(Name of Acknowledger Typed, Printed or Stamped)

GG 287902

Commission Number

Florida's Warmest Welcome

CITY OF POMPANO BEACH
REQUEST FOR LETTERS OF INTEREST
E-22-20

CONTINUING CONTRACT FOR PROFESSIONAL ENVIRONMENTAL TESTING

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

July 9, 2020

CITY OF POMPANO BEACH, FLORIDA

REQUEST FOR LETTERS OF INTEREST
E-20-20

CONTINUING CONTRACT FOR PROFESSIONAL ENVIRONMENTAL TESTING

Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing 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 of Pompano Beach is seeking qualified engineering firms to work on various projects for the City. The projects range in magnitude from small-scale to large or specialized designs.

The types of projects to be undertaken may include, but are not limited to:

- The City's approved Capital Improvement Plan (CIP) maybe found here: Adopted Capital Improvement Plan FY 2020-2024
- Preparation of Phase I, Phase II, and Phase III assessments
- Roadway, Streetscape or Parking Lot projects.
- Water or Reuse Main projects.
- Gravity Sewer Main projects.
- Force Main projects.
- Lift station/pump station rehabilitation projects.
- Parks and Recreational Facilities.
- Seawall and dock construction and repair.
- Storm Water/Drainage Improvement projects
- Consultation for Emergency Water/Wastewater/Stormwater Repairs.
- Inspection Services for Emergency Water/Wastewater/Stormwater Repairs.
- Canal and lake dredging.
- Grant reimbursement, FAA and FDOT support and compliance.

- SRF support and Davis Bacon Wage Reporting requirements
- Support Services for Remediation
- Demolition Projects

Scope of Services

The City intends to issue multiple contracts to engineering firms to provide continuing professional services to the City for various projects as-needed. 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 $500,000.00.

The scope of services may include, but is not limited to, the following:

- Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis.
- Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City)
- Provide project management services for projects, including turbidity monitoring.
- Prepare recommendations and cost estimates for compliance with regulatory requirements.
- 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.
- Prepare reports for regulatory compliance monitoring and assessments.
- Reporting on endangered animals (turtles and owls)

Firms must have demonstrated and specific experience in coordinating with local, county, state, and federal regulatory agencies as it relates to environmental regulatory requirements. Additionally, if firms do not have in-house testing capabilities, they must detail the nature and extent of partnerships with a qualified firm or laboratory. Laboratories performing analytical work must be NELAC certified for the analytes of interest and operate under a Laboratory Quality Manual following NELAC requirements. Firms performing environmental sampling or field data collection must have a Field Sampling Quality Manual and follow the current Florida Department of Environmental Protection Standard Operating Procedures.
Firms must have previous municipal experience and must be licensed to practice **Professional Environmental Testing** in the State of Florida, as required by all applicable Florida State Statutes and Board of Professional Regulation.

A. Task/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.

B. Term of Contract

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

C. Project Web Requirements:

1. This project will utilize e-Builder Enterprise™, a web-based project management tool. This web-based application is a collaboration tool, which will allow all project team members continuous access through the Internet to important project data as well as up to the minute decision and approval status information.

   e-Builder Enterprise™ is a comprehensive Project and Program Management system that the City will use to manage all project documents, communications and costs between the Lead Consultant, Sub-Consultants, Design Consultants, Contractor and Owner. e-Builder Enterprise™ includes extensive reporting capabilities to facilitate detailed project reporting in a web-based environment that is accessible to all parties and easy to use. Training will be provided for all consultants selected to provide services for the City of Pompano Beach.

2. Lead and Sub-Consultants shall conduct project controls outlined by the Owner, Project Manager, and/or Construction Manager, utilizing e-Builder Enterprise™. **The designated web-based application license(s) shall be provided by the City to the Prime Consultant and Sub-Consultants.** No additional software will be required.

   Lead Consultant and Sub-Consultants shall have the responsibility for logging in to the project web site on a daily basis, and as necessary to be kept fully apprised of project developments and required action items. , These may include but are not limited to: Contracts, Contract Exhibits, Contract Amendments, Drawing Issuances, Addenda, Bulletins, Permits, Insurance & Bonds, Safety Program Procedures, Safety Notices, Accident Reports, Personnel Injury Reports, Schedules, Site Logistics, Progress Reports, Correspondence, Daily Logs, Non-Conformance Notices, Quality Control Notices, Punch Lists, Meeting Minutes, Requests for Information, Submittal Packages, Substitution Requests, Monthly Payment Request Applications, Supplemental Instructions, Owner Change Directives, Potential Change Orders, Change Order Requests, Change Orders and the like. All supporting data including but not limited to shop drawings, product data sheets, manufacturer data sheets and instructions, method statements, safety SDS sheets, Substitution Requests and the like will be submitted in digital format via e-Builder Enterprise™.

D. 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 preferences 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.

E. Required Proposal Submittal

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 10 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)

F. Insurance

CONTRACTOR shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the CITY's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to CITY staff responsible for oversight of the subject project/contract.

CONTRACTOR is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONTRACTOR, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONTRACTOR under this Agreement.

Throughout the term of this Agreement, CONTRACTOR and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

1. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. 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.

2. Liability Insurance.

(a) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONTRACTOR's negligent acts or omissions in connection with Contractor's performance under this Agreement.

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

Type of Insurance		Limits of Liability		
GENERAL LIABILITY:		Minimum $1,000,000 Per Occurrence and $2,000,000 Per Aggregate		
* Policy to be written on a claims incurred basis				
XX	comprehensive form	bodily injury and property damage		
XX	**premises - operations**	**bodily injury and property damage**		
__	**explosion & collapse hazard**			
__	underground hazard			
XX	products/completed operations hazard	bodily injury and property damage combined		
XX	contractual insurance	bodily injury and property damage combined		
XX	broad form property damage	bodily injury and property damage combined		
XX	independent contractors	personal injury		
XX	personal injury			
__	sexual abuse/molestation	Minimum $1,000,000 Per Occurrence and Aggregate		
__	liquor legal liability	Minimum $1,000,000 Per Occurrence and Aggregate		
AUTOMOBILE LIABILITY:		Minimum $1,000,000 Per Occurrence and Aggregate. Bodily injury (each person) bodily injury (each accident), Property damage, bodily injury and property damage combined.		
XX	comprehensive form			
XX	owned			
XX	hired			
XX	non-owned			
REAL & PERSONAL PROPERTY				
__	comprehensive form	Agent must show proof they have this coverage.		
EXCESS LIABILITY			Per Occurrence	Aggregate
__	other than umbrella	bodily injury and property damage combined	$1,000,000	$1,000,000
PROFESSIONAL LIABILITY			Per Occurrence	Aggregate
XX	* Policy to be written on a claims made basis		$1,000,000	$1,000,000

(c) If Professional Liability insurance is required, Contractor agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of four (4) years unless terminated sooner by the applicable statute of limitations.

CYBER LIABILITY	Per Occurrence	Aggregate
__ * Policy to be written on a claims made basis	$1,000,000	$1,000,000

__ Network Security / Privacy Liability
__ Breach Response / Notification Sublimit (minimum limit of 50% of policy aggregate)
__ Technology Products E&O - $1,000,000 (only applicable for vendors supplying technology related services and or products)
__ Coverage shall be maintained in effect during the period of the Agreement and for not less than four (4) years after termination/ completion of the Agreement.

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3. Employer's Liability. If required by law, CONTRACTOR and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability Insurance in the minimum amount of One Hundred Thousand Dollars ($100,000.00) per employee, Five Hundred Thousand Dollars ($500,000) per aggregate.

4. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONTRACTOR, the CONTRACTOR shall promptly provide the following:

(a) Certificates of Insurance evidencing the required coverage;

(b) Names and addresses of companies providing coverage;

(c) Effective and expiration dates of policies; and

(d) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

5. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

6. Waiver of Subrogation. CONTRACTOR hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONTRACTOR shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONTRACTOR enter into such an agreement on a pre-loss basis.

G. 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.

Proposals will be evaluated using the following criteria.

Line	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)	0-15
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	0-15
3	Proximity of the nearest office to the project location: a. Location b. Number of staff at the nearest office	0-15
4	Current and Projected Workload Rating is to reflect the workload (both current and projected) of the firm, staff assigned, and the percentage availability of the staff member assigned. Respondents which fail to note both existing and projected workload conditions and percentage of availability of staff assigned shall receive zero (0) points	0-15
5	Demonstrated Prior Ability to Complete Project on Time Respondents will be evaluated on information provided regarding the firm's experience in the successful completion and steadfast conformance to similar project schedules. Provide an example of successful approaches utilized to achieve a timely project completion. Respondents who demonstrate the ability to complete projects on time shall receive more points.	0-15
6	Demonstrated Prior Ability to Complete Project on Budget Proposers will be evaluated on their ability to adhere to initial design budgets. Examples provided should show a comparison between initial negotiated task costs and final completion costs. Respondents should explain in detail any budgetary overruns due to scope modifications. Respondents which fail to provide schedule and budget information as requested will receive zero (0) points.	0-15
7	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

Additional 0-5% for Tier1/Tier2 Local Business will be calculated on combined scoring totals of each company.

NOTE:
Financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure; however, financial statements submitted to prequalify for a solicitation, and are not required by the City, may be subject to public disclosure.

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 Solicitation, 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.

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.

H. 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.

I. Right to Audit

Contractor's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, subcontract files (including proposals of successful and unsuccessful bidders), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by Owner's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the contractor or any of his payees pursuant to the execution of the contract. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this contract.

For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent or authorized representative shall have access to said records from the effective date of this contract, for the duration of the Work, and until 5 years after the date of final payment by Owner to Consultant pursuant to this contract.

Owner's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article. Owner's agent or its authorized representative shall give auditees reasonable advance notice of intended audits.

Contractor shall require all subcontractors, insurance agents, and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in any written contract agreement. Failure to obtain such written contracts which include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the Contractor pursuant to this contract.

J. Retention of Records and Right to Access

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, as amended. Specifically, the Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service;

2. Upon request from the City’s custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a

reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;

3. 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;

4. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

5. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

K. 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.

L. 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.

M. 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.

N. 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.

O. Contract Terms

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

The contract shall include as a minimum, the entirety of this Solicitation 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.

P. Waiver

It is agreed that no waiver or modification of the contract resulting from this Solicitation, 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.

Q. Survivorship Rights

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

R. Termination

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

Should either party fail to perform any of its obligations under the contract resulting from this Solicitation 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.

S. Manner of Performance

Proposer agrees to perform its duties and obligations under the contract resulting from this Solicitation 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 Solicitation 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.

T. Acceptance Period

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

U. Conditions and Provisions

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

Proposer's response shall not contain any alteration to the document posted other than entering data in spaces provided or including attachments as necessary. By submission of a response, Proposer affirms that a complete set of bid documents was obtained from the eBid System or from the Purchasing Division only and no alteration of any kind has been made to the solicitation. Exceptions or deviations to this proposal may not be added after the submittal date.

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

The City reserves the right to postpone or cancel this solicitation, 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.

V. Standard Provisions

1. Governing Law

   Any agreement resulting from this Solicitation 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. Permits

The selected Proposer shall be responsible for obtaining all permits, licenses, certifications, etc., required by federal, state, county, and municipal laws, regulations, codes, and ordinances for the performance of the work required in these specifications and to conform to the requirements of said legislation.

8. 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 Solicitation. Ignorance on the part of the firm will in no way relieve the firm from responsibility.

9. 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.

10. 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.

11. 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.

12. Public Records

a. 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, as amended. Specifically, the Contractor shall:

   i. Keep and maintain public records required by the City in order to perform the service;

   ii. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;

   iii. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

iv. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

b. Failure of the Contractor to provide the above described public records to the City within a reasonable time may subject Contractor to penalties under 119.10, Florida Statutes, as amended.

PUBLIC RECORDS CUSTODIAN

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK
100 W. Atlantic Blvd., Suite 253
Pompano Beach, Florida 33060
(954) 786-4611
RecordsCustodian@copbfl.com

W. Questions and Communication

All questions regarding the Solicitation are to be submitted using the Questions feature in the eBid System. 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. Addenda will be posted to the solicitation in the eBid System, and it is the Proposer's responsibility to obtain all addenda before submitting a response to the solicitation.

X. Addenda

The issuance of a written addendum or posting of an answer in response to a question submitted using the Questions feature in the eBid System are the only official methods whereby interpretation, clarification, or additional information can be given. If any addenda are issued to this solicitation the addendum will be issued via the eBid System. 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. Addenda will be posted to the solicitation in the eBid System.

Y. Contractor Performance Report

The City will utilize the Contractor Performance Report to monitor and record the successful proposer's performance for the work specified by the contract. The Contractor Performance Report has been included as an exhibit to this solicitation.

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

PROPOSER INFORMATION PAGE

_____, _____
(number) (Title)

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 solicitation. I have read the solicitation 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) _____ Title _____

Company (Legal Registered) _____

Federal Tax Identification Number _____

Address _____

City/State/Zip _____

Telephone No. _____ Fax No. _____

Email Address _____

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 IN THE EBID SYSTEM.

PROJECT TEAM

SOLICITATION 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		

(use attachments if necessary)

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

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: _____

Vendor FEIN: _____

Section 287.135, Florida Statutes, prohibits agencies from contracting with companies, for goods or services over $1,000,000, that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify

Exhibit – Contractor Performance Report

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

CITY OF POMPANO BEACH
CONTRACTOR PERFORMANCE REPORT

1. Report Period: from _____ to _____

2. Contract Period: from _____ to _____

3. Bid# & or P.O.#: _____

4. Contractor Name: _____

5. City Department: _____

6. Project Manager: _____

7. Scope of Work (Service Deliverables): _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Exhibit – Contractor Performance Report

CATEGORY	RATING	COMMENTS
1. Quality Assurance/Quality Control - Product/Services of high quality - Proper oversight - Communication	Poor =1 Satisfactory =2 Excellent =3	
2. Record Keeping -Accurate record keeping -Proper invoicing -Testing results complete	Poor =1 Satisfactory =2 Excellent =3	
3. Close-Out Activities - Restoration/Cleanup - Deliverables met - Punch list items addressed	Poor =1 Satisfactory =2 Excellent =3	
4. Customer Service - City Personnel and Residents - Response time - Communication	Poor =1 Satisfactory =2 Excellent =3	
5. Cost Control - Monitoring subcontractors - Change-orders - Meeting budget	Poor =1 Satisfactory =2 Excellent =3	
6. Construction Schedule - Adherence to schedule - Time-extensions - Efficient use of resources	Poor =1 Satisfactory =2 Excellent =3	
SCORE	**_____**	**ADD ABOVE RATINGS/DIVIDE TOTAL BY NUMBER OF CATEGORIES BEING RATED**

RATINGS

Poor Performance (1.0 – 1.59)*: Marginally responsive, effective and/or efficient; delays require significant adjustments to programs; key employees marginally capable; customers somewhat satisfied.*

Satisfactory Performance (1.6 – 2.59)*: Generally responsive, effective and/or efficient; delays are excusable and/or results in minor program adjustments; employees are capable and satisfactorily providing service without intervention; customers indicate satisfaction.*

Excellent Performance (2.6 – 3.0): *Immediately responsive; highly efficient and/or effective; no delays; key employees are experts and require minimal direction; customers expectations are exceeded.*

Would you select/recommend this contractor again? _____ Yes _____ No

Please attach any supporting documents to this report to substantiate the ratings that have been provided.

_____	_____	_____
Ratings completed by (print name)	Ratings completed by signature	Date
_____	_____	_____
Department Head (print name)	Department Head Signature	Date
_____	_____	_____
Vendor Representative (print name)	Contractor Representative Signature	Date

Comments, corrective actions etc., use additional page if necessary:

_____

_____

_____

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City of Pompano Beach Florida

Local Business Subcontractor Utilization Report

Project Name (1)		Contract Number and Work Order Number (if applicable) (2)	
Report Number (3)	Reporting Period (4) to	Local Business Contract Goal (5)	Estimated Contract Completion Date (6)
Contractor Name (7)		Contractor Telephone Number (8) ( ) -	Contractor Email Address (9)
Contractor Street Address (10)	Project Manager Name (11)	Project Manager Telephone Number (12) ( ) -	Project Manager Email Address (13)

Local Business Payment Report

Federal Identification Number (14)	**Local Subcontractor Business Name** (15)	**Description of Work** (16)	**Project Amount** (17)	**Amount Paid this Reporting Period** (18)	**Invoice Number** (19)	**Total Paid to Date** (20)
				Total Paid to Date for All Local Business Subcontractors (21) **$**		0.00

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

Contractor Name – Authorized Personnel (print) (22)	Contractor Name – Authorized Personnel (sign) (23)	Title (24)	Date (25)

Local Business Subcontractor Utilization Report Instructions

Box (1) **Project Name –** Enter the entire name of the project.

Box (2) **Contract Number (work order) –** Enter the contract number and the work order number, if applicable (i.e., 4600001234, and if work order contract include work order number – 4600000568 WO 01).

Box (3) **Report Number -** Enter the Local Business Subcontractor Utilization Report number. Reports must be in a numerical series (i.e., 1, 2, 3).

Box (4) **Reporting Period -** Enter the beginning and end dates this report covers (i.e., 10/01/2016 – 11/01/2016).

Box (5) **Local Contract Goal -** Enter the Local Contract Goal percentage on entire contract.

Box (6) **Contract Completion Date -** Enter the expiration date of the contract, (not work the order).

Box (7) **Contractor Name -** Enter the complete legal business name of the Prime Contractor.

Box (8) **Contractor Telephone Number -** Enter the telephone number of the Prime Contractor.

Box (9) **Contractor Email Address -** Enter the email address of the Prime Contractor.

Box (10) **Contractor Street Address –** Enter the mailing address of the Prime Contractor.

Box (11) **Project Manager Name -** Enter the name of the Project Manager for the Prime Contractor on the project.

Box (12) **Project Manager Telephone Number –** Enter the direct telephone number of the Prime Contractor's Project Manager.

Box (13) **Project Manager Email Address –** Enter the email address of the Prime Contractor's Project Manager.

Box (14) **Federal Identification Number –** Enter the federal identification number of the Local Subcontractor(s).

Box (15) **Local Subcontractor Business Name** – Enter the complete legal business name of the Local Subcontractor(s).

Box (16) **Description of Work –** Enter the type of work being performed by the Local Subcontractor(s) (i.e., electrical services).

Box (17) **Project Amount –** Enter the dollar amount allocated to the Local Subcontractor(s) for the entire project (i.e., amount in the subcontract agreement).

Box (18) **Amount Paid this Reporting Period** – Enter the total amount paid to the Local Subcontractor(s) during the reporting period.

Box (19) **Invoice Number** – Enter the Local Subcontractor's invoice number related to the payment reported this period.

Box (20) **Total Paid to Date** – Enter the total amount paid to the Local Subcontractor(s) to date.

Box (21) **Total Paid to Date for All Local Subcontractor(s)** – Enter the total dollar amount paid to date to all Local Subcontractors listed on the report.

Box (22) **Contractor Name Authorized Personnel (print)** – Print the name of the employee that is authorized to execute the Local Subcontractor Utilization Report.

Box (23) **Contractor Name Authorized Personnel (sign)** – Signature of authorized employee to execute the Local Subcontractor Utilization Report.

Box (24) **Title –** Enter the title of authorized employee completing the Local Subcontractor Utilization Report.

Box (25) **Date –** Enter the date of submission of the Local Subcontractor Utilization Report to the City.

REQUESTED INFORMATION BELOW IS ON LOCAL BUSINESS PROGRAM FORM ON THE BID ATTACHMENTS TAB. BIDDERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

CITY OF POMPANO BEACH, FLORIDA
LOCAL BUSINESS PARTICIPATION FORM

Solicitation # & Title: _____ Prime Contractor's Name: _____

Name of Firm, Address	Contact Person, Telephone Number	Type of Work to be Performed/Materials to be Purchased	Contract Amount

LOCAL BUSINESS EXHIBIT "A

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

Solicitation 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:

_____

_____

_____

_____

at the following price: _____

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

_____
(Street Address)

_____
(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"

LOCAL BUSINESS EXHIBIT "C"
LOCAL BUSINESS UNAVAILABILITY FORM

Solicitation #_____

I,_____
(Name and Title)

of_____, certify that on the _____day of

_____, _____, I invited the following LOCAL BUSINESS(s) to bid work
(Month) (Year)

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 "C"

LOCAL BUSINESS EXHIBIT “D”
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION

Solicitation #_____

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 amount.

_____ $_____

_____ $_____

_____ $_____

8. Other comments: _____

_____

_____

_____

_____

LOCAL BUSINESS EXHIBIT “D”

Online Questions & Answers

Event Information

Number:	E-22-20
Title:	Continuing Contracts for Professional Environmental Testing Services
Type:	Request for Letters of Interest
Issue Date:	7/9/2020
Question Deadline:	8/3/2020 05:00 PM (ET)
Response Deadline:	8/24/2020 02:00 PM (ET)
Notes:	Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing 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.

Published Questions

Question	Is a firm allowed to submit as both prime and on another team (in which another firm is submitting as prime)?
Answer	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
Asked	8/3/2020 11:24 AM (ET)

Question	How many references does the prime firm need to provide? Can the prime use reference from our subcontractors.
Answer	Two to three (maximum) references will be sufficient. A firm may NOT use the references of their subcontractors.
Asked	7/28/2020 03:28 PM (ET)

Question	Section Y – Contractor Performance Report. If Contractor Performance Report is to be submitted with the proposal, is it to be used in the reference section. If so how many references do we need. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
Answer	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
Asked	7/28/2020 03:23 PM (ET)

Question	Surveying and Landscaping is not listed in the Scope of Services; however, they are listed on the Project Team form. If Landscaping is required, are you referring to Landscape Architecture services?
Answer	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying.
Asked	7/27/2020 03:15 PM (ET)

Question	On the Local Business Exhibit "B", Local Business Letter of Intent to Perform as a Local Subcontractor, it asks for a price amount. Since the projects and scopes of work to be assigned are not known at this time, can we state "To Be Determined" (TBD) on the form?
Answer	Yes.
Asked	7/16/2020 02:48 PM (ET)

Question	Does the Local Business Subcontractor Utilization Report have to be included with the RFP Response or will this report be utilized once the contract is awarded?
Answer	Do not include the local business subcontractor utilization report in your proposal. Its inclusion in the solicitation is the City's notice to the would-be selected firms that their local business commitments will be tracked.
Asked	7/16/2020 02:46 PM (ET)

Question	Section Y – Contractor Performance Report. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
Answer	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
Asked	7/16/2020 11:10 AM (ET)

Question	Section G – Selection/Evaluation Process. The RFP states Current and Projected Workload is listed as one of the Selection Criteria; however, there is not a designated section for the current workload. Please indicate where this should be discussed in, level of detail and describe how this will be evaluated.
Answer	Incorporate this information at your descension. The evaluation is discussed in Section G, Item #4.
Asked	7/16/2020 11:09 AM (ET)

Question	Section E – Required Proposal Submittal – References. The RFP state that the propose list any prior projects performed for the City of Pompano Beach. What is the timeframe for the list of projects, what detail needs to be provided (i.e., name of project, completion year, cost, etc.). Is this being used to show current workload with the City? Please clarify.
Answer	Please limit the list to projects completed in the past 5 years. Project detail should be provided for each project performed in the City of Pompano Beach. Current projects which have not been completed should be included in the current project workload (Section G).
Asked	7/16/2020 11:09 AM (ET)

Question	Section E – Required Proposal Submittal – References. The RFP does not state the specific number of references that are required. Please clarify.
Answer	Two to three (maximum) references will be sufficient.
Asked	7/16/2020 11:09 AM (ET)

Question	Section E – Required Proposal Submittal – Schedule. For the Schedule section, the RFP requests the proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines. Each scope of work / types of projects would entail unique, project specific tasks; therefore, please elaborate on what type(s) of timelines you are referring to. Would this be one generic timeline?
Answer	Firms awarded a contract will be required to provide a detailed schedule during the issuance of a task order. For the RLI, please provide a technical approach on how your firm proposes to maintain a schedule on a task order.
Asked	7/16/2020 11:08 AM (ET)

Question	Project Team Form. On the Project Team form, there are only two blank lines for “Other Key Member” under PRIME section and only three blank lines under SUB-CONSULTANT section. Please clarify that the proposer can add additional “Other Key Member” lines to the form for both the PRIME and SUB-CONSULTANT?
Answer	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
Asked	7/16/2020 11:08 AM (ET)

Question	Please clarify if the City is requesting us to describe our firm's environmental engineering services related to the types of projects or is the City looking for experience performing the actual services listed under Introduction (i.e. environmental engineering services related to parks and recreational facilities or actual design and/or construction of parks and recreational facilities)?
Answer	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying. Construction is not part of this RLI.
Asked	7/16/2020 11:08 AM (ET)

Question	Scope of Services. Under "Scope of Services", the RFP states "The scope of services may include, but is not limited to, the following:" •Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis. •Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City) •Provide project management services for projects, including turbidity monitoring. •Prepare recommendations and cost estimates for compliance with regulatory requirements. •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. •Prepare reports for regulatory compliance monitoring and assessments. •Reporting on endangered animals (turtles and owls)
Answer	The RLI contains a list of services where the City may require professional environmental testing.
Asked	7/16/2020 11:08 AM (ET)

Question	Introduction: The RFP says, "The types of projects to be undertaken may include, but are not limited to: • The City's approved Capital Improvement Plan (CIP) maybe found here: Adopted Capital Improvement Plan FY 2020-2024 • Preparation of Phase I, Phase II, and Phase III assessments • Roadway, Streetscape or Parking Lot projects. • Water or Reuse Main projects. • Gravity Sewer Main projects. • Force Main projects. • Lift station/pump station rehabilitation projects. • Parks and Recreational Facilities. • Seawall and dock construction and repair. • Storm Water/Drainage Improvement projects • Consultation for Emergency Water/Wastewater/Stormwater Repairs. • Inspection Services for Emergency Water/Wastewater/ Stormwater Repairs. • Canal and lake dredging. • Grant reimbursement, FAA and FDOT support and compliance. • SRF support and Davis Bacon Wage Reporting requirements • Support Services for Remediation • Demolition Projects
Answer	The RLI contains a list of project types where the City may require professional environmental testing.
Asked	7/16/2020 11:06 AM (ET)

Question	Can you please list who the incumbent firms for this contract are?
Answer	GFA International, Inc., Professional Service Inc., E Sciences, Inc.
Asked	7/14/2020 11:43 AM (ET)

Question	Who will be on the selection committee?
Answer	Qualified City staff to be determined.
Asked	7/14/2020 08:42 AM (ET)

Question	What are amount of awards per consultant under the previous contract?
Answer	GFA $24,000.00 E Sciences $297,872.54 Professional Services $31,290 The City reserves the right to award contracts in its best interest. Past business is no indication of future contract awards.
Asked	7/14/2020 08:41 AM (ET)

Question	Is a certificate of Insurance Required with the proposal submittal and if so should it be uploaded under the Attachments tab within the Ebid System or a separate tab within the proposal response?
Answer	The certificate of insurance will be required for each SELECTED firm prior to contract negotiation.
Asked	7/14/2020 08:41 AM (ET)

Question	1. Who are the incumbent firms for this contract? 2. Besides the Transmittal Page, are there any other page limits on the RFP response? 3. Is there a contract funding limit?
Answer	1. GFA International, Inc., Professional Service Inc., E Sciences, Inc. 2. There is a 250MB limit for each attachment uploaded, but no limit on the number of attachments. 3. The RLI under "Scope of Services" discusses limits/restrictions. The City's approved Capital Improvement Plan as referenced in the RLI contains estimates of projects to be funded over the next 5 years.
Asked	7/10/2020 11:37 AM (ET)

Question	What City entity is this contract with (CRA, Engineering, etc.)?
Answer	Awarded City contracts will be available for use by any applicable department.
Asked	7/9/2020 03:47 PM (ET)

City of Pompano Beach

Letter of Interest

Continuing Contract for Professional Environmental Testing

E-22-20

August 24, 2020

AECOM

Submitted by:

AECOM Technical Services, Inc.
3201 West Commercial Boulevard,
Suite 134
Ft. Lauderdale, FL 33309

Contact:

Steve Starke, PG, CHMM, LEP, REPA
Project Manager
561.962.2571
steve.starke@aecom.com

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AECOM Imagine it. Delivered.

AECOM Technical Services, Inc.
3201 West Commercial Boulevard
Suite 134
Fort Lauderdale, FL 33309
Tel. 305.790.5829

August 24, 2020

Uploaded via: https://pompanobeachfl.ionwave.net

Mr. Jeff English
City of Pompano Beach
Purchasing Office
1190 NE 3rd Avenue, Building C
Pompano Beach, Florida 33060

Subject: Request for Letters of Interest E-22-20
Continuing Contract for Professional Environmental Testing

Dear Mr. English:

AECOM Environment (AECOM) appreciates the opportunity to submit this letter of interest to the City of Pompano Beach (the City) regarding continuing environmental testing and consulting services. AECOM stands ready to assist the City with the management and execution of projects awarded to us and we are committed to their success.

AECOM is a comprehensive provider of the services outlined in the City's Request for Letters of Interest (RLI) and we have provided engineering and environmental consulting services in Florida for more than 60 years, as well as to the City under two previous environmental contracts. We have professionals on staff, including environmental and civil engineers, geologists, and construction managers, who are conveniently located in Fort Lauderdale, Broward County, Florida. When needed, we can also provide talented staff from our other Florida offices, including Miami, Ft. Myers, Boca Raton, West Palm Beach, Orlando, and Tampa.

Our team has a broad cross section of skills and resources to address each project's specific needs. AECOM has selected Steve Starke, PG, CHMM, LEP, REPA to serve as Project Manager. Steve has served on numerous environmental services contracts and brings to our team more than 35 years of experience. Our proposed Assistant Project Manager is Delana Beculhimer, LEP. Delana has over 17 years of environmental experience.

AECOM's team has been organized into eight functional work groups: Phase I, II, and III Assessments; Engineering Services; Asbestos, Mold, and Metals-Based Paint; Sediment Dredging; Remedial Design; Remedial Construction; Natural Resources; and Resilience/Sustainability/Climate Change. Each group comprises staff with extensive experience in their respective disciplines.

TAB 01

LETTER OF TRANSMITTAL

AECOM provides unparalleled support for its municipal clients and is an industry leader in Brownfields and petroleum site/underground storage tank assessments, environmental site assessments, construction project management for remedial implementation, and natural resources protection. We believe our comprehensive in-house combination of expertise and experience will produce the right balance of knowledge and support for the City. AECOM's experience is highlighted by the successful completion of many significant projects in Florida and throughout the country, combined with world-class capabilities in site restoration, agency interaction, waterfront renewal planning, sustainable design, permitting, and award-winning Brownfields redevelopment projects. The AECOM team commits to delivering high quality products and cost savings through innovative concepts, technologies, equipment, and procedures.

Because it is our goal to always be mindful of the impact that engineering and redevelopment projects can have on surrounding residents, businesses, and property owners, the AECOM team will work in close consultation and coordination with the City and other city agencies to uniquely tailor our efforts to meet the needs and requests of the City's local constituency. Our collaborative efforts will be driven by principles of open communication, teamwork, and efficiency, and we are committed to developing management and reporting frameworks that will foster a successful and productive working environment while minimizing disruption to the City's residents.

AECOM also understands that the successful completion of assessment and remediation work can have significant positive implications for Pompano Beach communities. These include job creation, revitalization to the area via the creation of future community assets, addition of new revenue sources, expansion of the tax base, and increased public recognition of the City as a continually improving South Florida community.

We at AECOM appreciate the opportunity to work with you and look forward to receiving your response. Should you have questions concerning this qualifications package, please contact me or Vik Kamath.

Sincerely,

Steve Starke, PG, CHMM, REPA, LEP
Project Manager
steve.starke@aecom.com | 954.275.8306

Vivek (Vik) Kamath, PE
Principal-in-Charge / Authorized Signatory
vik.kamath@aecom.com | 305.790.5829

TAB 02

TECHNICAL APPROACH

Introduction

AECOM is an interdisciplinary firm with extensive experience providing a wide range of environmental engineering, water, transportation, and construction management services for projects throughout Florida. We also bring the experience and expertise of a global firm operating in 150 countries, with over 56,000 design and construction professionals worldwide. AECOM is the nation's largest and most capable design firms. AECOM is also a leader in resiliency, climate change, and disaster recovery practices across North America. The AECOM team recognizes that climate change poses an existential threat to the continued vitality of the City of Pompano Beach's coastal communities and to the health and well-being of those who live, work, and pursue leisure in this vibrant city.

For this important contract with the City, we have assembled a team with the skills and expertise needed to efficiently and effectively return a valuable product to the citizens of Pompano Beach. Our team is uniquely qualified to assist the City based on our experience with the following:

- AECOM previously served as an environmental engineering consultant to the City of Pompano Beach on two separate contracts
- AECOM is also currently providing or has previously provided environmental services to the City of Miami, City of Miami Gardens, City of Miami Beach, City of Coral Gables, City of Doral, City of Opa-Locka, City of Homestead, City of Hollywood, and Cooper City
- AECOM has served as the Contamination Assessment and Remediation (CAR) consultant for Florida Department of Transportation (FDOT) District 4 (Southeast Florida) for the past 25 years, performing services similar to those anticipated under this contract
- For the past 30 years, our team has served as the Environmental Consultant to Miami-Dade County Regulatory and Economic Resources Department (RER)

AECOM Environmental Services for City of Pompano Beach

Phase I /II ESAs	14
Remedial Evaluation/ Waste Disposal	01
Remediation	07
Groundwater Sampling/ Monitoring	12
Waste Characterization	01
Asbestos/Lead Paint Surveys	01
Emergency Response	02

- AECOM currently serves as one of Florida Department of Environmental Protection's (FDEP's) statewide Petroleum Contamination Consultants, as well as an FDEP Hazardous Waste/Dry Cleaner Solvent, State-Owned Lands, and Site Investigation Section Consultant

Our team maintains the full suite of capabilities anticipated under this agreement. These will be discussed in detail in Tab 7 Statement of Skills and Experience of the Project Team, including:

- Preparation of Phase I, Phase II, and Phase III assessments
- Roadway, Streetscape or Parking Lot projects
- Water or Reuse Main projects
- Gravity Sewer Main projects
- Force Main projects
- Lift station/pump station rehabilitation projects
- Parks and Recreational Facilities
- Seawall and dock construction and repair
- Storm Water/Drainage Improvement projects
- Consultation for Emergency Water/Wastewater/Stormwater Repairs
- Inspection Services for Emergency Water/Wastewater/Stormwater Repairs
- Canal and lake dredging
- Grant reimbursement, FAA and FDOT support and compliance
- State Revolving Fund (SRF) support and Davis-Bacon Wage Reporting requirements
- Support Services for Remediation
- Demolition Projects
- Preparation of preliminary reports and/or alternative recommendations
- Preparation of permit applications and submittal packages as required for permit issuance of agency permits (i.e. Federal, State, County, and City)
- Providing project management services for projects, including turbidity monitoring
- Preparing recommendations and cost estimates for compliance with regulatory requirements
- Providing project close-out services
- Preparing reports for regulatory compliance monitoring and assessments
- Reporting on endangered animals (e.g. turtles and owls)

Project descriptions for selected projects conducted in the tri-county area (Broward, Palm Beach, Miami-Dade), as well as projects performed for the City of Pompano Beach, can be found in Tab 4 References.

Design Philosophy and Process

One word can consistently be used to summarize what AECOM will provide to the City of Pompano Beach – Value. AECOM recognizes that it is crucial to get the most from available funding. Our goal, therefore, is to provide the City with experienced local personnel and the resources of a global company to provide high-quality, cost-effective services in a timely manner. To achieve this goal, AECOM will apply realistic, rational, and proven methods to the work we perform while focusing on the end result, but always with an eye toward improvement, innovation, and cost efficiency. AECOM understands that "success" is dependent on understanding the goals and achieving the objectives of the different programs we support. For example, we have been successful in meeting tight budgeting goals on projects using a cost-effective, risk-based approach to achieve closures from regulatory agencies. AECOM is also experienced in and available to assist the City with writing state and federal grant applications for funding programs with agencies such as FDEP (e.g. Brownfields), FEMA (e.g. BRIC), EPA (e.g. WIFIA), HUD (e.g. CDBG), etc.

AECOM has been providing environmental consulting services in Florida for more than 60 years. With over 250 technical disciplines in-house, AECOM has both the basic and the niche specialties found only within one of the largest environmental consulting companies in the United States. Our professionals have years of diverse experience providing comprehensive environmental services, which include contamination assessment and hazardous waste remediation focused on cleaning up the environment, to biological and ecological studies that focus on preserving the environment. We also pride ourselves in being able to rapidly mobilize to perform environmental emergency response and construction oversight on a wide variety of projects.

AECOM's strength in providing meaningful scopes of work, work plans, and preliminary assessments is derived from our ability to communicate with our client, characterize the problem quickly, identify key project components, and select simple, effective approaches to minimize the time to reach a solution. AECOM employs both proven and innovative methods, as well as effective management procedures. Each scope of work, work plan, or preliminary assessment is tailored to site-specific requirements, applicable regulations, and the assignment given. Deliverables are clearly defined and include milestones, status reports, drawings, and specifications, as needed.

With a strong local presence in Broward County, and having worked with the Broward County Environmental Protection and Growth Management Department (BCEPGMD), as well as the FDEP, on numerous environmental investigation and site rehabilitation projects, AECOM is very familiar with the regulations and the changes that have taken place over the years. We have successfully negotiated risk-based closure strategies for many of our clients, saving thousands of dollars in remediation costs. As an example, for the City of Coral Gables, we negotiated a conditional closure for the Biltmore Golf Course maintenance facility using a combination of engineering and institutional controls, significantly reducing site closure costs. These methods have also been used successfully during the site investigation at the Virginia Key Landfill.

AECOM understands the importance of performing preliminary site assessments, including but not limited to, thorough review of existing site information and scientific data. To streamline assessment activities, reduce the number of monitoring well installations, and minimize investigative derived waste (IDW), AECOM routinely uses advanced assessment technologies, such as direct push technology, rotosonic drilling methods, an on-site mobile laboratory, and microwells to cost effectively target the source. We will work very closely with the City to develop a strong working relationship that will result in cost-effective and timely solutions. For example, AECOM will diligently work directly with City representatives during the assessment process to clearly define the overall and optimum site closure goal, depending on the property's ultimate use or future use. This includes assessment of the chemicals of concern, as well as delineation of solid waste. There are many instances that "Closure with Conditions" is an acceptable alternative to our clients, which can often greatly reduce assessment and remediation costs for a project. We have used this option on several projects, including Bayfront, Grapeland, and Blanche Parks in Miami-Dade County. There are other instances where clients prefer only "Closure with No Conditions" for a property, in which case we discuss the data objectives and jointly make decisions for the next step, based on what the results are indicating. We keep the solution in mind, making sure the data we are collecting will provide value to any remedial alternative, be it natural attenuation, risk management, engineering/institutional controls, or advanced active remedial technologies.

AECOM has accrued a high level of experience in designing and installing groundwater and subsurface treatment systems, either in combination with product recovery systems or as stand-alone plume containment systems. In addition, AECOM provides professional Operation and Maintenance services on remediation and construction projects and programs worldwide.

AECOM's philosophy for Operation and Maintenance services is based on four principles:

1) Make worker safety a priority

2) Operate and maintain systems at peak facility efficiency

3) Achieve or exceed regulatory requirements

4) Employ cost-effective systems and strategies

These goals can often be enhanced by using remote telemetry systems to reduce system downtime and field maintenance costs. The AECOM team has extensive experience conducting Asbestos Hazard Emergency Response Act (AHERA) asbestos inspections and developing facility management plans. Our AHERA/EPA certified staff is prepared to respond to every phase of AHERA asbestos management. AECOM's philosophy is to treat asbestos abatement as a combination construction and industrial hygiene project. We have previously conducted asbestos work for the City of Pompano Beach, FDOT, the City of Orlando, and most recently for the City of Miami Police Department. AECOM also has experience in conducting lead paint building surveys using X-ray fluorescence (XRF) in the field or the paint-chip method. In addition, we have utilized our team of subcontractors for asbestos, metals-based paint (MBP), and mold surveys and remediation on hundreds of projects within the state of Florida.

AECOM believes sustainability should focus on comprehensive system designs to maximize environmental, social, and economic benefits, while reducing, and preferably eliminating, potential impacts to the natural environment. Drawing on a large pool of diverse and experienced staff, AECOM provides the vision needed to develop design strategies that will deliver superior sustainability and performance. We recently completed a bench-scale test for the City of Miami to assist with development of a sustainable methodology for copper mitigation in stormwater outfalls.

AECOM recognizes the City's mandate to conduct environmental engineering and related services in a timely fashion, with unsurpassed quality, and at cost-effective pricing. We can do this by being a local company with a global reach. We have consistently upheld these tenets across multiple projects. Our team is backed by the resources of one of the world's largest engineering firms. Our proven management strategies, innovative technologies, and strong working relationships with the regulatory community have resulted in outstanding projects that we and the City can be proud of. Our team of asbestos/metals-based paint/mold specialists and national experts in resiliency, climate change, and environmental health and safety (EHS) are here to assist you in keeping the City of Pompano Beach at the forefront of environmental safety and sustainability.

Digital Innovations

Technological advancements are bringing about new ways to optimize project delivery, increase productivity and create efficiencies throughout project execution. By rethinking technology's role in how we design, build and operate we are able to unlock the best outcomes for Marathon. We are pushing the industry forward through the creative application of existing tools and by inventing new ones. Below is a high-level summary of how AECOM is accelerating the industry's digital transformation to solve our clients' most complex challenges, reduce labor requirements, and drive cost savings through innovation.

Barcoding for Spill Prevention Control, Regulatory Inspections. AECOM is using barcoding and iPad technology in the field to identify equipment, with numbering scheme coordinated with the client to provide consistency across departments. Barcodes are placed in standardized location for easy maintenance/inventory; equipment photographs are collected, providing serial and model number, barcode and label location. Data gathered can be used for spill prevention control plans and regulatory inspections.

Mobile Apps for Waste Inventory/Compliance Inspections. Incorporation of bar codes/data reader technologies, EHS MIS data management tools (EMIS) to support RCRA compliance programs and machine learning tools that incorporate waste characterization business logic.

EHS(Q) Management Information Systems. AECOM is an industry leading EHS MIS service provider, supporting clients in requirements gathering, system selection process, business/workflow analysis and the configuration and implementation of commercial EHS software systems. We also work with vendors on their product roadmap, providing subject matter expertise. Our deployed systems have a consistently

Digitized Maintenance Records, GIS for Asset Inventory/Condition Assessments of Sanitary Sewer Systems. Using pole camera technology to capture detailed pipe information, converting CAD as-built drawings, digitizing maintenance records & interviewing utility personnel, AECOM is leveraging ESRI GIS applications and web-based assessments to automate updates. Assets are ranked by risk for repair and replacement for maintenance scheduling and prioritization. Able to list repair/replace requirements to assist w/ future capital planning, improve practices and provide key performance indicators to keep data up to date and accurate.

Climate Action for Urban Sustainability Tool (CURB). CURB is a decision support tool for cities globally to assist with GHG emission abatement planning efforts. C40, the World Bank and Bloomberg Philanthropy supported development of CURB and is available on their websites. Using relatively simple data inputs, the tool provides emission abatement, cost /cost savings estimates, and identifies key quantitative and qualitative co-benefits.

Disaster Resilience Scorecard. Developed jointly with IBM, the Scorecard helps cities understand their ability to withstand and bounce back from disruptive events. It establishes a baseline measurement of a city's current level of disaster resilience and tracks progress against preliminary or detailed indicators. AECOM can support clients through full Scorecard completion or use as the basis of a one- or two-day workshop. The Scorecard was the basis for AECOM's Disaster Resilience Survey tool for Small Businesses that was applied to over 200 small businesses in New Orleans. The Scorecard was also tailored specifically for utilities and was the basis for workshops for a large SE water utility. This approach to disaster resilience could be applied to companies and agencies, as well.

Unmanned Aerial Vehicles (UAVs) for Impact. UAVs are well suited to areas where it is important to be non-disruptive, or where the areas are large and access may be otherwise difficult. AECOM has used the technology for floodplain mapping, surveying and assessing rail lines, roads, bridges, homes and dams after extreme weather events.

Disaster Resilience Solutions

AECOM has more than 30 years of experience helping public and private sector organizations prepare for, respond to, and recover from disasters of all kinds. Our staff includes emergency management specialists who know how to prepare and how to respond in a way that will keep City staff and residents secure; and our engineers, certified industrial hygienists, planners, scientists, construction managers, and other specialists can support your departments of emergency management, transportation, environment, facility management and construction teams.

To this end, our focus on our clients is one of the strongest aspects of AECOM. During the Coronavirus pandemic, for example, this focus is more important than ever. We live here too. We look for ways where we can use our deep expertise and experience to help our communities along the paths of recovery. Since the onset of the pandemic, we have been called upon for our expertise in environmental controls; recommendations of decontamination chemicals, disinfection and decontamination protocols; personal protective equipment (PPE); HVAC/Filtration system protocols; equipment decontamination/material disposal; EHS training; and administrative controls. We have been supporting our clients to implement programs/projects with a safe and phased return to Operations, including developing an Environmental Management System (EMS) to streamline management of EHS and sustainability data, track COVID-19 incidents; analyze industrial hygiene exposure assessments and monitoring, as well as track follow-up actions taken, testing status, quarantine period and prepare reports and statistics, including COVID-19 case maps.

Staffing Methodology

Our staffing strategy, designed specifically for the City of Pompano Beach, is to match both upcoming and potential City projects with our professional expertise and experience. To form our team, we selected key personnel with excellent communication practices and successful experience working on various environmental engineering projects. Our team offers one of the largest and most broad-based environmental staffs in Florida and we maintain excellent relationships and rapport with the regulatory agencies, which is critical for this contract. Our project team is further described in Tab 5 Project Team Form, Tab 6 Organizational Chart, and Tab 8 Resumes of Key Personnel.

Manpower Planning, Including Scheduling and Allocation of Resources

With four local offices in South Florida, AECOM has the ability to plan, schedule, and allocate resources for projects ranging from a Phase I environmental site assessment or an asbestos survey to a complex remediation project. With the depth of our resources, we are able to do this with very short notice. A recent example is a project for the City of Miami that involved the emergency repairs for the environmental engineering controls at Blanche Park. The City of Miami Parks Department notified AECOM about the need to shut down this popular park to do repairs needed to enhance the safety of those using the park. During the course of these field activities, the Parks Director expanded AECOM's scope to cover additional field activities. AECOM was able to accommodate these activities without delays and in a matter of days. The AECOM team mobilized to the site and directed the remedial activities, and the park was opened within a matter of weeks. Scheduling is further discussed in Tab 2 Schedule. Refer to Tab 9 Office Locations for details regarding our team's locations.

Timely Completion of Projects / Phases

As one of the largest engineering firms in the United States, our clients routinely rely on us for timely completion of projects. The Bayfront Park project is one example. There was a very small logistical window to implement the corrective action plan for the Park during the off-season from June to October2016. Managed by our local team, AECOM completed this project well ahead of schedule to meet the requirements of the City of Miami and the Bayfront Park Trust. This prevented potential loss of revenue from large park events, such as the Ultra Music Festival**.**

Capacity to Provide On-call Services in a Timely Manner

The AECOM team has 46 environmental staff located in Fort Lauderdale within 10 minutes of the City of Pompano Beach. The strength and depth of these resources clearly demonstrate our capacity to provide on-call services in a timely manner. We have previously served as an environmental emergency response contractor for the Miami-Dade County Department of Environmental Resources Management (DERM) and the FDOT, as well as major oil company clients, among others. Our team consists of multidisciplinary staff that lives and works in the South Florida area and is available within a matter of minutes to a few hours to respond to services the City may need.

Computer Aided Design and Drafting Capabilities

AECOM is an engineering firm providing services in multiple disciplines, such as transportation, water/wastewater, environmental engineering, sustainability, and ecosystem assessment and restoration. Our local offices not only staff computer aided design and drafting capabilities, but also have the capability to provide Unmanned Aircraft Systems (drone) surveys for our clients. These services are available from our Miami office. Our staff is equipped with and trained in the use of GIS software and GPS equipment, which enables us to graphically illustrate a variety of types of data associated with our projects. This further enhances our deliverables and provides a greater depth of understanding of the data we are presenting to both our clients and the regulatory community.

QA/QC Procedures, Including Timely Reporting, and Reviewing Pay Applications and Change Orders

AECOM's Quality Management System (QMS) (ISO 9001 compliant) extensively documents the AECOM Culture of Quality and is strictly followed to maintain the highest integrity of our final products and deliverables. The QMS addresses and details quality policy, quality procedures, quality instructions, and quality forms. Many of our federal clients mandate this internationally recognized level of quality management; therefore, the City of Pompano Beach can be confident that our deliverables have been detail checked and have undergone an extensive independent technical review. The detailed evaluation of documents is completed by senior, highly qualified, and project-independent professionals to advise on accuracy, completeness, and technical adequacy. The reviewer also evaluates the basis and validity of calculations, significant conclusions, opinions, assumptions, evaluations, recommendations, and design. The local AECOM team has been working with local county and state regulatory agencies for more than 30 years. We realize that there are often strict regulatory deadlines. Having former regulators on our team, such as our Principal-in-Charge, Vik Kamath, helps us better understand the need for timely completion of reports and submittals to the regulatory agencies. During construction oversight, our team also understands the need to review pay applications and change orders in a timely manner without disrupting the project schedule.

Prior Experience with Governmental Agencies

Having worked in the Broward County area for more than 30 years, our local team has many years of experience with Broward County Environmental Protection and Growth Management and FDEP. Our Principal-in-Charge, Vik Kamath, PE, is a former FDEP engineer and administrator; and our Project Manager, Steve Starke, PG, has been the manager on large-scale environmental contracts with DERM, FDEP, FDOT, City of Pompano Beach, City of Miami Beach, and the City of Miami, among others.

Our team routinely refers to Florida Administrative Code Chapter 62-780, as well as other pertinent regulatory guidelines, while working on environmental assessment and remediation projects.

AECOM is a State of Florida FDEP remediation contractor with contracts in the Petroleum Restoration Program, the FDEP HazWaste Program, the FDEP State-Owned Lands Program, and the FDEP Site Investigation Section Program. We have also performed environmental services for numerous cities in South Florida, including the City of Pompano Beach, City of Miami, City of Miami Beach, City of Coral Gables, City of Hialeah, City of Hollywood, and Cooper City, among others. Finally, we have regulatory experts in other disciplines, such as ecological/biological assessments and restoration projects, who routinely work with FDOT and other governmental clients.

Maintaining Time Schedules and Cost Controls

To make sure work is completed on time, a dynamic schedule is established and deliverables are identified at the beginning of each project. The identification of schedule activities and significant milestones for each task are provided by the individual task managers based on their understanding of the project scope and their prior experience on similar projects. Major project activities as well as the deliverables are shown on the schedule. Deliverable submittal dates and major project events are classified as project milestones. The activities needed to meet these milestone dates are identified and logically scheduled to support their achievement. These items, along with action lists, are monitored and updated in conjunction with the schedule as tangible means of tracking the progress of individual tasks/phases and identifying/reacting to problem areas.

Schedule tracking is accomplished by comparing project status to planned milestones. Various scheduling tools are available, but we find that simple bar charts are adequate for schedule control of most projects. Project team understanding of what is required is the best resource for keeping a project on schedule. Monthly project schedule reviews by the Project Manager will be a key to keeping the team and the City informed of progress and identifying schedule and within budget. When projects are delayed, it is typically due to

The ability to stay within the projected budget is a function of developing a complete scope of services that anticipates the activities required to complete the design work, identifying an experienced team to perform the work, and then developing a realistic schedule. Our experience in providing a wide variety of services to our clients allows us to develop comprehensive scopes of services. We take the time to meet with our clients to fully understand the intent and goals of the project so that the appropriate tasks and work efforts are included in our proposals.

Next we identify the appropriate staff that will work on the project. Typically, we include a mixture of project level and staff level engineers. This core staff is supplemented by other disciplines as needed. Finally, we develop realistic schedules that include sufficient time to prepare the milestone deliverables and for client review. Oftentimes on more complex projects, we recommend that review meetings be held so that review comments can be discussed.

We have found that this approach significantly increases our client's engagement in the process and results in fewer comments as the project progresses.

Providing clients with accurate cost estimates is an important component of a successful project. AECOM maintains a library of cost estimates that have been obtained from the various projects we have completed to help in developing accurate cost estimates.

Below is a list of example projects that AECOM has completed within the past three years. Each project was managed by the proposed Project Manager or Assistant Project Manager, Steve Starke and Delana Beculhimer.

Each project was completed under a Master Services Agreement (MSA) with individual task work orders, similar to the City. Each project was completed on time and under budget.

Project Name	Client Name | Contract	AECOM Project Manager	Initial Budget	Final Cost
SR 9/I-95 Park and Ride/FPL Parcel Level II Soil and Groundwater Assessment	FDOT District 4 **|** Contract BDY43	Delana Beculhimer	$ 40,108	$ 32,988
I-75 Level III Soil Excavation	FDOT District 4 **|** Contract BDY43	Steve Starke	$1,009,456	$ 958,448
Glades Road Level II Soil and Groundwater Assessment	FDOT District 4 **|** Contract BDY43	Steve Starke	$ 44,471	$ 27,056
I-95 Level II Soil and Groundwater Assessment	FDOT District 4 **|** BDY43	Delana Beculhimer	$ 24,581	$ 20,430
I-95 Bridge Asbestos Abatement	FDOT District 4 **|** BDY43	Delana Beculhimer	$ 47,379	$ 28,654
CR 510 Level II Soil and Groundwater Assessment	FDOT District 4 **|** BDY43	Delana Beculhimer	$ 125,405	$ 102,923
Northwood Rail Corridor Level III Remediation	FDOT District 4 **|** BDY43	Steve Starke	$1,071,498	$ 796,857
I-75 Segment E Level II Soil and Groundwater Assessment and Level II Soil Disposal	FDOT District 4 **|** BDY43	Steve Starke	$ 117,280	$ 109,453
Turkey Lake Level II Soil Assessment	Florida's Turnpike Enterprise **|** BE266	Delana Beculhimer	$ 57,836	$ 48,455
Citrus Sands Level III Natural Attenuation Monitoring	Florida's Turnpike Enterprise | BE266	Steve Starke	$ 49,164	$ 43,243
Peters Road Asbestos Pipe Excavation Oversight	FDOT District 4 | BDY43	Steve Starke	$ 39,400	$ 27,621
SR 7 Pond 8 Level II Soil and Groundwater Assessment/Level III Soil and Groundwater Remediation of Arsenic	FDOT District 4 | BDY43	Delana Beculhimer	$ 485,488	$ 375,467
SR 713 Level II Soil and Groundwater Assessment/Level III Soil and Groundwater Remediation	FDOT District 4 | BDY43	Delana Beculhimer	$ 551,412	$ 506,744

TAB 03

SCHEDULE

AECOM understands that “time is money” and that effective schedule control is necessary for multi-task efforts. AECOM uses Primavera SureTrak and Microsoft Project for preparing project schedules. Initially, the AECOM Project Manager will review the projected schedule with the City during the planning phase. A resource-loaded schedule is then developed to correspond to the proposed scope of work for each project that the City assigns to AECOM. The sequencing of events, estimates of time frames, and external constraints (such as permitting, site access, and regulatory approval) are input into SureTrak/Project. The software generates a resource-loaded schedule by task that serves as the baseline schedule. Each schedule clearly identifies critical milestones and provides a means to focus effort for on-time completion of the project.

Project types, such as described in the City of Pompano Beach RFP, are very dynamic, and conditions can change rapidly, often with limited notice, resulting in slippage of the schedule if the environmental consultant is not able to consistently respond quickly or if appropriate measures are not in place so that corrective action measures can be implemented immediately. AECOM uses Primavera SureTrak and Project to manage these situations, so that the schedule clearly identifies important milestones and provides a means for the Project Manager to focus effort and promote on-time completion of the project.

AECOM’s Project Manager, Steve Starke, will be directly responsible for project control and monitoring. He will receive updates from the task managers and technical staff and then discuss with the Principal-in-Charge, Vik Kamath, any corrective actions, if needed.

TAB 04

REFERENCES

AECOM's business philosophy is that repeat clients are developed by providing exceptional services that exceed expectations. Nationally, we have been re-selected with city, county, and state clients for comprehensive environmental testing services. The most effective measure of past performance is what our customers say about us. Please find the requested reference information below.

City of Miami – Bayfront Park

Miami, FL

Keith Ng
City of Miami
Project Manager
305.416.1298
keithng@miamigov.com

Cost
$230,000 (fee) | $989,000 (construction)

Performance Dates
6/2016 - 6/2018

Key Staff: Steve Starke, Vik Kamath, Fernando Navarrete, Mike Powell, Dan Levy

AECOM has been a consultant for the City of Miami for the past 14 years on multiple Environmental Engineering contracts that are similar to this proposed contract with the City of Pompano Beach. We have provided services to the City of Miami ranging from asbestos surveys at Fern Isle Park and the City of Miami Police Station, to annual sampling of the City's stormwater outfalls after major rain events in accordance with the City's NPDES permit, to conducting offshore sampling for Red Tide monitoring. We have performed Phase I and Phase II Environmental Site Assessments for the City at the former Miami Arena, in Little Haiti, and along N. River Drive, to name a few. We have replaced and sampled a contaminated irrigation well at Grapeland Park, performed source removal activities at Douglas Park, and performed other environmental engineering services at multiple locations within the City of Miami, including various assessments; groundwater monitoring; installation of engineering controls; and preparation of Engineering Control and Maintenance Plans and Deeds of Restrictive Covenant and/or cleanups at Curtis Park, Douglas Park, Blanche Park, and Regatta Park, among others.

Provided below are details of one of our City of Miami projects at Bayfront Park in downtown Miami. Contaminated groundwater and soil, as well as buried waste, had previously been identified at Bayfront during assessment activities. AECOM was subsequently tasked by the City of Miami to provide environmental engineering services for implementation of a Corrective Action Plan (CAP) for implementation of engineering controls at the Park. Bayfront Park is a large waterfront park, bordering Bayside Marketplace, that is frequently used for concerts and other large public events, such as the Ultra Music Festival. The Bayfront Trust, which manages the Park, was concerned about how the proposed remedial activities would affect these events. AECOM participated in meetings with the Bayfront Trust Board members, as well as public meetings, to discuss the proposed remedial construction work and the most strategic scheduling, as to least affect the Park's events and operations. This work consisted of conducting groundwater monitoring, as well as air monitoring and source removal activities. Prior to the commencement of soil/waste excavation activities, the AECOM Team assisted the City with obtaining the local permits for the proposed CAP approved by Miami-Dade County DERM.

The construction contractor commenced excavation of impacted soils starting the week of June 13, 2016. The excavated areas were lined with a high visibility 8-oz geotextile liner prior to backfilling with clean fill to provide engineering controls. The excavation area was later restored with new sod placed on top of the clean soils. The areas around tree trunks were covered with bonded rubber mulch, under the direction of a certified arborist, in accordance with the plans approved by DERM. Asphalt areas were repaved after construction.

Background air sampling, mobilization, and fence installation were completed by the first week of June 2016. Permitting activities with the City of Miami were completed during the week of June 6, 2016. Excavation activities in Phase I consisted of removing 12 inches of impacted soils in four areas, followed by installation of the liner and placement of lime rock and a soil/sand mix, with sod on the surface. Phase I started during the third week of June and was completed on July 22, 2016, followed by a DERM inspection on July 24, 2016.

Construction work in Phase II in two areas commenced on July 20, 2016, and was completed with sod during the last week of August 2016. The construction fence was removed, following the final DERM inspection, on September 14, 2016.

The Ambient Air Monitoring Program continued through the first week of September 2016. AECOM subsequently provided a Certificate of Completion Report, documenting the construction and air monitoring activities to the City and to DERM.

Groundwater monitoring was completed and a No Further Action with Conditions (NFAC) was approved on May 1, 2017. AECOM then prepared an Engineering Control and Maintenance Plan, which was approved by DERM in February 2018, and assisted the City with preparation of a Deed of Restrictive Covenant (DRC) for the Park, which was submitted to DERM in June 2018.

Wagner Creek Seybold Canal Restoration – Sediment Dredging and Remediation

Miami, FL

Robert Fenton
Construction Manager
City of Miami
786.263.2133
rfenton@mmiamigov.com

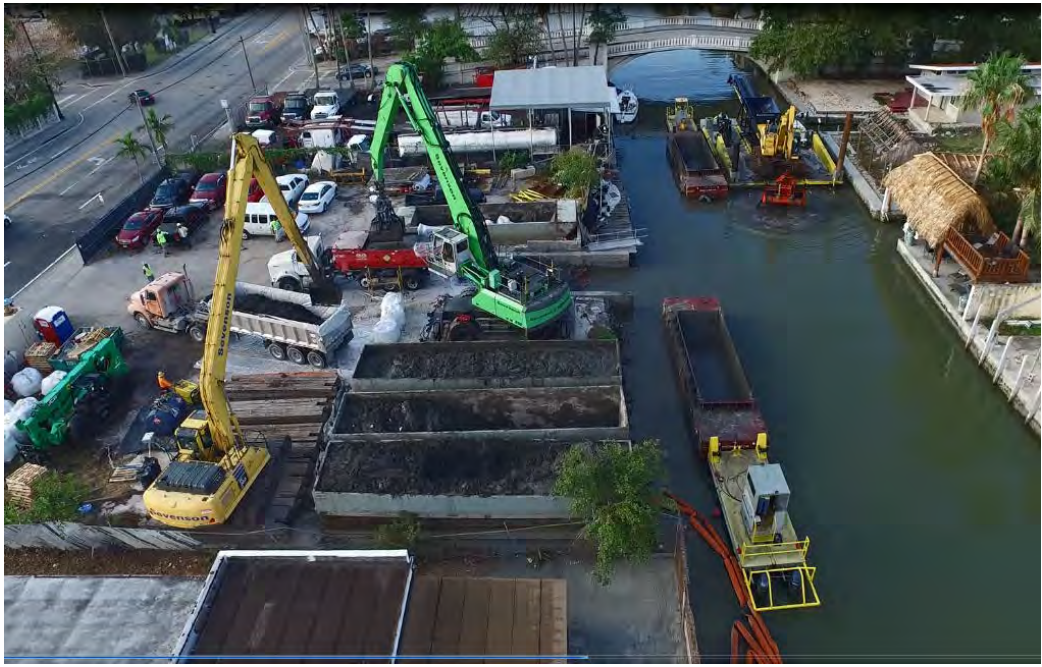
Cost
$3,200,000 (fee) | $14,000,000 (construction)

Performance Dates
4/2017 – 06/2018 (services) | 07/2017 – 06/2018 (construction)

Key staff: Dan Levy, Vik Kamath, Babu Madabhushi, Keith Stannard, Mike Powell

AECOM / Sevenson Environmental Services (AECOM/SES) provided Design-Build services to the City of Miami to remove contaminated (dioxin) sediment from Wagner Creek and Seybold Canal. These waterways were considered the most contaminated in the state of Florida. The sediments in Wagner Creek contained elevated levels of dioxins; and dredging was needed to remove the contaminated sediments and restore this aquatic habitat and manatee refuge area, as well as restore the drainage features of these waterways, which are designated as Outstanding Florida Waters (OFWs). The key to project success was AECOM's design of three innovative dredge approaches. AECOM's plan was developed based on the use of specialized dredge equipment that was built specifically for this project. Key advantages included:

- Ability to access the site and transfer material continuously
- Fast track a permitting program that could obtain regulatory approval from FDEP, United States Army Corps of Engineers (USACE), Miami-Dade County DERM, and FWC within 90 days of contract award
- Use of aqua dams, moon pools, and air curtains to provide protection of the endangered manatees



The City was in jeopardy of losing millions of grant dollars if the project was not substantially completed by March 2018. AECOM was successful in obtaining permits in time to allow for project start and secured funding.

AECOM was responsible for the engineering dredge design for the six operational sections (OS1- OS6), design and permitting of the off-site staging area, pre- and post- structural engineering evaluations, permitting an innovative dredge plan, public outreach, regulatory compliance, manatee protection, and on-site environmental and quality assurance inspections of the dredging activities.

Awarded the WEDA 2018 Environmental Excellence Award

Two of the key accomplishments included: 1) an extensive community outreach effort that successfully promoted a clear understanding of environmental issues associated with restoring these contaminated waterways, and 2) AECOM's public outreach team that promoted communication with the project stakeholders, and most importantly the residents, which stimulated meaningful discussions and a deep understanding of environmental issues affecting the surrounding neighborhoods.

The project was a huge success and received two prestigious Environmental Awards last year, a national award from the Western Dredging Association (WEDA) and a regulatory award from FDEP for environmental excellence in dredging.

Awarded the Florida Department of Environmental Protection (FDEP) 2018 Award for Superior Excellence

Jennifer Smith, FDEP SE District Director commented, "On behalf of the DEP, I am thrilled to recognize AECOM and SES for coming up with a dredging solution to a decades-long environmental problem."

Florida's Turnpike Enterprise – NW 170th Street Ramp

Hialeah, FL

Philip Stein
Environmental Administrator
Florida's Turnpike Enterprise
407.264.3301
philip.stein@dot.state.fl.us

Cost
$54,000 (Assessment) | $697,000 (Construction)

Performance Dates
1/2019 – 7/2020

Key Staff: Steve Starke, Delana Beculhimer, Matt Holbrook, Pete Verbanac

AECOM has provided consulting services across the state of Florida for the Florida Department of Transportation (FDOT) in Districts 1-7, as well as Florida's Turnpike Enterprise (FTE). These services have included environmental consulting services, highway and bridge design, construction engineering inspection services, safety and traffic engineering, intelligent transportation system (ITS) planning and design, traffic operations design, and development of the Severe Incident Response Vehicle (SIRV) Program, as well as structural and drainage planning and design. We have been an FDOT Contamination Assessment and Remediation (CAR) contractor since 1995, working under seven different CAR contracts. Our CAR services have included Level I/II Environmental Site Assessments; asbestos, metals-based paint, and mold surveys/abatement; environmental construction/remediation; construction dewatering/contaminated effluent treatment; emergency response actions and source removals; construction plans reviews; soil reuse; waste disposal; underground storage tank removals/closures; maintenance of traffic (MOT); utility installation; and in-house environmental labor support.

For the recent NW 170th Street Ramp project completed for the FTE under our current CAR contract, AECOM was requested to conduct a soil and groundwater assessment, and subsequently to conduct the excavation and disposal of contaminated/unsuitable materials, and then backfill a portion of NW 107th Avenue, adjoining south of NW 170th Street. This work was conducted as part of the FTE's preparation for construction of a ramp for a new interchange between the SR 821 Homestead Extension of Florida's Turnpike and NW 170th Street, in Hialeah Gardens, Miami-Dade County. This area was formerly used as a construction and demolition (C&D) landfill.

AECOM conducted a subsurface environmental assessment in this area, beginning in January 2019, consisting of the installation and sampling of soil borings (SBs), temporary monitoring wells (TMWs), and test pits (TPs). The assessment was completed and an Impact to Construction Assessment Report (ICAR) was submitted in April 2019. The results of the assessment indicated that TRPH exceeded the residential Soil Cleanup Target Level (SCTL) in SB-9 and the leachability SCTL in SB-7 and SB-10. However, the TRPH speciation analyses in these three soil samples, for all aliphatic and aromatic carbon ring groups, were reported below their respective lab detection limits or below the applicable Chapter 62-777 Florida Administrative Code (FAC) SCTL criteria. The TRPH speciation results indicated that TRPH was not likely a contamination issue in the soil within the project area. The soil analytical results also indicated that the arsenic concentrations in SB-7 and SB-9 exceeded the SCTL. The follow-up Synthetic Precipitate Leaching Procedure (SPLP) analysis of arsenic in SB-7 and SB-9 indicated that the arsenic in the soil at these two locations was not likely to present a leaching risk to the groundwater.

The ammonia concentrations detected in the groundwater at the five sampling locations indicated that ammonia in TMW-10 exceeded the groundwater cleanup Target Level (GCTL). The ammonia concentrations detected in the other four TMWs were below the GCTL. The five ammonia concentrations exceeded the Fresh/Surface Water Cleanup Target Level (FSWCTL). In addition, the calculated values for unionized ammonia in TMW-6 through TMW-10 exceeded the FSWCTL. All other analyzed constituents were below the respective GCTLs. The ammonia concentrations in the groundwater at all five TMW locations exceeded the FSWCTL. Further, the calculated values indicated that the unionized ammonia in TMW-6 through TMW-10 exceeded the FSWCTL, thereby presenting a potential risk to surface water discharge of dewatering effluent.

Utilizing a small excavator, AECOM field staff oversaw the excavation of five test pits (TP-1 through TP-5) along the south side of NW 170th Street on June 12 and 13, 2019. The test pit depths were terminated at a consolidated limestone horizon (approximately 1.5 to 3.5 feet below grade). Soil samples for vapor screening were collected from the four walls of each test pit using an Organic Vapor Analyzer (OVA) to screen for organic vapors and a landfill meter to monitor for potential methane exposure in the former landfill site. The test pit excavations indicated that solid waste/debris and elevated organic vapors were observed within the subsurface.

The FTE authorized AECOM to conduct the excavation and disposal of contaminated soil and solid waste from the site in order to prepare the area for construction of the Turnpike ramp. AECOM also oversaw the removal and recycling of discarded tires and solid waste/construction debris that were present at the surface around the work area. Prior to initiating excavation work, silt fences were erected along the corridor to protect the adjacent canals.

The excavation and stockpiling of muck and organic soils within the proposed roadway construction area began on April 22, 2020, and continued through May 12, 2020. A total of 6116.84 tons of muck and soil (commingled with limited amounts of C&D debris) were excavated and ultimately transported offsite for disposal as non-hazardous materials at the Medley Landfill in Medley, Florida. The used tires (total of 7.06 tons) were loaded and removed from the site and transported to a tire recycling facility on May 15, 2020. Construction debris (total of 94.83 tons) that was scattered over the ground surface was disposed at the Medley Landfill on April 28, 2020.

Backfilling, grading, and compaction of the subgrade areas began on April 30, 2020, and was completed on May 14, 2020. A total of 4,067.73 tons of A3 sand and 6,546.90 tons of lime rock were placed within the project. As part of the backfilling and compaction process, density/Proctor tests were performed in selected 500-foot completed areas from May 4 through 6, 2020, and May 12 through 14, 2020. All density tests performed at the site measured acceptable compaction values ranging from 100% to 103%.

A final elevation survey, detailing the final excavation profiles, was prepared to document the finished excavation profile within the work area and enable FTE to initiate construction of the proposed Turnpike ramp. A Soil/Solid Waste Excavation and Disposal Report, documenting field activities, was submitted in July 2020.

TAB 05

PROJECT TEAM FORM

AECOM has completed and submitted the AECOM Project Team Form electronically through the City's eBid System and uploaded to the Attachments Response tab, titled "AECOM_Project Team Form_LOI E-22-20."

TAB 06

ORGANIZATIONAL CHART

The City of Pompano Beach is seeking a partner who is experienced in managing multiple projects and services areas. AECOM has the understanding and capabilities to deploy these services in alignment with your expectations. AECOM's framework for the program is rooted in our local team that is connected to an overarching regional leadership team. The Project Manager will be supported by the Assistant Project Manager, Discipline Leaders, and professional staff located within the Broward, Palm Beach, and Miami- Dade County areas. The staff assembled has the depth and capacity to deliver the work outlined and to provide guidance and support to the City.

The management team from AECOM assigned to this project is committed to being overwhelmingly responsive to the needs of the project and more than willing to work with the City to make sure that tasks are completed successfully. Our proposed program team has been identified for delivery of the requested services.

The organizational chart of our proposed program team is provided below. It presents AECOM's proposed key personnel.

Steve Starke, PG, CHMM, LEP, REPA

Project Manager

Steve specializes in petroleum and hazardous waste assessments and remedial design and implementation, and is highly experienced in the management of multiple-site, indefinite-delivery order contracts and performance-based contracts. His clients have included the City of Pompano Beach (Environmental Engineering and CRA contracts), City of Miami, City of Miami Beach, City of Opa Locka, City of Hollywood, Cooper City, Miami-Dade County DERM, Miami-Dade Aviation Department (MDAD), Broward County, Palm Beach County, Port of Palm Beach, FDOT (District 4 and Turnpike), FDEP, FEMA, USCG, US National Park Service, as well as numerous major oil and private clients.

In supporting this contract, the work group leaders will report to Steve. Steve has been working on environmental services contracts for more than 35 years. Steve will:

- Utilize staff resources from the appropriate work group(s) based on the individual scope of service requested.
- Serve as the single point of contact and Project Manager responsible to the City of Pompano Beach and will be available on a 24/7/365 basis.
- Have oversight responsibility for the performance of the work on the contract, including preparation of work plans and cost estimates, management level responsibility for coordinating project tasks. and the assignment and deployment of personnel needed for each project.

Delana Beculhimer, LEP

Assistant Project Manager

Delana is a Project Manager with 17 years of experience conducting assessment, remediation, monitoring, and closure of metals and petroleum-contaminated sites for FDOT (District 4 and Turnpike); FDEP State Owned Lands, Petroleum, and Site Investigation Section; and private clients.

Delana's experience includes Level I/Level II/Level III assessments; roadway/stormwater/drainage improvement contamination assessment and remediation; tank removals/waste disposal; site remediation; asbestos/metal-based coating surveys; report preparation; preparing cost estimates; and project closeout services. She has conducted groundwater elevation surveys, natural attenuation monitoring, field data collection, supervision of drilling operations for soil borings, installation of groundwater monitoring wells, soil and groundwater sampling, and aquifer slug tests. In addition, she has prepared various types of environmental site assessment reports, contamination assessment reports, source removal reports, tank closure assessment reports, and sediment characterization reports.

Delana will provide technical support and project management for the environmental services identified within each scope of services for the City of Pompano Beach.

Vik Kamath, PE

Principal-in-Charge

Vik is a senior project engineer and the South Florida Remediation Department Manager. He manages a wide variety of environmental engineering projects ranging from corrective action plans, groundwater remediation, landfill closures, solid and hazardous waste management, methane gas mitigation projects, petroleum storage tanks, waste to energy plants, and wastewater treatment and disposal facilities. Prior to joining AECOM, Vik served as the Program Administrator for Waste Management at the FDEP office in West Palm Beach. During his tenure at AECOM, Vik has managed small as well as large remediation projects for the City of Miami. Having worked for the State of Florida for over 20 years as an engineer and administrator, he has a thorough understanding of state, local, and federal regulations and serves as an expert regulatory technical advisor for private and municipal clients in Palm Beach, Broward, and Miami-Dade Counties.

Vik will provide engineering and project management support to the Project Manager for the duration of this contract and will assign engineering staff, as needed, to complete remedial design projects for the City of Pompano Beach.

Luis Smith, CIH, CIEH, FLAC

Asbestos, Mold, and Lead Based Paint Lead

Luis is a Certified Industrial Hygienist (CIH) and Florida Licensed Asbestos Consultant (FLAC) with over 30 years of experience providing industrial hygiene consulting services to a diverse group of clients, including government, utilities, military, health care, insurance, construction, property developers, property managers, legal, manufacturing, pharmaceuticals, automotive, etc. Luis specializes in the indoor air quality practice and has extensive experience performing microbiological assessment and remediation projects involving fungi, bacteria, arthropods, algae, etc. In addition, he has managed numerous asbestos surveys and abatements. Luis also provides health and safety consulting services and has completed compliance audits at various types of facilities.

Babu Madabhushi, PhD

QA/QC

Dr. Madabhushi has 25 years of experience in conducting and managing environmental engineering projects. He served as local quality manager for AECOM's Miami office and is one of AECOM's quality lead verifiers in the state of Florida. He was instrumental in the AECOM Miami office acquiring ISO-9001 certification. His technical expertise is in the areas of sediment dredging, soil and sediment assessment, contamination assessment, remedial investigation and feasibility studies, soil and groundwater remediation, bioremediation, and operation and maintenance of remedial systems. Babu is extremely knowledgeable of FDEP and USACE regulations and standards. He coordinated with Florida Fish and Wildlife Conservation Commission (FWC) during the dredging projects at Flamingo Marina, Everglades Marina, and the Wagner Creek and Seybold Canal dredging projects, where he was involved in obtaining permits and the execution of dredging activities.

Fernando Navarrete, PhD, PE

Engineering Services Lead

Dr. Navarrete has 26 years of experience in water resources projects design including water and stormwater rehabilitation projects, hydraulic and hydrologic modeling, groundwater modeling and monitoring, stormwater management, and complete design of water resource projects. Some of his clients include the South Florida Water Management District (SFWMD), FWC, Broward County, FPL, City of Miami, City of Oakland Park, and City of Miramar.

Dan Levy, PG

Sediment Dredging Lead

Dan is a Vice President with the AECOM Environmental Business Line and has 34 years of experience in the environmental industry. Dan's experience includes research and development of innovative treatment technologies for the prevention of Harmful Algal Blooms (HABs) and implementation of innovative algae harvesting technology to remediate toxic algal blooms from Florida's lakes and canals. In cooperation with FDEP, Dan served as the Project Director for the algal bloom restoration programs that occurred in 2018 in Lee and Martin Counties, Florida. He is also the co-inventor of the patented SEDCUT dredging technology that was developed for the removal of nutrient-rich phosphorus-laden sediments from Lake Okeechobee. The technology was developed in collaboration with the

SFWMD and USACE and received the honor award for innovation. Dan is also the recipient of the 2018 Western Dredging Association (WEDA) Environmental Excellence Award and the FDEP Southeast District Superior Excellence Distinction Award for outstanding environmental practices in restoring one of Florida's most polluted waterways and the 2019 Environmental Business Journal (EBJ) Award for Social Contribution for development of an innovative Algae Harvesting program that can restore nutrient-impacted waterways.

David Hayman, PE

Remedial Design Lead

David is a senior engineer with 28 years of environmental consulting experience. He has extensive experience in management, preparation, design, and construction of various environmental engineering projects for federal, state, and municipal agencies. Dave also has extensive experience with dewatering permit applications and contaminated dewatering effluent treatment. He will be our chief design engineer for remedial treatment systems that may be needed on this contract.

Rich Ulkus, GC

Remedial Construction Lead

Rich is a licensed General Contractor with more than 40 years of experience in the planning and construction management of a wide range of water and wastewater treatment projects. He also has experience in site decontamination and demolitions, groundwater cleanup, soil vapor extraction and remediation, underground storage tank removals, and hazardous and regulated waste disposal.

Keith Stannard

Natural Resources Lead

Keith has 25 years of experience in conducting and managing environmental programs and ecological investigations for various public and private sector projects, including linear facilities (roadways, railways, pipelines), site development (industrial, residential, mixed-use), and special-purpose projects (offshore facilities, marinas, dams, maintenance dredging, basin studies, etc.). Keith has an in-depth knowledge of federal, state, and local environmental regulatory criteria and associated agency procedures in relation to ecosystem restoration and management. He also has extensive experience with marine and terrestrial habitat ecology, wetland and upland mitigation, threatened and endangered species conservation and ESA Section 7 consultation, and ecosystems restoration and management.

Justin Vandever

Resilience/Sustainability/Climate Change Lead

Justin has extensive experience in coastal and marine science, engineering, and climate change adaptation. His project experience includes climate change vulnerability and risk assessments, sea level rise inundation mapping, coastal processes and flooding, design of coastal and estuarine restoration and monitoring projects, and response of coastal and estuarine environments to sea level rise. Justin has served as a quality reviewer and technical advisor on numerous coastal flooding and climate change-related projects. He has co-authored technical articles related to climate change vulnerability, including sea level rise impacts in San Francisco Bay, effects of coastal erosion on the California coast, and mitigating climate change through coastal wetland restoration, and has presented at regional, nationwide, and international coastal conferences. Justin was selected as one of the American Society of Civil Engineers "New Faces of Civil Engineering" in 2013.

José Soler, PE

Seawall and Dock Construction Lead

José is a Director with AECOMs Americas Ports & Marine Group. He has over 23 years of experience performing and managing numerous waterfront and maritime projects involving planning and coordination of design from conceptual through final and construction. His project experience includes construction management of bulkheads, piers, dolphin structures, container terminals, waterside and landside improvements, cargo yard development, and rail systems, as well as bridges. He has managed projects in the Caribbean and in the US. José will work alongside our environmental team members on seawall or dock projects for the City.

Jae Park, PhD, CFM

Grant Writing/Funding Assistance Lead

Dr. Park has 28 years of experience and expertise in the areas of hazard mitigation, resilience and disaster recovery, grants management, and policies. He has helped many local, state, and federal governments rebuild resilient communities after major disasters such as Hurricanes Fran, Floyd, Isabel, Katrina, Sandy, Matthew, and Maria. Currently, Dr. Park is a FEMA Hazard Mitigation Assistance contract program manager for AECOM. Prior to joining AECOM, he served as a policy advisor and chief policy analyst for the Mississippi Governor's Office of Recovery and Renewal in coordinating Hurricane Katrina. He was an Assistant Director for Mitigation, Division of Emergency Management, State of North Carolina. During his tenure, he was instrumental in development of an overall long-term vision for Hazard Mitigation and oversaw managing $800 million in mitigation funds for implementing various hazard mitigation planning projects.

Subcontractors

AECOM has added strategic teaming partners to our team for the City of Pompano Beach's E-22-20, Continuing Contract for Professional Environmental Testing contract. Those firms include:

Asbestos, Mold, Lead-based Paint Abatement

CES CROSS ENVIRONMENTAL SERVICES, INC. is a specialty environmental contractor with primary focus on abatement and demolition work. After being organized in 1988 by current President and CEO, Clyde A. Biston, CES has grown into one of the largest asbestos abatement firms in the state of Florida. From its four offices, CES has performed and continues to pursue projects in the 12 states where licensing is maintained. Projects include:

- Broward College Asbestos Abatement/Demolition
- Bear cut Bridge Rehabilitation Asbestos Abatement, Key Biscayne, Florida
- Florida Department of Transportation, Districts 4 and 6 Demolition and Asbestos ROW Contracts

Florida-certified mold remediators Millard Scott and John Tostanoski will be supporting AECOM on this contract.

Asbestos, Mold, Lead-based Paint Testing

GLE specializes in providing environmental, architectural and engineering, and construction consulting services to both private and public sectors. Their staff consists of nearly 90 multi-disciplined professionals. They have worked on many complex issues for various property types.

GLE's environmental professionals can provide analysis of single-building elements or entire buildings as part of their services for public agencies to comply with federal, state, and local regulations associated with lead, asbestos, industrial hygiene, indoor air quality, radon, and other environmental concerns. GLE holds asbestos and industrial hygiene contracts with Palm Beach County, Palm Beach County School Board, Miami-Dade Aviation Department, and the School Board of Broward County. John Simmons, a Florida EPA Lead-Based Paint Assessor and Florida Radon Measurement Technician, will support AECOM for this contract.

Drilling Services

EARTH TECH DRILLING 954-974-2424 located in Pompano Beach, is South Florida's leading drilling contractor, serving Miami Dade, Broward, and Palm Beach Counties. They specialize in environmental, geotechnical, direct push, and water well drilling, as well as vacuum excavation / daylighting. ETD is an SBE-certified firm and combines the skills and resources of highly experienced drillers and technicians with state of the art equipment to provide direct push, hollow stem auger, mud, and air rotary drilling services. ETD has extensive experience throughout Florida and the southeastern US. Services include monitoring wells, sparge wells, cluster wells, direct push, and well abandonments. ETD has provided drilling services for the following Level II projects:

- SR 7, Broward County, FL
- SR 80, Palm Beach County
- Interstate 75, Broward and Palm Beach Counties
- University Drive, Broward County
- Hollywood/Pines Boulevard, Broward County
- Powerline Road, Broward County
- Sample Road, Broward County

Ed Marks, PG, WCC, will support AECOM under this contract.

located in Davie, Florida, JAEE has been serving Palm Beach County for 20 years. JAEE specializes in environmental drilling using direct push technology. They currently employ 11 people with experience ranging from 5 to 28 years in the field.

Willie Smitherman is a Florida Certified Water Well Contractor, Certified Environmental Specialist, and Certified Environmental Inspector, and will be supporting AECOM for this contract.

Grant Writing/Funding Assistance

Anthony Sullivan is President and Director of Environmental Affairs/Funding Sources for Sullivan Regulatory Consultants, with 29 years of environmental cost recovery experience. SRC coordinates the preparation of various local, state, and federal reimbursement and low interest applications to private and governmental agencies.

Anthony has worked with Miami-Dade Aviation Department (MDAD) since 1994 to secure reimbursement of petroleum cleanup at Miami International Airport (MIA). He served as the focal point consultant for MIA petroleum reimbursement and eligibility issues associated with FDEP.

Laboratory Services

located in Pompano Beach, provides full-service environmental monitoring and analytical testing services for a wide variety of projects. They have more than 40 years of experience in environmental testing, coupled with the latest scientific and technological innovations. Pace was one of the first labs to help clients adjust to the new environmental regulations. And as those regulations evolved, so did Pace. Pace is made up of three major divisions: Environmental Services, Life Sciences Division, and Scientific Professional Services Division.

Pace Life Sciences provides full-service, extensive drug analysis capabilities with concomitant process understanding, by leveraging analytical methods, physicochemical, biophysical, and/or biopharmaceutical characterization. The combination of Pace's experience and cutting edge, GMP, and FDA approved facilities allows them to assist clients to analyze their novel drug entities.

Our Scientific Professional Services division provides scientific staffing, product regulatory services, and instrument support, allowing customers to focus on their core business and respond to workload demand. Pace has expertise and experience in the areas of hazard communication, product stewardship, and raw material data management for companies of various sizes, both domestic and global. And, with over 20 years of experience with instrument support service, Pace can help optimize efficiency and control costs.

Pace is NELAC certified (E83079, E86240, E84129) for the analytes of interest and operates under a Laboratory Quality Manual following NELAC requirements and has municipal experience. Pace licensed to practice in Pompano, Florida. Christina Raschke will be supporting AECOM for this contract.

Subsurface Utility Engineering

Founded in 1977, DRMP was among the first firms in Central Florida to offer its clients a full-service firm with a multidiscipline approach to civil engineering and surveying services. DRMP now has 16 offices throughout the southeastern United States that offer a broad range of services from their expert staff of engineers, surveyors, planners, scientists, and construction inspectors who work together to make powerful ideas a reality and transform the communities DRMP serve. Projects include:

- Pompano Beach FP&L Substations (Sample Road, Crystal, Ely, and Andrews Subs) Survey and Subsurface Utility Engineering Services for Florida Power and Light, Florida Sample Road Interchange Improvements at I-95 (436958-1-52-01), FDOT District 4, Pompano Beach, Florida
- Coral Ridge Drive, FDOT District 4, Broward County, Florida
- Right-of-Way Mapping and Survey Staking for Canal Rehabilitation Projects, Lake Worth Drainage District, Palm Beach County, Florida
- Carol Avenue Stormwater Improvements, Village of Palm Springs, Palm Beach County, Florida
- Continuing Engineering Services (Contract No. 2018-21) for the City of Parkland, Broward County, Florida

Derek Zeman, PSM, RPLS will support AECOM on this contract.

Surveying

provides Land Surveying Services on a continuing basis for large facilities such as City of Miami, Florida International University, Miami-Dade County, and Turkey Point. J. Bonfill is experienced with the requirements associated with Land Surveying services for Parks, Recreation, and Open Spaces Department projects and has provided surveying services for major, mid-sized, and small pocket park projects throughout Miami-Dade County, The City of Miami, and City of Miami Beach.

J. Bonfill is technically certified and experienced in the four Miami-Dade County Technical Surveying Categories. Their field personnel are experienced in the location of existing utilities in conflict with the alignment of pipelines; documenting right of way improvements that will be temporarily or permanently relocated by the project, such as utilities, pavement, sidewalk, curb and gutter, valley gutter, trees, landscaping, sod, pavement markings, driveways, and mailboxes; and documentation of vehicle and pedestrian traffic control measures. Our personnel are experienced in construction layout re-establishing and maintaining the alignment centerline as defined by the project drawings; locating and identifying obstructions; supporting construction activities in accordance with the specifications; and providing survey for progress measurements and final as-built survey.

Eugene Collings-Bonfill, PE, PSM and Oria Jannet Suarez, PSM will be supporting AECOM on this contract.

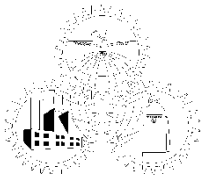
Resiliency/Sustainability/Climate Change

Established in 2006 and headquartered in the City of Miami, 300 Engineering Group P.A., is an SBE/DBE and Envision Certified firm that was built on the principle of delivering the highest quality of work, on time, under budget, and cost effectively. Relevant projects include:

- City of Miami Beach Continuing Engineering Services Contract
- City of North Miami Continuing Engineering Services Contract
- City of North Miami Beach Program & Construction Management Services for the Water Capital Improvement Program
- Broward County Water and Wastewater Services Regional Transmission Master Plan
- Broward County Water and Wastewater Services – Engineering Services for Wastewater and Disposal System

Fernando Miralles, PhD, BCEE, D.WRE, PMP, F.ASCE will support AECOM on this contract.

Remedial Design/Construction Services



Founded in 1994, EESI has been providing environmental engineering, pilot testing services, remedial equipment fabrication, environmental construction, remediation, and storage tank management for the past 25 years. They specialize in environmental engineering, remedial equipment fabrication, pilot testing services, remedial construction, and fuel system services. EESI has performed hundreds of successful DPE, AS, and SVE pilot tests throughout Florida and from them, designed hundreds of remedial action plans. With a fleet of rental trailers/portable remedial systems and hundreds of system components, EESI can customize a remedial trailer to suit a particular remedial design. These systems are available for immediate use on short term, aggressive cleanups, dewatering projects, emergency responses, open-pit sparging projects, pilot studies, and limited scope, alternate procedure remedial actions.

Relevant projects include:

- City of West Palm Beach Kaye Street Water Plant Fuel Tank Removal
- City of Fort Lauderdale Pump Station D37
- City of West Palm Beach Wastewater Treatment Plant Fuel Tank Removals
- City of Hialeah Reverse Osmosis Water Treatment Plant
- City of West Palm Beach East Central Regional Water Reclamation Facility Remedial System Installation
- Miami International Airport Fuel Lines

Joe Ziegler, PE will be supporting AECOM for this contract.

Waste Disposal/Emergency Response

located in Pompano Beach, has become the leading environmental and industrial service provider and largest hazardous waste disposal company in North America. Since 1980, field service centers have been strategically located across North America to provide emergency response services and perform planned work on customer locations. Clean Harbors is a recognized leader in environmental emergency response services, with more than 400 service locations providing waste transportation and disposal, laboratory chemical packing, 24-hour emergency response, parts cleaning, and field, energy, and industrial services. The Company owns and operates more than 100 waste management facilities offering a wide range of disposal options including incineration, wastewater treatment, and landfill, recycling and specialty disposal. Clean Harbors is the largest hazardous waste disposal company and the largest re-refiner of used oil in North America and has been serving the City for many years.

Patrick Etheridge is the South Florida general branch manager and will be supporting AECOM on the contract.

Since 1952, NRC/US Ecology has provided safe and compliant solutions for complex waste management needs and ensured the effective management of the environmental risks our customers face. They lead the industry with expertise spanning across a comprehensive suite of environmental, industrial and emergency response services. NRC/US Ecology provides treatment, recycling, and disposal services including RCRA hazardous waste disposal, solid waste/wastewater treatment; PCB, PFAS and other non-hazardous waste disposal; energy waste disposal; thermal treatment and recycling; aerosol and solvents recycling, and metals recovery, industrial services including vacuum transfer and pumping; decontamination and demolition; asbestos/lead/PCB/mold abatement and disposal, and emergency response services including disaster response, and recovery and Oil Spill Response and Compliance (OSRO). Diego Mejia will support AECOM for this contract.

Waste Disposal

located in Pompano Beach and headquartered in Houston, Texas is North America's premier solid waste services provider. WM is your single source for industrial and hazardous waste disposal. Whether your materials are solid or liquid, whether they are from a single location or several dozen, WM can handle them in a manner that is safe, compliant, and cost-effective. WM's services include waste transportation management, on-site waste services program management, industrial waste sustainability, hazardous waste disposal, residential waste/recycling, and dumpster rentals. WM's clients include engineering and consulting firms, automotive, construction, education, manufacturing, healthcare, municipalities, oil and gas, pharmaceutical, petrochemical, steel, pipelines, transportation, and utilities. WM is strongly committed to the safe and responsible management of waste, working diligently to achieve regulatory compliance and protection of human health and the environment.

Jeff Roccapriore will support AECOM with this contract.

Principal-in-Charge
Vik Kamath, PE (FTL)*

Project Manager
Steve Starke, PG, CHMM, LEP, REPA (FTL)*

Project Support
Health & Safety
Luis Smith, CIH, CIEC, FLAC (FTL)*
QA/QC
Babu Madabhushi, PhD (FTL)*

Assistant Project Manager
Delana Beculhimer, LEP (FTL)*

Phase I, II & III Assessments
Delana Beculhimer, LEP (FTL)*
Kathryn Eisnor, LEP (FTL)*
Matthew Holbrook, PG (FTL)*
Ed Leding, PG (FTL)*
Alec Rizzo (FTL)
Elizabeth Sulivan (FTL)

Resilience/Climate Change
Justin Vandever (OAK)*
Lauren Swan (MIA)*

Engineering Services
Fernando Navarrete, PhD, PE (FTL)
Stormwater
Gino Mora (FTL)*
Jonathan Barbosa, PE (FTL)
Civil Engineering
Daniel Baker, PE (WPB)*
Clecio De Sa, EI (FTL)
Water/Wastewater
Roger Williams, PE (MIA)*

Sediment Dredging
Dan Levy, PG (FTL)*
Chandy John, PhD (JAX)*
Babu Madabhushi, PhD (FTL)*
Mike Giovannozzi, PE (WPB)*

Seawall & Dock Construction
Jose Soler, PE (MIA)*
John Carel, PE (MIA)*

Remedial Design
David Hayman, PE (FTL)*
Babu Madabhushi, PhD (FTL)*
Devansh Shah, PE (MIA)*
Sonia Burkule (FTL)
Josh Gregory (FTL)
David Vargas (FTL)

Grant Writing/Funding Assitance
Jae Park, PhD, CFM (IAD)*
Amy Baker, PE (IAD)*

Remedial Construction
Rich Ulkus, GC (MIA)*
Mike Powell (MIA)*
Mike Scinta (MIA)*
Richard Longhenry (MIA)

Asbestos, Mold, & Lead Based Paint
Luis Smith, CIH, CIEC, FLAC (FTL)
Carlton Gordon, MRSA (FTL)*
DeAndre Scholl (FTL)

Natural Resources
Keith Stannard (FTL)*
Natural Resources
Mike Briener (MIA)*
Kelley Samuels, PWS, CERP (ORL)*
Pete Verbanac (FTL)
Permitting
Karen Brandon, PE (WPB)*
Laura Cherney (MIA)

Subcontractors Support Services

Asbestos, Mold, Lead-based Paint Abatement
Cross Environmental (FTL)
Asbestos, Mold, Lead-based Paint Testing
GLE & Associates (FTL)
Drilling Services
Earth Tech Drilling (PMP)
JAEE Environmental Services (FTL)

Grant Writing/Funding Assistance
Sullivan Regulatory Consultants (TLH)
Laboratory Services
Pace Analytical (PMP)

Subsurface Utility Engineering
DRMP
Surveying
J. Bonfill & Associates

Resiliency/Sustainability/Climate Change
300 Engineering PA
Remedial Design/Construction Services
Engineered Environmental Solutions (WPB)

Waste Disposal/Emergency Response
Clean Harbors (PMP)
US Ecology / SWS (FTL)
Waste Disposal
Waste Management Inc of Florida (PMP)

(FTL) Fort Lauderdale • (PMP) Pompano Beach • (MIA) Miami • (JAX) Jacksonville • (OAK) Oakland, CA • (ORL) Orlando • (WBP) West Palm Beach • (TLH) Tallahassee • (TPA) Tampa • (IAD) Germandtown, MD

* - Resumes provided in Tab 8 Resumes of Key Personnel.

TAB 07

STATEMENT OF SKILLS AND EXPERIENCE OF PROJECT TEAM

The AECOM Team

AECOM launched 30 years ago when a handful of employees from design and engineering companies shared a dream of creating an industry-leading firm dedicated to making the world a better place. AECOM became an independent company formed by the merger of five entities. While our official founding was in 1990, many of our predecessor firms, such as Dames & Moore, Woodward Clyde, ENSR, Metcalf & Eddy, URS, and Radian have distinguished histories. Since 1990, more than 50 companies have joined AECOM and, in 2007, we became a publicly traded company on the New York Stock Exchange. In 2014, we more than doubled our revenue and workforce with the acquisition of URS, which expanded our capabilities and solidified us as a premier, fully integrated infrastructure firm. Today, AECOM has over 56,000 employees operating in 150 countries from which to draw remedial investigation and design expertise. AECOM is the nation's largest and most capable design firm. In addition, our Florida footprint covers the entire state, and we are continuing to partner with our clients to develop innovative solutions to their most complex problems.

Contaminated and other environmentally sensitive sites present significant liabilities to industry and government – in some cases affecting the health, safety, and real estate values of local communities and requiring substantial financial expenditures to remediate. To properly manage these liabilities, the AECOM team will carefully consider site-specific conditions, regulatory requirements, and stakeholder issues. Our team has many success stories working with clients / stakeholders where we have responded to site impacts, eliminated threats to nearby receptors, recovered the value tied up in impaired or stigmatized property, and generated goodwill in the community by creating an asset. Our goal is to provide services to the City of Pompano Beach, such that together we will have many success stories associated with important projects within the City.

There is an inherent value in working with an organization such as AECOM that maintains the required professionals in-house and locally, within the county, to service our clients, supplemented by the expertise of our additional staff, subcontractors including SBE/MBE/DBE firms. Our team is discussed in greater detail in Tab 5 Project Team Form, Tab 6 Organizational Chart, and Tab 8 Resumes.

Our team maintains the full suite of capabilities anticipated under this agreement, including multidisciplinary engineering, environmental, and construction oversight services with the expertise and experience needed to perform virtually any environmental project or challenge the City may have. The anticipated scopes of services enumerated in the Request for Letters of Interest were previously listed in Tab 1 Technical Approach and are discussed below.

Adopted Capital Improvement Plan

AECOM has the resources and expertise to provide professional environmental testing services for each of the projects identified in the City of Pompano Beach's Adopted Capital Improvement Plan (CIP) for FY 2020-2024, including major bridge rehabilitation, roadway resurfacing, sidewalk improvements, park refurbishing and renovations, basketball court resurfacing, lighting improvements, pool lining repairs, golf course repairs, replacement of artificial turf, building refurbishment, seawall rehabilitation, parking lot improvements, signage improvements, canal dredging, tree replacement, grant writing, utility renewal and replacement, water treatment plant upgrades, well maintenance, stormwater system improvements, pavement repair, and others.

Preparation of Phase I, Phase II, and Phase III Assessments

AECOM provides assessment services in conjunction with municipal, county, and state programs and is intimately familiar with the differing objectives of each as defined by ASTM, Florida Administrative Code (FAC), and specific program guidance.

Phase I Site Assessment

In general, site assessment is initiated with a Phase I environmental site assessment (ESA), conducted in accordance with ASTM E-1527-13 (Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process; expected to be revised in 2020) and/or 40 CFR Part 312 (All Appropriate Inquiry - AAI). The AAI is a requirement for federal brownfields grants and represents the level of effort needed to establish an innocent landowner defense under CERCLA in addition to providing Superfund liability limitations for bona fide prospective purchasers and contiguous property owners. The preliminary assessment consists of a detailed site and area inspection and review of environmental, regulatory, and community documents. This assessment substantially aids in the identification of potential on-site and local off-site contaminant sources and minimizes the prioritization of sites or sources that may have no bearing on the specific investigation. This key initial phase has the effect of being able to streamline subsequent environmental investigations. Preliminary assessment tasks that are particularly helpful in focusing on the site assessment include:

- Site and adjacent site ownership and occupants (identified from property records and supplemented with city directories)
- Site and adjacent site history, land use, and past facility operations, as identified by detailed interviews with site personnel and area residents, especially those with long-term ties to the area and specific recollection of development
- Federal, state, local, and tribal agency records (permits, licenses, releases, land use limitations, compliance, and enforcement)
- Solid, petroleum, hazardous, and biohazardous waste management, storage, and disposal practices
- Well inventories (potable/non-potable, irrigation, injection, and monitoring)
- Site utilities, general drainage, and topography
- Geologic and hydrogeologic properties
- Sensitive receptors (augmented by Department of Health data)
- Analysis of Data Gaps

In the City of Pompano Beach, AECOM has used these techniques, combined with site reconnaissance and a preliminary evaluation of area geology, to identify areas of concern. Typically, the areas of concern have resulted from impacts to the soil and/or groundwater from the improper handling of hazardous materials. AECOM significantly utilizes these techniques to baseline the known distribution of contamination, target suspected source areas, and minimize the number of environmental mobilizations and samples needed to complete the investigation. Below are descriptions of sample projects.

Phase I Site Inspection

Dr. Martin Luther King Jr. Boulevard and NW 10th Avenue Parcel, Pompano Beach, FL. AECOM was contracted by the City of Pompano Beach Community Redevelopment Agency (CRA) to perform a Limited Phase I Site Assessment to identify whether current or historical activities on or near the subject property may have resulted in significant contamination by hazardous substances or wastes and/or petroleum products, also known as a Recognized Environmental Condition (REC). The subject property consisted of three adjacent undeveloped land parcels, located on the northeast corner of Dr. Martin Luther King Jr. Blvd and NW 10th Avenue. The property was located within the Pompano Beach Northwest Brownfield Area. One REC was identified.

Phase I Environmental Site Assessment – Asbestos and Lead-Based Paint Survey – Seminole Media Productions, Hollywood, FL. The Seminole Media Productions building is located approximately ¼-mile south of Stirling Road and immediately east of State Road 7 in Hollywood, Broward County, Florida. AECOM completed a Phase I ESA of the Site, as well as additional services, including an asbestos survey and lead-based paint survey. The Phase I ESA and the asbestos and lead-based paint survey were conducted at the request of the Tribe prior to proposed renovations within the building. Thirty-three bulk samples were collected from suspected asbestos-containing materials (ACM). Forty-seven samples were collected using X-ray fluorescence (XRF) technology as part of the lead-based paint survey.

There were no RECs identified that could be reasonably expected to create an area of concern at the Site. Based on the asbestos sampling, mirror mastic located on the southern and eastern walls of the eastern portion of the first floor of the Site contained 20 percent chrysotile asbestos. During the lead-based paint survey on the first floor, 47 samples were analyzed using XRF technology, and there was no lead identified equal to or greater than the 1.0 mg/cm^2 standard using the Department of Housing and Urban Development (HUD) Chapter 7 1997 revised guidelines. AECOM also identified light ballasts labelled as non-polychlorinated biphenyls (PCBs) containing. AECOM also identified mold during the asbestos survey.

Based on the Phase I ESA of the Site, AECOM identified three (3) areas of concern that could be associated with future renovations: ACM (mirror mastic), potential PCBs in the light ballasts, and mold on the southern first floor wall. AECOM recommended that the asbestos-containing material identified should be properly managed if renovations impacted the area, the light ballasts should be properly disposed of if they were removed, and further mold investigations should be conducted prior to renovations.

Phase I Environmental Site Assessment Report – Asbestos Survey– Pompano Beach Pier, Pompano Beach, FL. AECOM completed a Limited Phase I ESA and pre-demolition asbestos and lead based paint survey at the Pompano Beach Pier for the City. Phase I activities were reported in a Limited Phase I ESA and the pre-demolition asbestos survey and lead based paint survey reports were conducted by a subcontractor under AECOM supervision and documented under separate covers.

Phase II Site Assessment

Properties identified as having contamination potential during the Phase I environmental site assessment activities should be further assessed to verify or refute the contamination concerns. This is a Phase II ESA. The general steps that are completed in the performance of a Phase II assessment are discussed below.

A formal Work Plan, detailing the number and type of samples; the type of analyses; the projected labor, equipment, materials, and subcontractor utilization; the assessment schedule; and associated costs is prepared. An environmental project manager coordinates the proposed field activities with the property representative. AECOM strives to accommodate site operational constraints and site personnel requests, without sacrificing assessment quality or jeopardizing schedules of the City.

Prior to the initiation of the actual assessment work, a site-specific Health and Safety Plan (HASP) is prepared. If accessible and intact, existing monitoring wells identified in the area are utilized, as appropriate. Areas that are outside of the subject site that may have a negative impact on the site are also investigated. A local receptor survey is conducted, and the current and adjacent land use is noted. AECOM obtains a utility clearance prior to performing soil borings or monitoring well installations on the property. Available site location maps are reviewed for possible location of underground utilities. Sunshine State One Call, as well as known utility firms, are contacted to identify utilities that could be located at the site. The locations and depths of existing utilities are reviewed to determine impact, if any, on existing contamination. AECOM gathers an appropriate amount of data as needed to verify or refute contamination potential.

The following are the field tasks that may be conducted during implementation of a Phase II assessment:

- Geophysical survey instruments, such as ground-penetrating radar, ground conductivity meters, magnetometer surveys, or metal detectors, may be employed to identify or verify buried tanks, drums, etc. or fill and construction materials.
- Excavation of test pits may be performed to document the presence of septic systems or the depth and type of buried material within the parcel.
- Soil borings are advanced using hand augers, drill rigs, or direct push techniques. The borings are advanced to discrete intervals determined by the Project Manager and Field Scientist. The soil is screened using an OVA-FID to determine the presence of total organic and hydrocarbon vapors.
- Monitoring wells are installed using direct push or standard drilling techniques, depending on the site conditions.
- Groundwater, soil, surface water, and/or sediment samples are collected for on-site mobile lab analysis or are transported to a fixed laboratory for analysis.
- Water table elevation surveys, using known survey elevation benchmarks, are conducted to determine depth to water, groundwater gradient, and groundwater flow direction, which will affect plume migration, dewatering considerations, and subsurface construction.
- Sensitive receptor surveys are conducted to determine the possible impact of contamination to adjacent areas, as well as potable wells that may be located in the area of the site.
- Aquifer testing may be conducted to determine hydraulic characteristics to evaluate groundwater contamination migration rates during dewatering operations.
- Well abandonments are conducted to properly close monitoring, irrigation, and/or potable wells in accordance with FAC Chapter 62-532.500(4) and South Florida Water Management District (SFWMD) guidelines.

Prior to procuring analytical services for Phase II testing, AECOM audits the laboratory facilities and procedures. If the lab does not meet our standards, we do not use it. AECOM has longstanding relationships with the laboratory specified in this submittal, Pace Analytical. Pace is certified by the Florida Department of Health's (DOH's) Environmental Laboratory Certification Program (ELCP) and can achieve the required method detection levels. In addition to their DOH certification, and in accordance with Chapter 62-160 FAC (Quality Assurance), Pace operates quality assurance programs consistent with the NELAC quality systems standards. Laboratory reports are prepared in compliance with NELAC standards. Before submitting final laboratory data, AECOM performs a quality control check to verify the laboratory report is free of errors. This check maintains analytical reliability and reduces liability to the City.

A clear and concise report is prepared upon the receipt, compilation, and review of field and laboratory data. The objectives of the soil and groundwater sampling report are to:

1. Clearly present the assessment data gathered to verify or refute the identified contamination potential
2. Provide a conclusion, based upon the data, as to whether further assessment appears warranted
3. Provide appropriate recommendations and remedial cost estimates.

The soil and/or groundwater sampling report presents the soil and groundwater assessment methodologies; the hydrogeologic setting; the subsurface assessment results; pertinent conclusions; and recommendations for additional work. Copies of regulatory correspondence, historical data, current site photographs, soil boring and lithologic logs, geophysical data, soil and groundwater analytical reports, in addition to well completion and abandonment reports, are included in the report.

Phase II Field Investigation

AECOM has conducted the following Phase II ESAs for the City:

- Limited Phase II ESA for the site location of the proposed library. Site reconnaissance, geophysical surveys, soil and groundwater sampling, and monitoring well installation activities were conducted and documented in a Limited Phase II Environmental Site Assessment Report.
- Soil and Groundwater site assessment for the site location of the proposed library. Petroleum and arsenic impacts were identified during the limited phase II assessment; therefore, a full assessment was requested by Broward County. Two site assessment reports were submitted, one for the petroleum impacts and one for the arsenic impacts.
- Site assessment and monitoring well installation and abandonment activities at the Salley property were conducted and documented in a Site Assessment Report and a Monitoring Well Abandonment Report.
- Groundwater monitoring conducted at the Municipal Golf Course. Groundwater sampling activities were conducted on a quarterly or semi-annual and annual basis and documented in the corresponding monitoring reports.
- Quarterly monitoring sampling activities at the Aquatics Center located in the Community Park.

Additional example projects are detailed below:

Lease Parcel N-11 Palm Beach International Airport Phase I and Phase II ESA. The Lease Parcel N-11 and Pond areas are located in the northeast corner of the Palm Beach International Airport (PBIA) (the Site). AECOM completed a Phase I ESA of the Site and identified a former underground storage tank (UST) area along the west-central portion of the Site and a former landfill on the southeastern portion of the Site. For the Phase II ESA, groundwater samples were collected to evaluate current groundwater quality around the perimeter of the former UST, as well as to evaluate potential groundwater issues if the site was developed in the future. During the Phase II ESA, a series of test trenches were excavated by the Pond in the area of the former landfill.


Phase II ESA Test Trench

Petroleum impacts to the groundwater were not identified above GCTLs in the north and east perimeter areas of the former UST area; therefore, AECOM did not anticipate building restrictions outside of a 50-foot perimeter to the north and east of the former USTs. The test trenches identified domestic garbage and construction debris in three of the seven trench locations. Petroleum or metal impacts to the soils were not identified above the established SCTLs in the trenches that were excavated. AECOM recommended that, at a minimum, the landscape personnel at PBIA be educated on the presence of the buried waste, the types of hazards that may be present, and the appropriate protective clothing to wear to avoid potential risks/hazards from the solid waste in the soils around the perimeter of the Pond. AECOM also recommended that the areas where the solid waste is present be excavated to eliminate the potential risks and hazards.

McClure Village Project. AECOM provided environmental services for the Phase I and Phase II ESAs at McClure Village. The project area consists of a 13-acre parcel multifamily residential area that was historically used for cultivation. The Phase I ESA conducted at McClure Village identified the historical agricultural use at the project area as a REC. AECOM evaluated areas within the project site targeted for construction, including the demolition of three multifamily houses and a storage building. AECOM conducted sampling to evaluate the soil quality with respect to former agrochemicals and arsenic in these areas so that the demolition/new construction could be implemented. The Phase II ESA identified elevated levels of arsenic above State residential standards.

AECOM subsequently conducted a Site Specific Human Health Risk Assessment (HHRA), which indicated that the levels of arsenic were below EPA guidelines. Based on the Phase II ESA and HHRA, AECOM formulated a Soil Management Plan to protect the workers and manage the soils during the demolition and new construction.

Palm Tran Expansion Phase I and Phase II ESA. AECOM conducted a Phase I ESA on two combined parcels 2.7 acres in size and consisting of a building, parking area, and storage lot. The Phase I identified a former UST area and potential asbestos in the warehouse/office structures. AECOM completed a Phase II ESA in the vicinity of the former UST area. Soil borings were advanced, and 84 soil samples were screened for the presence of petroleum vapors.

Two temporary well points were advanced at representative locations at the former UST area to evaluate groundwater quality. AECOM recommended no further assessment with respect to the soil and groundwater quality.

Phase III Site Assessments

AECOM understands that the successful completion of assessment and remediation work can have significant positive implications for Pompano Beach communities. AECOM's Florida operations maintains a full staff of engineers, geologists, scientists, and remedial technicians – many with decades of direct experience in Phase I, Phase II, and Phase III environmental investigations and community redevelopment. A large part of our experience has been investigations and remediation, as well as operation and maintenance of remedial systems in densely populated urban areas from south Miami-Dade County to West Palm Beach.

AECOM conducts sediment assessments and remediation in accordance with the FDEP Sediment Quality Assessment Guidelines. Remediation of contaminated sediments typically associated with wetlands is conducted under an Environmental Resources Permit (ERP) in accordance with the SFWMD and USACE requirements. Remedial Action Plans (RAPs) are prepared and submitted to the appropriate regulatory agencies for approval. AECOM has local in-house personnel experienced in properly planning for and conducting sediment and wetland remediation, as well as preparing ERPs.

AECOM offers inspection services to monitor possible contaminated sites that include imminent threat sites. The inspections are conducted from the discovery of the threat or contamination through the selected corrective actions and cleanup. The inspections include site visits for site reconnaissance, field sampling, monitoring well installation, construction and installation of the remediation system, and operation and maintenance of the remediation system. During the inspections, observations are recorded for record keeping based on applicable standards and regulations. Adjustments are made to protect the public and the environment. Additional inspections are conducted based on the severity of the threat.

Sediment Core Sampling

AECOM's team of in-house registered Professional Engineers is prepared to design remediation systems to treat all levels of hazardous wastes and petroleum hydrocarbons for the City. Our approach to preparing a RAP begins with an evaluation to identify the most cost-efficient and technically sound treatment alternatives for remediation of contaminated media based on the results and findings reported in the site assessment report. The remedial alternatives evaluation takes place during the site assessment. The evaluation of numerous remedial alternatives is based on both cost-effectiveness and efficiency. RAPs are designed in accordance with applicable FAC guidelines. Templates of previous work allow AECOM to provide the City with proven designs while reducing costs. AECOM considers multiple phases and innovative technologies to reach desired cleanup goals and makes appropriate recommendations concerning the correct action to be pursued (e.g. contaminant mass removal at the source and natural attenuation along the fringes of the plume).

AECOM has conducted the following Phase III Site Assessments for the City:

- Vehicle fuel spill and source removal due to a leaking fuel tank from a truck parked along the east shoulder of the NW 24th Avenue, just north of Hammondville Road. Soil excavation, soil screening and sampling, backfill, and disposal activities were conducted and documented in a Source Removal Report.
- Soil assessment and source removal at an electrical transformer that was discharging oil for an unknown period of time. Soil sampling and screening, removal, backfill, and disposal activities were conducted and documented in a Source Removal Report.
- Emergency response activities involving a crane overturned during construction activities at the community park.

University Drive Vehicular Emergency Response Cleanup

Additional example projects are detailed below:

Contamination Assessment and Remedial Action Plan, Former Navy Dump Site, Fort Lauderdale-Hollywood International Airport, Fort Lauderdale, FL. AECOM conducted environmental assessment activities and a remedial action evaluation for the former Navy Dump site located in the northeast area of the Fort Lauderdale-Hollywood International Airport. The location of the former dumpsite is improved with airport-supporting facilities, north of the main airport runway, with a portion of the dumpsite airside. The primary contaminants of concerns at the former Navy Dump site included arsenic impacts to soils and groundwater.

AECOM completed assessment activities and developed a remedial action to mitigate the surficial soil impacts in the immediate area of the former dump site. An excavation plan was developed to remove arsenic-impacted soils that were at concentrations greater than commercial/industrial SCTLs. The remediation efforts were completed, and an Initial Source Removal Report was submitted to FDEP and subsequently approved following two quarters of groundwater monitoring.

In 2013, AECOM developed a Declaration for Restrictive Covenant (DoRC) for Broward County Aviation Department (BCAD) in order to place restrictions on the parcel of land known as the Former Navy Dump. Engineering and administrative controls were used to obtain a No Further Action status from the FDEP. The No Further Action with Conditions was subsequently approved by FDEP.

Memorandum of Agreement for Land Use Controls, Fort Lauderdale-Hollywood International Airport, Fort Lauderdale, FL. AECOM worked with BCAD and the FDEP in negotiating a Memorandum of Agreement (MOA) for Land Use Controls for contaminated sites related to the airport property.

The MOA intent is to restrict exposure to contamination by use of groundwater and surface water restrictions, soil restrictions, and land use restrictions set forth in the MOA. AECOM also negotiated higher GCTLs for the airport campus as part of the MOA. The FDEP approved the MOA, which is currently on file.

Since 2008, AECOM Technical Services, Inc. has provided environmental consulting for BCAD on a work authorization basis through the Broward County Qualified Vendor List for Environmental Consultant Services. Services provided to BCAD include, but are not limited to, Baseline Exit Closures, Phase II ESAs, Site Assessments, Remedial Action Plans, Remedial Actions, Compliance Inspections, Rapid Response, and Peer Reviews.

Roadway, Streetscape, or Parking Lot Projects

AECOM is prequalified by the FDOT in Minor, Major, and Controlled Access Highway Design. Minor Highway Design includes the design for rural resurfacing and pavement rehabilitation and minor widening. These projects include preparation of construction documents for minor drainage, utility relocation, traffic operations improvements, and miscellaneous design, as well as post-design services. Major highway design includes the design for urban highways with new curb and gutter and new or major reconstruction of rural projects to add two or more lanes. These projects include utility relocation plans, drainage design and permitting, maintenance of traffic plans (MOT), traffic engineering applications, and intersection reconstruction.

Roadway plans preparation typically includes plotting of survey data, establishing horizontal and vertical profile grades, analysis of independent geotechnical soil investigation, key map, drainage maps, plan-profile sheets, intersection details, typical section sheets that show the approved pavement design, summary of quantities sheets, summary of drainage structures, drainage structure detail sheets, lateral ditch/outfall sheets, stormwater treatment details, cross section sheets (including earthwork computations), MOT plans, and other detail sheets needed to convey the intent for the planned improvement.

Additional information used in development of the plans can consist of:

- Draft and Final Pavement Design Package
- Draft and Final Typical Section Design Package
- Record Decision Documentation Booklet

Plans and designs are prepared in accordance with the latest standards adopted by Broward County, AASHTO, and the FDOT, including FDOT Roadway Plans Preparation Manual, Pavement Type Selection Manual, Rigid and Flexible Pavement Design Manuals, the Drainage Manual, and the current Standard Road and Bridge Specifications. AECOM has extensive experience preparing pavement designs for resurfacing projects based upon an analysis of the existing pavement structure.

In addition, AECOM has conducted thousands of environmental soil, groundwater, and sediment assessments in Miami-Dade, Broward, and Palm Beach Counties. AECOM routinely conducts sampling in areas designated for roadway improvements, such as:

- Drainage/Stormwater Improvements
- Properties identified for acquisition
- City and State Right of Way (ROW)

The primary objective of this work is to assess whether construction or facility activities will be impacted by contamination or whether redesign can be performed to avoid the contamination. AECOM has conducted over 500 Phase II environmental assessments for FDOT alone.

AECOM has been responsible for the management, recovery, identification, handling, containerization, storage, and transport/disposal of regulated substances, and hazardous and non-hazardous materials and wastes, on many roadway/streetscape projects. Wastes can be encountered during acquisition and assessment activities, during construction, as a result of an emergency response (e.g., tanker spill), or when wastes are illegally disposed. AECOM coordinates the removal of such wastes quickly so that project schedules are not impacted.

Streetlight Installation in Contaminated Area

Gravity Sewer Main, Water Main/ Reuse, and Force Main projects

AECOM has provided planning, design construction phase, and environmental sampling services for numerous collection systems, countless lift stations, and hundreds of miles of wastewater force mains. Collection system projects have included gravity, low pressure, and vacuum sewers. We have extensive experience with evaluation of alternatives to convert areas currently served with septic tanks to central sewers.

Our expertise in gravity sewers includes rehabilitation as an answer to aging and deteriorated pipe sections. AECOM experts have assessed the conditions of hundreds of miles of sewer pipe and, where needed, produced designs for rehabilitation with approaches such as slip lining, pipe-bursting, and cured-in-place “lining.”

In addition to design services, AECOM has completed soil and groundwater assessments at numerous locations where new pipe installations and upgrades were completed. Services have included soil and groundwater sampling to determine if existing lines have created a conduit for contaminated groundwater and dewatering effluent treatment during installation. AECOM has also conducted oversight activities at locations with existing asbestos-containing transite pipe to make sure workers were not exposed during excavation, abatement, or pipe bursting activities.

Sewer Installation in Contaminated Area

Lift Station/Pump Station Rehabilitation Projects

Within Florida, AECOM has a broad base of pump station design experience. Most stations are designed for unattended service, with telemetry systems providing remote alarms in the event of equipment failure or other emergency situations. Typical services include geotechnical studies, hydraulic analyses, mechanical design, electrical and instrumentation design, specifications, architectural plans, cost estimates, construction services, start-up assistance, and operation and maintenance manuals and training.

Environmental assessments and public participation services are also provided for pump station designs. AECOM’s design capabilities for pump stations entail civil, electrical, mechanical, and structural engineering; instrumentation and controls; and architecture. Our designers have completed the design of hundreds of pump stations in Florida and across the nation, both large and small, including wastewater, potable water, and stormwater facilities.

AECOM has provided studies, design, construction, start-up, and operation of more than 300 new and existing pump stations, including working on Collier County’s Wastewater Basin Analyses Program for MPS 306. The Basin 306 Program includes upgrades of three master pump stations and 27 duplex pump stations.

Capacities of the pump stations have ranged from 0.1 mgd to 750 mgd. AECOM completed a 750-mgd Detroit wastewater pump station that won the American Consulting Engineers Council (ACEC) Engineering Excellence Honor Award.

AECOM’s procedures on pump station hydraulics and our in-house design experts are well-known throughout South Florida. Our staff gave a presentation on state-of-the-art pump station design at the Southwest Florida Water & Wastewater Exposition in Fort Myers. Our lift station projects have ranged from the smallest of residential stations to large master stations with capacities up to 50 mgd. The lift stations have used submersible pumps as well as the most complicated wet well/dry well configurations with extended motor/pump shafts. These facilities often employ various ancillary equipment such as variable speed drives, odor control, emergency power, and SCADA.

AECOM is often called upon to modify existing pump stations that have reached the end of their useful life. At these stations, capacities are increased, equipment is replaced, and instrumentation is improved. We also work with clients to address corrosion and other issues that affect pump station service life.

AECOM currently holds a Professional Services Agreement with the City of Hollywood, Florida, which has been in force since 2003. As part of the agreement, AECOM was assigned various task orders. A series of task orders related to a replacement program involved professional services for 18 City-owned lift stations.

Each lift station ranges from 125 gpm to 725 gpm. AECOM worked closely with City staff and their building department to site plan and professionally landscape the site. Most sites are within residential neighborhoods. As part of the lift station program, AECOM also designed water main, force main, and gravity sewer pipelines to tie from new lift stations to the existing underground infrastructure. AECOM's phased program approach has delivered each station within budget and schedule. AECOM is currently providing construction services for four of the 18 lift stations and final design for lift station A-5.

AECOM has completed the following projects for the City of Hollywood.

- **West Hollywood Pump and Storage Facility.** AECOM provided design, bidding, permitting, and construction management services for the $1 million West Hollywood Pumping and Storage Tank Facilities.
- **City Model Conversion.** Providing conversion of city-wide water transmission model from WaterCad to Infoworks.
- **Stormwater Pump Station #6.** AECOM provided design, permitting, bidding, construction, and start-up phase services for what was ultimately a facility housing two 3,750 gpm stainless steel submersible pumps. The building architecture was designed to match the established and historic neighborhood. The construction project was on time and within budget.
- **Lift Station Conversion and Upgrade Program.** Provided design, permitting, bidding, construction, and start-up phase services for the replacement of 11 lift stations ranging from 125 gpm to 725 gpm each.
- **Master Lift Station Conversion and Upgrade Program**. Prepared documents for the structural design rehabilitation of three master lift stations.
- **City-wide Water Main Repair Evaluation.** Prepared a city-wide water main distribution replacement plan for 220 miles of pipe. Replacement was prioritized in utility analysis zones by ranking of importance factors.
- **Johnson Street Water Main Repair.** Prepared contract documents for water main replacements including design, permitting, and construction services.
- **Water Use Permitting for Membrane Softening Plant Expansion.** Prepared the water use permit renewal request for information with the SFWMD permit for requested withdrawals from the Biscayne and Floridian aquifers.
- **Bond Report for Water Treatment Plant Improvements.** Developed a bond report describing the status of the municipal water treatment supply systems.
- **City of Hollywood WTP, Various Water Treatment Plant Improvements.** Provided for the facilities upgrade of a water treatment plant that included spiractor piping modifications, new 9,000-kVA emergency generator facilities, and gravity filter piping and valve replacement, building rehabilitation, and filter operations study. Also managed the structural rehabilitation of steel filters, sodium hypochlorite tank replacement, lime pumps and slakers replacement design report, HVAC upgrades, chlorine facility upgrades, elimination of plant discharges to the pond, spiractor cone repair investigation, and storage tank and repump facilities in the western part of the City. AECOM prepared studies, developed pre-design reports, prepared final design drawings and specifications, provided bidding services, coordinated permitting, and provided construction services and engineering certifications and commissioning services as required.

Parks and Recreational Facilities

AECOM has conducted multiple environmental assessments to identify the presence of potential contamination at State of Florida properties and facilities. These typically include state parks, correctional facilities, and other governmental facilities. Full site assessments have been performed to meet the requirements of Chapter 62-780, FAC (Contaminated Site Cleanup Criteria). However, should a site meet the requirements of an alternative State of Florida cleanup program, the applicable FAC will guide the completed assessment.

We have provided services under a similar Environmental Engineering Services Agreement for the City of Miami ranging from asbestos surveys at Fern Isle Park and Curtis Park in Miami, to annual sampling of the stormwater outfalls after major rain events in accordance with the City of Miami's NPDES permit, to Red Tide surface water sampling in Biscayne Bay. We are currently involved on several park projects that are in various stages of assessment/monitoring/cleanup, as well as our completed environmental work at Curtis Park, Douglas Park, Blanche Park, and Grapeland Park in Miami. AECOM was tasked by the City of Miami to provide services for implementation of a corrective action plan for engineering controls at Bayfront Park. This project is discussed in detail in Tab 4 References.

AECOM was also contracted by Cooper City to conduct a site assessment and prepare a Site Assessment Report (SAR) for the Bill Lips Sports Complex (Complex). Arsenic, exceeding the Chapter 62-777 FAC criteria, was identified in the soil and groundwater of the soccer fields.

Blanche Park Engineering Controls Installation (Artificial Turf and Rubber Mulch)

Blanche Park Engineering Controls Completed

AECOM prepared a Source Removal Plan and then performed the removal and disposal of contaminated soil at the Complex. A Soil Source Removal Report was subsequently prepared.

AECOM then prepared a Natural Attenuation Monitoring Plan (NAMP), which proposed groundwater monitoring for the site. Subsequent to completion of five quarters of NAM, AECOM submitted a No Further Action with Conditions (NFAC) to Broward County, which was approved. AECOM then prepared a Deed of Restrictive Covenant for the site, which was recorded by Broward County. The monitoring wells were then properly abandoned.

In addition, AECOM conducted surface and groundwater monitoring at the Park Ridge Golf Course in Lake Worth and Dyer Park in West Palm Beach for the Solid Waste Authority of Palm Beach County:

Bill Lips Sports Center Contaminated Soil Excavation

Bill Lips Sports Center Restoration

Park Ridge Golf Course, Surface and Groundwater Level Monitoring, Lake Worth, FL. In 2007, AECOM installed a network of miniTROLL® data loggers at the Park Ridge Golf Course, which were later changed to LevelTROLL® units. Currently, three LevelTROLL® units are located at Park Ridge Golf Course. In addition, AECOM assisted Locher Environmental and the Solid Waste Authority (SWA) with the installation of two pressure transducers for surface water monitoring. The groundwater and surface water monitoring activities are conducted in accordance with the Water Use Permit Monitoring Plan for the site.

During quarterly visits, recorded data are downloaded from the LevelTROLL® units. Maintenance is also conducted during the data download events as needed. During field events AECOM records time and depth to water in the well, downloads water level and atmospheric pressure data, and reprograms the LevelTROLL® units to collect data every two hours. Maintenance performed on a quarterly basis includes verifying proper operation, checking the available battery life, checking the available memory, and evaluating the general condition of the LevelTROLL® communication port and cable. Data collected by the pressure transducers are remotely downloaded using Loggernet software via internet access. The pressure transducers collect stage levels within the lake every minute and report the hourly average. During quarterly visits, staff gauged readings, which were recorded for comparison purposes.

The water level data are plotted graphically to illustrate the water level changes during the monitoring period. The surface water and groundwater data collected by the dataloggers is also compared to the manual data recorded in the field to determine whether the datalogger requires re-calibration.

AECOM prepares a quarterly status report detailing LevelTROLL® data logger activities (i.e. site visits, downloading and reprogramming activities, and maintenance). The report also includes the raw surface water and groundwater level data (separated for each month), a summary of the analyzed data, recommendations based on the data and datalogger performance, and a groundwater flow map.

Dyer Park and Site 7, Groundwater Level Monitoring and Data Evaluation – West Palm Beach, FL. In 2010, AECOM installed a network of AquaTROLL® dataloggers at the Dyer Park former landfill. In 2012, AECOM installed a network of Aqua TROLL® dataloggers on the west side of the current North County Resource Recovery facility (Site 7). Twelve AquaTROLL® units and one BaroTROLL® unit are located at the Dyer Park site. Five AquaTROLL® units and one BaroTROLL® unit are located at Site 7. During quarterly visits to each site, recorded data are downloaded from the AquaTROLL® units and the BaroTROLL® unit. Maintenance is also conducted during the data download events as needed. During field events AECOM records time and depth to water in the well, downloads water level and atmospheric pressure data, and reprograms the AquaTROLL® units to collect data ranging from 15-minute to two-hour intervals.

Maintenance performed on a quarterly basis includes verifying proper operation, checking the available battery life, checking the available memory, and evaluating the general condition of the AquaTROLL® unit's communication port and cable.

The data from each site are evaluated for localized groundwater elevation changes, indicative of dewatering activities in the vicinity of the closed landfills. Based on data interpretations, AECOM provides recommendations for further investigation of data anomalies and data validation as warranted.

The groundwater elevation data and conductivity data for each site are graphed alongside the rainfall data to evaluate the effects of seasonal rainfall events. The rainfall data for Dyer Park are obtained from the Solid Waste Authority (SWA) rain gauge located at Site 7. The rainfall data for Site 7 are obtained from the same rain gauge. Subsequent to two quarterly events, AECOM prepares a semi-annual status report detailing the AquaTROLL® data logger activities (i.e. site visits, downloading and reprogramming activities, and maintenance). Additionally, the status reports include the AquaTROLL® data graphed alongside the local rainfall, a summary of the analyzed data, and recommendations based on the data and AquaTROLL® data logger performance.

Former Cross State and Lantana Sanitary Landfills, Groundwater Level Monitoring and Data Evaluation – West Palm Beach and Lake Worth, FL. In 2004, AECOM installed a network of miniTROLL® data loggers at the former Lantana Sanitary Landfill (LSL) and Cross State Landfill (CSL). Six LevelTROLL® units and one BaroTROLL® unit are located at LSL. Four LevelTROLL® units and one BaroTROLL® unit are located at CSL. During quarterly visits to each site, recorded data are downloaded from the LevelTROLL® units and BaroTROLL® unit. Maintenance is also conducted during the data download events as needed.

During field events, AECOM records time and depth to water in the well, downloads water level and atmospheric pressure data, and reprograms the LevelTROLL® units to collect data every two hours. Maintenance performed on a quarterly basis includes verifying proper operation, checking available battery life, checking available memory, and evaluating the general condition of the LevelTROLL® communication port and cable.

The data from each site are evaluated for localized groundwater elevation changes, indicative of dewatering activities in the vicinity of the closed landfills. Based on data interpretations, AECOM provides recommendations for further investigation of data anomalies and data validation as warranted.

The groundwater elevation data for each site are graphed alongside the rainfall data to evaluate the effects of seasonal rainfall events. The rainfall data for the LSL are collected by an on-site rain gauge. The rainfall data for the CSL site are obtained from SFWMD's environmental database, which provides current daily meteorological data.

Subsequent to two quarterly events, AECOM prepares a semi-annual status report detailing LevelTROLL® data logger activities (i.e. site visits, downloading and reprogramming activities, and maintenance). Additionally, the status reports include the LevelTROLL® data graphed alongside the local rainfall, a summary of the analyzed data, and recommendations based on the data and LevelTROLL® data logger performance.

Seawall and Dock Construction and Repair

AECOM's coastal engineering services encompass a number of disciplines, with highly trained teams skilled in the fields of marine biology, aquatic and fisheries ecology, chemistry, toxicology, hydrology, archeology, geology, and hydrography, as well as civil, coastal, environmental, geotechnical, and structural engineering. We have conducted numerous coastal engineering projects involving a spectrum of planning, design, permitting, and construction management. AECOM has been involved in the coastal model updates for the NWFWMD in the Florida Panhandle counties and has completed storm surge modeling, field reconnaissance, overland wave modeling, and coastal flood mapping. We have also completed Storm Surge Advisory Update and Flood Risk Review Meetings with local counties/municipalities and FEMA, as well as developed Enhanced Coastal Risk MAP products to convey coastal flood hazard risks. We have also performed bank stabilization projects in Hillsborough, Manatee, Pinellas, and Levy Counties.

In addition, AECOM provided planning, design, permitting, construction document preparation, construction management, and construction administration services for the reconfiguration of existing Slip 3 at the Port of Palm Beach. The project consisted of the reconstruction of the Port of Palm Beach's Slip #3, including dredging, upland improvements, and a bulk sugar vessel loading system, with coordination of existing tenant operations and Florida Power & Light. At Port Miami, AECOM was contracted to replace the North Bulkhead Wall along the northern extension of Dodge Island to serve cruise operation berths.

An AECOM team was selected by the US Navy to design and build a reconstructed boat basin and upland support facilities, serving special operations forces small craft vessels at the Naval Air Station in Key West, Florida.

AECOM also provided professional engineering services (investigation, design, permitting, and coordination) for the US Coast Guard Station in Marathon, Florida to upgrade the waterfront facilities, which included a benthic survey, permitting, a concrete soldier pile and plank bulkhead, a concrete wharf, a boat ramp, and seawall/bulkhead repairs consisting of stacked bagged concrete and mass gravity concrete wall.

AECOM has conducted multiple asbestos containing material (ACM) abatements during renovations on overwater bridges, including ACM bearing pad removals, where the bridges join the seawalls. We have also provided consultation services to FDOT for sampling and disposal of bridge fender timber pilings contaminated with arsenical wood preservatives.

Tequesta Bridge ACM Abatement

Port of Palm Beach Seawall Installation

Storm Water/Drainage Improvements

The AECOM team has been involved in the various aspects of stormwater management planning and design, from project development studies to complex systems modeling, design and construction of extensive storm sewer systems, pump stations, stormwater treatment areas, and conveyance improvements for federal, state, and local governments, including roadways, airports, and site developments. We have prepared numerous project development studies for documented flooded areas and identified potential alternative solutions. We have developed designs for culvert upgrades, storm sewer system improvements, and channel improvements.

AECOM is experienced in the design and permitting of both online and offline stormwater pond systems on a local and regional scale. These include multi-use stormwater flood control, stormwater treatment, and wetland treatment/mitigation ponds with sizes ranging from 1 to over 60 acres. AECOM has also worked on numerous “innovative” stormwater treatment facility designs and Low Impact Development or “Green Infrastructure” projects that utilize off-line treatment systems, biological treatment, chemical treatment, rain gardens, and stormwater reuse. We have also assisted various cities and counties in the analysis, design, and permitting of baffle boxes, trash collectors at inlets, and sediment control devices.

AECOM has always used advanced technologies to identify and implement innovative, progressive solutions to drainage problems. We keep abreast of water-related rules and regulations at the local, regional, and federal levels. Stormwater is one of the major priorities for communities in Florida, and AECOM can provide expertise in the following areas:

- Preparation of Stormwater Master Plans
- Stormwater and watershed modeling
- Design of stormwater management and treatment structures, pumps, and piping systems
- Design of stormwater collection systems and engineering analyses of drainage basins
- Preparation of permit applications and reports, and agency coordination
- Rate studies to develop impact and user fees
- Surface and groundwater level monitoring, sampling, and analysis
- Stormwater utility consulting
- Municipal NPDES permit compliance and annual reporting

Recent Florida Stormwater Experience includes:

- Martin County Mapp Road
- City of Miami Beach Climate Resiliency and Flood Mitigation Program
- City of Miramar, Historic Miramar Infrastructure Improvements – Phase I, II, and III
- City of Naples, Stormwater Master Plan Update
- South Indian River Water Control District, General Engineering Services
- South Florida Water Management District – GES
- Southwest Florida Water Management District – GES
- Florida Fish and Wildlife Conservation Commission – GES and environmental restoration

In addition to design services, AECOM has performed soil and groundwater assessments at multiple stormwater drainage areas to assess impacts to proposed drainage ponds. If soil contamination is identified in areas of proposed stormwater or drainage improvements, AECOM will work quickly to identify alternatives to disposal. We have successfully worked with local authorities in Broward County, Miami-Dade County, and the FDEP to successfully reuse contaminated soil on projects in order to reduce or eliminate disposal costs. For example, AECOM gained approval to reuse arsenic-contaminated soil along the I-75 corridor in Broward and Miami-Dade Counties. Soil containing contaminants above residential SCTLs, but below commercial/industrial SCTLs, that was not suitable for fill beneath the roadway was tested for leachability. The soil did not present a leaching concern and, with approval from Miami-Dade County DERM, was relocated and used as fill material within a newly constructed pond to raise the bottom elevation.

I-75 Storm Water Pond Soil Reuse

If groundwater contamination is identified within areas proposed for stormwater or drainage improvements, AECOM has performed dewatering services to facilitate subsurface construction. In addition to traditional groundwater remediation techniques, AECOM and its subcontractors have installed pumps, dewatering points, and horizontal wells to facilitate construction in the dry, while also treating contaminated effluent before its eventual outfall. We have also overseen the excavation of pond floors to facilitate installation of PVC liners, which prevent contaminants in stormwater from entering the subsurface and create a hydraulic barrier between the pond to prevent the migration of contaminant plumes.

SR 80 Storm Water Pond Engineering Control (Liner) Installation

Consultation / Inspection Services for Emergency Water/ Wastewater/ Stormwater Repairs

AECOM's Water Group comprises engineers who have designed water and wastewater systems for many local government agencies in South Florida, including the City of Hollywood, Town of Davie, Cooper City, and the Miami-Dade Water and Sewer Authority, to name a few. We are capable of providing emergency services for water, wastewater, or storm water repair. For example, AECOM provided emergency remediation consultation services to FDOT District 4 when a roadway contractor ruptured a 42-inch pressurized sewage pipe on January 4, 2019, which then spilled untreated sewage into the canal system from NW 15 Street to the Intracoastal Waterway in the City of Pompano Beach. AECOM has also provided Construction Engineering Inspection (CEI) services to administer construction contracts and provide inspection services for numerous Florida projects. AECOM can provide complete CEI services to support projects. We can task-organize experienced road, highway, or utility system field inspectors; project administrators; and Senior Project Engineers to administer or oversee the City's construction projects.

Our CEI personnel will adhere to the regulations and proceed as expected by the City's personnel. Our primary function will be to monitor progress of the contractor's work to confirm compliance with the construction contract documents and applicable permits and regulations. We will monitor the contractor's construction progress schedule, perform on-site testing, and maintain adequate records for DBE participation, Davis-Bacon Act reporting, monthly invoice verification, and final project closeout.

AECOM can readily provide construction services to the City, with one of the largest groups of Certified Construction Managers in the industry. AECOM excels at managing the entire construction process, from pre-design through occupancy. We work to streamline the construction process, controlling costs, schedule, and scope of work without compromising quality.

In Florida, AECOM has provided services during construction for many local projects. These services range from office-based activities, including shop drawing reviews and design clarifications to full-scale construction contract administration/management with on-site resident project representative services. As an example, under our contract with Collier County, we have performed CEI services for Bay Villas, Bay Colony Shores, Barron Collier, and the US 41 (Venice Bypass). AECOM provided full CEI services on this contract, including contract administration, field inspection and testing, utility coordination, environmental compliance, and public information.

Canal and Lake Dredging

AECOM understands the desire to restore ecological habitats through restoration to enhance recreational and economical value. AECOM's primary objective is to develop a remediation plan that can be implemented cost-effectively to restore these environments. To accomplish this, we will develop strategies to provide the City with restoration design plans that can be successfully implemented at the lowest cost with the least risk to the City and stakeholders.

Our team has extensive experience working on contaminated sediment projects in tidally influenced estuarine environments with a complex mixture of organic and inorganic contaminants (e.g., polynuclear aromatic hydrocarbons [PAHs], poly-chlorinated biphenyls [PCBs], dioxin, and metals), and understands the importance of these restoration efforts. AECOM's Dredging Team, comprising engineers, geologists, scientists, planners, and construction specialists, will investigate, evaluate, and develop the most practical and cost-effective risk-based remedial strategy to complete the work with consideration for safety, overall project performance (including risk reduction and permanence), minimized cost, constructability, and regulatory acceptability and compliance.

For instance, management of potential constituent release is imperative for compliance with Florida's Surface Water Quality Standards. Our strategy includes a multidisciplinary science/engineering evaluation of a wide variety of sediment remedial technologies designed to eliminate human and ecological exposure pathways. Further, our strategy recognizes the critical importance of engaging stakeholders through effective use of public meetings and other tools. Lastly, our project team recognizes the critical need for sustainable watershed-wide sediment management solutions. A successful design must adopt and implement practices and policies that are sustainable in the long run, provide for a productive and healthy ecosystem in the long term, and enhance societal benefits for the surrounding community.

AECOM provided Design-Build services for the City of Miami Wagner Creek/Seybold Canal contaminated sediment removal project (as a subcontractor to Sevenson Environmental Services [SES]). The sediments in Wagner Creek contained elevated levels of dioxins. Dredging was needed to remove the contaminated sediments and restore this aquatic habitat and manatee refuge area. Refer to Tab 4 References for a detailed discussion of this award-winning project.

Another example of AECOM's cutting-edge technology is our work in removal of harmful algae blooms (HABs) from Florida's lakes and canals. Nutrient pollution and HABs cost the nation an estimated $1 billion each year due to their impacts on tourism, health, commerce, and ecosystems.

In September 2017, AECOM initiated conversations with SWFWMD to identify a municipal government entity in need of support and assistance in mitigating algae blooms that are present in lakes throughout the SWFWMD. The City of Lakeland subsequently indicated an interest and a willingness to participate in a pilot demonstration project by AECOM. AECOM's harvesting technology removes both algae and nutrients (e.g. nitrogen and phosphorus), returns clean clarified water back to the environment, and provides a consolidated algae biomass product that can be transformed into algae biofuel and feedstock for commercial use.

AECOM Algae Harvester


Lee County Algal Blooms Post Harvesting


Lee County Harmful Algal Blooms

The US Army Corps of Engineers was authorized in 2018 by the 115th Congress under Section 139 of the Water Resources Development Act (WRDA) to implement a 5-year HAB technology development demonstration program. AECOM's innovative Algae Harvesting Program was selected for this important research to demonstrate a viable and scalable "No Harm Solution" that can physically remove intact algae cells and the nutrients that fuel algae growth from the water column. In addition, on July 9, 2018, Florida Governor Rick Scott issued Executive Order 18-191, declaring a state of emergency due to the significant areas of HABs in multiple South Florida counties. AECOM provided HAB recovery efforts for multiple communities in Lee and Martin Counties. AECOM's HAB work has provided much needed relief to these communities, improving air quality, reducing effects to sea life, and improving quality of life for residents and tourists.

The Water Resources Development Act of 2018 authorized the Engineer Research and Development Center (ERDC) of USACE to perform research to develop scalable solutions for monitoring, preventing, and managing large harmful algal blooms. In 2019, AECOM began supporting ERDC in the first year of the three-year HABITATS research, which is being conducted at Lake Okeechobee as part of the USACE's Aquatic Nuisance Species Research Program (ANSRP). The objective of the HABITATS research project is to develop and demonstrate the scalable capability of algae and nutrient removal from large water bodies, while recovering the resulting biomass for potential beneficial .

Grant Reimbursement, FAA, and FDOT Support Compliance

AECOM will provide advisory consultation, as requested by the City, related to federal, state, and local grant/loan program funding streams and alternative project formulations that the City could pursue to address community development, hazard mitigation, resilience needs, etc.

AECOM's Grant Writing and Funding Assistance Team is headed up by Jae Park, PhD and Amy Baker. Jae and Amy have many years of experience preparing grant and loan applications for a variety of programs. Please refer to ***Tab 8, Resumes***, for details of Jae's and Amy's experience in securing funding sources for our clients. Jae and Amy will be assisted by Anthony Sullivan, of Sullivan Regulatory Consultants (SRC). Anthony is located in Tallahassee, Florida and has many years of funding assistance experience. Refer to ***Tab 6, Organizational Chart*** for details of Anthony's experience.

The AECOM team is familiar with grant reimbursement and loan support for securing funds from a variety of programs and sources, including State Trust Funds; State Revolving Fund (SRF) Loan Programs; Brownfields Cleanup and Redevelopment; CWA; CERCLA; SARA; RCRA; USDA Rural Development; EPA Various Programs; and other Federal, State and local earmarked appropriations, among others.

One of the newest federal grant funding vehicles is the FEMA Building Resilient Infrastructure and Communities (BRIC) Program. The Notice of Funding Opportunity (NOFO) for BRIC was just published on August 3, 2020. The BRIC program makes federal funds available to states, US territories, Indian tribal governments, and local communities for pre-disaster mitigation activities to reduce the risks they face from disasters and natural hazards. AECOM assisted FEMA with the development of the BRIC program, and we will be able to assist the City in completing the associated grant application documents, Benefit Cost Analysis (BCA), disclosures, etc., for this and many other state and federal loan/grant programs.

AECOM has also assisted numerous private clients, municipalities, and state agencies with Brownfields projects (i.e., projects conducted under EPA or state agency Brownfields programs). Our experience includes developing Geographic Information System (GIS) databases of Brownfields sites; ASTM Phase I ESAs; ASTM Phase II ESAs; complete site investigations, risk assessments, remediation, grant applications, redevelopment; and other activities (e.g., wetlands delineation and emergency response activities).

State Revolving Funds Support and Davis-Bacon Wage Reporting Requirements

As noted above, AECOM's Grant Writing and Funding Assistance Team is well versed and experienced in assisting our clients with technical support to prepare applicable documents associated with State Revolving Fund (SRF) projects. These include projects that are eligible for the Clean Water SRF and the Drinking Water SRF. The Clean Water State Revolving Fund (CWSRF) Program funds infrastructure that protects public health, improves water quality, or promotes alternative water supply projects. The Drinking Water State Revolving Fund (DWSRF) Program funds infrastructure projects that are intended to facilitate compliance with the requirements in the Safe Drinking Water Act. Our team has assisted clients with obtaining SRF loans from EPA programs such as the Water Infrastructure Finance and Innovation Act (WIFIA) program, as well as the State Infrastructure Financing Authority program (SWIFIA). We have also provided services to help obtain HUD Community Development Block Grant (CDBG) grants for property acquisition, rehabilitation, construction, and resiliency.

The Davis-Bacon Act requires that each contract over $2,000 to which the United States or the District of Columbia is a party for the construction, alteration, or repair of public buildings or public works contain a clause setting forth the minimum wages to be paid to various classes of laborers and mechanics employed under the contract. On AECOM Davis-Bacon federal projects, AECOM and our subcontractors are required to pay these employees no less than the local prevailing wage rates (including fringe benefits), as determined by the Department of Labor, according to their type of work being performed on-site. Subcontractors submit their weekly Certified Payroll for their employees working on the project as part of their recordkeeping. Supporting documentation is submitted as part of the monthly invoice to the client. AECOM abides by the Davis-Bacon wage reporting requirements and makes sure that wage determinations are in accordance with the provisions set forth in 29 CFR Part 1, Part 3, and Part 5. AECOM has also contracted with municipalities to review bid documents and required forms to confirm that contractors are in compliance.

Support Services for Remediation

AECOM provides our clients with comprehensive remediation services. This has included providing both in-situ and ex-situ remedial support services for soil and groundwater projects. Our remedial efforts consistently meet the established schedule requirements so that projects are not delayed. Our treatment technologies include air sparging (AS), soil vapor extraction (SVE), solidification/stabilization, chemical oxidation, ion exchange, recirculating well technology, carbon treatment, bioremediation/bioaugmentation, bioventing, thermal treatment, and others.

Installation of liner and clean fill over contaminated soil and buried solid waste at Northwood Rail Connector

In the case of contaminated soil and/or groundwater, soil reuse, as well as engineering and institutional controls, are used wherever possible. These methods have enabled us to more rapidly achieve conditional site closures.

AECOM is fully capable of rapidly deploying the equipment needed to gain plume control and immediately initiate remediation, reducing the impacts of contamination to City schedules. We have previously utilized portable treatment systems on several projects for the Florida Department of Transportation.

AECOM will also use team member, EESI, who has deployed portable remedial systems and heavy equipment on a fast track basis. Clean Harbors and SWS/US Ecology will provide personnel, response vehicles, vacuum trucks, heavy equipment, sorbents, and disposal services to assist discharges associated with emergency response cleanup activities.

AECOM, in partnership with the Air Force Civil Engineer Center (AFCEC), developed the SRT (Sustainable Remediation Tool). SRT provides a systematic iterative approach to evaluate the efficiency of remedial programs, including sustainability metrics in cases of unavoidable contamination. The SRT can be used to determine how best to meet City time constraints.

We have used enhanced reductive dechlorination processes, as well as biostimulation and bioaugmentation processes, bioremediation, chemical oxidation, recirculating well technology, and many other innovative technologies to complete site remediation. We often use a combination of technologies at sites to expedite cleanup and reduce costs.

Due to the widespread use of arsenical compounds, projects can often be faced with arsenic contamination issues. Contaminated soils are typically excavated and properly disposed of; however, remediation of arsenic in groundwater is less common. AECOM implemented an innovative remediation system to treat arsenic-contaminated groundwater at a proposed storm water pond site on SR 7 in Hollywood, Florida. The use of polymers is the traditional arsenic treatment method. The polymers flocculate out all forms of arsenic into particles that then settle out in an equalization tank or can be captured in large


SR 7 Arsenic Remediation and Post Remediation Monitoring

sand filters. This method is quite costly and requires a large operational footprint. Instead, groundwater at the SR 7 project was extracted from the existing open pond excavation and pumped to an 18,000-gallon open-top weir tank. The water was subsequently pumped through four bag filters and two 5,000-pound activated alumina (Al_2O_3) media filters. The treated water was then discharged to a floating screen within the excavation. This method proved to be less costly and easier to implement, given the lack of available space on the parcel.

Remediation must prevent the exacerbation of contamination and the exposure of construction workers to contamination. Emphasis is placed on the use of portable remediation systems (e.g., air sparge/VES trailers, portable strippers/carbon units) that can be put into place quickly, have minimal effect on the local community, and not jeopardize the project schedule. Where drainage features are to be constructed in contaminated areas or dewatering is to be performed, sheet piling or counter-pumping may also be utilized to prevent migration of contaminated groundwater. If needed, AECOM provides a dewatering effluent treatment system to remediate the groundwater before its eventual outfall.

SR 80 Dewatering Contaminated Effluent Treatment System

AECOM currently provides remediation services to the State of Florida under the following programs:

- FDEP Petroleum Restoration Program
- FDEP HazWaste Program
- FDEP State-Owned Lands Program
- FDEP Site Investigation Section Program

In addition, AECOM has provided environmental remediation services for numerous cities in South Florida, including the City of Pompano Beach, City of Miami, City of Miami Beach, City of Coral Gables, City of Hialeah, City of Hollywood, and Cooper City, among others.

Below are two examples where AECOM employed innovative technology to assist with the assessment and remediation of two dry cleaner facilities.

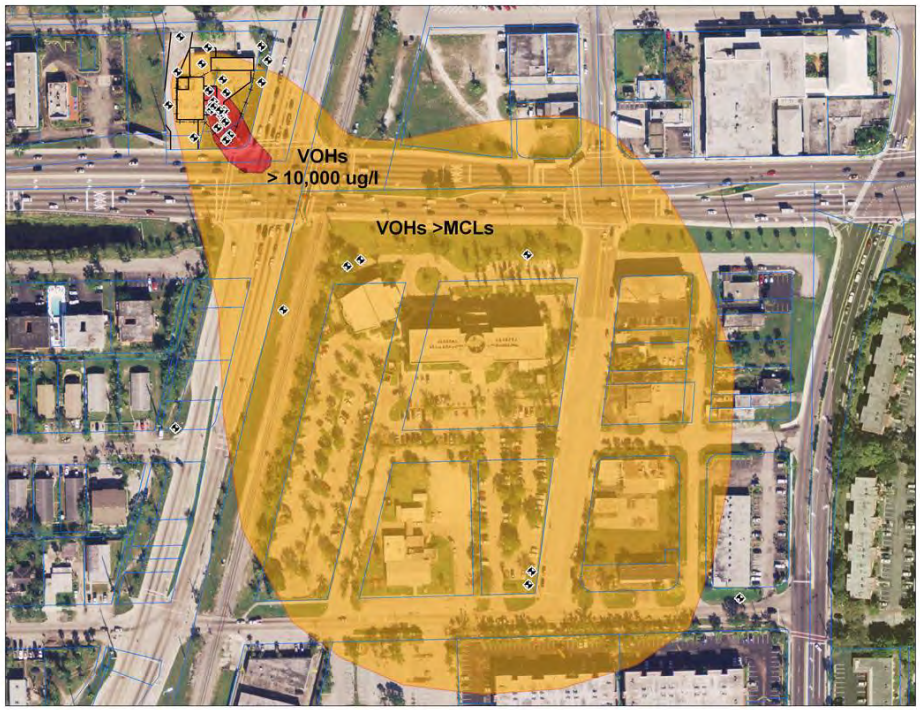
Dry Cleaning Depot Facilities, Pompano Beach and Fort Lauderdale, Broward County, FL: Traditional assessment data (monitoring well and direct push groundwater sampling) at two Dry Cleaning Depot facilities (Pompano Beach and Fort Lauderdale) documented the presence of drainable dense non-aqueous phase liquid (DNAPL). To accurately and efficiently define the extent of DNAPL (drainable and sorbed), a membrane interface probe (MIP) survey was conducted at both of the sites and included borings within each of the buildings. The MIP, a screening tool with semi-quantitative capabilities, is used to identify the presence and distribution of DNAPL and high concentrations of dissolved-phase contaminants. The probe is equipped with a photo-ionization detector (PID) to detect aromatic hydrocarbons, a flame ionization detector (FID) to detect straight chained hydrocarbons, and an electron capture detector (ECD) to detect chlorinated solvents. Results of the surveys were used to accurately depict the distribution of DNAPL at the sites and were used for focused source removal excavation at the Fort Lauderdale site and redesign of the groundwater bio-remediation system at the Pompano Beach site. In both cases, the utilization of MIP technology resulted in the savings of hundreds of thousands of dollars in comprehensive remediation costs.

Hanners Cleaners, Pompano Beach, Broward County, FL. AECOM conducted site assessment and remediation at Hanners Cleaners. The former Hanners Cleaners is an abandoned dry cleaner facility located on the northwest corner of the intersection of Atlantic Boulevard and Dixie Highway in Pompano Beach. Hanners operated from the early 1960s to 1989. As a former Superfund site, Hanners entered the Florida Department of Environmental Protection's Dry Cleaning Solvent Remediation Program in 1996 and was given high priority due to its location within a wellfield protection area.

AECOM conducted a site assessment and delineated the extent of chlorinated solvent impacts to on-site soils and to on-site and off-site groundwater. The soil plume measured approximately 0.2 acres and provided a continuous source of contamination to the groundwater. The groundwater plume measured approximately 32 acres and extended off-site to the southeast, impacting public ROW, public facilities, and private residences. The maximum detected tetrachloroethene (PCE) concentration in groundwater was 42,000 µg/l while the maximum detected concentration of total volatile organic halocarbons (VOHs) in groundwater was 225,589 µg/l. A risk based corrective action (RBCA) evaluation indicated the presence of completed exposure pathways for direct exposure of contamination from soil, leaching of contamination from soil to groundwater, groundwater transport of contamination to sensitive receptors, and volatilization of contamination from groundwater and soil to the atmosphere or indoor air.

Former Hanner's Cleaners Chemical Oxidation Injections Dynamic remedial design (preliminary, intermediate, and final) plans, based on cost and remedial efficiency, were employed to guide the sequential implementation of remedial efforts. The first steps included implementation of soil excavation and contaminant vapor extraction to remediate soils located above the water table (vadose zone). Vadose zone remediation was deemed complete following approximately one year of operation of the vapor extraction system and confirmation by soil sample analyses. Then source area groundwater remediation using chemical oxidation was implemented. Custom-designed (by AECOM) segmented injection wells and a custom- designed injection system were installed to address the critical mass of contaminants within the source area. Three full-scale injection events were performed over a period of approximately two years. Chemical oxidation was able to reduce total VOH concentrations by 98 percent and shrink the plume size from 32 acres down to less than ½ acre. An evaluation was performed after each injection event to determine its remedial and cost effectiveness. It was determined that additional chemical oxidation treatments would not be economically feasible.

Subsequent cost evaluations of remedial technologies indicated that excavation of residual contamination would significantly reduce the saturated source area, resulting in the greatest mass removal per unit cost. In addition, results of microbiological analyses indicated the resurgence of a viable population of de-halo respiring bacteria. Evaluation of bacteria population density and distribution indicated that enhanced bioremediation as a follow-up to saturated zone excavation would provide the most cost-effective alternative for remaining active groundwater remediation.



Former Hanner's Cleaners Solvent Groundwater Plume

Former Hanner's Cleaners Chemical Oxidation Injections

Sheet piling was used to reduce the volume of excavated soils and protect the existing network of monitoring wells and aboveground structures. Prior to initiation of activities, monitoring wells located within the sheet pile area were properly abandoned in accordance with state standards. Excavated soils were contained within dewatering boxes prior to transportation and off-site disposal. While the excavation was open, it was sparged for 48 hours to remove dissolved VOHs from the exposed groundwater. Subsequent to sparging, AECOM added potassium thiosulfate to quickly reduce the dissolved oxygen concentrations to levels that are supportive of reductive dechlorination. Ethyl-lactate (bioremediation enhancement) was then added to the exposed water table, and the excavation was backfilled. Concurrently, ethyl-lactate was injected into selected downgradient injection wells. The first round of post excavation/enhanced bioremediation sampling indicated the combined effects of remedial efforts were effective in reducing dissolved VOH concentrations, such that those analyses indicated attainment of state active remediation standards. Currently, PCE is no longer detected on-site, the plume of contamination is confined to the parcels located on the northwest corner of the intersection of Atlantic Boulevard and Dixie Highway, and the maximum concentration of total VOHs is 24.6 ug/l, which represents a greater than 99.999% reduction in contaminant concentrations.

Demolition Services

AECOM has almost 60 years of proven experience in providing environmental and demolition services for construction projects in Florida. We have successfully completed thousands of these projects, including more than 250 demolition projects for FDOT District 4 in southeast Florida.

Our Florida construction services group consists of individuals with significant experience as construction managers, supervisors, equipment operators, and skilled technicians. Several group members hold licenses and certifications, such as: general contractor, building contractor, mechanical contractor, and pollutant storage system specialty contractor.

As part of our demolition services, AECOM routinely conducts asbestos, metal-based paint (MBP), and mold surveys/abatement within buildings and on bridges, as well as surveys of building materials and contents to identify potential demolition waste disposal problems, such as transformers, light ballasts, and drummed waste. We have performed demolition/abatement services for clients such as the City of Pompano Beach, City of Miami, City of Orlando, and FDOT.

Our abatement services have included total building encapsulation and abatement, as well as wet demolitions. Our abatement services are provided in accordance with the asbestos survey, management respiratory protection plan, and the asbestos standard operating procedures. Our asbestos projects are supervised by certified asbestos inspectors and managers.

Las Olas Bridge Renovation ACM Abatement

SR 7 Building Shop Demolition

In addition to the above services, AECOM and its team members have experience in site preparation; roadway planning; construction progress reviews; clearing and grubbing; storage tank installation and removal; pressure testing of storage tanks; removal of hydraulic lifts; septic tank removals; replacement and installation of asphalt or concrete pavement; removal and relocation of underground utilities (storm drainage systems, water mains, sewer mains, etc.); construction dewatering; and sheet piling. These services have been provided at contaminated or potentially contaminated sites.

AECOM has removed hundreds of aboveground and underground storage tanks (ASTs and USTs) over many years in South Florida, including tank removals at known UST sites, as well as unforeseen removals of tanks that were identified and immediately removed during construction/demolition activities.

We have assisted with services that involved construction activities within areas of known contamination, including review of suitable materials for use in contaminated media, consultation on asbestos piping issues, constructability reviews for sites impacted by Superfund Consent Decrees, building cut and reface projects, sign footer removals, and excavation of contaminated soil and dewatering to facilitate construction and utility installations.

Removal of UST from Former Transmission Shop

AECOM has also responded to numerous emergency response situations relating to the discovery of USTs, buried drums, spills, as well as contaminated soil and groundwater identified during the construction/demolition phase of projects. AECOM's experience with numerous major oil and municipal clients has provided us the ability to work quickly and effectively to address emergency situations.

AECOM also prepares demolition bid documents and provides oversight of demolition activities. Our services include inspection of above ground structures, equipment, and debris to document and provide detail for appropriate disposition of waste materials following demolition.

Field Sampling Statement

AECOM has adopted the State of Florida Department of Environmental Protection (FDEP) Standard Operating Procedures for Field Activities (DEP-SOP-001/01) for field sampling. The official Florida SOPs became effective December 3, 2008, and are cited in the FDEP Quality Assurance Rule, 62-160 FAC. They contain appropriate guidance for the equipment, procedures, documentation, and quality control of environmental assessment work as needed for services we propose to provide to the City of Pompano Beach. AECOM staff is trained to conduct field work in accordance with the FDEP SOPs and copies are routinely carried to the field for reference. If needed, AECOM has the experience to provide the City with site-specific field sampling plans should it be determined and agreed that the FDEP SOPs do not adequately address a given task.

Field and Laboratory Data Validation

Data validation provides procedures, methods, and activities to determine whether data are of the right type, quality, and quantity to support environmental decision-making for the project. AECOM's data validation is conducted to determine how well the data collected on a given project supports the project objectives and decisions to be made. First, during the field effort, an AECOM project manager will verify that proper procedures (as outlined in the proposal and FDEP SOPs) are followed, and soil, groundwater, sediment, and/or surface water data are being generated on an acceptable level. The analytical data will be sent to AECOM for data verification and validation. AECOM will determine the usability of the analytical data and will identify limitations on the use of the data. The usability of data collected during a project will be assessed and any deviations from proposed field activities and sampling and handling procedures will be reviewed, and their effect on

data usability evaluated. Second, the analytical results of the sampling will be compared to laboratory method detection limits (MDLs) and applicable regulatory cleanup levels, and based on the results of this examination, conclusions regarding the validity and usability of data for each analytical group will be drawn.

Preliminary Reports / Alternative Recommendations (Research, Modeling, Testing and Data Analysis

AECOM has extensive experience preparing preliminary reports and offering alternative recommendations. Preliminary reports with alternative recommendations are usually prepared after performing specialized-type assessment activities at a site, such as risk assessments, feasibility studies, and others.

Risk Assessment

AECOM has performed numerous risk assessments either as stand-alone investigations or as part of a variety of different environmental investigations. Risk assessments are generally offered in two service areas: human health evaluations and environmental evaluations. We evaluate the possible risks presented at a site and design and implement the most feasible approach to risk assessment. This work includes the performance of a baseline risk assessment, refinement of the preliminary remediation goals, a detailed risk evaluation of the remedial alternatives, and an evaluation of relevant laws, regulations, and guidance documents.

AECOM has the capability and the flexibility to adapt our risk assessment approaches to meet client-specific needs and evolving federal and state regulatory requirements. The general objective of a risk assessment is to determine the probability, magnitude, and significance of risks that may be posed to human health and ecological components by environmental contamination. The results may be used to develop acceptable contaminant levels and remediation goals for the source medium. Therefore, the risk assessment is an integral part of the overall site investigation and remedial design process as it is essential in evaluating the need for remediation and in selecting the most appropriate remedial action(s).

Evaluation of these factors requires a multi-disciplinary analysis of physicochemical, toxicological, geological, topographical, demographic, ecological, and other characteristics of a site. Accordingly, technical personnel performing risk assessments must use a diversity of scientific knowledge. AECOM staff have more than 20 years of experience preparing human health and environmental risk assessments for our clients using the latest risk assessment guidance and evaluation methods. Our staff is skilled at applying risk-based and conditional closure (i.e. No Further Action with Conditions) techniques provided in Chapters 62-780.650 and 62-780.680, FAC. Most importantly, we have developed the expertise needed to obtain regulatory approval of our risk assessments and conditional closures without protracted negotiation. We have a solid record of negotiating less stringent cleanup standards, based on the level of our risk assessment documentation, while not compromising human or environmental receptors. An example project is provided below.

Gove Elementary Modernization – Human Health Risk Assessment, Belle Glade, Palm Beach County, FL. AECOM completed a Human Health Risk Assessment (HHRA) for the Gove Elementary School Modernization Project. Initially, AECOM collected soil and groundwater samples from the existing Gove Elementary School and the adjacent farmland and analyzed the soil samples for arsenic and the organochlorine pesticide dieldrin. Using the soil and groundwater data, AECOM formulated a site-specific HHRA for the children, teachers, maintenance workers, and visitors to the school. AECOM recommended relocating soils to adjacent farms, which was negotiated with FDEP.

Feasibility Studies

AECOM has nationwide experience conducting feasibility studies in coordination with our remedial investigations. Feasibility studies have included evaluation of potential remedies and the selection of site cleanup alternatives. Close communication with the client and regulatory agencies during evaluation of remedial strategies has led to timely and efficient completion of tasks with the goal of advancing the project forward towards site cleanup.

Remedial Alternatives Evaluation

The results of the site assessment are used to select and evaluate remedial alternatives for site rehabilitation that are consistent with the proposed redevelopment plans. AECOM is fully capable of conducting the research, modeling, or testing needed to properly evaluate field data and provide alternative recommendations. As noted above in our *Support Services for Remediation* discussion, AECOM's Sustainable Remediation Tool can also assist in evaluating various remedial alternatives.

AECOM's experience with brownfields redevelopment, risk assessments, and risk-based corrective action (RBCA), results in proposed remedial alternatives tailored to address site-specific risks while minimizing re-development costs. This can be achieved through the following approaches:

- Defining alternative cleanup levels based on a site-specific risk assessment, while considering the proposed future use.
- Incorporating engineering controls and/or institutional controls in remedial alternatives to reduce exposure while reducing cleanup costs.
- Evaluating the viability of monitored natural attenuation through data analysis, risk assessment, and modeling.
- Utilizing focused remedial alternatives, such as targeted source removal combined with natural attenuation.

Remedial Design

Effective engineering is an essential element in designing the most cost-effective and efficient solutions to site contamination problems. This service can be integrated into our full-service turnkey capabilities or be performed as an individual task. AECOM streamlines the remedial design phase by using standard designs. Items that can be standardized include recovery/injection well, soil vapor extraction systems (SVES), skid-mounted and trailer-mounted portable remediation equipment, and control instrumentation. In cases of extensive or mixed contaminant plumes, it may be necessary to conduct feasibility tests or models to predict remedial effectiveness. Historic chlorinated solvent studies have included bench scale analyses/comparison of innovative bioremediation technologies to cost effectively justify appropriate amendments or augmentations, while site-specific pilot tests have been used to design innovative chemical oxidation strategies. Based upon the successful implementation of these technologies in Pompano Beach and Broward County, AECOM has a sufficient set of data to design and implement these and other innovative technologies in a cost-effective manner. AECOM's final design packages include, but are not limited to, cost estimates, schedules, O&M manuals, HASPs, QA/QC requirements, and construction plans and drawings. To provide accuracy and complete client satisfaction, AECOM employs professional engineers, including civil, electrical, mechanical, and structural, to certify the required drawings and documents.

AECOM designs, fabricates, and operates a variety of mobile soil and groundwater treatment systems

Permitting (federal, state, county, and city)

Environmental permitting and compliance are integral parts of AECOM's consulting practice. Successful project permitting and compliance requires an understanding of the intricacies of environmental regulations, the complexities of the resources affected by development, and solid working relationships with regulators. Drawing on our full range of technical specialists, resource scientists, environmental engineers, planners, and regulatory specialists, AECOM's environmental practice helps clients streamline the approval process and comply with environmental laws. AECOM's professional staff is noted for its permitting and compliance expertise and will negotiate with regulatory agencies to resolve environmental issues, develop favorable permit conditions, and complete the permitting process in a timely manner. Our staff has extensive experience in permitting projects specifically in Florida and specializes in preparing federal and state permits that comply with the requirements of the Clean Water Act, Endangered Species Act, Clean Air Act, Coastal Zone Management Act, National Environmental Policy Act (NEPA), National Historic Preservation Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, and numerous other federal, state, and local regulations.

AECOM routinely prepares stormwater, wastewater, dewatering, coastal, wetlands, water body, and environmental resource permit applications in accordance with Florida Department of Environment Protection, US Army Corps of Engineers, US Environmental Protection Agency, Water Management Districts, and local, County, and municipal agency regulations. We assist our clients by applying our regulatory experience and knowledge on the front end of projects and implementing permitting strategies and schedules and developing mitigation plans, when needed, to expedite the permit acquisition a*nd compliance process.* AECOM has an excellent reputation for developing efficient and innovative solutions to complex regulatory problems. As noted in Tab 6 Organizational Chart, AECOM has chosen Karen Brandon to head up our permitting team and for this contract with the City of Pompano Beach. Refer to Tab 8 Resumes for details of Karen's permitting experience.

AECOM completed permitting for the G.W. Ivey Power Plant in Homestead, Florida, which was submitted to and approved by the FDEP Division of Air Resource Management. Homestead Energy Services (HES) operates G. W. Ivey Power Plant and serves as a control area within the state of Florida to have electricity generation available to respond to disturbances to the electric grid in Florida. The facility operates 10 stationary dual fuel-fired generator engines, which are subjected to the requirements of National Emissions Standards for Hazardous Air Pollutants (NESHAP) as included in 40 CFR 63, Subpart ZZZZ for reciprocating internal combustion engines (RICE). HES retrofitted and equipped the engines with an oxidation catalyst, continuous monitoring systems, and a crankcase ventilation system to reduce carbon monoxide (CO) emissions to meet the requirements of RICE NESHAP in 2013.

A Title V Air Operation Permit Renewal application was due to the FDEP in October 2018. AECOM reviewed facility operation data inclusive of hours of operation, fuel usage, changes since earlier renewal in 2013, and proposed changes. AECOM held a pre-application conference call with FDEP explaining the application strategy. Based on engine capacities and facility operational requirements, the facility's annual potential to emit (PTE) for primary criteria air pollutants was estimated and federal and Florida state rule applicability was determined. Subsequently, AECOM submitted a Title V Air Operation Permit application along with supporting documents using FDEP's Electronic Permit Submittal and Processing System (EPSAP) in October 2018.

On an annual basis, AECOM submits an Annual Operating Report (AOR) to the FDEP. FDEP issued a renewed Title V Air Operation Permit on December 12, 2018. An AOR is submitted by April 1 every year. FDEP issued an AOR acceptance letter.

Project Management Services, including Turbidity Monitoring

AECOM's approach to project management facilitates maximum control, efficiency, and cost effectiveness; minimizes risk and liability; and provides convenient facility locations to address the required services. The proposed project organization for this contract has been designed to provide the City with technical expertise, responsive resources, and accessible communication channels. These three elements have been the hallmarks of our success in performing quick response assessment, design, and remedial services. AECOM has provided project/program management services on numerous projects in Florida and across the United States.

As an environmental safeguard, AECOM has used turbidity curtains and oil booms in canals during dredging, assessment of soil and groundwater in the equipment and sediment staging areas before and after implementation, and canal ecosystem evaluations after completion of dredging. We also conduct

turbidity monitoring to ensure that dewatering effluent meets the standard of 1 NTU or lower to comply with NPDES requirements for effluent discharged into a surface water body.

AECOM conducted turbidity monitoring at SR 80 and I-95 in Palm Beach County for groundwater that was being discharged to a nearby canal. The site was formerly a dry detention pond that was being converted to a lined wet retention pond. During construction and dewatering, the roadway contractor detected fecal odors and visually contaminated soil in the pond area; therefore, work was stopped until the site could be evaluated by AECOM.

AECOM took initial soil samples from the pond perimeter and water samples from the pond and the dewatering discharge point, and tested them for volatiles, semi-volatiles, and fecal coliform. Analytical results indicated that fecal coliform was detected in the surface water within the pond. Following several weeks of aeration, surface water within the pond was resampled for fecal coliform and found to be below regulatory cleanup criteria.

During assessment drilling, a plume of petroleum-contaminated soil and groundwater was defined within the northwest corner of the pond. AECOM commenced soil excavation, removing 80 tons of petroleum-contaminated soil and 3,000 gallons of contaminated groundwater, which were disposed of by a licensed waste hauler.

AECOM coordinated with the FDEP and the SFWMD to obtain permits to allow discharge of the dewatering effluent into a nearby SFWMD canal. Due to the presence of petroleum contamination, AECOM installed a treatment system, capable of handling the required 2,000 gpm flow rate for dewatering, prior to discharge to the canal.

A dewatering system consisting of 60 well points was designed, installed, and piped to the treatment system. In addition, AECOM employed innovative horizontal well trenching technology to create three 100-foot-long trench drains below the pond to increase drawdown.

AECOM oversaw excavation of the pond floor to facilitate installation of the PVC liner, which prevents contaminants in stormwater from entering the subsurface and creates a hydraulic barrier between the pond and the local neighbors' septic systems. Prior to discharge, AECOM installed a turbidity curtain in the canal and conducted turbidity monitoring twice per day to comply with the NPDES requirements issued by SFWMD.

Recommendations and Cost Estimates

AECOM provides a standard scope of services to its clients including recommendations and estimates for engineering and environmental projects. AECOM has provided recommendations and estimates for multiple projects with the City of Pompano Beach under our former City contracts, including remedial alternatives for the Municipal Golf Course and source removal for the proposed replacement library site. Our contracts in place with agencies such as FDEP, FDOT, DERM, and SFWMD require AECOM to provide recommendations for compliance with county codes, Florida Administrative Code, and Federal Code of Regulations, as well as providing rough order of magnitude (ROM) estimates early in the assessment and design phases, along with more detailed estimates during the implementation phases. AECOM's management of cost control on projects has been highly effective with the City of Pompano Beach and with other clients for multi-site and multi-task order contracts. To assist in meeting project requirements and to control costs, a well-defined, negotiated work plan proposal accompanied by effective communication before, during, and after its preparation will be key to satisfying the City's expectations. AECOM will communicate with the City to define the required scope of work and prepare a site-specific/task-specific dynamic work plan proposal. The purpose of the dynamic work plan proposal is to define the scope of work to be performed, the fee, and the period of performance, while still being flexible enough to accommodate changes of scope in the field on a real-time basis. The work plan proposal will clearly define the project tasks and a list of project deliverables to meet the City's expectations. Deliverable objectives will be clearly defined and include milestones, status reports, drawings and specifications, and meetings needed with the City and/or regulators.

During the development of the task fee proposal, an internal review is conducted by the Project Manager and Principal-in-Charge to ensure that the needs of the City have been met in the most cost-effective manner possible. After approval of the cost estimate by the City, and submittal of the Notice to Proceed, budgets are entered into AECOM's Oracle financial system (AECOM Project Information Center – APIC), which enables the Project Manager to monitor financial activities on each project.

The APIC system is specifically formatted for tracking multi-site/multi-task assignment contracts and can accommodate Time and Materials Max structures, as utilized by the City, but can also accommodate fixed price. The specific advantages and benefits of our system include coordinated planning, estimating, and scheduling; real-time cost allocation and tracking; automated cost reporting and invoice development; and the capability to incorporate field

changes and work plan modifications. The electronic data contained in the database provides a baseline cost vs. the time expenditure schedule curve, which is compared against the actual cost vs. time expenditure schedule curve. Comparison of these two curves provides a mechanism for quickly and easily identifying whether a project is over or under budget and ahead or behind schedule. Project Status Reports (PSRs) by tasks and by project are provided to the project managers electronically on a weekly basis. These reports provide the project managers with updated budget, cumulative cost to the project, detail of charges applied to the project, detail of unencumbered commitments, and status of billings and accounts receivable. Other reports provided are weekly labor and non-labor status reports that outline charges for each specific project task. Weekly evaluation of the tasks and project budgets significantly reduces the possibility of project budget overruns and scope of service changes. These early detection mechanisms also allow AECOM to deal with issues before they become (potentially costly) full-scale problems.

Closeout Services

In combination with program management services, AECOM will provide closeout services on behalf of the City. Inclusive with these services are certificates of completion, as-built drawings, and completed punch lists. Similarly, environmental construction/remediation services that might be provided to the City would be subject to the same set of requirements. Some of the services included in a closeout process are described below:

Substantial Completion/Final Acceptance

When the Contractor has submitted a request for substantial completion, key members of AECOM's team will conduct a final inspection of the work with project representatives from the City of Pompano Beach and the Contractor and provide written recommendations in the form of a punch list for acceptance of the work. AECOM will prepare and distribute the punch list. Final acceptance i9s given once each project representative initials by the punch list item, thereby confirming that the item has been completed.

Record Drawings and Certification Submittals

AECOM will prepare and submit required record drawings to the City and County showing changes made during construction. The contractor will provide to AECOM marked-up (red-lines), as required in the contract specifications, depicting significant deviations and changes in the Contract Drawings. AECOM will provide the appropriate documentation for completion certification to the permitting agency. Required testing conducted by the contractor will be documented and results will be provided to AECOM.

Reports for Regulatory Compliance Monitoring and Assessments

In addition to the reporting requirements for site assessments, remediation, air monitoring, asbestos surveys, etc., AECOM is also experienced in preparing various compliance monitoring reports. AECOM scientists regularly review existing ordinances and guidelines during environmental assessments, planning, and permitting. AECOM staff collaborates with environmental and planning staff to modify or amend these ordinances, guidelines, methods, Land Development Codes, and Comprehensive Plan Elements to implement more efficient and sustainable projects. AECOM routinely prepares operation and maintenance reports for sites that are under active remediation, as well as natural attenuation and post-remediation monitoring reports for sites that are either undergoing "monitoring only" or have previously undergone active remediation, respectively.

NPDES Compliance Storm Water Sampling

The EPA has typically required that NPDES permitted facilities, such as publicly owned treatment works (POWs) and industrial dischargers, submit a Discharge Monitoring Report (DMR) at least once a year. In support of these regulations, AECOM has provided both storm water discharge monitoring and industrial and process water discharge monitoring services to its clients. The most significant general permit condition is the requirement that facilities prepare a Storm Water Pollution Prevention Plan (SWPPP). The first step in preparing an SWPPP is to identify potential sources of storm water contamination. The plan then identifies Best Management Practices (BMPs) which the facility will use to avoid such contamination.

Properties identified to be impacted by contaminants at concentrations exceeding regulated soil and groundwater standards are subject to assessment pursuant to applicable Florida Administrative Code.

As an FDEP contractor and consultant for several programs (Statewide Petroleum, Dry Cleaner/Hazardous Waste, State Owned Lands, Site Investigation Section, and CERCLA/Brownfields) regulated by the referenced codes, AECOM has developed a unique set of innovative assessment techniques that provide a time and cost advantage to our clients. AECOM prepares site assessment and interim reports that summarize the activities conducted during the site assessment or interim activities, including the findings of the investigation. At a minimum (or as applicable), AECOM reports include site history and background information, local/regional geology/hydrogeology, a summary of analytical results, description and rationale of field methodologies, a summary of the nature and extent of contamination (including source and potential source areas), any documented or potential public health and environmental impacts, and recommendations for further action. Depending on the magnitude of, or sensitivity of, contamination, the report either includes or recommends a feasibility study/remedial alternatives evaluation. Should the investigation include the analyses of large volumes of data (e.g. historic DOH potable well data), AECOM will obtain the data in raw format, import it into MS Access, and perform detailed queries to identify contaminant trends. These queries are simultaneously imported into GIS for graphic depiction in a clear and concise manner.

To AECOM, reporting refers not only to final signed and sealed documents, but also to documents necessary to convey progress during project tasks. The goal of AECOM reports is to provide a document that meets the highest quality standard possible, both in content and presentation. We have devised a real time system of reporting field data in easily transferred formats. We submit figures in Adobe portable document format (pdf), text in MS Word format, and tabular data in MS Excel format, to facilitate electronic transfer and ease of viewing by the recipient. When preparing work plans, site investigation reports, remedial evaluations, remedial designs, and monitoring reports, we streamline our effort by using standard FDEP and AECOM derived formats and checklists. As another method of streamlining reports, AECOM has developed extensive database and GIS capabilities. Data are imported directly from DOH databases or from the subcontracted laboratories ADaPT electronic data deliverable. We use the database and GIS query utilities to perform quality control checks and quickly project selected data onto our maps. GIS is also used to overlay different datasets to identify trends or conflicts.

Data provided in our tables, figures, and reports in most cases are derived directly from the database to avoid mistakes inherent in transposing from one medium to another. The use of these resources and good communication enables AECOM to avoid significant rework. As required by Chapters 471 and 492 Florida Statutes, applicable portions of required documents, which are submitted to each regulatory agency for public record, are signed and sealed by the appropriate AECOM professional(s) who prepared them. Reports and data submitted to each regulatory agency are typically delivered in physical printed form, on compact disks, and in Adobe portable document format. Reports, tables, figures, etc., will be uploaded into the City's e-Builder Enterprise web-based management tool.

Endangered and Threatened Species

AECOM employs many biologists, ecologists, botanists, and other specialists who are qualified by the US Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), and other regulatory agencies to conduct surveys for various federally and state-listed species. Our qualified protected species surveyors are experienced in coordination with the federal, state, and local agencies and have fluent

knowledge of the survey standards necessary to meet permitting requirements. AECOM employs a wide range of biological experts throughout Florida who also assist in threatened and endangered species surveys and permitting.

The AECOM Team consists of qualified ecologists who are authorized by FWC as authorized gopher tortoise agents and we regularly permit and carry out gopher tortoise relocations. In addition, AECOM has experience in creating habitat management plans for a variety of listed species, including the bald eagle (*Haliaeetus leucocephalus*), Florida sandhill crane (*Grus canadensis pratensis*), gopher tortoise (*Gopherus polyphemus*), burrowing owl (*Athene cunicularia*), Audubon's crested caracara (*Caracara cheriway*), wood stork (*Mycteria americana*), and other listed species. We collaborate with the client to determine the most feasible method of permitting impacts to habitat occupied by protected species.

AECOM's approach to endangered species compliance is to identify potential affected state or federally protected species early in project planning and determine any permitting requirements specific to the identified species. AECOM biologists work with the project team to identify where species impacts can be avoided and propose project modifications to minimize or eliminate survey and permitting restrictions.

- **Data Collection.** Gathering and compiling required data in accordance with selected protocols, during the approved survey period. When required, AECOM biologists will conduct habitat evaluations and species-specific surveys within the designated survey areas and applicable survey seasons.
- **Qualified Species Specialists.** Our wildlife biologists, ecologists, fisheries specialists, and botanists include senior staff qualified with in depth knowledge and experience to conduct surveys for federally and state-listed species. To support a streamlined environmental approval process, our experienced biologists design and conduct surveys in accordance with USFWS and FWC-approved methods and protocols.
- **Agency Coordination and Clearances.** "Early and often" communications with the regulatory agencies is key. Our team continually refreshes their regulatory requirement knowledge to provide the City with a streamlined approach that implements best management practices, thorough management plans, and permitting assistance that meets applicable regulatory requirements.
- **Avoidance and Minimization Strategies.** Biologists will work with the design team to determine if avoidance and/or minimization measures or best management practices (BMPs) can be employed to reduce or eliminate potential impacts.
- **Quality Assurance.** The data collected and the documents developed are reviewed and verified by senior technical experts.

The Endangered Species Act of 1973 (ESA) is designed to protect and recover imperiled species and the ecosystems upon which they depend. The federal law directs federal agencies to work to conserve endangered and threatened species. It is administered by the US Fish and Wildlife Service (USFWS), and NOAA's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales.

Section 7 of the ESA, Interagency Cooperation, requires federal agencies to consult with the USFWS and NMFS, as appropriate, to ensure the actions they take, including those they authorize, fund, or carry out, do not jeopardize the continued existence of any listed species nor result in an adverse modification to any federally designated critical habitat.

The lead federal agency (typically USACE for the City's projects) will consult with the USFWS and NOAA fisheries to determine what information is needed in order to determine whether a federally listed or candidate species may be affected by the City's proposed project. During Interagency consultation, the USFWS (or NMFS) typically considers the species status, historical and current distribution, biological background, endangerment factors, potential presence in the project region, and associated impact evaluation. The process is concluded when the USFWS (or NMFS) issues a project-specific "biological opinion" or concurrence letter addressing the proposed action.

AECOM routinely assists federal agencies with Section 7 consultation for both upland/terrestrial and coastal/nearshore projects. We have the in-house expertise to conduct supporting surveys or studies that will be required. In addition, AECOM personnel have an extensive history of consultation with the USFWS and NOAA, as well as FWC.

Upland/Terrestrial

AECOM understands the process of preserving Florida's and the City's natural resources, including native ecosystems and protected species, and has the experience to balance project development and schedule with meeting requirements regarding protected species and other sensitive resources. AECOM ecologists have proven experience coordinating with federal, state, and local environmental regulatory agencies to permit the protection, relocation, impacts, and mitigation of protected species as a result of development activities.

Coastal/Nearshore

AECOM has been involved in listed offshore species evaluations and protection. Some of AECOM's previous work includes:

- Development of marine species protection plans and marine species spotter plans (e.g., manatees, sea turtles, sawfish, sturgeon)
- Management of surveys for protected seagrass and coral species
- Development of extensive offshore mitigation (including relocation) plans for hard-bottom impacts
- Long-term monitoring of offshore impact areas, as well as mitigation success
- Studies of potential impacts to listed species designated critical habitat

Other Applicable Laws

In addition to the ESA, the following laws may apply to City projects with federal funding or authorizations:

- National Environmental Policy Act (NEPA)
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act

Resilience/Sustainability

AECOM is one of the leaders in resiliency, climate change, and sea level rise practices across North America. The AECOM team recognizes that climate change poses an existential threat to the continued vitality of Broward County's coastal communities and to the health and well-being of those who live, work, and pursue leisure in this vibrant community. We look forward to the opportunity to apply our rooted knowledge and resilience planning in the region. Our local experience is complemented by global expertise in resilience best practices that we bring, including climate resilience knowledge from our 100RC Resilient Cities Resilient305 program management work with the City of Miami.

AECOM is a national leader in climate change adaptation and resilience planning. Combined with our experience in environmental planning, engineering, and design, this makes us an effective partner for the City of Pompano Beach. We are actively working with communities across the US to inform future environmental planning and engineering projects. For the City of Naples Climate Change Adaptation and Mitigation Action Plan, we are developing a framework to incorporate climate change considerations into existing and future projects and policies that will protect public assets from future climate hazards. AECOM is also a Strategy Partner for 100 Resilient Cities, including the Greater Miami & the Beaches Resilient305 Program, with priority actions centered around climate change, affordable housing, transportation, and land use. For the New York Waterfront Code, we are performing facility evaluations, site-specific analysis, and providing environmental and land use recommendations. In the San Francisco Bay Area, we are developing a Mobility Adaptation Strategy in the Islais Creek neighborhood that will protect transportation infrastructure, enhance shoreline access, and nurture community resilience in adjoining neighborhoods. We are also leading the Urban Land Institute Quad County Business Case for Resilience in Southeast Florida to analyze the fiscal impact of critical infrastructure under sea level rise scenarios across a four-county region. On these and similar projects, we work with stakeholders to couple local knowledge with regional and national expertise to develop relevant and effective solutions that provide long-term resilience considerations.

AECOM is an industry leader in partnering with our customers to develop and implement green and sustainable technologies for our remediation and engineering projects. A key feature of our commitment to sustainability is our focus on green and innovative components of remediation projects. This commitment is exemplified by the *#2 Ranking* by *Engineering News Record* (ENR) as one of the *Top 100* green buildings design firms, as well as our inclusion by *Newsweek* in their list of Greenest Large Companies.

The AECOM team will work with the City of Pompano Beach to understand intergovernmental processes, evaluate historical and existing sustainability and resiliency efforts, and establish a baseline understanding of the community as it is today; how it may change in response to climate stressors, including extreme heat, sea level rise, and flooding; and how these factors represent challenges and opportunities for equitable community outcomes. We will also consider the project objectives through a social equity lens to guide prioritization of climate adaptation and sustainability actions that emphasize social co-benefits rather than one-dimensional benefits. These benchmarks will constitute an initial framework and project prioritization for community resiliency, environmental sustainability, social equity, hazard mitigation and adaptation policies, energy assurance, land use, and implementation strategies and projects.

AECOM Employs Sustainable Remediation

Key Personnel Matrix

The key personnel matrix provides the experience, education, and dedication of our key personnel. Additional information about these key personnel and subcontractors is provided in their resumes. This information includes the tasks each will be assigned, their experience level and previous years performing related work, and applicable knowledge for this contract. Resumes for key team members are included in Tab 8 Key Personnel Resumes.

Key Team Matrix

Personnel | Role	Education / Professional Designations	Years of Experience	Preliminary Reports/Alternative Recommendations	Permitting (Federal, State, County and City)	Project Management	Recommendations and Cost Estimates	Closeout Services	Reports for Regulatory Compliance Monitoring and Assessments	Reporting on Endangered Animals	Phase I/II/III Assessments	Roadway, Streetscape or Parking Lot Projects	Water or Reuse Main Projects	Force Main Projects	Lift Station/Pump Station Rehabilitation Projects	Parks and Recreational Facilities	Seawall and Dock Construction Repair	Storm Water/Drainage Improvement Projects	Consultation for Emergency Water/Wastewater/Stormwater Repairs	Inspection Services for Emergency Water/Wastewater/Stormwater Repairs	Canal and Lake Dredging	Grant Reimbursement, FAA and FDOT Support and Compliance	SRF Support and Davis Bacon Wage Reporting Requirements	Support Services for Remediation	Demolition	Gravity Sewer Main Projects
Vik Kamath | Principal-in-Charge	MS, Thermal & Environmental Engineering | BS, Chemical Engineering PE: FL #42618	40	●	●	●	●	●	●		●					●			●		●				●	
Steve Starke | Project Manager	BS, Geology FL: PG #1560; CHMM #9231; LEP #148, REPA #6029	37	●	●	●	●	●	●		●	●	●	●	●	●		●	●		●	●		●	●	●
Delana Beculhimer | Assistant Project Manager / Phase I, II & III Assessments Lead	BS, Geology; BS, Environmental Geography, Natural Hazards LEP #357	17	●	●	●	●	●	●	●	●	●	●	●	●	●		●			●	●		●	●	●
Luis Smith | Health & Safety / Asbestos, Mold & Metals-Based Paint Lead	BS, Environmental Science CIH #8075, FLAC #AX53	14	●	●	●	●	●	●	●	●													●	●	
Babu Madabhushi | QA/QC / Remedial Design Team Member	PhD, Hazardous Waste Management | MS, Wastewater Treatment	23	●		●	●		●		●	●						●			●			●		
Kathryn Eisnor | Phase I, II & III Assessments Team Member	BS, Earth Sciences LEP #370	15	●	●	●	●	●	●	●	●	●	●			●		●				●		●	●	●
Matthew Holbrook | Phase I, II & III Assessments Team Member	MS, Geological Services | BS, Geology PG: FL #2165	26	●	●	●	●	●	●		●	●				●		●						●	●	
Ed Leding | Phase I, II & III Assessments Team Member	MS, Geology | BS, Geology PG: FL #1292	31	●		●	●	●			●													●		
Alec Rizzo | Phase I, II & III Assessments Team Member	BS, Geology	2			●					●	●	●					●						●		
Elizabeth Sullivan | Phase I, II & III Assessments Team Member	BS, Geology	5	●	●		●	●	●		●					●								●	●	
Fernando Navarrete | Engineering Services Lead	PhD, Ocean Engineering | BS, Civil Engineering PE: FL #69999	18	●	●	●	●	●					●	●	●	●	●	●	●	●	●				●	●
Jonathan Barbosa | Stormwater Lead	BS, Civil Engineering PE: FL #81615	10	●				●				●	●	●	●			●	●							
Gino Mora | Stormwater Team Member	MS, Civil Engineering | BS, Civil Engineering FDEP Qualified Stormwater Management Inspector		●				●				●	●	●	●			●	●		●				●	●
Daniel Baker | Civil Engineering Lead	BS, Civil Engineering PE: FL #73196	14	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●		●		●	●
Ciecio De Sa | Civil Engineering Team Member	MS, Civil Engineering | BS, Civil Engineering EI: FL 1100019838	5	●	●		●	●				●	●	●		●		●			●		●		●	●
Roger Williams | Water/Wastewater Lead	MS, Environmental Engineering | BS, Civil Engineering PE: FL #68199	16	●	●	●	●	●	●				●	●	●				●	●						●
Dan Levy | Sediment Dredging Lead	Computer Modeling, Graduate Studies | BS, Geology PG: FL #1230	34	●	●	●	●	●	●	●	●	●				●					●	●		●	●	

Key Team Matrix

Personnel | Role	Education / Professional Designations	Years of Experience	Preliminary Reports/Alternative Recommendations	Permitting (Federal, State, County and City)	Project Management	Recommendations and Cost Estimates	Closeout Services	Reports for Regulatory Compliance Monitoring and Assessments	Reporting on Endangered Animals	Phase I/II/III Assessments	Roadway, Streetscape or Parking Lot Projects	Water or Reuse Main Projects	Force Main Projects	Lift Station/Pump Station Rehabilitation Projects	Parks and Recreational Facilities	Seawall and Dock Construction Repair	Storm Water/Drainage Improvement Projects	Consultation for Emergency Water/Wastewater/Stormwater Repairs	Inspection Services for Emergency Water/Wastewater/Stormwater Repairs	Canal and Lake Dredging	Grant Reimbursement, FAA and FDOT Support and Compliance	SRF Support and Davis Bacon Wage Reporting Requirements	Support Services for Remediation	Demolition	Gravity Sewer Main Projects
Chandy John | Sediment Dredging Team Member	PhD, Environmental Hydraulics | MS, Civil Engineering, PADI	32	●	●	●	●	●	●		●		●				●	●			●	●		●		
Mike Giovannozzi | Sediment Dredging Team	MS, Civil Engineering | BS, Civil Engineering PE: FL #62563	21	●	●	●	●										●				●					
David Hayman | Remedial Design Lead	BS, Ocean Engineering PE: FL #48082	30	●	●	●	●	●	●		●	●						●						●		
Devansh Shah | Remedial Design Team Member	MS, Environmental Engineering | BE, Environmental Engineering PE: FL #88389	5	●		●	●		●		●					●		●		●				●	●	
Sonia Burkule | Remedial Design Team Member	MS, Environmental Engineering; BS, Chemical Engineering	15	●	●	●	●	●	●	●	●													●		
Josh Gregory | Remedial Design Team Member	BS, Environmental Engineering	21	●		●	●	●	●		●													●	●	
David Vargas | Remedial Design Team Member	MS, Environmental Engineering | BS, Environmental Engineering EIT	5		●		●		●		●	●						●			●			●		
Richard Ulkus | Remedial Construction Lead	AS, Civil Engineering Technology GC: FL	45			●	●					●	●	●	●	●	●	●	●	●	●	●	●		●	●
Mike Powell | Remedial Construction Team	Undergraduate Studies	32					●			●	●			●	●					●			●	●	
Mike Scinta | Remedial Construction Team	High School Diploma	43		●	●	●	●			●	●	●	●	●	●	●	●		●	●			●	●	●
Richard Longhenry | Remedial Construction Team	High School Diploma	46								●		●	●	●		●	●						●	●	●
Keith Stannard | Natural Resources Lead	BS, Biological Sciences	26	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	
Kelly Samuels | Natural Resources Team	BA, Environmental Design PWS, CERP; FWC Gopher Tortoise Authorized Agent	25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●
Pete Verbanac | Natural Resources and Phase I/II/III Teams	BS, Natural Science/Zoology	30	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●					●		●
Karen Brandon | Natural Resources – Permitting Lead	BS, Environmental Engineering	38	●	●	●	●	●	●	●						●	●				●	●		●	●	●
Laura Cherney | Natural Resources Team Member	MBA; BS, Environmental Engineering Sciences	20	●	●	●			●	●						●	●				●	●			●	●
Carlton Gordon | Asbestos, Mold & Metals-Based Paint Team	BA, Communication Studies | MRSA: #2163	19			●			●		●	●	●			●						●		●	●	

Key Team Matrix

Personnel | Role	Education / Professional Designations	Years of Experience	Preliminary Reports/Alternative Recommendations	Permitting (Federal, State, County and City)	Project Management	Recommendations and Cost Estimates	Closeout Services	Reports for Regulatory Compliance Monitoring and Assessments	Reporting on Endangered Animals	Phase I/II/III Assessments	Roadway, Streetscape or Parking Lot Projects	Water or Reuse Main Projects	Force Main Projects	Lift Station/Pump Station Rehabilitation Projects	Parks and Recreational Facilities	Seawall and Dock Construction Repair	Storm Water/Drainage Improvement Projects	Consultation for Emergency Water/Wastewater/Stormwater Repairs	Inspection Services for Emergency Water/Wastewater/Stormwater Repairs	Canal and Lake Dredging	Grant Reimbursement, FAA and FDOT Support and Compliance	SRF Support and Davis Bacon Wage Reporting Requirements	Support Services for Remediation	Demolition	Gravity Sewer Main Projects
DeAndre Scholl | Asbestos, Mold & Metals-Based Paint Team	BS, Environmental Science	2						●		●	●				●								●	●	
Justin Vandever | Resilience/Sustainability/ Climate Change Lead	MS, Marine Science | BS, Civil and Environmental Engineering PE: CA #76245	14	●		●						●	●					●								●
Lauren Swan | Resilience/Sustainability/Climate Change Team	MLA, Landscape Architecture | BA, Urban and Regional Planning	14	●	●	●	●					●	●					●								●
Jae Park | Grant Writing/Funding Assistance Lead	PhD, Urban and Regional Science | MS, Community and Regional Planning CFM	28			●			●	●													●	●		
Amy Baker | Grant Writing/Funding Assistance Team	BS, Civil Engineering PE: LA #30484, SC #35074, TX #129148; PMP #1510737; CFM	22	●		●			●			●				●		●	●				●	●		●
José Soler | Ports & Marine Leader	BS, Civil Engineering PE: FL #85451; PR #18272	24	●		●			●			●				●	●	●	●				●	●		●
John Carel | Ports & Marine Team	MS, Civil Engineering | BS, Civil Engineering PE: MA#49086, FL#71844, NJ#57347, NY#57347, SC#11885	47			●											●									
Prabin Tuladhar | Ports & Marine Team	MS, Civil/Structural Engineering | BS, Civil Engineering PE: CA#69427	19			●											●									

Current & Projected Workload

The table below provides the team member's current workload, projected workload, and percentage of availability.

Team Member | Title	Current Workload	Projected Workload	Percent Availability
Vik Kamath | Principal-in-Charge	60%	60%	40%
Steve Starke | Project Manager	20%	30%	70%
Delana Beculhimer | Assistant Project Manager / Phase I, II & III Assessments Lead	30%	20%	80%
Luis Smith | Health & Safety / Lead, Mold & Lead-based Paint Lead	50%	40%	60%
Babu Madabhushi | QA/QC / Remedial Design Team	80%	40%	60%
Kathryn Eisnor | Phase I, II & III Assessments Team	80%	80%	20%
Matthew Holbrook | Phase I, II & III Assessments Team	20%	20%	80%
Ed Leding | Phase I, II & III Assessments Team Member	70%	70%	30%
Alec Rizzo | Phase I, II & III Assessments Team Member	60%	20%	80%
Elizabeth Sullivan | Phase I, II & III Assessments Team Member	50%	40%	60%
Fernando Navarrete | Engineering Services Lead	75%	60%	40%
Jonathan Barbosa | Stormwater Lead	50%	50%	50%
Gino Mora | Stormwater Team Member	40%	60%	40%
Daniel Baker | Civil Engineering Lead	95%	60%	40%
Ciecio De Sa | Civil Engineering Team	80%	60%	40%
Roger Williams | Water/Wastewater Lead	80%	70%	30%
Dan Levy | Sediment Dredging Lead	75%	75%	25%
Chandy John | Sediment Dredging Team	80%	40%	60%
Mike Giovannozzi | Sediment Dredging Team	80%	60%	40%

TAB 08

RESUMES OF KEY PERSONNEL

Team Member | Title	Current Workload	Projected Workload	Percent Availability
David Hayman | Remedial Design Lead	50%	40%	60%
Devansh Shah | Remedial Design Team	60%	30%	70%
Sonia Burkule | Remedial Design Team	50%	30%	70%
Josh Gregory | Remedial Design Team	50%	40%	60%
David Vargas | Remedial Design Team Member	50%	25%	75%
Richard Ulkus | Remedial Construction Lead	60%	60%	40%
Mike Powell | Remedial Construction Team Member	50%	25%	75%
Mike Scinta | Remedial Construction Team	50%	50%	50%
Richard Longhenry | Remedial Construction Team	80%	60%	40%
Keith Stannard | Natural Resources Lead	80%	60%	40%
Kelly Samuels | Natural Resources Team	50%	60%	40%
Pete Verbanac | Natural Resources Team	100%	25%	75%
Karen Brandon | Natural Resources – Permitting Lead	75%	60%	40%
Laura Cherney | Natural Resources – Permitting Team	75%	60%	40%
Carlton Gordon | Asbestos, Mold & Lead Based Paint Team	75%	60%	40%
DeAndre Scholl | Asbestos, Mold & Lead Based Paint Team	60%	60%	70%
Justin Vandever | Resilience/Sustainability/Climate Change Lead	80%	60%	40%
Lauren Swan | Resilience//Sustainability/Climate Change Team	70%	60%	40%
Jae Park | Grant Writing/Funding Assistance Lead	80%	75%	25%
Amy Baker | Grant Writing/Funding Assistance Team	80%	60%	40%
Jose Soler | Ports & Marine Lead	80%	60%	40%

Directly following this section are resumes for Key Personnel for AECOM and our subconsultants. Resumes for the individuals with an asterisk behind their name on the organizational chart are presented at the end of this section.

Steve Starke, PG, CHMM, LEP, REPA

Project Manager

Key expertise
Health and Safety Management
Risk Assessments
Compliance Audits
Safety Training

Education
BS, Geology, James Madison University, 1983

Years of experience
32 with AECOM | 37 Total

Training
40-hour OSHA 1910.120 HAZWOPER
8-hour OSHA 1910.120 HAZWOPER Annual Refresher
10-hour OSHA Construction Industry Outreach Training
OSHA 511 General Industry
Basic Incident Command
DOT Hazardous Materials Shipping (HM172)

Registrations/Certifications
Professional Geologist: FL #1560, NC #1372, TN #3707, VA #2801000993
Registered Environmental Property Assessor #6029
Licensed Environmental Professional #148
Certified Hazardous Materials Manager #9231
AECOM Certified Project Manager

Steve is a senior project manager and hydrogeologist with over 37 years of experience conducting Phase I/Phase II environmental site assessments, contamination assessment investigations, environmental audits, remedial implementation/O&M, storm water, construction management, and emergency response services in Florida.

Professional history

Steve specializes in petroleum and hazardous waste assessments and remedial design and implementation and is highly experienced in the management of multiple-site, indefinite-delivery order contracts and performance-based contracts. His clients have included the City of Pompano Beach (Environmental Engineering and CRA contracts), Miami, City of Miami Beach, City of Opa Locka, City of Hollywood, Cooper City, Miami-Dade County DERM, Miami-Dade Aviation Department (MDAD), Broward County, Palm Beach County, Port of Palm Beach, FDOT (District 4 and Turnpike), FDEP, FEMA, USCG, US Park Service, as well as numerous major oil and private clients. Below are select government contracts/projects that Starke has been responsible for as project manager.

Select project experience

Environmental Professional Engineering and Testing Services, City of Pompano Beach, FL. Managed two environmental testing and consulting services contracts (Engineering and CRA) for the City of Pompano Beach, Florida, as part of two 5-year task order contracts for work at City properties or properties being acquired by the City for redevelopment. Services included, regulatory site assessments, Phase I and Phase II environmental site assessments, monitor well installation and abandonment, acid tank sludge sampling, soil and groundwater sampling and monitoring, emergency response, asbestos surveys and remediation services. Project work included strong interaction with Broward County Environmental Protection and Growth Management Department.

Cooper City, Bill Lips Sports Complex, Cooper City, FL. Managed fieldwork and prepared a Site Assessment Report (SAR) and subsequent SAR Addenda for the Bill Lips Sports Complex (Complex), located adjacent to the Cooper City Water Treatment Plant. Following assessment, AECOM prepared a Source Removal Plan and then performed the removal and disposal of arsenic-contaminated soil at the Complex. A Soil Source Removal Report was subsequently prepared. AECOM then prepared a Natural Attenuation Monitoring Plan (NAMP), which proposed 4 quarters of groundwater monitoring. Upon completion of 4 quarters of NAM monitoring, AECOM prepared a Declaration of Restrictive Covenant (DRC) for the project and obtained a conditional closure from Broward County.

City of Miami Beach, Environmental Services Contract, Miami Beach, FL. Project manager for environmental services contract included environmental assessments, tank removal, remediation, and emergency response at a number of City maintenance and golf course facilities. Most of the assessments were conducted in a phased approach. Each of the sites were evaluated and a scope of services developed. Soil gas surveys, soil sampling and analysis, monitoring well installations, groundwater sampling, groundwater surveys, and aquifer testing were conducted as part of the scope of services for the majority of the sites. The above tasks also include furnishing all necessary licenses, permits, and insurance; installation of safety barriers (for tank installations), tank and line tests; and contaminated soils disposal and excavation.

Port of Palm Beach, Capital Improvement Program Environmental Services, Palm Beach, FL. Managed more than 20 Phase I and Phase II site assessments as well as the contamination assessment and remediation program for the SkyPass/Port expansion program. Interacted with Palm Beach County Department of Environmental Resources Management. Managed petroleum tank closure assessments and soil remediation projects. Administered an air monitoring program for the excavation of arsenic-contaminated soil.

Miscellaneous Environmental Engineering - Capital Improvements and Transportation Program Services, City of Miami, FL. Contract manager on Miscellaneous Environmental Services Contracts RFQ 10-11-045 ($1MM) and RFQ 14-15-027. Responsible for planning and design services, surveying, environmental site assessments, ACM/MBP/mold surveys, remediation and treatment system O&M services, construction management, groundwater sampling and monitoring, engineering control plans, deeds of restrictive covenant, contaminated soil disposal, mitigation and abatement services, as well as site closures. These services were performed for the City Capital Improvements and Transportation Program, The Resilience and Public Works Department, the City Parks Department, and the City of Miami Police Department. Selected projects included Bayfront Park (assessment, groundwater monitoring, construction management/air monitoring, engineering control plan, deed of restrictive covenant (DRC)), Blanche Park (assessment, groundwater monitoring, repairs of engineering controls), Grapeland Park (assessment, groundwater monitoring, irrigation well replacement, construction management, engineering control plan), Regatta Park (assessment, engineering control plan, DRC), Curtis Park (construction management and air monitoring), Citywide Storm Water Outfall Monitoring (storm water monitoring/reporting, bench scale mitigation pilot test), ROW 5520 NE 4th Ave (assessment, soil remediation), and the Police Department (asbestos sampling and abatement).

Districtwide Contamination Assessment and Remediation Services, Florida Department of Transportation, District 4, Districtwide, FL. Contract manager for contract BDY43 (2014-2019), as well as the previous four FDOT District 4 (SE Florida) environmental consulting contracts (1995 to 2014), where he managed environmental services on hundreds of projects across a five-county area. Project scopes included Phase I and Phase II assessments, full site assessments, tank/waste removals, asbestos surveys/abatement, metal-based paint surveys/abatement, mold services, demolition, emergency response, NEPA studies, dewatering treatment, construction management, plans reviews, and site remediation for contaminants including metals, solvents, and hydrocarbons.

Reimbursement/Pre-approval/PRP/SOL Programs, Florida Department of Environmental Protection, Statewide, FL. Managed numerous petroleum assessments, tank removals, remedial system designs/ implementations, and site closures under the FDEP Petroleum Reimbursement, Pre-approval, and Petroleum Restoration programs for multiple major oil companies (BP/Amoco, Shell, Unocal, Tenneco, and Mobil), private clients and municipal clients, including Miami-Dade County. Managed projects under AECOM's Statewide Petroleum Cleanup Contract for over 10 years. Under this contract, managed groundwater and soil assessment and remedial activities at sites located throughout south and central Florida. Employed innovative rapid site assessment methods, including direct push technology, mobile lab services, as well as membrane interface probe (MIP) technology for rapidly mapping free product plumes.

Managed Performance Based Cleanups (PBCs) under this program as well as a master storage tank project that included the closure of 26 USTs.

Also managed multiple FDEP State-Owned Lands (SOL) sites, including state parks, correctional facilities, universities, and other governmental facilities for the FDEP since the inception of the SOL initiative.

Stormwater Pond Assessment, USCG, Air Station Miami, FL. Managed the environmental testing portion of a Design Repair Program for the Stormwater Pond at USCG Air Station Miami. This project consisted of selected surface water and sediment sampling at multiple locations within the storm water pond prior to initiation of repairs. A comprehensive report of findings was also prepared.

NW 142 St. Widening, City of Opa Locka, FL. Project manager responsible for notifying Miami-Dade County DERM and filed a Discharge Notification Form. Subsequently developed a sampling plan and managed the sampling program, including soil screening and sampling, as well as sampling of excavated solid waste material. AECOM then developed a waste disposal plan for the City of Opa Locka to address the contaminated soil and excavated waste material. AECOM workers detected fuel odors during construction work within the right of way along NW 142nd Street, between NW 102nd Avenue and NW 107th Avenue in Opa Locka, Florida.

Delana Beculhimer, LEP

Assistant Project Manager / Phase I, II & III Assessment Lead

Key expertise
Contaminated and Hazardous Materials Management
Environmental Studies

Education
BS, Geology, Austin Peay State University, 2003
BS, Environmental Geography, Natural Hazards, Austin Peay State University, 2003

Years of experience
13 with AECOM | 16 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher
8-hour OSHA Site Supervisor
26-hour FDOT PD&E Manual
CPR / First Aid
CSX Roadway Worker Protection / Contractor Safety Certification
Biohazard Awareness
Hazard Communication
Excavation and Trenching Safety

Registrations/Certifications
Licensed Environmental Professional: FL #357
CPR / First Aid

Delana is a Project Manager with 16 years of experience conducting assessment, remediation, monitoring, and closure of metals and petroleum-contaminated sites for FDOT District 4, FDEP State Owned Lands, petroleum preapproval, site investigation section, and private clients.

Professional history

Delana has conducted groundwater elevation surveys, natural attenuation monitoring, field data collection, supervision of drilling operations for soil borings, installation of groundwater monitoring wells, soil and groundwater sampling, and aquifer slug tests. In addition, she has prepared various types of environmental site assessment reports, contamination assessment reports, source removal reports, tank closure assessment reports, and sediment characterization reports.

Select project experience

Four Contamination, Assessment and Remediation Contracts, FDOT District 4, Districtwide, FL. Managed multiple projects, including construction oversight / management, initial site investigations, soil and groundwater assessments, delineation, soil and groundwater remediation, UST and hydraulic lift removal, coordination with regulatory agencies, and reporting.

- Conducted field reconnaissance, including interviews and photo-documentation; FDOT plan reviews; and research and review of numerous FDOT, state, and municipal databases (e.g., FDOT ETDM database) to address environmental, physical, natural, social / cultural, and biological aspects potentially affecting project, in accordance with NEPA regulations for FDOT District 4.
- Produced aerial site plans using ArcView GIS software to facilitate field reconnaissance and for inclusion into FDOT District 4 Level II
- Contamination Impact Assessment Reports, Contamination Screening Evaluation Report Addenda, Contamination Assessment Management Plans, environmental identification features reports, and initial-phase plan review reports.
- Prepared CSER Updates for FDOT District 4 to identify potential contamination impacts that may affect ROW acquisition or construction efforts, allowing District 4 to mitigate remedial and design efforts and preserve production schedule.
- Participated in valuation engineering studies with multi-disciplinary team to analyze function, process, system, and design of projects to evaluate methods to reduce costs and improve performance and quality.
- Supervised surveying and sampling of numerous FDOT District 4 bridges for asbestos-containing materials and metal-based paint in conformance with the national emission standards for hazardous air pollutants. Conducted numerous bridge survey report reviews for FDOT District 4

Contract BDY43, FDOT District 4, Districtwide, FL. Project manager for the Contamination, Assessment, and Remediation (CAR) contract, which included approximately 87 projects. Services included Level I and Level II Environmental Site Assessments, asbestos and lead surveys/abatement, environmental construction and remediation, dewatering, and emergency response. In addition, she provided on-site technical support at the District 4 office. During this time, she assisted FDOT by completing ROW reviews; construction plans reviews; coordinating with Design, ROW, and Drainage Project Managers; and conducting PD&E document reviews.

Kings Highway, FDOT District 4. FL. Project manager on Kings Highway, which was being widened from a 2-lane roadway to a 4-lane roadway. AECOM performed an assessment of the soil and groundwater at 32 sampling locations. The assessment was completed near a known contaminated gas station, in an agricultural area parallel to a canal that was to be relocated, within proposed drainage ponds, and at proposed subsurface structure locations. Soil and groundwater analytical results indicated petroleum concentrations in excess of State standards along the corridor and with the FDOT ROW. To prevent worker exposure, AECOM was tasked with removing petroleum impacted soil within the construction zone and developing a remediation system to treat potentially contaminated groundwater before its eventual discharge to a surface water body. AECOM developed a dewatering permit package for submittal to SFWMD and FDEP. After approval of the permit package, AECOM developed a treatment system that would accommodate the contractor's anticipated flow rate of 600 gpm. The remediation system was mobilized to the site during the construction phase. The groundwater was successfully treated prior to being discharged.

I 75 Express Lanes – Segment D, FDOT District 4, FL. Project manager on this project. The FDOT constructed two new Express Lanes in the northbound and southbound directions within the I 75 existing medians. AECOM identified arsenic impacted soil within the FDOT ROW during assessment activities conducted in 2012. In 2014, the roadway construction contractor excavated within areas identified with arsenic contamination. AECOM conducted oversight of the excavation activities and collected samples of the stockpiled soil for laboratory analysis. Soils identified with arsenic concentrations between residential and industrial standards were released to the contractor to use beneath the roadway. Soils identified above industrial standards were further analyzed for leachability to determine if it could be deposited into existing FDOT drainage ponds. All soil was identified below leachability standards and AECOM transported and placed the soil into various existing retention ponds on the corridor. Nearing completion of the roadway project in 2018, the roadway construction contractor notified FDOT that there was approximately 70,000 cubic yards of excess material that would not be needed to complete roadway construction. AECOM conducted sampling of the soil pile and identified arsenic above State standards, but below leachability standards. After receiving DERM approval, 45,000 cubic yards of soil was transported and deposited into an existing drainage pond in Miami Gardens. An additional 25,000 cubic yards of soil was approved to be moved for site grading to achieve appropriate elevation and slope at Griffin Rd. Three loads of miscellaneous and construction related debris was subsequently hauled away for disposal.

Vik Kamath, PE
Principal-in-Charge

Key expertise
Environmental Engineering
State/Local/Federal Regulations
Brownfields Program
Risk-Based Closure
Solid Waste Management
Hazardous Wate Management
Methane Gas Mitigation

Education
MS, Thermal & Environmental Engineering, Southern Illinois University, 1980
BS, Chemical Engineering, Indian Institute of Technology/ Bombay, India, 1976

Years of experience
17 with AECOM | 40 Total

Training
Mitigation Benefit Cost Analyses Toolkit, FEMA
Field Construction Safety, OSHA
Community Emergency Response, FEMA
8-Hour Bio-Readiness, Center for Biological Defense, University of South Florida
Vulnerability Assessments for Wastewater Treatment Plants, University of Florida TREEO Center

Registrations/Certifications
Professional Engineeer: FL #42618
AECOM Certified Project Manager
AECOM Lead Verifier - Impact Assessment & Permitting
AECOM Lead Verifier - Waste Services

Vik is a senior project engineer and manages a wide variety of environmental engineering projects ranging from corrective action plans, groundwater remediation, landfill closures, solid and hazardous waste management methane gas mitigation projects, petroleum storage tanks, waste to energy plants, and wastewater treatment and disposal facilities.

Professional history

Prior to joining AECOM, he served as the Program Administrator for Waste Management at the Florida Department of Environmental Protection (FDEP) office in West Palm Beach. During his tenure at AECOM, Vik has managed small as well as large remediation projects for the City of Miami. Having worked for the State of Florida for over 20 years as an engineer and administrator, he has a thorough understanding of state, local and federal regulations and serves as an expert regulatory technical advisor for private and municipal clients in Palm Beach, Broward and Miami-Dade counties.

Select project experience

Former Virginia Key Landfill Closure and Groundwater Remediation, City of Miami, FL. Senior project engineer and project manager leading a team of environmental scientists, geologists and engineers. The work completed includes soil and groundwater assessments, aquifer pump tests, drainage well capacity tests and landfill closure that is currently in the permitting phase. A key component of the landfill closure is incorporating future use of the landfill as a park for the City of Miami. The construction phase is anticipated to start after Miami-Dade County completes the procurement of a contractor.

Former City of Miami Convention Center/Regatta Park, Coconut Grove, FL. Lead environmental engineer for a complete environmental assessment of six different areas on a 15-acre site that was the location of the City's Convention Center. After completion and regulatory approval of the site assessment activities, a Corrective Action Plan was developed for implementation by the contractor procured by the City. Upon completion of the corrective action, a certification of completion of construction with a No Further Action with Conditions was submitted and approved by the regulators, as part of a cost-effective risk-based corrective action approach. The site is now the location of a popular park in the Coconut Grove area. An engineering and institutional control plan is being proposed that will be part of the Restrictive Covenant for the property.

Broward County Landfills – Permitting Compliance and Reporting, Broward County Solid Waste and Recycling Services, Broward County, FL. Engineer/project manager responsible for providing geological services for the review and reporting of groundwater data collected on a semi-annual basis at two landfills as part of FDEP permit requirements. Services include reviewing electronic data deliverables (EDDs) through the FDEP Automated Data Processing Tool (ADAPT) application, generating a Semi-Annual Monitoring Reports in accordance with Section 62-701.510(9)(a) of the Florida Administrative Code (F.A.C.). This report summarizes all hydrogeological water quality parameters and analytical results, sampling and analytical methods.

Ives Estates Park (former Ojus Landfill), Miami Gardens, FL. Lead Environmental Engineer for this redevelopment project that started in 2006. Services provided include soil and groundwater assessment, methane gas assessment and mitigation system design and implementation of the corrective for the Youth Complex. Upon completion of mitigation measures the certification of completion of construction was submitted to and approved by the regulators. The site is currently under Operation and Maintenance with regular site visits by AECOM technicians under the direction of the engineer. AECOM is currently in the process of submitting a proposal to design upgrades to the Youth Center Building.

West End Cargo Area Bldg. 2064, Miami-Dade Aviation Department, Miami-Dade, FL. Lead Environmental Engineer to complete site assessment activities and recommend remediation activities at the location of a former building that was in a group of buildings in the West End Cargo Area at Miami International Airport known as Aerodex Plant 1. The site assessment activities included the installation of groundwater monitoring wells and soil borings to determine the impact of petroleum and hydrocarbons. A series of thirteen groundwater monitoring wells and soil borings were installed at pre-determined locations. Upon the lab reports were reviewed by the team, a site assessment report was submitted to and approved by the regulators. The County has requested AECOM to provide additional services and work with the adjacent property owner.

TIAA 5707 Building, Blue Lagoon Drive, Miami, FL. Lead Environmental Engineer to complete a soil, methane gas and groundwater site assessment report (SAR) for the location of a former unpermitted landfill and waste disposal area. The purpose of the SAR was to redevelop the 8- acre site for 5-story Class A office building and a 4-story parking garage. Upon completion and approval of the SAR by the regulators, a remediation plan consisting of soil removal for the open areas and a methane gas mitigation plan for the office building and the parking garage was prepared for approval from the regulators. The construction of the building and parking garage was completed under the direction of the lead engineer in June 2018. The entire project was approved by DERM in September 2019. AECOM is currently conducting operations, monitoring and maintenance activities for the site.

Luis Smith, CIH, CIEC, FLAC

Health & Safety Manager / Asbestos, Mold & Lead Based Paint Lead

Key expertise
Industrial Hygiene
Health and Safety
EHS Audits
Indoor Air Quality
Mold Assessment & Remediation
Asbestos Sampling & Surveys
Lead Paint Assessment & Control
Radon Sampling & Mitigation

Education
BS, Environmental Science, University of Massachusetts at Amherst, 1988

Years of experience
13 with AECOM | 31 Total

Training
40-hour OSHA 1910.120 HAZWOPER
8-hour OSHA 1910.120 HAZWOPER Annual Refresher
10-hour OSHA Construction Industry Outreach Training
OSHA 511 General Industry
Basic Incident Command
DOT Hazardous Materials Shipping (HM172)

Registrations/Certifications
Professional Geologist: FL #1560, NC #1372, TN #3707, VA #2801000993
Registered Environmental Property Assessor #6029
Licensed Environmental Professional #148
Certified Hazardous Materials Manager #9231
AECOM Certified Project Manager

Luis is a Certified Industrial Hygienist (CIH) with 31 years of experience providing industrial hygiene consulting services to a diverse group of clients including: government, utilities, military, health care, insurance, construction, property developers, property managers, legal, manufacturing, pharmaceuticals, automotive, etc.

Professional history

Luis specializes in the indoor air quality practice and has extensive experience performing microbiological assessment and remediation projects involving fungi, bacteria, arthropods, algae, etc. Luis also provides health and safety consulting services and has completed compliance audits at various types of facilities.

Select project experience

City of Miami, Miami Police Central Station– Miami, FL. Conducted a water damage assessment throughout the 1st floor gymnasium and locker room areas following a sewage backflow caused by a lift station pump failure. Prepared a remediation work plan to identify the extent of damaged materials and provided recommendations for removal and replacement. Limited bulk sampling of asbestos was also performed to assess the potential presence of asbestos in the building materials scheduled for replacement.

City of Miami, Curtis Park Ambient Air Monitoring – Miami, FL. Developed an air monitoring plan to identify and evaluate potential airborne hazards during excavation and removal of heavy-metal impacted topsoil at playground area where toxic ash had been dumped. Directed field staff to collect ambient air samples and field data. Monitoring was performed for particulate matter <10 microns in diameter (PM10) and total suspended particulate matter (TSP) including lead and various other heavy metals. Provided oversight of contractor activities and conducted personal exposure monitoring for contractor employees.

Fern Isle Park Pre-Demolition Asbestos Survey, City of Miami, Miami, FL. Responsible for providing pre-demolition asbestos survey of various park structures scheduled for demolition including visual inspection and bulk sampling for suspect asbestos-containing materials. Prepared survey report to document findings, conclusions, and recommendations of survey submitted to local regulatory agency for approval.

City of Miami, Miami Police Central Station and Special Operations Section, City of Miami, FL. Conducted limited pre-renovation asbestos surveys at both facilities prior to planned renovations involving flooring upgrades. The surveys included visual inspection and bulk sampling for suspect asbestos-containing materials.

Broward County North Regional Courthouse, Deerfield Beach, FL. Investigated a 194,000 square foot courthouse facility in response to employee and occupant complaints. The investigation included inspection of multiple air handler units serving the site including some that were installed in the 1970s.

Indoor environmental testing identified high relative humidity conditions throughout the facility due to uncontrolled amounts of fresh air ventilation being delivered. Mold growth was also identified in some areas due to leaks in the building envelope.

Broward County Risk Management, Indoor Air Quality Investigation at N. Regional Courthouse, Deerfield Beach, FL. Technical lead responsible for conducting a comprehensive assessment of the facility, including the HVAC system, to identify potential sources and pathways of poor air quality. Performed testing and data logging of general air quality parameters, including temperature, relative humidity, carbon dioxide, and carbon monoxide. Provided various recommendations to improve building and air quality conditions.

SR93 / I-75 ITS Hub Building (FM 421707-4) Miramar, FL, FDOT District 4, Districtwide, FL. Oversaw mold remediation activities in Hub Building, including isolating mold impacted area, implementing air filtration equipment, removing impacted material, HEPA vacuuming, and wet wiping. Conducted outdoor air sampling and post-remediation sampling inside the building and recommended adjustments to temperature and humidity controls of air conditioning units to prevent future mold.

Private Chemical Blending Facility – Quincy, FL. Conducted a comprehensive ISO 14001 and ISO 45001 environmental health and safety audit of a chemical blending facility that manufactures various chemicals for use in cleaning and maintenance of HVACR equipment. Performed an initial gap analysis of existing programs and records to establish a high-level regulatory baseline and provide recommendations for future program changes. Later performed a deep-dive review of available EHS program records including employee training matrices.

Asbestos Inspection and Abatement, Orlando Utilities Commission, Orlando, FL. Technical lead responsible for conducting inspection and sampling of electrical breakers and switchgear at various substations for the presence of asbestos-containing materials (ACM). Performed asbestos abatement and disposal through a subcontractor and provided oversight and coordination of the work.

Hazardous Materials Survey, US Air Force, Tampa, FL. Technical Lead. Conducted a survey of Building B58 at MacDill Air Force Base to identify and quantify hazardous materials in the interior and exterior including asbestos, lead in paint, and universal wastes (e.g. fluorescent light bulbs, light ballasts, thermostats) to address special handling and disposal requirements prior to demolition. Also prepared abatement specifications to describe project requirements and obtain competitive bids.

Hazardous Materials Survey, US Navy, Jacksonville, FL. Technical lead responsible for conducting a survey of Building B840 at the Naval Air Station to identify and quantify hazardous materials in the interior and exterior of the building including asbestos, lead in paint, and universal wastes (e.g. fluorescent light bulbs, light ballasts, thermostats) to address special handling and disposal requirements prior to demolition. Also prepared abatement specifications to describe project requirements and obtain competitive bids.

Emergency Asbestos, Mold, and Lead Testing, Naval Facilities Engineering Command, Various Facilities - Key West and Jacksonville, FL. Technical lead responsible for conducting visual assessment and moisture mapping of structures that were damaged by Hurricane Irma to identify the scope of work for mold remediation. Conducted bulk sampling for asbestos and lead in paint to assess their potential presence prior to initiating remediation activities. Conducted post-remediation inspection and spore trap air sampling to assess air quality conditions following remediation.

Babu Madabhushi, PhD

QA/QC / Sediment Dredging & Remedial Design Team

Key expertise
Sediment Dredging
Soil and Sediment Assessment
Contamination Assessment
Remedial Investigation and Feasibility Studies

Education
PhD, Hazardous Waste, Management, West Virginia University, 1997
MS, Wastewater Treatment, Indian Institute of Technology, 1993
BS, Civil Engineering, Kakatiya University, 1988

Years of experience
19 with AECOM | 25 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher

Certifications
AECOM Lead Verifier - In Situ Bioremediation
Certified Project Manager

Babu has 25 years of experience in conducting and managing environmental engineering projects. He served as local quality manager for AECOM's Miami office and he is one of AECOM's quality lead verifiers in the state of Florida.

Professional history

Babu was instrumental in the AECOM Miami office acquiring ISO-9001 certification. His technical expertise is in the areas of sediment dredging, soil and sediment assessment, contamination assessment, remedial investigation and feasibility studies, soil and groundwater remediation, bioremediation, and operation and maintenance of remedial systems. Babu is extremely knowledgeable of FDEP and USACE regulations and standards. He coordinated with FWC during the dredging projects at Flamingo Marina, Everglades Marina, and the Wagner Creek and Seybold Canal dredging projects, where he was involved in obtaining permits and the execution of dredging activities.

Select project experience

Wagner Creek and Seybold Canal Restoration Project, City of Miami, Miami, FL. Deputy project manager responsible for assisting with the design and implementing the mechanical dredging operations to remove contaminated sediments from what has been known as Florida's most contaminated waterway. Also oversaw construction quality to ensure compliance with permit conditions.

Former Homestead Air Force Base Remediation, US Air Force, Homestead, FL. Served as the Deputy Project Manager that executed the assessment and remedial activities for a performance-based remediation contract at the former Homestead AFB. The sites are contaminated with petroleum compounds, chlorinated solvents, and arsenic. Services include remedial investigation, remediation enhancements, contaminated soil removal, and in-situ soil and groundwater remediation.

Secondary Canal Sediment Sampling, South Florida Resource Conservation and Development Council, Inc., Miami-Dade County, FL. Project manager and project engineer responsible for the sampling and characterization of sediment from approximately 50 secondary canals.

Performance-Based Remediation, Homestead Air Force Base, Homestead, FL. Responsible for assisting project manager and serving as QA/QC manager for performance-based remediation contract project to obtain unrestricted closure of four sites at former Air Force Base.

Former Eaker Air Force Base Remediation, US Air Force, Blytheville, Arkansas. Served as the Project Manager that oversaw the assessment and remedial activities for a performance-based remediation contract at the former Homestead AFB. The sites are contaminated with petroleum compounds, chlorinated solvents, and arsenic. Services include remedial investigation, remediation enhancements, contaminated soil removal, and in-situ soil and groundwater remediation.

Marina Dredging, Everglades National Park, FL. QA / QC manager and assisted with design and implementation of mechanical dredging operations to remove very fine sediments from the Everglades City Marina.

Opa Locka General Aviation Airport Building 119, Miami-Dade Aviation Department, Miami, FL. Served as the Project Manager that oversaw source removal activities conducted on an expedited schedule. Michael was also involved in the site assessment comprising soil and groundwater to delineate the extent of petroleum and metals contamination.

Miami-Dade Aviation Department, Opa Locka General Aviation Airport Building 147, Miami, FL. Served as the Project Manager that oversaw source removal activities conducted on an expedited schedule. Michael was also involved in the site assessment comprising soil and groundwater to delineate the extent of cadmium and PAH contamination.

Solid Waste Landfill, Miami-Dade County Solid Waste Landfill, FL. Assistant project manager for the Miami-Dade County Solid Waste Landfill.

Wal-Mart Superstore Brownfields Site Assessment and Cleanup, US EPA/FDEP, Inverness, FL. Project environmental engineer for the Wal-Mart Superstore Brownfields Site Assessment and Cleanup.

Blue Lagoon Post Office Site Assessment, Remediation, and Methane Collection System, US Postal Service, Miami, FL. Served as the Senior Site Superintendent for contamination assessment at a facility constructed over a filled-in canal. Work included soil and groundwater remediation activities and methane gas collection system design and monitoring. Currently, AECOM is performing the methane gas monitoring.

Operation and Maintenance Of Treatment Systems, FAA William J. Hughes Technical Center, Atlantic City, NJ. Remediation engineering task leader for operation and maintenance of treatment systems for CERCLA Superfund site (approximately 5,000 acres) at Areas B, D, 20A, 29, and 41. Also served as QA/QC Manager and Lead Verifier of the data and the reporting.

Other project includes:

- Assistant Project Manager, Miami-Dade County Solid Waste Landfill, FL
- Project Environmental Engineer, Wal-Mart Superstore Brownfields Site Assessment and Cleanup, (USEPA/FDEP), Inverness, FL
- Miami-Dade Aviation Department, Northwest Cargo Area, Miami, FL
- US Postal Service, Blue Lagoon Post Office Site Assessment, Remediation, and Methane Collection System, Miami, FL
- Miami-Dade Aviation Department, Miami International Airport and Opa Locka General Aviation Airport, FL

Kathryn Eisnor, LEP

Phase I, II & III Assessment Team

Key expertise
Contamination Investigations
Phase I and Phase II Environmental Site Assessments
Contamination Assessment Investigations
Soil and Groundwater Remediation
NEPA

Education
Indian Country Environmental Hazard Assessment, United Tribes Technical College, 2012
BS, Earth Sciences, Dalhousie University, 2002

Years of experience
2 with AECOM | 15 Total

Training
40-Hour OSHA HAZWOPER
8-Hour OSHA HAZWOPER Refresher
8-Hour OSHA Site Supervisor
8-Hour Incident Commander
24-Hour Emergency Response Technician
RTA Contractor Safety
FDEP Stormwater Sediment Erosion Control Inspector and Instructor
USACE Jacksonville District, Regulatory Division Federal Wetland Delineation and Jurisdiction
Excavation and Trenching Safety

Registrations/Certifications
Licensed Environmental Professional: FL #370
CPR / First Aid
FEC Roadway Worker Protection Certification

Kathryn is a geologist with 14 years of environmental industry experience.

Professional history

Kathryn has managed and executed a wide variety of multi-faceted environmental projects, including Phases I and II environmental site assessments; emergency response and clean-up of petroleum and other hazardous substances; indoor air quality assessments, safety training, and industrial hygiene evaluations, including noise studies, odor complaint evaluations, site assessment, remediation, and redevelopment of contaminated properties; NEPA evaluations for various federal agencies (US EPA, U.S. Bureau of Indian Affairs (BIA), U.S. Department of Housing and Urban Development (HUD), U.S. Department of Transportation, U.S. Indian Health Services (HIS), U.S. Fish and Wildlife Service (US FWS), and US ACE); management and oversight of mold assessment and remediation in hotels and commercial buildings, and residential mold remediation; and asbestos inspections for due diligence, demolition, and asbestos hazard emergency response act (AHERA) inspections in schools.

Select project experience

Contamination Assessment and Remediation (CAR) Contracts BDY43, District 4, Districtwide FL. Conducted projects under the FDOT District 4 contamination, assessment, and remediation contract, the NPDES contract, and the environmental services contract. Project components included construction oversight / management, initial site investigations, FDOT NEPA compliance services, soil and groundwater assessments, delineation, soil and groundwater remediation, UST and hydraulic lift removal, coordination with regulatory agencies, and reporting. Responsibilities have included:

- Conducted field reconnaissance, including interviews and photo documentation; FDOT plan reviews; and research and review of numerous FDOT, state, and municipal databases (e.g. FDOT ETDM database) to address environmental, physical, natural, social and cultural, and biological aspects potentially affecting projects, in accordance with NEPA regulations for FDOT District 4.
- Prepared ID Features Memo using ETDM / EST database, EIR Checklist, FDEP databases, and other relevant databases, combined with field review.
- Produced and reviewed aerial site plans using ArcView GIS software to facilitate field reconnaissance and for inclusion into FDOT District 4 reports.
- Participated in valuation engineering study with multi-disciplinary team to analyze function, process, system, and design of projects and evaluate methods to reduce costs and improve performance and quality.
- Supervised surveying and sampling of numerous FDOT District 4 bridges for asbestos-containing materials in accordance with national emission standards for hazardous air pollutants. Conducted numerous bridge survey report reviews for FDOT District 4.
- Conducted Phases I and II assessments for three FDOT District 4 hazardous waste cleanup contracts.

- Provided support as environmental consultant for District 4, performing environmental, contamination, permit, and report reviews.
- Conducted NEPA evaluations to support work program, conducting project reevaluations, creating RFP language, and reviewing PD&E documents (contamination screening evaluation reports, cultural resource assessment surveys, endangered species biological assessment reports, wetland evaluation reports, etc.). Supported projects related to developing alternative sea turtle lighting standards, wetland mitigation, and endangered species, and other projects as requested by Planning and Environmental Management Office.
- Conducted NPDES inspections throughout FDOT District 4 to comply with FDOT MS4 Permit requirements and completed reporting requirements for inspections. Assisted with development of database for outfall inventory in FDOT District 4 using previous inspections, GIS, and Google Earth Pro to locate outfalls and provide information where available on each outfall, stormwater facility, pond, and/or french drain in the system.

Environmental Assessment, Fee-To-Trust Application, Seminole Tribe, Nationwide. Project manager for Environmental Assessment to support Tribe decision to place previous fee property into trust under BIA fee-to-trust application process. Environmental Assessment included information from multiple Tribe departments and answers to several rounds of questions asked by BIA from previous submittals of environmental assessment. area is a highly environmentally sensitive area of Florida, a recharge area of the Floridan aquifer, and development in the area is restricted. Area has rich Seminole history and artifacts were found on the property. environmental assessment was accepted by BIA and project is now in Trust and part of the Tribe's Reservation.

Various NEPA Compliance, Various Clients, Statewide, FL. Project manager for more than 400 NEPA compliance documents for residences, businesses, and tribal infrastructure (office buildings, schools, water/wastewater facilities, roads, and a cemetery). Compliance mainly addressed BIA 516 DM chapter 10 and 59 IAM 3-H. Also performed NEPA compliance for US EPA, IHS, FEMA, US FWS, US ACE, and HUD. Responsible for gathering information pertinent to each project and writing and reviewing final document before submission to agency for approval. In addition, conducted government to government assessments and meetings with various state (FDOT, SFWMD, FDEP) and federal agencies (US ACE, IHS, US FWS, US EPA) regarding projects on and off Reservation properties.

Matthew Holbrook, PG

Phase I, II & III Assessments Team

Key expertise
Groundwater and Soil Contamination Remediation
Assessment and Investigations
Tank Closure

Education
MS, Geological Sciences (Hydrology), Ohio University, 1992
BS, Geology, Franklin & Marshall College, 1989

Years of experience
23 with AECOM | 23 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher

Registrations/Certifications
Professional Geologist: Florida #2165

Matthew has 23 years of experience with soil and groundwater assessment and remediation projects. He has prepared initial remedial action, tank closure, contamination assessment, remedial action, monitoring only, and no-further-action reports and compiled data for petroleum-contaminated and nonpetroleum-contaminated sites in accordance with FDEP requirements for various clients He has also performed sampling and evaluation of groundwater and soil remediation systems, including system sampling, calculation of groundwater and air flow rates, and evaluation of system performance.

Professional history

Matthew has performed aquifer pumping tests using direct-reading and remote telemetry-enabled data logging equipment to evaluate local aquifer characteristics, and to assist with design of groundwater pump and treat systems. He has also evaluated influence of tides, regional groundwater table fluctuations, and local geology on raw pump test data. Matthew has participated on projects located in Miami-Dade, Broward, Palm Beach, Martin, St Lucie, Okeechobee, DeSoto, and Indian River counties in Florida.

Select project experience

District Wide Contamination Assessment and Remediation Services Contract BDY43, Florida Department of Transportation District 4, Districtwide, FL. Participated in multiple Level II contamination impact assessments for major FDOT roadways in South Florida, including I-75, I-95, I-595, US 1, and US 441. Work has included: project planning and budgeting, review of regulatory records, field reconnaissance and underground utility locates, oversight of subcontractors and field staff, sampling of groundwater and soil, preparation and review of project deliverables and invoices, and interaction with representatives of FDOT District 4.

Turnpike-Wide Spill Response, Contamination Assessment and Remediation Services Contract BE266, Florida Department of Transportation, Florida's Turnpike Enterprise, Districtwide, FL. Participated in multiple Level II contamination impact assessments and asbestos and metal-based coatings surveys for bridge projects for Florida's Turnpike Enterprise. Work has included: preparing project proposals, project planning and budgeting, review of roadway design documents, oversight of subcontractors and field staff, preparation and review of project deliverables, and interaction with representatives of Florida's Turnpike Enterprise.

Petroleum Restoration Program Contract GC 834 – South Region, Florida Department of Environmental Protection, Region Wide, FL. Prepared cost / scope proposals and change orders for multiple sites in Miami-Dade, Broward, and Palm Beach counties. Oversaw petroleum assessments in soil and groundwater, implementation of groundwater natural-attenuation monitoring plans, and preparation of site closure reports for state-wide petroleum clean-up sites.

Miscellaneous Environmental Engineering Services Contract RFQ No. 14-15-027, City of Miami, FL. Participated in preparing proposals and project budgets, overseeing field staff and subcontractors and preparing and reviewing project deliverables for the City's projects at Blanche Park, Bayfront Park, Grapeland Park and the City's ongoing NPDES Outfall stormwater sampling programs.

Virginia Key Landfill Tidal Influence Survey and Aquifer Pump Tests, Miami-Dade County Department of Environmental Resources Management, Miami-Dade County, FL. Assisted the project management and field staff in the setup, calibration, programming and operation of dataloggers for collection of tidal survey data and step-drawdown and constant flowrate pump test data for a shallow aquifer at the former landfill site. As part of a follow-up pump test, setup remote telemetry dataloggers for continuous real-time monitoring of chlorides and total dissolved solids under steady pumping conditions over several weeks. Assisted the project team in converting raw pump test data into EXCEL and TXT formats ready for use in modeling the design for a proposed groundwater pumping remedial system.

Soil and Groundwater Assessments NW 170th Street Interchange, FDOT Florida's Turnpike Enterprise, Hialeah, FL. Prepared proposals and change orders, project scope and budgets, oversaw field staff and subcontractors for the advancement of 10 soil and groundwater sampling locations adjacent to a closed landfill in NW Hialeah. Reviewed field and laboratory data and prepared Level II Impact to Construction Assessment reports.

Soil and Groundwater Assessment Vineland Road Exit Ramp, FDOT Florida's Turnpike Enterprise, Orlando, FL. Prepared proposal and change orders, project scope and budgets, oversaw field staff and subcontractors for the advancement of 11 soil and groundwater sampling locations in and adjacent to a truck repair facility located adjacent to east side of Turnpike at Vineland Road. Reviewed field and laboratory data and prepared Level II Impact to Construction Assessment report.

Soil and Groundwater Assessment Braddock Road Interchange Improvements, FDOT Florida's Turnpike Enterprise, Auburndale, FL. Prepared proposal and change orders, project scope and budgets, oversaw field staff and subcontractors for the advancement of 9 soil sampling locations and 6 groundwater sampling points along Braddock Road. Reviewed field and laboratory data and prepared Level II Impact to Construction Assessment report.

Ed Leding, PG

Phase I, II & III Assessments Team

Key expertise
Construction/Project Management
Contamination Assessment
Environmental Studies
Environmental Engineering
Environmental Impact Assessment Studies
Environmental Science
Hydrology/Hydrographic Surveying
Municipal Solid Waste
Pollution Consulting/Monitoring
Risk Assessment
Sampling

Education
MS, Geology, Unviversity of Arkansas, 1985
BS, Biology, University of Oklahoma, 1981

Years of experience
21 with AECOM | 31 Total

Training
40 Hour HAZWOPPER with current Annual 8 Hour Refresher

Registrations/Certifications
Professional Geologist: FL #PG1292
AECOM Certified Project Manager

Ed is a Florida Professional Geologist with over 30 years of environmental experience. Ed joined AECOM in February 1999 as a Senior Geologist. His responsibilities include managing projects and providing technical support on environmental audits, site assessments, and remediation projects throughout South Florida.

Professional history

Ed's experience includes providing technical design and support for remedial actions to abate soil and groundwater impacts from petroleum products, pesticides/herbicides, metals and solvents and evaluating current environmental impairment and potential environmental liability of a property prior to purchase. Other project management duties involve the operation and maintenance oversight of soil and groundwater remediation systems, optimizing systems to expedite remediation and site closure, oversight of underground storage tank removals, closures and compliance, cost estimates and oversight of project budgets. Ed has managed environmental contracts for clients such as Broward County Aviation Department, The Seminole Tribe of Florida, Broward County, School District of Palm Beach County (District), for Palm Beach County Facilities Development and Operations, and the South Florida Water Management District.

Select project experience

Hydrological Evaluations, Palm Beach County Solid Waste Authority Palm Beach County, FL. Project manager and technical reviewer for the LevelTROLL® units installed at Park Ridge Golf Course as well as the two pressure transducers installed in the East Lake and West Lake. Provided quality review for the reported data and data interpretation. Provided support for the Aqua TROLL® dataloggers and BaroTROLL® units installed at the Dyer Park site and Site 7 (Renewable Energy Park) site. Technical review for Aqua TROLL® dataloggers and BaroTROLL® data collected from the Lantana Sanitary Landfill site. Historically provided technical review for the former Cross State Landfill which was abandoned in 2015.

Environmental Monitoring/Permitting/ Regulatory Services / Broward County Landfill, Broward County Landfills - Hollywood Yard Trash Landfill –Broward County, Hollywood, FL. Senior project geologist to complete a semi-annual post-closure surface and ground monitoring of this former Class III landfill that was operated by the City. The landfill was originally permitted in 1979 by Broward County and the State of Florida Department of Environmental Regulation and was initially filled with pitrock dredged from a nearby lake before any brush was deposited. In 1992 it was used to dispose of debris generated from Hurricane Andrew and was subsequently closed in 1995 under a State permit. The landfill is currently regulated by Broward County under a post-closure/long-term care permit under the requirements of Chapter 62-701, Florida Administrative Code. AECOM provided permitting services for renewal of the landfill permits issued by the Florida Department of Environmental Protection and Broward County Environmental Protection and Growth

Management Department. The permits were issued in late 2015 and early 2016. AECOM generates a Biennial monitoring report in accordance with Florida Administrative Code Rule 62-701.510(8)(a) and 62-701.510(8)(b) for the Broward County Solid Waste and Recycling Services (SWRS) Class I Broward County Landfill (BCL).

Broward County Aviation Department, Broward County, FL. Project Manager: Since 2008, AECOM Technical Services, Inc., (as URS), has provided environmental consulting for Broward County Aviation Department (BCAD) on a work authorization basis through the Broward County Qualified Vendor List for Environmental Consultant Services. In 2015, working with BCAD and the Florida Department of Environmental Protection (FDEP), AECOM negotiated a Memorandum of Agreement (MOA) for the Fort Lauderdale-Hollywood International Airport. Other services provided to BCAD include but are not limited to Baseline Exit closures, Phase II ESAs, Site Assessments, Remedial Action Plans, Remedial Actions, Compliance Inspections, Rapid Response, and Peer Reviews.

Palm Beach County Facilities Development and Operations – Site Assessment at Fire Rescue Training Facility, West Palm Beach County, FL. Project Manager: Manager for the Site Assessment at the Palm Beach County Fire Rescue Training Facility. Performing an assessment per Florida Administrative Code Chapter 62-780 for Per- and Polyfluoroalkyl Substance (PFAS) impacts to the soil and groundwater at the fire training area. The assessment consists of advancing 25 soil borings, the collection and analysis of 57 soil samples for PFAS. The installation of four groundwater monitor wells and the collection of groundwater samples for analysis of PFAS. Formulation of a Site Assessment Report per FAC Chapter 62-780. The field staff completed inhouse AECOM PFAS training prior to implementing field work. The assessment is ongoing.

Seminole Tribe of Florida, Hollywood, FL. Project Manager: Manager for the removal of five, 4,000-gallon underground storage tanks (USTs) at a site located in Hollywood, Florida. Over 89 tons of petroleum impacted soils were also excavated and transported offsite and disposed.

Implemented Initial Remedial Action (IRA) by installing an air-sparge system and conducting one week of air-sparging activities. Following the UST removals and IRA implementation the site was restored to match the surrounding area. To evaluate the extent of potential impacts, two temporary monitor wells were installed and sampled for petroleum constituents. The groundwater samples did not indicate the presence of petroleum constituents above applicable state standards. The Tank Closure Assessment recommending “: No Further Action” and Initial Remedial Action report was submitted to Broward County for review. As requested by Broward County two quarters of groundwater monitoring were conducted, after which AECOM requested an NFA which was approved.

Fernando Navarrete, PhD, PE

Engineering Service Lead

Key expertise
Water Reources
Water Rehabilitation/Improvements
Construction Mangement Services

Education
PhD, Ocean Engineering, Florida Atlantic University, 2001
BS, Civil Engineering, UNAM-Mexico, 1991

Years of experience
18 with AECOM | 26 Total

Training
CPR / First Aid

Registrations/Certifications
Profesoinal Engineer: Florida #69999
AECOM Certiied Project Manager
AECOM Lead Verifier – Water Resources

Fernando has 26 years of experience in water resources projects design including water and stormwater rehabilitation projects, hydraulic and hydrologic modeling, groundwater modeling and monitoring, stormwater management, and complete design of water resource projects. Some his clients include the SFWMD, FWC, Broward County, FPL, City of Oakland Park, and City of Miramar.

Professional history

Fernando has 26-years of experience in design and project management of complex large water resources projects. His experience includes water resource projects from conceptual design to construction certification. More specifically his experience includes; hydraulic and hydrologic modeling, groundwater modeling and monitoring, design and project management of Stormwater Treatment Area (STAs) including the modeling of the manmade wetlands (STAs) and the design of small and large pump stations, levees canals and water control structures.

In addition to his design experience he has been the engineer or record as well as the project manager for construction management services of water resources restoration projects. The combination of design and field experience allows Fernando to provide input to solve time critical issues that arise during design and construction.

Select project experience

South Florida Water Management District, STA 1W – Expansion #2 Project, FL. Project manager for the design of the project including: Topographic Surveys, Geotechnical exploration, 1D and 2D H&H modeling of the complete system, Geotechnical Analysis, Hazard Potential Classification, and Freeboard Analysis. The AECOM team is currently working on the intermediate and final design of the Stormwater Treatment Area (STA) including the design of a 5.5 connection canal, inflow, spreader, collection and outflow canals, culverts, spillways, gates and weirs. The project also includes the complete design of two Inflow pumps stations (500 cfs and 600 cfs each) one outflow pump station (625 cfs); and a 40 cfs seepage pump station.

Water Main and Storm Drainage Improvements for the Bid Package #11, City of Oakland Park, FL. Lead senior engineer providing, design and construction management services for utility improvements for Bid package # 11. The improvements included watermain replacement and relocation, sanitary sewer installation and the rehabilitation of the storm water management system. The objective of the utility improvements was to abandon old undersized watermains and to improve the storm drainage system to relieve areas of localized flooding without interrupting utility service.

Water Main and Storm Drainage Improvements for the Bid Package #8, City of Oakland Park, FL. Project Manager for the construction management services for utility improvements for Bid package # 8. This ongoing project was given to AECOM due to the good performance on the Bid Pack #11 job. The project includes the watermain replacement and relocation and the rehabilitation of the stormwater management system. The addition of sidewalks and refurbishment of one lift station.

Lakeside Ranch Stormwater Treatment Area (South), SFWMD, FL. Dr. Navarrete is currently the Project manager for the construction management services for the construction of the second phase (south) of the Lakeside Ranch STA which includes five (5) stormwater treatment cells, inflow and outflow control structures, cast-in-place concrete culverts and over 9 miles of interior and exterior levees.

Lake Placid Scrub Unit Hydrologic Assessment, Highlands County, FL. Project manager for the hydrologic and hydraulic analysis of the Lake Placid Scrub Unit (LPS) for the Florida Fish and Wildlife Conservation Commission (FWC). Different potential restoration alternatives were evaluated to determine the potential improvement of impaired depressional wetlands and groundwater seepage communities. The EPA's Storm Water Management Model (SWMM) was used for the analysis A second analysis was conducted to reduce the erosion along two unpaved access roads in the LPS due to stormwater flows. Currently. The AECOM team proceeded with the design and permitting for the hydrological restoration alternative selected.

Bayfront Park Corrective Action Design, city of Miami, FL. Lead civil engineer for the design of soil replacement and mixing for the reduction and elimination of contaminated soils in Bayfront Park, and Engineer of Record for the construction.

Compartment C Buildout Project, SFWMD, FL. Lead civil engineer for the basis of design report and associated preliminary studies including the following: H&H modeling, water availability evaluation, DMSTA analysis, Hazard Potential Classification, and Freeboard Analysis. Subsequently led the design of the Stormwater Treatment Area including the detailed H&H modeling for the complete system; design of canals, culverts, levees, gates, weirs, and all civil aspects; design of a 100-cfs hydration pump station; and coordination of all design disciplines. Also managed the civil design of the G-508 Major Pump Station (2,100-cfs) and a 75-cfs seepage pump station including canals, levees, and all civil aspects.

Deering Estates Flow Way Pump Station, SFWMD, FL. Participated in the design of the Deering Estate project, which included the construction of a ¼ of a mile of extended canal to a new 100-cfs pumping station, installation of a 60-inche discharge pipe with under-road crossing of Old Cutler Road and an outlet spreader structure. The project also included the construction of 2-acres of educational man-made wetland. Fernando also served as the Engineer of Record (EOR) for the Engineering During Construction.

Gino Mora

Engineering Services – Stormwater Lead

Key expertise
Civil Engineering - Infrastructure Design and Drafting
Construction Management and Inspection

Education
BS, Civil Engineering, Florida Atlantic University, 2015
MS, Civil Engineering, Florida Atlantic University, 2018

Years of experience
5 with AECOM | 8 Total

Registrations/Certifications
FDEP Qualified Stormwater Management Inspector, October 2018

Gino's background includes experience working on a variety of large and complex utility and infrastructure improvement projects performing design and construction engineering inspection.

Professional history

Gino's experience includes civil engineering design, technical specification development, regulatory permitting and construction management/inspections for large utility improvement projects for municipalities, encompassing roadway, stormwater drainage, water main and sanitary sewer improvements. The combination of design experience and field experience allows Mr. Mora to provide input to solve issues that arise during construction in a timely manner. Some elements include water and wastewater distribution and collection system, paving grading and drainage plans, levees and water control structures, preparation of construction drawings and details, contract bid documents and technical specifications. His construction experience has been related to municipal infrastructure and surface water management infrastructure.

Select project experience

STA 1W Expansion #2 Project - Pump Stations and Stormwater Treatment Area, South Florida Water Management District (SFWMD), FL. Staff Engineer. This project consists of approximately 1,800 acres of STA expansion to the existing STA-1W located within Palm Beach County. The project includes the construction of three new STA cells, a 6-mile concrete lined connection canal, perimeter and interior levees, canals, structures, culverts, boat ramps, and maintenance ramps. Structures include one fixed divide weir to balance flows among the cells and 11 control structures to regulate flows within the STA treatment cells. Inflow and outflow control structures are double barrel reinforced concrete box culverts with slide gates, control buildings, platform mounted stilling wells, and include electrical and remotely operated telemetric control. Project also includes construction of Florida Power & Light (FPL) tower pads and access ramps at all FPL transmission poles and installation of FPL Distribution. Gino's responsibilities include reviewing and preparing technical specifications as well as design drawings.

Bid Pack #8 Infrastructure Improvements: East Zone South of Park Lane East Project, City of Oakland Park, FL. Design Engineer and Inspector. The objective of this infrastructure improvement included water main replacement, sewer force main replacement, rehabilitation of Lift Station B-1, drainage improvements, sidewalk installation, and asphalt overlay. The proposed drainage improvements included the construction of new stormwater conveyance system piping networks and exfiltration trenches along NE 16th Ave, as well as modifications of the existing conveyance that discharge into the existing interconnected lakes and canals. The water main replacement consisted of replacing 18,429 linear feet of existing two (2) inch diameter, four (4) inch diameter and six (6) inch diameter water mains with six (6) inch diameter or eight (8) inch diameter water mains. Mr. Mora responsibilities included reviewing design documents and drawings, conducting construction engineering inspections, and assisting the Engineer of Record (EOR) with the preparation of the closing documents and drawings.

Historic Miramar Infrastructure Improvements Phase III, City of Miramar, FL. Resident Inspector. The objective of this infrastructure improvement project was to replace undersized water mains that were nearing their expected useful life, provide a higher level of sanitary sewer service, improve the storm drainage system to relieve areas of localized flooding while minimizing interruptions to existing services, as well as milling and resurface of FDOT and city roads. The project includes a new lift station, the installation of 32,555 linear feet of sewer main, 48,597 linear foot of water main, and 7,592 linear feet of storm drainage between solid and exfiltration trench. Mr. Mora responsibilities included performing construction engineering inspections and coordination with the Engineer of Record (EOR) relating to submittals and RFIs, submittal of daily reports, review and approval of the Contractor's monthly pay requests.

Bid Pack #11 Water Main and Drainage Improvements, City of Oakland Park, FL. Design Engineer and Resident Inspector. The objective of this water main and drainage improvement project was to replace/upgrade approximately 10,300 linear feet of existing two (2) inch diameter water main with six (6) inch diameter or eight (8) inch diameter water mains. In addition, approximately 1,064 linear feet of new exfiltration trenches, 2,635 linear feet of HDPE drainage pipes sized between 18- and 24-inch diameter, and 131 linear feet of 24-inch diameter RCP. Gino participated in the design and drafting of the City of Oakland Park utility improvement and drainage project, as well as performing construction engineering inspections and coordination with the Engineer of Record (EOR) relating to submittals and RFIs, submittal of daily reports, review and approval of the Contractor's monthly pay requests, and preparation of project record drawings.

Lakeside Ranch Stormwater Treatment Area South, South Florida Water Management District (SFWMD), FL. Staff Engineer and Inspector. The objective of the project was to treat stormwater in order to reduce phosphorus loading to the Lake Okeechobee and the Everglades. The project and its associated structures included five treatment cells located south of the preservation area, comprised approximately 30,328 linear feet of perimeter levees and 17,442 linear feet of interior levees on a 2,700-acre parcel of land. Gino assisted with the review and preparation of reports and technical specifications, the entry of information into the South Florida Water Management District System Primavera/Expedition, as well as inspector during its construction.

Palm Beach County Solid Waste Authority - Injection Well Pump Station Design, West Palm Beach, FL. Staff Engineer. The objective of the project was to create increased reliability and redundancy for the injection well pump station, which serves the North County Landfill's Leachate, Recycling, Biosolids Palletization, and Industrial Wastewater systems. Gino participated in the analysis, design process and detailing of different structural elements. In addition, Gino contributed with the review of technical specifications of the different structural components of the project.

AAF "All Aboard Florida" from St. Lucie County (D9) to Miami-Dade County (D10), Florida East Coast Railroad, FL. Staff Engineer. This project entails the introduction of a second track along a 120-mile segment of the FEC Railroad corridor, which includes the reconstruction of approximately 260 railroad crossings, extensive utility coordination, signalization and roadway reconstruction. Gino worked with the team in charge of the production of grade crossing design. As part of this team, Gino participated in the structural evaluation, analysis and design of the different structural elements. The analysis and design were performed using finite element computer model RISA 3D software.

Daniel Baker, PE

Engineering Services – Civil Engineering Lead

Key expertise
Construction/Project Management
Design and Permitting of Large Stormwater Management
Utilities
Neighborhood Improvement

Education
BS, Civil Engineering, Florida State University

Years of experience
11 with AECOM | 14 Total

Registrations/Certifications
Professional Engineer: Florida #73169

Daniel has 14 years of engineering experience including engineering design, construction management, and construction engineering inspection. In addition to engineering design and construction management work, permitting services have been provided to support these engineering and construction projects through federal, state, and local regulatory agencies.

Professional history

Daniel's key project experience includes construction management services provided on the South Florida Water Management District's Lakeside Ranch STA South, S-140 Pump Station Refurbishment, and the Compartment C Build-out projects. Related engineering and construction services have been performed on various large- and small-scale projects including wetland and stream restorations, utility services, land development, and roadways. Construction experience includes the successful management of numerous projects simultaneously during all phases of a project with tasks required of the prime consultant from full coordination of the design team to serving as the liaison between the Owner and the Contractor.

Select project experience

Lakeside Ranch Stormwater Treatment Area STA-South, Martin County, FL. Onsite contract construction manager duties include the daily management tasks required for the construction and successful completion of five (5) new flow-ways (STA cells) leading efforts to ensure conformance with the contract drawings, technical specification, budget, schedule, and permit requirements. Responsibilities include serving as the owner's lead correspondent with the prime contractor all project coordination; management of a full service inspection team composed of one (project controls specialist, one lead inspection representative, one geotechnical technician, and various other off-site personnel to provide quality assurance for conformance with the contract documents and permit requirements; coordination with the Engineer During Construction (EDC) relating to submittals, requests for information, field orders, proposals/VEPs, and change orders; and other tasks including leading project meetings, review of change orders, review and approval of the Contractor's monthly pay requests, and preparation of monthly billing. Construction Management Services of the $35M project included quality assurance and oversight of the STA-South components including 788 acres of new flow-way, 9+ miles of levees, 10 miles of canals/ditches, 9 inflow/outflow control structures with instrumentation and control, 6 overflow spillways, 2 culvert structures, 1 discharge structure/highway crossing, 10 flow control weirs, and 7 miles of underground power distribution. A close working relationship with the District's Project Manager (DPM) and other District staff has been maintained throughout the project to provide the best completed project and service possible. A vast understanding of the project and the parties involved was obtained through current and prior related work and a proactive approach to all tasks was beneficial to the position as construction manager.

Compartment C Buildout, SFWMD, Hendry County, FL. Onsite contract construction manager duties include the daily management tasks required for the construction and successful completion of STA's 5-4, 5-5, and 6-4 for conformance with the contract drawings, technical specification, budget, schedule, and permit requirements. Responsibilities include general coordination with the Contractor; management of the inspection team which includes one administrative assistant, four inspection representatives, one engineering technician and various offsite personnel to provide quality assurance for conformance with the contract documents and permit requirements; coordination with the Engineer During Construction relating to submittals, field orders, value engineering proposals, requests for information and proposals; and other tasks including preparation for and participation in project meetings, review of change orders, review and approval of the Contractor's pay requests, and preparation of monthly billing. Construction Management Services of the $47M project included quality assurance and oversight of the Buildout components including 4,850 acres of new flow-way,

18 miles of levees, 23 miles of canals, 1-100 cfs pump station, 20 control structures, 18 miles of underground power distribution, and instrumentation & control at all 22 new structures. A close working relationship with the District's Construction Manager (DCM) and other District staff has been maintained throughout the project to provide the best service possible. Prior to serving as the Contract Construction Manager, work included daily inspection of construction activities required of a staff inspection representative. Specific inspection responsibilities included nearly 18-miles of underground MV electrical distribution system, 20 Flow Control Weirs, 9 Hydration Structures, and Levee construction. A vast understanding of the project and the parties involved was obtained and a proactive approach to all tasks was beneficial to the position as construction manager.

S-140 Pump Station Refurbishment, Collier County, FL. Assistant resident engineer and onsite owner's representative, tasks ranged from daily construction inspections and reporting, to review of shop drawing submittals, product data, requests for information, change orders, and contractor coordination. The project included the replacement of all electrical wiring and equipment including motor control for the station, replacement of three main engines including refurbishment of the associated 435 cfs pumps, and automation of the refurbished units. Daily communications with the client's project manager and field staff were beneficial to the project and improved the quality of work obtained from the contractor's team.

Light Harbor Park, Riviera Beach, FL. Project engineer and construction representative serving as the engineer of record's representative and construction manager with responsibilities including daily project management tasks, construction administration including Client and Contractor coordination, and construction engineering inspections for the first new public boat ramp facility constructed by Palm Beach County in nearly 50-years. Site development included the construction of an upland boat basin with aluminum floating docks and over 500-feet of new seawall accessed by six (6) boat launching ramps, a stormwater management system, onsite utilities including a lift station and public restroom facilities, and a parking lot to accommodate 72 boat trailers. Tasks also included design assistance, preparation of the construction drawings and details, technical specifications, bid documents, and permitting through the US ACE, USCG, FDEP, FWC, FDOT, Palm Beach County Health Department, and the City of Riviera Beach.

Phil Foster Park Multi-Purpose Building, Riviera Beach, FL. Project Engineer and Construction Representative serving as the engineer of record's representative and construction manager responsible for daily project management tasks, construction administration, construction engineering inspections, and the design to relocate existing site utilities to accommodate the addition of a new multi-purpose building to the existing Palm Beach County park. Tasks also included design and preparation of paving, grading, and drainage plans, water and sewer plans, surface water management calculations and modeling, preparation of contract documents, technical specifications, and an engineer's cost estimate, and permitting through the US ACE, USCG, FDEP, FWC, FDOT, Palm Beach County Health Department, and the City of Riviera Beach.

Harbourside Place, Jupiter, FL. Engineer responsible for preparation of hydrologic and hydraulic calculations for an environmental resource permit through the South Florida Water Management District and design assistance for a lift station to serve the 9.5-acre mixed use development. Tasks included calculations required for the preparation of a surface water management report and stormwater modeling with AdICPRv3. The project incorporated the use of a subsurface stormwater management system from StormTech. StormTech SC-740 detention chambers were used for water quality attenuation and storage. Lift station work included as-built review, permit assistance and design computations to accommodate approximately 100,000 gallons of daily sanitary flow from the development with a connection to an existing offsite force main, preparation of a lift station report, and preparation of utility permit applications for submittal to the Palm Beach County Health Department.

N.W. 12th Avenue, Boca Raton, FL. Assistant engineer for design and permit assistance for the widening of approximately 3/4 of a mile of roadway from 2-lanes to 4-lanes including addition of medians, a surface water management system, turn lanes, and bicycle lanes. Tasks also included pipe sizing calculations and modeling using ASAD, and all utility coordination including onsite inspections and meetings with utility representatives.

Ritz Carlton Stormwater Pumps, Manalapan, FL. Engineer responsible for providing design assistance for stormwater pump stations at the Ritz Carlton Hotel to alleviate localized drainage problems. Tasks included review of existing drainage system, design of two stormwater pump stations, pump station report preparation, and construction drawings and details.

Improvements to Rutherford Lane, Town of Haverhill, FL. Engineer responsible for design and construction observation for the widening of 500-feet of residential roadway including a new surface water management system within the Town of Haverhill. Tasks included civil engineering inspections (CEI) throughout construction of the project, preparation of paving, grading, and drainage plans, surface water management calculations and modeling, preparation of contract documents, technical specifications, and an engineer's cost estimate, and permitting and construction coordination through Palm Beach County Land Development Division.

Roger Williams, PE

Engineering Services – Water/Wastewater Lead

Key expertise
Water and Wastewater Conveyance
Pumping System
Tunneling/Trenchless Installations
Permittting
Utilities

Education
MS, Environmental Engineering, Florida International University, 2003
BS, Civil Engineering, Florida International University, 2001

Years of experience
14 with AECOM | 19 Total

Training
Microtunneling and Pilot tubes, Colorado School of Mines
Pressurized TBM Tunneling, Society of Mining Metallurgy and Exploration
Design and Construction of Micro-tunneling Projects, ASCE
Groundwater Flow and Transport Modeling with GMS MODFLOW

Registrations/Certifications
Professional Engineer: FL #68199
AECOM Certified Project Manager

Roger has 16 years of planning, design, permitting, construction and program management experience specializing in water and wastewater utilities, highway drainage systems, and major canal and levee earthwork projects.

Professional history

Roger has analyzed, designed, permitted and managed the construction of small and large diameter pressurized and gravity flow pipelines and tunnels ranging from 6-inches to 12-foot in diameter. His expertise has included numerous installation methods such as the traditional open cut methods and trenchless installations such as Horizontal Directional Drill (HDD), Micro-tunneling (MT) with casings, and Tunnel Boring Machine (TBM) tunnels with precast concrete segmental liners. Roger is versed in the application of various pipe materials including Ductile Iron (DI), High Density Polyethylene (HDPE), Poly Vinyl Chloride (PVC), Pre-stressed Concrete Cylindrical Pipe (PCCP), Reinforced Concrete (RC), and Fiberglass Reinforced Mortar Pipe (FRMP) materials of construction. Roger is proficient in the preparation of detailed design/construction drawings, technical specifications, and procurement documents for projects delivered through Design-Bid-Build and alternative delivery methods such as Design-Build. Roger is a member of the AWWA Technical Standards Committee for Concrete Pipe Products and Gasket Materials, and now serves as the Segment Leader for AECOM's Miami Metro Conveyance Practice.

Select project experience

72-inch PCCP Redundant Main at Preston WTP, Miami-Dade Water and Sewer Department, Miami, FL. Project manager for the design and construction of 1200 linear feet of 72-inch PCECP main along West 2nd Avenue, between 11th and 13th Streets, and the associated water, sewer, and drainage relocations. The project entailed four complex (4) interconnections to an existing active Interpace-era pipe with provisions for mitigating risks and contingency plans.

Miami Avenue 48-inch FM, Miami-Dade Water and Sewer Department, Miami, FL. Design build engineering manager for the 13,000 linear of 48-inch PCECP Force Main, 5,000 linear feet of 12-inch Water Main Improvements, 1000 linear feet of 24-inch drainage, and 72-inch Jack and bore crossing along Miami Avenue, NW 2nd Avenue, and NW 1st Avenue, between NE 36th and 8th Street Responsible for all utility design, MOT, permitting, and construction management for the accelerated project involving City of Miami, FDOT, MD-PWD, and the stakeholders of Wynwood, Design District, and MidTown.

48-inch Downtown Water Main Loop, Miami-Dade Water and Sewer Department, Miami, FL. Manager and technical lead for the detailed design, and development of Design Criteria for three Micro tunnel crossings consisting of a 72-inch steel casing and 48-inch DI carrier pipeline along NW 1st Avenue and 7th street, NW 1st Avenue and NW 12th Street, and Biscayne Blvd and NE 5th Street. Lead the efforts including alignment studies, staging plans, establishing contract work areas, and development of the Geotechnical Baseline Report.

Collier County Master Pump Station 306, Collier County, FL. Task manager and EOR for the design of 185 linear feet of 42-inch Microtunnel with steel casing containing a 24-inch PVC a carrier main under US-41, and in the vicinity of Entrance Street. Elements included: trenchless design; 20 ft. deep shafts; instrumentation and monitoring plan; and ancillary venting systems for O&M.

Design Build Criteria and Construction Management Services for the Installation of 54-inch Redundant Force Main on Washington and Euclid Streets, City of Miami Beach, Miami Beach, FL. Project manager/ construction manager for the development of design criteria, technical specifications, 30% design drawings and overall construction management for the installation of 4600 linear feet of 54-inch Redundant Force Main by micro tunneling (pipe jacking) using a minimum of three shafts, and 700 linear feet of 54-inch open cut installation. The projects were subsequently value engineered to a 3300 linear foot 54-inch outside diameter HDD which is a record drilling effort in the SE United States.

Design Build Criteria Package for the Replacement of the 54-inch Force Main and 20-inch Water Main Crossing the Government Cut and Norris Cut Channels, Miami-Dade Water and Sewer Department, Miami, FL. Project manager and design criteria engineer of record for developing the design-build criteria package for the replacement of the 54-inch-diameter force main that extends from Miami Beach to the Central District wastewater treatment plant, and the 20-inch-diameter water main between Port Island and Fisher Island. Project entails development of design criteria, technical requirements, specifications, geotechnical baseline report, engineering drawings, environmental resource permits, and acquiring the land rights to support the replacement of the water and sewer utilities via: 5300 linear ft of 9-foot diameter tunnel with pre-cast concrete segmental liners, under Norris Cut; and 900 linear feet of 60-inch Micro-tunnel with steel casing, under Fisherman's Channel; and 1200 linear feet of 72-inch micro-tunnel with casing, under Government Cut Channel; 1000 linear feet of 8-inch HDD on Fisher Island, and 2700 linear feet of 60-inch open cut installation on Virginia Key.

Corrosion Evaluation and Cathodic Protection of a 60-inch PCCP FM, Miami-Dade Water and Sewer Department, Miami-Dade County, FL. Project manager for the design of a cathodic protection system to assure 60-year service life a 60-inch PCCP main in Miami Beach that transmits raw sewerage. Project included soil analysis, stray current measurements, and design protection system, complete with specifications that consisted of bonding straps, sacrificial zinc anodes, with access for long term maintenance and operation.

NE 79th Causeway HDD Water Main Installation, Miami-Dade Water and Sewer Department, Miami, FL. Engineer of record for the acquisition of ERPs including FDEP, USACE, and DRER Class 1 to support the installation of 1100 linear feet of 30-inch HDD water main under Biscayne Bay, and the excavation and removal of 14 linear feet of existing submerged DI pipe. Led the effort that entailed performance of benthic surveys, and development of method statements, pollution prevention plans, monitoring procedures, and contingency methods, technical specifications, cost estimates associated with the project that was orchestrated in close proximity to the bay, and adjacent to wetland habitats.

Evaluation HDD Alternatives to Replace the Existing 54-inch Force Main Traversing the Government Cut Channel, Miami-Dade Water and Sewer Department, Miami-Dade County, FL. Project manager/lead engineer for the evaluation of a 9000 linear foot dual bore 42-inch diameter HDD alternative for replacing the existing 54-inch sanitary sewage force main between Miami Beach and Virginia Key, and 3300 linear foot of 36-inch HDD between Fisher Island and Miami Beach. Evaluation entailed a detailed literature review; HDD technology assessment; hydraulic analysis; installation load and geometric analysis; easement assessment; risk analysis; pricing of the scheme/methodology; and conclusively developing a final recommendation report.

South District Wastewater Treatment Plant High Level Disinfection Upgrade to 285-mgd Yard Piping, Miami-Dade Water and Sewer Department, Miami, FL. Provided construction management/oversight, inspection, acceptance testing, RFI coordination, and claims analysis services for the installation of 1144 linear feet of 120-inch Pre-Stressed Concrete Cylinder Pipe (PCCP), 642 linear feet of 108-inch PCCP, 1000 linear feet of 84-inch PCCP, and 3000 linear ft of 48-inch Ductile Iron Pipe (DIP). Other pipe materials included Poly Vinyl Chloride (PVC), High Density Polyethylene (HDPE), and steel. Oversaw the installation of ancillary pipe structures including tapings valves, relief outlets, saddles, thrust restraints, temporary bypasses, and coordinated the testing and restoration work in compliance with MDWASD specifications.

Update of Technical Specifications and Standards, Miami-Dade Water and Sewer Department, Miami, FL. Task manager for the review and update of MDWASD's existing technical specifications, design details, and construction standards, and preparation the Pre-approved Material List for various pipe materials and fittings to be utilized on developer (donation) related projects and large diameter capital improvement pipeline projects.

Dan Levy, PG

Sediment Dredging Lead

Key expertise
Sediment Dredging
Dredged Material Management
Innovative Technologies
Coastal & Freshwater Wetland Mitigation Design and Monitoring
NEPA Studies
Ecosystems Management
Program Management

Education
Graduate Studies, Computer Modeling, Florida State University, 1988
BS, Geology, Florida State University, 1984

Years of experience
17 with AECOM | 35 Total

Training
40-Hour OSHA Health and Safety
8-Hour OSHA Annual Health and Safety
8-Hour OSHA Site Supervisor Health and Safety

Registrations/Certifications
Professional Geologist: Florida #1230
Certified Hazardous Materials Manager / Master Level: #5446
AECOM Certified Project Manager

Dan is a Vice President with the AECOM Environmental Business Line and has 35 years of experience in the environmental industry. Dan's experience includes research and development of innovative treatment technologies for the prevention of Harmful Algal Blooms (HABs) and the implementation of innovative algae harvesting technology to remediate toxic algal blooms. In cooperation with the FDEP.

Professional history

Dan specializes in sediment dredging and management technologies. Dan is a Professional Geologist with first-hand experience developing innovative dredging solutions. He manages AECOM's sediment dredging operations in the SE region and has served as the Project Manager for numerous high-profile dredging projects, including Lake Okeechobee, the largest Dredging Demonstration project conducted in Florida; NSB Kings Bay; and development of innovative dredge plans to reduce the shoaling problems within entrance channel and Wagner Creek, deemed one of the most polluted waterways in Florida. Dan is also the co-inventor of the patented SEDCUT Dredge Technology for selective and strategic removal of sediments.

Select project experience

Wagner Creek/Seybold Canal, FL. Developed Alternative Dredge Plans to minimize ecological and residential impacts. Obtained permit approval from FDEP and FWC in less than 90-days.

City of Miami, Wagner Creek Seybold Dioxin Contaminated Sediment Dredging, FL. Project Manager for the $18.4M Design/Build contract to remove hazardous waste sediments to restore what has been considered the most polluted waterway in Florida. Developed three separate innovative dredge plans utilizing customized dredge equipment to minimize draft depth and use of unique water quality protection procedures, including aqua barriers, air curtains, and moon pools to prevent impacts to the downstream Outstanding Florida Waters of the Miami River and to manatees that reside in these water bodies. The existing field conditions for both Wagner Creek and Seybold Canal are unique and posed several significant logistical constraints that required extensive regulatory consultation with FDEP, FWC, USACE, and DERM to obtain approval for the innovative dredge approaches. Both waterways are tidally influence, provide refuge to manatees and are located in high-density mixed-use urban areas with failing revetments and bulkheads. Permits were received in less than 90 days.

Lake Marion Dredge Feasibility Study FL. Developed innovative dredge plan to remove over 16.5-million CY of nutrient-rich sediments from the lake. Work was performed directly for FWC.

Pilot Dredging, Lake Okeechobee, FL. Pilot Dredging ($1M / two-year project). Developed innovative dredging design to remove over 20- million-CY of sediment from the lake. Obtained approval from FDEP and FWC to conduct pilot demonstration project.

Lake Marion/Dredge Feasibility Study, FWC, FL. Technical manager for providing services that included bathymetric survey using both dual frequency and ground penetrating radar (GPR), sediment characterization, bench scale testing (column settling and jar testing), conceptual dredge plans, and development of an innovative dredge approach using in-lake capping and re-

contouring to restore the lake's water quality. Lake Marion is a 2,995-acre lake located on the Lake Wales Ridge (Central Florida). The lake has over 16.5-million CY of organic sediments that are responsible for declining water quality and transitioning the lake to a eutrophic status. The innovative dredge plan was shown to provide over $50M in cost savings over conventional dredging and was accepted by the FWC as the preferred alternative.

NSB Kings Bay Alternative Dredge Design, NAVFAC-Southeast, GA. Project director for the development of an alternate Dredging Plan to minimize the frequency of maintenance dredging activities in the waterfront and inner-channel areas at NSB Kings Bay. Excessive shoaling in these areas requires annual dredging to maintain draft depths. Dredging volumes can reach 2-million CY annually. Several dredging alternatives were developed to minimize dredging costs and sediment accumulation in the Water Restricted Areas (WRAs). Hydrodynamic and sediment transport modeling was conducted to evaluate the sediment transport impacts for each scenario and to identify potential alternatives that could potentially be carried forward for further consideration.

Lake Okeechobee Pilot Dredging Project, ERDC, Okeechobee, FL. Served as Project manager for a two-year $1M research and design pilot dredging project to demonstrate a new dredge technology (SEDCUT) that could selectively remove a thin 30-cm layer of contaminated surface sediments from a slightly denser mud substrate. Test results were successful and demonstrated that a 30-cm thick sediment layer of fluid mud (<5% solids) could be removed with little or no re-suspension of the underlying mud substrate. Key features of the technology included: 1) buoyancy compensation chambers to control the unit's contact pressure with the underlying substrate to allow the dredge head to ski along a density plane, 2) load indicators to activate the dredge pump, 3) a water manifold system to regulate solids content of the dredge slurry, and 4) adjustable intake shield to minimize dilution water in the dredge pump.

Cape Sable Canal Restoration, Everglades National Park, FL. Project manager for the $6.9M Coastal Restoration project that included hydraulic dredge design, permitting, and construction administration to transport sediments over some of the Park's most sensitive habitat. Because of the remote location of the project (over 20-miles from the closest upland area) and the sensitive natural environment, environmental permitting and logistics played a key role in engineering a workable solution. Project constraints included: 1) marine transportation for 5,000 CY of limestone sand and heavy equipment to remote wilderness areas, 2) site access limited to October 1 through March 31 to avoid the crocodile nesting season (crocodile nests were identified in the work areas and could not be impacted), 3) shallow marine access channel (limited to 2-ft maximum draft), and 4) closest staging area over 60 miles via open water transport from the project site (Key West). To work around these constraints and obtain regulatory and Park approval, an innovative hydraulic dredge system was designed to hydraulically transport sediments over 1.5 miles to the construction site. The project was successfully completed and solved one of the biggest ecological problems in the Park.

Marina Dredging, Everglades National Park, FL. Project manager for design and implementation of hydraulic dredging operations to remove calcium carbonate silt and marl sediments from the Everglades City Marina. The project consisted of obtaining permits and performing hydraulic dredging operations to remove approximately 1,125-CY of silt sediments from the marina boat basin. Worked with the Florida Department of Environmental Protection (FDEP) to allow the dredged sediment to remain on-site and avoid the significant cost of off-site disposal for the client. Due to the limited space within the marina, dredging was performed using an un-manned hydraulic-powered Mudloader® dredge, equipped with a rotating cutterhead and high suction pump stationed on pontoons.

North Lake/Dredge Feasibility Study, City of Hollywood, FL. Project manager for providing the full spectrum of dredge design and engineering services necessary to restore the navigational channel and environmental quality of the lake. The lake is an 84-acre manmade tidal lake that serves as the center of the City's public boating area. Services provided included surveying, geotechnical bearing tests, water quality analysis, dredge plan design, cost estimating, and regulatory permit negotiations.

Canal Dredging, Miami International Airport (MIA), Miami, FL. Project manager for the $8M design/build remediation for the Former Eastern Airlines Main Base Hangar 22 site at MIA. Project involved remediation of over 600,000 square feet (14-acres) of critical airside airport property and removal of contaminated sediment from the stormwater collection/ conveyance canal. Because of the logistical issues of maintaining a drainage canal on an active airport, dredging operations were designed and developed to allow use of an innovative truck-mounted dredge unit. The dredge head was designed to remove a 1-foot layer of contaminated canal bottom sediments while allowing the drainage canal to maintain its required flow discharge volume. More than 1,200-tons of contaminated sediments were removed and dewatered on-site. Filtrate water was treated through a series of settling tanks, oil/water separators, sand filtration, granular activated carbon, and ion exchange units, prior to discharge back to the surface water canal.

Chandy John, PhD

Sediment Dredging - Modeling

Key expertise
Hydrodynamics
Hydrological Modeling
Water Quality and Sediment Transport Modeling
Feasibility Analysis
Design Analysis

Education
PhD, Civil (Environmental Hydraulics) Engineering, 1997
MS, Civil (Water) Engineering, 1985

Years of experience
2 with AECOM | 32 Total

Training
40-Hour OSHA HAZWOPER
ESRI ARCGIS
Geo-statistics
SPSS
SAS

Registrations/Certifications
Certified Scuba Diver:, PADI

Chandy has 32 years of expert level experience in H&H, hydrodynamic modeling, STA and Marsh Conservation Area modeling, sediment fate & transport, scour analysis, circulation, mixing processes and nutrient analysis and HABs interception and treatment.

Professional history

Chandy has worked on various modeling and restoration projects while employed by SJRWMD Engineering Division's Modeling Group from 1997 to 2005. He is very familiar with Lake Jesup's environmental issues and also served in Lake Jesup Modeling Review Committee. He has over 20 publications in Journal of Coastal Research, Oceanologica Acta, Canadian Journal of Civil Engineering, and Coastal Engineering, Netherlands. He was a member of Northern Coastal Basin Monitoring and Research Work Group, Florida from 1999 to 2003 and Member of Technical Work Group, Indian River Lagoon, Florida advising on hydrodynamic, water quality, & sediment fate & transport modeling from 1997 to 1998. He was also member of American Society of Civil Engineers (ASCE), American Water Resources Association (AWRA), American Shore and Beach Preservation Association (ASBPA), and Association of State Floodplain Managers (ASFPM). He won the 2nd place award for "Best Content" for 2-D hydrodynamic and contaminant fate and transport modeling results during the SJRWMD 2nd Annual Poster Competition, Palatka, Florida, USA, 1997.

Chandy is trained to run surface water models (EFDC, WASP, MIKE models, Delft3D, RMA2, RMA4, FESWMS, SMS, GMS, ADCIRC, and MODFLOW. Chandy successfully completed short courses in: EFDC, ICPR 2-D, HEC-RAS 2-D, Coastal Engineering, Harbor Planning, and Design, Project Management, and Microsoft Project.

Select project experience

Benning Road Facility RI/FS Sediment Transport Analysis and Impact of Site Contaminants on Background Locations due to River Flows and Tides, DC. Senior oceanographer/hydraulic engineer responsible for evaluating tthe distribution of sediments (silt & clay, sand, and gravel) within the area of interest from the confluence of Beaverdam Creek and Anacostia River to E. Capitol Street Bridge. Assessed the potential for silt & clay sized sediments in the Pepco Waterside Investigation Area (WIA), that potentially carry sediment contaminants (PCBs, PAHs, etc.), to be transported to areas north of background reference sites during normal or extreme conditions (storm events and storm surge conditions). The potential for sediments within the WIA to be eroded during normal events (2-year return period) and extreme storm events (50- year, 100- year return period) was evaluated including assessment of how far these eroded sediments may be carried away and in what direction.

Wagner Creek Seybold Canal Restoration - Sediment Dredging and Remediation, City of Miami, FL. Hydraulic modeler for design/build dredging program to remove contaminated sediments containing dioxin from what has been considered one of the most polluted waterways in Florida. Innovative dredge plans using customized dredge equipment to minimize draft depth and use of unique water quality protection procedures, including aqua barriers, air curtains, and moon pools to prevent impacts to the downstream Outstanding Florida Waters and to protect the manatees that reside in these water bodies.

Hydroperiod and Design Storms Modeling - Comprehensive Everglades Restoration Plan, SFWMD, West Palm Beach, FL. Project manager for responsible for coordinating the hydroperiod and design storms modeling for existing and proposed operational structures and supervised the application of hydrology and hydraulic models to assess G-161 water control structure and the NLB culverts impacts, essential to implement Comprehensive Everglades

Restoration Plan. Assisted in STA-3/4 of the Everglades Construction Project that receives stormwater runoff from the S-2/7, S-3/8, S-236 and C-139 Basins in the Everglades Agricultural Area by application of Federal highway's FESWMS 2-D hydraulic model.

Hydroelectric FERC Licensing. Modeler/hydraulic engineer responsible for applying a calibrated 3-D MIKE3 FM model for evaluating currents, shear stress, Froude and Reynolds numbers to Assess Potential Sediment Transport. MIKE3FM model produced acceptable model results for 16 scenarios and was used to evaluate Froude and Reynolds #s, and sheer stress and critical sheer stress values in the tailwaters below the proposed Project and showed the potential effects on the mussel population.

Sediment Fate and Transport Modeling and Permitting, Sebastian Inlet and Indian River Lagoon Melbourne, FL. Oceanographer/hydraulic engineer responsible for applying a calibrated 3D hydrodynamic, water quality, and sediment transport model to demonstrate the effect of the proposed channel on seagrass beds, shoals, and Intracoastal Waterway. Calibrated 3-D for evaluating currents, shear stress, Froude and Reynolds numbers to Assess Potential Sediment Transport. Conducted multiple potential scenarios to evaluate potential effects on the seagrass population and infilling of the navigational channel and sediment trap. Successfully obtained environmental permits that resulted in navigational channel extensional and safe boat passage and seagrass protection and mitigation.

Restoration Cedar & Ortega Rivers Contaminated Sediment Remediation, St Johns River Water Management District, FL. Project manager responsible for developing and evaluating remedial alternatives for Cedar and Ortega Rivers, developed engineering design plans for cleanup and conceptual models, utilized upland CDF for cleanup, evaluated navigable capacity of the channel, evaluation of remedial action including placement of a cap either with or without preliminary dredging. Applied 3-D Sediment Transport Model to assess effectiveness of sediment traps using the Cedar/Ortega/St. Johns River EFDC hydrodynamic and sediment transport model. Addressed investigation and restoration of contaminated sediment sites addressing upland CSF and contaminated sediment dredging, sediment fate and transport modeling and monitoring, capping and natural recovery components of sediment management.

Bridge Hydraulics, Scour Analysis, and Floodplain Modeling and Mapping, Baltimore, MD. Conducted bridge hydraulics, scour analysis and floodplain modeling/mapping. Used HEC-RAS hydraulic and 2-D RMA2/FESWMS hydrodynamic model for floodplain evaluation, assisted in the development of joint permit application to support the proposed replacement of bridges Baltimore, MD. As Sr. Oceanographer/Hydraulic Engineer, Chandy issues with the proposed pier locations and site hydraulics and to determine flood stage. Used scenarios with different pier locations to update the hydraulic/flood model and investigate the effect of the pier locations on the flood elevations, velocity, shear stress, and Froude Number changes. Evaluated site hydraulics changes and FEMA floodplain regulations.

Tampa Bay Canal Dredging and Env. Enhancement, City of Tampa, FL. Hydrodynamic and sediment transport modeler and water quality data analyst responsible for the hydrodynamic modeling to evaluate the water level, currents and circulation, sediment erosion and deposition, and sediment dredging scenarios for Currituck Tidal Canal and the box culvert that exchanges water between the canal and Hillsborough Bay waters, Florida.

Tampa Bay West Shore and Davis Island Canal projects, Tampa, FL. Tampa Bay West Shore and Davis Island Canal projects that included dredging and dredge material disposal assessment, bathymetric and structure surveys, physical and RCRA chemical sediment analyses, and provided technical advice to obtain ERP permit. Chandy was hydrodynamic and Sediment Transport Modeler and Water Quality Data Analyst.

Brookeville Floodplain Modeling And Mapping, Wetland Mitigation And Stream Restoration, Maryland State Highway Administration, MD. Conducted H&H study to assess floodplain modeling and mapping, wetland mitigation and stream restoration for mitigation site located east of Main Street in Brookeville, MD. Assessed existing and proposed condition hydraulics (water level, shear stress, Froude #, and stream velocity) using HEC-RAS model.

Mike Giovannozzi, PE

Sediment Dredging - Marine and Coastal Engineering Lead

Key expertise
Dredging / Navigation
Marine and Coastal Engineering
Coastal Structures
Beach Nourishment Design
Wave and Hydrodynamic Modeling
Sediment Transport Modeling

Education
MS, Civil Engineering (Coastal Engineering), University of Delaware, 2001
BS, Civil Engineering, University of Delaware, 1999

Years of experience
4 with AECOM | 24 Total

Registrations/Certifications
Professional Engineer: Florida # 62563

Mike's wide-ranging expertise includes dredging and navigation studies, marina planning and design, wave and hydrodynamic studies, beach nourishments, physical and numerical modeling, feasibility studies, design of traditional and innovative shore protection structures, and coastal floodplain mapping.

Professional history

Mike has considerable experience in the planning and design of coastal and marine structures, ports and harbors, navigable waterways, marinas, and waterfront developments; and he has managed multi-discipline teams in the planning and design of high-profile international waterfront development projects. Mike is highly capable in an array of numerical modeling techniques (including wave, hydrodynamic, and sediment transport) and is well versed in the latest coastal design manuals, such as the U.S. Army Corps of Engineers.

Select project experience

Wagner Creek Seybold Canal Restoration - Sediment Dredging and Remediation, City of Miami, FL. Design Engineer. Design/build contract to remove hazardous waste sediments to restore what has been considered the most polluted waterway in Florida. Developed three innovative dredge plans and used unique water quality protection procedures to prevent impacts to the downstream Outstanding Florida Waters of the Miami River and to manatees. The existing conditions for both Wagner Creek and Seybold Canal are unique and posed significant logistical constraints that required extensive regulatory consultation with multiple agencies. Permits received in less than 90 days.

Cruise Terminal H Dredging Design and Post Design Services, Port Miami, Miami, FL. Senior Project Engineer. Design services for a maintenance dredging program to accommodate the berthing of the Bimini Superfast vessel. Mike's duties included marine resources and seagrass survey, bathymetric survey, preparation of permit sketches suitable for submittal to the regulatory agencies to initiate the environmental permit application, and preparation of opinion of probable construction cost and assistance during the environmental permit phase. He led preparation of contract documents (plans and technical specifications) and definition of dredging limits.

Bayou Caddy Ecosystem Restoration Project, Waveland, MS. Independent Technical Reviewer. Analysis and conceptual design of a breakwater for the Bayou Caddy restoration site. The breakwater was designed to protect a wetlands habitat that was created through the beneficial placement of dredge material from a nearby navigation project. The review focused on the coastal engineering analysis and design, specifically on the historical shoreline change analysis, geotechnical data collection, dredging history, wave modeling, breakwater performance, and breakwater structural stability.

Kings Bay Navigation Channel, Camden County, GA. The Kings Bay Entrance channel provides ocean access for the US Navy's Trident nuclear submarines. In recent years, the channel has experienced an increase in shoaling. Removal of sediments in the channel has been costly and dredging operations potentially interfere with navigation. A comprehensive hydrodynamic and sediment transport model was performed to assess potential dredge plan alternatives. Evaluated the dredge alternatives and provided recommendations to improve dredging efficiencies and reduce maintenance dredging intervals. In addition, recommendations were provided to modify the entrance channel to minimize shoaling.

North Atlantic Coast Comprehensive Study, USACE Baltimore District/ North Atlantic Division, Jacksonville, FL. H&H engineer responsible for providing engineering evaluation for development of focus area reports (reconnaissance level analyses) for coastal areas, utilizing the USACE plan formulation process. The reports identified problems, needs, and opportunities, and with stakeholder input, recommended projects for implementation.

FEMA Flood Hazard Analysis and Mapping, USEPA Region V. H&H engineer responsible for performing large-scale (regional) wave model of Lake Superior to support the FEMA Risk Map program for Region V. He also provided technical review and oversight for the coastal flood hazard analysis and mapping for several Region V counties including the assessment of shoreline type, erosion analysis, and wave and storm surge calculations.

H&H Continuing Services Contract, St. Johns River Water Management District, Districtwide, FL. Worked on the Conceptual Siting Analysis of Phase I for the Indian River Lagoon. Data (i.e., simulated water level and 50% renewal time) identified in the Literature Review was used to score the 39 potential projects to improve water quality in the Indian River Lagoon and Banana River Lagoon. The resultant scoring is being used to scope Phase II of the project, which will include hydrodynamic modeling of conceptual options developed in Phase I.

Environmental Restoration at Ibis Isle, Palm Beach, FL. Coastal engineer. dredging responsible for environmental restoration project for an island community located on the Intracoastal Waterway.

Devansh Shah, PE

Remedial Design Team

Key expertise
Assessment and Remediation of Contaminated Soil and Groundwater
Design of Innovative Remedial Systems and Strategies
Contamination Review and Phase II planning for Contaminated Sites
Construction Quality Control and Management

Education
MS, Environmental Engineering, University of Florida, 2016
BE, Environmental Engineering, Gujarat Technological University, 2014

Years of experience
2.5 with AECOM | 5 Total

Training
OSHA 40-hour HAZWOPER Training (29 CFR 1910.120) and yearly Refresher Courses
CETCO certified Vapor Barrier Inspector
LEED v 4.0 Green Associate

Registrations/Certifications
Professional Engineer: Florida #88389

Devansh works as a Deputy Project Manager with AECOM. He has over five years of experience working on environmental engineering, regulatory compliance and remediation projects.

Professional history

Devansh has been closely working with Project Managers in managing projects and taking on responsibilities including but not limited to Proposal Preparation, coordination with clients and subcontractors, report reviews and invoicing. His experience includes groundwater remediation system design, conducting contamination reviews for roadways and transit projects, Level I and Level II environmental site assessment, liner/vapor barrier installation inspections, source removal design, hydrogeological investigations, and regulatory compliance report preparation.

Select project experience

NEPA Evaluations, Florida Department of Transportation District 4, FL. Deputy Project Manager responsible for labor support for the Planning and Environmental Management section of FDOT District 4 conducting NEPA evaluations to support the work program, conducting project re-evaluations, creating Request for Proposal language, and reviewing project development and environment documents (Contamination Screening Evaluation Reports). Also, assisted FDOT by performing constructability reviews, equipment specification reviews, pond site evaluations, and other related duties as requested, as well as performing overall environmental project management on a number of projects. Services included plans review/ERC comments, Project Suite/Environmental Tracking System (ETS) updates, review of environmental documents for the District Four ROW.

Site Development, Miami Dade County Transit, Miami, FL. Worked as a Deputy Project Manager and assisted with contamination review and phase II planning for upcoming planned transit network in Miami Dade County. Work included coordinating with various government agencies for file reviews, drafting contamination review report, preparation of Phase II plans, coordination with sub-contractors and coordination with field staff, working with transit and drainage teams to determine the assessment design, evaluation of laboratory analytical data, and reporting of findings..

Virginia Key Landfill Closure, Miami Dade County, Miami, FL. Worked as a Project Engineer and assisted in design of remediation system and monitoring plan for closure of Virginia Key Landfill. Additionally, assisted in design of drainage test wells, design of drawdown test conducted at the site and design of Class V injection well and extraction well system.

Contamination Review, Florida Department of Transportation District 6, FL. Deputy project manager and assisted with contamination review and phase II planning for various projects for FDOT. Work included coordinating with various government agencies for file reviews, drafting contamination review report as well as preparing contingency plans.

Site Development, Florida Gas Transmission, Miami, FL. Deputy project manager and assisted with contamination review and preparation of Phase I and Phase II assessment plans for upcoming projects. Phase II plans included review and evaluation of various site-specific soil and groundwater assessment plans. Developed the emergency plans for hydrotesting which included developing radius of influence (ROI) calculations for dewatering to be conducted as part of the project.

Site Development, Miami Dade Aviation Department, Miami, FL. Project engineer and assisted in various source removal projects. Tasks ranged from development of site assessment plans, cost proposal preparation and drafting, project setup, field coordination, coordination with various regulatory agencies, evaluation of laboratory analytical data for soil and groundwater, and report writing.

Site Development, Private Developer, Doral, FL. Project engineer and assisted with site assessment conducted as a part of development of treatment technique for ongoing dewatering operations on the site. Assisted in designing of sedimentation sizing as well as flow rate determination and coordinated with various entities working on the site.

Site Development, Private Developer, Hialeah, FL. Project engineer and assisted with hydrogeological site study and drafted a Baseline Groundwater Remediation Plan as required by Miami-Dade County Department of Regulatory and Economic Resources, Division of Environmental Restoration and Monitoring (DERM) and in accordance with Rule 62-701.710(1)(d)2 of the Florida Administrative Code for the operation of a Construction and Demolition Materials Recycling Facility. Tasks included regional hydrogeological study, site historical records review, monitoring well and piezometer installation, groundwater sample collection, and data analysis and reporting.

Site Development, Private Developer, North Miami, FL. Lead engineer on vapor barrier system design and inspections. Tasks included designing of vapor barrier system, oversight on liner installation, project task management, coordination with client and report preparation.

Curtis Park Corrective Action Plan, City of Miami, Miami, FL. Owner representative conducting construction observations and field representative for the Engineer of Record during construction and remediation activities which included, but are not limited to, storm water system and roadway construction, engineering control installation, site grading and compaction, regulatory agency inspections, electrical conduit and irrigation line installation, and contaminated soil excavation, sorting and handling. Tasks included daily reporting and documentation of work progress, inspections for adherence to design drawings, communication of site status and potential issues to Engineer of Record, addressing contractor questions concerning design drawings and identification of potential Health and Safety issues.

Remediation System Reporting and Management, Private Utility Provider, Miami-Dade County, FL. Assisted in drafting Quarterly Status Reports for submittal to DERM and supported the project manager in coordinating the fieldwork, sampling, operations and maintenance activities of multiple groundwater remediation systems in Miami-Dade County in accordance with site Remedial Action Plans. Project responsibilities included coordination of the production of figures, tables and attachments by multiple project team members, data validation of laboratory reports.

Phase II Environmental Site Assessment, Various Locations. Performed oversight of soil boring/monitoring well installations and conducted field sampling required for Phase II Environmental Site Assessments in Broward and Miami-Dade Counties, Florida for private and public entities. Oversaw various soil boring and monitoring well installations, groundwater and surface water sampling, methane gas monitoring, data recording, monitoring well top of casing surveying, analytical data processing, and report preparation.

Douglas Park Corrective Action Plan, City of Miami, Miami, FL. Owner representative conducting construction observations and field representative for the Engineer of Record during construction activities which included, but are not limited to, engineering control installation, site grading and compaction, regulatory agency inspections, electrical conduit installation, and contaminated soil excavation, sorting and handling. Tasks included daily reporting and documentation of work progress, inspections for adherence to design drawings, communication of site status and potential issues to Engineer of Record, addressing contractor questions concerning design drawings and identification of potential Health and Safety issues.

Inashco North America, Beneficial Use Determination, Putnam, CT. Environmental engineer to conduct the life cycle assessment for the company's waste to energy ash recovery plant in Putnam. Conducted analysis to determine the beneficial use for the waste products from the processing plant by running numerous EPA LEAF (analytical) tests at University of Florida.

Rich Ulkus, GC

Remedial Construction Lead

Key expertise
Contaminated and Hazardous Materials Remediation
Remedial Construction
Construction Management
Construction Oversight
QA/QC

Education
AAS, Civil Engineering Technology, Hartford State Technical College, 1973

Years of experience
32 with AECOM | 45 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher
CPR/First Aid

Registrations/Certifications
General Contractor: FL #CGC1523061
AECOM Certified Project Manager

Richard has 45 years of experience in planning, design, and construction management of a wide range of water and wastewater treatment projects. He is also experienced in site decontamination and demolitions, groundwater cleanup, SVE and remediation, underground storage tank removal, and hazardous and regulated waste disposal.

Professional history

Rich brings unrivaled experience in the construction and commissioning of RO WTPs in the State of Florida having constructed nearly 100 mgd of cumulative RO WTP projects in Florida over the past 25 years.

Select project experience

Florida RO Water Treatment Plant and Wastewater Treatment Plant Design-Build, Town of Davie, FL. Senior construction manager for the $106M design-build services for expansion of water and wastewater infrastructure systems. Two plants – water and wastewater – will share a common administration/laboratory building, electrical feed systems and standby generators. AECOM's services include stakeholder outreach, planning, design, subcontractor prequalification, bidding of construction packages, GMP development, construction management, bonding, and construction of the facilities. A GMP was developed for the original portion of the $101M for the two plants and through an open book change order the reuse water pipelines were added and also managed and constructed by AECOM, which was approximately $6M in value. The project consists of a 6 mgd reverse osmosis water treatment facility, Floridan Aquifer wells, and a 3.5 wastewater treatment plant capable of delivering reuse-grade water. As part of the RO plant construction, Managed the construction of 18,000 LF of 4 to 12 inch reuse pipelines, 10,000 LF of well access roads and 3 water storage tanks ranging in size from 750,000 to 3 million gallons. He was involved through –out the GMP development as well as construction whereby he managed 32 subcontractors and 28 equipment vendors on-site during construction. Rich was also responsible for developing the overall delivery P6 schedule and served as a consultant to the commissioning and start-up team.

RO Water Treatment Plant, City of Hialeah, FL. Led the construction of the 10 mgd RO WTP with a future capacity of 17.5 mgd. The project included the construction of the pre and post treatment systems, chemical feed systems including caustic, fluoride, sulfuric acid, corrosion inhibitors, degasifier system, biofilter and scrubber, an 80,000 sf process building, including the RO racks, RO feed pumps, HVAC and plumbing, and all electrical and SCADA systems. The project included the construction of 2- 5 million gallon Finished water storage tanks. Three (3) 2000 KW CAT generators were also installed along with portable generators at each well site. Deep injection well sitework, and well houses, including the portable gen sets were construction by AECOM under the supervision of Rich. Under this design-build construction contract, he managed 26 subcontractors and 28 equipment vendors. All subcontractors and vendors were prequalified by AECOM. AECOM retained overall job-site safety responsibility under Rich and his General Superintendent Warren Howard. He was also on-site during the start-up and commissioning phase to ensure the systems were commissioned smoothly.

Contamination Assessment and Remediation (CAR) Contracts, FDOT District 4, FL. Provided construction management and consulting services on FDOT District 4 CAR contracts. Assisted FDOT by performing constructability reviews and equipment specification reviews for issues related to asbestos piping and suitable materials for use in contaminated media. Manages AECOM construction staff.

Dry Cleaners Solvent Cleanup Site Remediation, FDEP, Various Locations, Statewide, FL. Managing staff providing construction and operations and maintenance services under statewide environmental services contract for assessment and cleanup of contaminated dry cleaning sites throughout the state.

Bayshore Golf Course Material Recovery Facility (MRF), City of Miami Beach, , FL. Managed design and permitting for construction of material recovery facility, including remediation of former MRF site.

Normandy Shores Golf Course Water Reclamation, City of Miami Beach, FL. Managed arsenic remediation projects at Bayshore and Normandy Shores golf courses, including asbestos abatement, demolition of existing facilities, and construction of new site drainage systems.

Ammonia Removal, City of Miami Beach, FL. Project manager and technical specialist for design and permitting of 750-gpm system to remove ammonia from construction dewatering effluent.

Petroleum Pre-Approval Program, FDEP, FL. Managing construction and operations and maintenance services for FDEP petroleum pre-approval program.

Sequencing Batch Reactor System Design-Build, Miami-Dade County, Goulds, FL. Senior construction manager for sequencing batch reactor treatment system for groundwater contaminated with ammonia at Old South Dade landfill.

North County Reverse Osmosis Water Treatment Plant Expansion, Collier County, FL. Managed a design-build project involving the addition of six wells and 15,000 feet of raw water line, as well as various upgrades to a reverse osmosis plant to enable it to treat higher chloride content raw water.

South County Reverse Osmosis Water Treatment Plant Expansion, Collier County, FL. Managed staff that provided services during construction and start-up of an 8-mgd reverse osmosis water treatment plant, ultimately expandable to 20 mgd, which included an addition to the construction of the plant and support facilities; the construction of a 15-well wellfield with transmission mains; 1 2.5 million gallon finished water storage tank and the installation of two deep injection wells for concentrate disposal.

RO WTP, Rich served as the Construction Manager on the 1 mgd RO Membrane WTP, Hollywood, FL. The construction included sitework, and grading, three wells with 3 vertical turbine pump stations, a process building with two (2) 1 mgd nano-filtration units, degasifiers, 1 mgd finished water storage tank, electrical support systems, and a SCADA control system. He also commissioned the RO WTP.

Michael Powell

Remedial Construction – Oversight

Key expertise
Construction Management
Remedial Construction
Soil Excavations
Waterway and Environmental Restoration

Education
St. Thomas University, 1983

Years of experience
15 with AECOM | 25 Total

Training
OSHA 40-Hour HAZWOPER
Asphalt Paving Level 1 and Level 2 Inspection, Earthwork Level 1 and Level 2 Inspection
Heavy Vehicle/Equipment Operation Certification
Nuclear Density Gauge Safety Certified
CDL Class B with Tank and Hazmat Endorsements

Certifications
Sampling & Evaluating Asbestos Dust/Cert. #AA03220158202
Ahera Asbestos Supervisor/Cert #AA040601 CS02
Hands on Electrical Troubleshooting I & II/FL Water & Pollution
Confined Space Certified
Opa-Locka General Aviation Airport – MDAD Security Clearance
Miami International Airport – U.S. Customs Security Clearance

Michael has over 25 years of experience in hazardous waste management, construction oversight, RAP implementations, source removals, and UST/AST removals.

Professional history

Michael is an experienced heavy equipment operator and has been involved in hundreds of remediation projects throughout Florida. Additionally, Michael is experienced with the installation, operation and maintenance of various types of groundwater extraction, pump and treat, in-situ bioremediation product application, dual phase extraction and dewatering systems.

Select project experience

NW Cargo Area – Miami International Airport, FL. Provided the operation and maintenance of the groundwater treatment systems A, B, C, D and E in the Northwest Cargo Area at MIA.

Concourses C, E, F at Miami International Airport – Miami, FL. Field technician for the installation of groundwater treatment and soil vapor extraction systems, underground piping, and equipment stockade compounds. Michael also performed daily O&M activities and quarterly groundwater and air sampling.

Opa-Locka General Aviation – Site 1, Opa-Locka, FL. Provided oversight of source removal activities, confirmatory soil sampling and analysis, and restoration of the remediated area with clean fill and sod. Due to numerous buried utilities in the footprint of the excavation, hand digging was required in most of the area to avoid damage to underground structures. This project was completed incident-free.

West End Cargo Area Building 2064 Assessment, Miami International Airport, Miami, FL. Field Technician supporting ongoing assessment and monitoring activities at Building 2064 in the West End Cargo Area of Miami International Airport.

West End Cargo Area Pond Assessment and Source Removal, Miami International Airport, Miami, FL. Field technician for the assessment and oversight of the source removal and monitoring activities at the West End Cargo Area Pond of Miami International Airport.

Concourse C Source Removal, Miami International Airport, Miami, FL. Field technician oversaw the source removal and monitoring activities at Concourse C at MIA. Michael also acted as County's representative and worked as a liaison between FDEP's consultant and FDEP's contractor that actually performed the field work.

NW 175th Street drainage improvement, City of Miami Gardens, FL. Site inspector for the NW 175th Street drainage improvement. Miami International Airport (MIA) Fire Well Capacity Testing: Field technician for capacity tests of five (5) fire wells at the tank farm located at MIA.

Venevision Studio Limited Site Assessment, Medley, FL Field technician for the delineation of soil contamination at the MDT property adjacent to Venevision Studios in the vicinity of 7500 NW 72 Avenue in Medley.

Central Bus Facility Oil Water Separator Assessment and Closure. Field technician that oversaw the assessment, abandonment and closure of an oil/water separator (OWS). Oversaw the clearing and cleaning of the OWS and cutting and capping of inlet and outlet pipes. Soil samples were collected and analyzed and contaminated soil was removed and disposed.

WASD Distribution Yard Limited Site Assessment, Miami-Dade County, FL. Field technician supporting the limited site assessment as part of a Site Rehabilitation Completion Order (SRCO) Rescission Request for the Distribution Yard. The limited assessment consisted of the installation of sampling of one soil boring and one monitoring well adjacent to the former canopy footer excavation and the preparation and submittal of SRCO request report.

Ives Estate Park / Former Ojus Landfill, City of Miami, FL. Field technician supporting the groundwater and methane gas monitoring at Ives Estate Park. Michael is responsible for providing emergency response to the methane gas monitors and ongoing monitoring of on-site and off-site well where ammonia impacts have been found. Currently, quarterly monitoring of cluster well installed as part of a pilot test is ongoing to determine if active treatment of groundwater is needed. His emergency response is highly critical in successful and uninterrupted operation of the park.

Westwind Lakes Park O&M and Methane Gas Monitoring, Miami-Dade County, FL. Field technician who supported the design, construction oversight, startup, operation and maintenance of a passive methane gas mitigation system for the recreation center building at the Park. Michael is credited with an incident-free record at this site.

Chapman Field Groundwater Sampling and Monitoring Well Rehabilitation/Repair and Installation, City of Coral Gables, FL. Field technician provided the location and integrity testing of 22 existing groundwater monitoring wells located throughout the park; many of which were located within dense vegetation where access was limited. Subsequently, He assisted with the groundwater assessment at the park after the monitoring well rehabilitation. Additionally, Michael supported an ammonia background study that included installation of 10 monitoring wells in the areas not impacted by the site. Currently, he performs the annual groundwater monitoring.

Michael Scinta

Remedial Construction – Environmental

Key expertise
Construction Management
Remedial Construction
Soil Excavations
Waterway and Environmental Restoration

Education
High School Diploma

Years of experience
19 with AECOM | 45 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher
OSHA 29CFR 1910.146 Confined Space
Florida Advance Work Zone Traffic Control

Michael is a Senior Construction Manager with 45 years of experience working in Florida. He has extensive construction knowledge and has provided management and oversight for numerous sediment dredging, contaminated soil and water treatment systems, transportations, infrastructure, soil excavations, seawall restoration, waterway, and environmental restoration projects.

Professional history

Michael specializes in environmental remediation technologies that include sediment excavations (mechanical and hydraulic), sediment dewatering, water treatment systems, and in-situ treatment technologies. He also has extensive experience with constructing marine sediments and ecosystems restoration projects. Michael has also served as the construction manager for the contaminated sediment dredging operations conducted at the Former Eastern Airlines Main Base (EAMB) at Miami International Airport, in which a truck-mounted hydraulic dredge was utilized to remove a 1-foot layer of highly contaminated canal bottom sediments.

Select project experience

Construction Manager/Field Inspector, Flamingo Marina Dredging, Everglades National Park, FL. Dredge operations were needed to remove over 10,000 cubic yards (CY) of sediment that were deposited as a result of Hurricane Wilma. The deposited sediments prevent the Park's Search and Rescue operations and the Park's Law Enforcement Rangers access to patrol out of Flamingo and protect the natural resources in Florida Bay.

WECA Pond Source Removal, Oversight of Hazardous Muck Soils, Miami International Airport, Miami, FL. Senior construction manager/field inspector responsible for overseeing the source removal of hazardous muck soils from historical dumping in a former canal. Provided construction oversight of soil excavation, free floating product removal, and open-hole treatment (air sparging) of contaminated groundwater.

Construction Inspection, Miami-Dade Department of Environmental Resources Management (DERM), Miami, FL. Senior construction manager/field inspector responsible for overseeing inspection of contractor performance and assists in staffing and utilization of inspecting resources; reviews and approves invoices; and reviews and approves as-builts for drainage, street resurfacing and reconstruction, swale restoration, and canal dredging activities being performed DERM.

Stormwater Engineering Design Improvements, City of Doral, FL. Senior construction manager/field inspector responsible for design and construction administration of 14 projects listed in the City of Doral Stormwater Master Plan as critical infrastructure improvements or flooding "hotspots.".

Right-of-Way Expansion, FDOT District 4, Fort Lauderdale, FL. Construction manager responsible for oversight of field staff during remediation activities, new construction, and demolition activities. Also responsible for direct client interaction.

Metro-Dade Transit Authority Facilities Construction, Miami, FL. Construction manager responsible for overseeing the repair and installation of new storm drains at three Metro-Dade Transit Authority facilities. Project included complete site parking (asphalt, concrete) restoration and fueling system upgrade.

Miami-Dade DERM, FEMA/DORM, FL. Construction manager/senior inspector responsible for managing the design and construction of approximately $30M of roadway and drainage infrastructure repairs throughout Miami-Dade County for one of five “Master Consultants” that support Miami-Dade’s DERM. The scope consists of drainage installation, roadway restoration, resurfacing, and reconstruction.

Concourse F, Miami International Airport (MIA), Miami-Dade Aviation Department, Miami, FL. Construction manager responsible for the implementation and operation and maintenance a 500-gpm remedial system to remove free product and treat contaminated groundwater from Concourse F at Miami International Airport.

Miami-Dade DERM, FEMA/DORM, FL. Construction manager/senior inspector responsible for managing the design and construction of approximately $30 M of roadway and drainage infrastructure repairs throughout Miami-Dade County for one of five “Master Consultants” that support Miami-Dade’s DERM. The scope consists of drainage installation, roadway restoration, resurfacing, and reconstruction.

NW Cargo, MIA, Miami, FL. Supervised the Remedial Action Plan Modification and NPDES permitting of a 500 gpm groundwater treatment system in the Northwest Cargo Area. Treatment system effluent was to be redirected to a nearby storm-drain, thus the necessity of the NPDES permit.

Former Eastern Airlines Hangar 22, MIA, Miami-Dade Aviation Department, Miami, FL. Overseeing the installation of a $7.6M remedial system at Hangar 22. Project has included installation of over 900 feet of horizontal extraction wells and over 3,000 feet of horizontal soil vapor extraction well.

Keith Stannard

Natural Resources Lead

Key expertise
Ecology/Biology
Environmental Regulatory Issues
Terrestrial and Marine Habitat Assessment
Natural Community Evaluations
Wetlands Delineations and Assessments
Benthic Resource Assessments
Protected Species Conservation
ESA Section 7 Consultation
Mitigation Design, Construction, and Monitoring
Ecosystems Restoration and Managementt

Education
BS, Biological Sciences, State University of New York, 1991

Years of experience
21 with AECOM | 25 Total

Training
FDEP Uniform Mitigation Assessment Method
TREEO T&E Species of Florida
OSHA 30-hour Construction
OSHA 40-hour HAZWOPER

Certifications
First Aid/CPR
USAA SCUBA Diver
USACE Wetlands Delineation Certification
FDOT WET II
AECOM Certified Project Manager
AECOM Lead Verifier - Oil & Gas Midstream
AECOM Lead Verifier - Wetlands Permitting & Restoration
AECOM Lead Verifier - Impact Assessment and Permitting

Keith has 25 years of experience in conducting and managing environmental programs and ecological investigations for various public and private sector projects, including linear facilities (roadways, railways, pipelines), site development (industrial, residential, mixed-use) and special-purpose projects (offshore facilities, marinas, dams, maintenance dredging, basin studies, etc.).

Professional history

Keith has an in-depth knowledge of federal, state, and local environmental regulatory criteria and associated agency procedures in relation to ecosystem restoration and management. He also has extensive experience with marine and terrestrial habitat ecology; wetland and upland mitigation; threatened and endangered species conservation and ESA Section 7 consultation; and ecosystems restoration and management.

Select project experience

Districtwide Data and Reporting Consultant (NEPA/PD&E), FDOT D6, FL. Senior technical lead managing and leading NEPA related tasks associated with various large and small-scale FDOT roadway improvement, new roadway, bridge replacement/improvement, and other projects throughout Miami-Dade and Monroe Counties in Florida. Tasks include project impact reviews, natural resource assessments, contamination assessments, Section 4(f) and socio-cultural effects documentation, noise and air quality assessments, water quality assessments, inter-agency coordination, mitigation planning, and other activities/assessments for FDOT projects and producing the required documentation to facilitate environmental certification prior to construction. Tasks also include preparation and review of PD&E documents including technical reports, Reevaluations and other studies/evaluations as requested by the FDOT in conformance with NEPA and the PD&E Manual.

Wagner Creek Seybold Canal Dredge, City of Miami, FL. Environmental permitting lead responsible for the for design and implementation of mechanical dredging operations to remove contaminated sediments in Wagner Creek and Seybold Canal, which are open tributaries to the Miami River and Biscayne Bay Aquatic Preserve. Tasks included marine species surveys and developing unique species exclusion barriers and techniques. Worked with Miami-Dade County Department of Environmental Resources Management (DERM), FDEP, USACE, USFWS, and FWC for permitting, manatee protection, and sediment amendment and disposal.

Districtwide Miscellaneous Permitting Services Consultant (Contracts C-7724, C-8I41, C-9155 and C-9L61), FDOT District 6, Miami-Dade and Monroe Counties, FL. Awarded five consecutive five-year contracts to manage federal, state and local agency environmental permitting activities and other environmental-related studies for various large and small-scale FDOT roadway improvement, new roadway, bridge replacement/improvement, boat ramp restoration and tunnel projects throughout Miami-Dade and Monroe Counties in Florida. Tasks include conducting seagrass/benthic resource surveys; marine and freshwater wetland assessments and delineations; upland assessments; protected plant and wildlife surveys and assessments; federal, state, and county agency coordination; environmental resource permitting;

stormwater management permitting; Class V Deep Well permitting; obtaining sovereign submerged lands easements; GIS mapping; wetland and T&E species mitigation planning and design; permit tracking; erosion control; engineering plan reviews; dewatering permitting; water quality assessments; NEPA studies/re- evaluations; in-house technical and administrative assistance and EFH assessments.

Program Manager, Various Integrity Management Projects, Florida Gas Transmission Company, Various Counties, FL. Program includes assisting FGT with its integrity management program for all of its existing pipelines (mainlines and laterals) throughout the State with emphasis in Miami-Dade, Broward Hillsborough and Pinellas Counties in accordance with the Pipeline Safety Act of 2002 [49 Code of Federal Regulations (CFR) 192]. Tasks include environmental assessments, cultural resource assessments, potential contamination assessments, environmental resource impact permitting, FERC compliance documentation, construction dewatering permitting, hydrostatic test water discharge NPDES permitting, subsurface contamination sampling and remedial action design, ROW utility coordination and permitting, MOT plan design, public awareness program design and implementation, public & agency coordination/ workshops, T&E plant & wildlife surveys/permitting/ relocations, agency consultations, construction support and environmental training (for contractors), cost estimations and scheduling, roadway repair design and structural assessments.

Business Unit Lead, City of Lake Worth Electric Utility, Palm Beach County, FL. Business lead for assisting the City with its daily/weekly onsite construction management services for the Lake Worth Energy Efficiency Program Implementation project. Tasks include augmentation of their staff providing construction management services for a new 2 MW solar farm, water conservation and facility lighting, installation of new light poles and light fixtures, Armory Annex LED lighting improvements, installation of new AMI meters, and other energy saving-related elements city-wide.

Cape Sable Canals Dam Restoration Environmental Assessment – Phase II, Monroe County, National Park Service, FL. Project manager responsible for all tasks associated with the preparation of an Environmental Assessment and anticipated Finding of No Significant Impact to provide sustainable solutions to canal-induced saltwater intrusion and degradation of the interior freshwater and brackish marshes in order to reestablish the natural function of the Marl Ridge and restore the Cape Sable region to a more natural state. Phase II includes proposed dam restoration at the Raulerson Canal, East Side Creek, and House and Slagle Ditches.

Big Cypress National Preserve Hunting Management Plan / NEPA Environmental Assessment, National Park Service, Collier/Monroe Counties, FL. Senior scientist for environmental tasks associated with the preparation of a Hunting Management Plan / NEPA Environmental Assessment for the Big Cypress National Preserve. Tasks include data review, internal and public scoping, CBA, and preparation of an EA for submittal to NPS.

I-95/SR 9 PD&E/CE Type II, FDOT District 4, FL. Environmental manager responsible for environmental tasks/studies for a PD&E study for roadway improvements (express lanes) along 13.5-miles of I-95/SR 9 from north of Oakland Park Boulevard (SR 816) to south of Glades Road (SR 808) in Broward and Palm Beach Counties. Project documentation included an AQTM, WER, ESBA, CSER, NSR, SCEE, and CE Type II. Tasks included QA/QC review of all project documents and preparation of the CE Type II in compliance with the FDOT PD&E Manual and NEPA. The CE Type II document was approved and signed by FHWA in August 2013.

Tamiami Trail Modifications, Next Steps, Everglades National Park, National Park Service, FL. Environmental manager for all tasks of an Environmental Impact Statement for modifications of sections of the US 41/Tamiami Trail to allow for restored water flows from the SFWMD Water Conservation Areas north of Tamiami Trail to Everglades National Park south of Tamiami Trail. Tasks include field review, agency coordination, project scoping and public involvement, alternatives development, environmental consequences assessments, and preparation of the Draft and Final EIS/ROD documents for submittal to NPS and the US Congress.

Michael Breiner

Natural Resources Team

Key expertise
Threatened & Endangered (T&E) Species Assessments
Protected Species Relocations Habitat Assessments
Natural Community Mapping
Wildlife Permitting and Relocations Wetland Delineation and Assessment
Freshwater Wetland Mitigation Monitoring
Environmental Resource Permitting Terrestrial and Aquatic Biology and Impact Analyses
NEPA Studies (FERC, EIS, EA, PD&E)
Taxonomic Investigations
Coastal & Freshwater Wetland Mitigation Planning and Design

Education
AA, Fish and Wildlife Management, Haywood Technical Institute, 1978

Years of experience
38 with AECOM | 38 Total

Training
FDEP Uniform Mitigation Assessment Method
TREEO T&E Species of Florida
OSHA 30-hour Construction
OSHA 40-hour HAZWOPER

Certifications
First Aid/CPR
USAA SCUBA Diver
USACE Wetlands Delineation Certification
FDOT WET II
AECOM Certified Project Manager
AECOM Lead Verifier - Oil & Gas Midstream
AECOM Lead Verifier - Wetlands Permitting & Restoration
AECOM Lead Verifier - Impact Assessment and Permitting

Professional history

Michael has 38 years of experience in conducting ecological studies for private and public sector clients, with 14 years in botany.

Michael's technical expertise is focused on environmental issues relating to small- and large-scale developments and linear construction projects (roadways, pipelines, etc.) throughout the eastern US. Technical experience includes wetland delineations and functional analysis, floral and faunal assessments, wildlife surveys and relocations, community inventories, mapping, soil and water quality assessments, NEPA documentation, environmental permitting, and mitigation monitoring.

Select project experience

Cape Sable Canals Dam Restoration Environmental Assessment, Permitting, and Mitigation Monitoring – Phase I, National Park Service (NPS), Monroe County, FL. Senior biologist responsible for all tasks associated with the preparation of an EA and FONSI for the restoration of two failed canal dams in the Cape Sable area of Everglades National Park (Homestead Canal and East Cape Extension Canal). Tasks include field review, agency coordination, internal and public project scoping, and preparation of the EA and FONSI for submittal to the NPS. Second stage of the project included all aspects associated with successful issuance of all local, state, and federal environmental permits for the project. Current tasks include 5 years of mitigation monitoring at the dam sites.

6-inch Miami Beach Lateral Exposed Pipe Cover in Biscayne Bay, Miami-Dade County, FL. Project manager for assessing marine benthic habitats for impacts relating to laying concrete pads on exposed segments of existing submerged natural gas pipeline located in the Biscayne Bay Aquatic Preserve. Tasks included conducting marine benthic resources survey to identify and map (in GIS) submerged resources. Results of the surveys were used to apply for environmental permits and provide suitable mitigation for proposed impacts due to construction activities. Included mitigation planning, design, and implementation.

Krome Avenue South PD&E Study, Florida Department of Transportation (FDOT), District 6, Miami-Dade County, FL. Lead biologist responsible for environmental tasks associated with the performance of a PD&E Study. Tasks include preparation of a Wetland Evaluation Report, Endangered Species Biological Assessment report, a Farmlands Analysis, and detailed coordination with Miami-Dade County Environmentally Endangered Lands (EEL) for proposed impacts to protected rock pineland habitat. Also assisted with preparation of the EIS for FHWA submittal.

Florida Gas Transmission Company, FL. Senior biologist responsible for conducting wetland assessments and delineations, mitigation assessments, wetland and terrestrial vegetation community investigations and mapping, land use mapping, wildlife investigations, surveys for protected plant and animal species of conservation concern (including gopher tortoise, scrub jay, red-cockaded woodpecker, burrowing owl, Audubon's caracara, and American kestrel), stream morphology studies, contamination assessments, environmental resource permitting, and QA/QC for proposed pipeline expansion projects (extensions, looping and laterals).

Flora and Fauna at an Environmentally Endangered Land, FDOT District 6, Miami-Dade County, FL. Lead biologist assisting FDOT with threatened and endangered wildlife surveys and permitting. Tasks included identification and monitoring of two federally-listed planted species; propagation and relocation of a federally-listed plant species from a donor site to 3 recipient sites, and the relocation of Liguus tree snails from proposed tree removal: and detailed coordination with Miami-Dade County Environmentally Endangered Lands (EEL) for impacts to protected rock pineland habitat.

Imperiled Coastal Rockland Habitat, Upper Matecumbe Key, FDOT District 6, Monroe County, FL. Lead biologist assisting FDOT with threatened and endangered plant surveys and permitting, wetland assessments and delineations for mitigation credits, wetland and terrestrial vegetation community investigations and mapping, and habitat assessments for protected plant and animal species of conservation concern. Tasks included restoration of coastal rockland and coastal berm hammock communities overgrown with invasive non-native vegetation and monitoring of several protected plant species prior to land transfer to a Florida State Park. Twelve state-listed plant species, one of which is found in only two other locations in the Florida Keys, were identified at the site.

Airport Expansion Program/Westside Development Program, Broward County Aviation Department., Fort Lauderdale-Hollywood International Airport, Ft. Lauderdale, FL. Principal investigator assisting the Airport Expansion Program team and BCAD with ecological-related tasks including wetland mitigation construction and exotic species control oversight, threatened and endangered wildlife surveys and permitting (including burrowing owl relocations) and wetland mitigation compliance activities. Assisted in wetland mitigation monitoring and maintenance activities to ensure compliance with Federal, State and County environmental permits.

Districtwide Miscellaneous Permitting Services Consultant – Five Contract, FDOT District 6, Miami-Dade and Monroe Counties, FL. Assist FDOT with various environmental permitting activities and other environmental-related studies for various large and small-scale FDOT roadway improvement, new roadway, bridge replacement/improvement, boat ramp restoration and tunnel projects throughout Miami-Dade and Monroe Counties in Florida. Tasks include conducting seagrass/benthic resource surveys, marine and freshwater wetland assessments and delineations, upland assessments, protected plant and wildlife surveys and assessments, Federal/State/County agency coordination, environmental resource permitting, wetland and T&E species mitigation planning and design, NEPA studies/re-evaluations, Essential Fish Habitat assessments, and protected plant and wildlife biological surveys/assessments.

Natural Resources, Confidential Client, OK, KS, MI, and IL. Biologist conducting wetland assessments and delineations, wetland and terrestrial vegetation community investigations and mapping, land use mapping, wildlife investigations, habitat assessments for protected plant and animal species of conservation concern (including Indiana bat, American burying beetle, spotted skunk, and short-eared owl), and stream morphology studies, for proposed dilbit transmission pipeline.

I-75 PD&E Study (15 Mile Corridor) from Miami-Dade County Line to SR 826 (Palmetto Expressway), FDOT District 6, Miami-Dade County, FL. Biologist conducting wetland and protected plant and wildlife species/habitat assessments and mapping. Tasks also include preparation of a Wetland Evaluation Report and Endangered Species Biological Assessment report for submittal to FHWA for proposed roadway improvement and alignment alternatives. Additional tasks included preparation of environmental permit application packages for submittal to Federal, State and local regulatory agencies, which included an in-depth wood stork assessment and wetland mitigation planning.

I-95 PD&E Study (10-mile Corridor) from Oakland Park Blvd. to Glades Road, FDOT District 6, Broward and Palm Beach Counties, FL. Lead biologist for environmental field and assessment tasks associated with the performance of a PD&E Study. Tasks include preparation of a WER, ESBS, CSER, NSR, AQR, SCEE, and a Categorical Exclusion Type II for submittal to FHWA for proposed roadway improvement and alignment alternatives.

Natural Resources, Florida Gas Transmission Company, FL, AL, MS, and LA. Principal investigator conducting wetland assessments and delineations, mitigation assessments, wetland and terrestrial vegetation community investigations and mapping, land use mapping, wildlife investigations, surveys for protected plant and animal species of conservation concern (including gopher tortoise, scrub jay, red-cockaded woodpecker, burrowing owl, Audubon's caracara, and American kestrel), stream morphology studies, contamination assessments, environmental resource permitting, and QA/QC for proposed pipeline expansion projects (extensions, looping and laterals) Also, performed gopher tortoise relocations in support of pipeline construction at various locations in Florida and Alabama.

Florida Panther Prey Survey for the Everglades Agricultural Area (EAA) Conveyance and Regional Treatment (ECART), EAA Compartment B and EAA Compartment C Projects of the CERP, Palm Beach County, FL. Organized and conducted extensive panther prey (deer and feral hog) track surveys and reporting for approx. 16,000-acres in western accordance with US FWC guidelines in connection with the USACE 404 permit application.

Kelley Samuels, PWS, CERP

Natural Resources Team

Key expertise
Biology
Ecology
Wetlands Delineation
Threatened & Endangered Species
NEPA

Education
BA, Environmental Studies, 1997

Years of experience
25 with AECOM | 25 Total

Training
Graduate, Florida Statewide and U.S. Army Corps of Engineers Wetland Delineation Methodology Courses

Registrations/Certifications
Wetland Scientists Professional Wetland Scientist (PWS)
FWC Gopher Tortoise Authorized Agent
Ecological Restoration Certified Ecological Restoration Practitioner (CERP)
AECOM Certified Project Manager
AECOM Lead Verifier - Impact Assessment & Permitting
AECOM Lead Verifier - Oil & Gas Midstream

Kelley is a Senior Ecologist and an AECOM Certified Project Manager, based in the Orlando, Florida office. Kelley has nearly 25-years of experience as an environmental impact assessment and permitting specialist.

Professional history

Kelly's expertise includes ecological assessments of flora and fauna (primarily in the southeast), with a specific focus on wetlands and wildlife as they relate to linear corridor analyses, environmental permitting, due diligence evaluation, and environmental monitoring. This work includes wetland assessment, wetland delineation, and functional assessment of wetland impacts and proposed mitigation utilizing the Uniform Mitigation Assessment Method (UMAM), protected species analyses, and environmental permitting with local, state and federal agencies. She is an authorized agent by the Florida Fish and Wildlife Conservation Commission (FWC) to excavate, transport, and handle the state threatened gopher tortoise (Gopherus polyphemus). Kelley has assisted in the delivery of federally funded projects that meet all aspects of the National Environmental Policy Act (NEPA) requirements including managing interdisciplinary teams from project development through the permitting, implementation and post permit compliance phases. She has prepared environmental documents that meet the National Park Service (NPS), Department of Energy (DOE), Federal Energy Regulatory Commission (FERC), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Study and federal Environmental Assessment (EA)/Finding of No Significant Impact (FONSI) and Environmental Impact Assessment (EIS) requirements for millions of dollars of public investment.

Select project experience

Big Cypress National Preserve Trail Heads and Turn Lanes Environmental Assessment (EA), Collier, Miami-Dade and Monroe Counties, FL. AECOM was hired to assist the National Park Service (NPS) with analyzing impacts that would occur as a result of improvements at eight trail heads and the construction of five turn lanes on US 41. Kelley served as the project manager of a multi-disciplinary team that evaluated overall impacts and led the natural resource impact assessment and documentation through the National Environmental Policy Act (NEPA) process including public scoping. During the NEPA process, Kelley analyzed impacts associated with a series of alternatives to water resources, wetlands, soils, floodplains, special status species, and wildlife. A Wetland Statement of Findings (WSOF) was developed in accordance with NPS policy to quantify the impacts, conduct a functional assessment, and develop a conceptual mitigation plan to compensate for unavoidable wetland impacts. The proposed improvements were found to result in a Finding of No Significant Impact (FONSI)/EA class of action determination in August 2012. Final engineering and permitting at the four trail heads identified as part of the preferred alternative commenced shortly after the environmental document was approved and Kelley continued to manage the permitting process.

NPS requisite documents identifying the approach, methods, and results of wetland investigations were summarized in the following documents: Wetland Delineation Field Plan, Wetland Jurisdictional Delineation Report and a Conceptual Mitigation Plan Report. Site inspections were conducted with agency representatives to gain concurrence on the extent of wetland jurisdiction, the loss of function, and the mitigation required to compensate for wetland impacts and habitat occupied by federally endangered species including the wood stork (*Mycteria americana*) and Florida panther (*Puma*

concolorcoryi) and the state listed Florida sandhill crane (*Antigone canadensis*). A Class IV permit was obtained from the Miami-Dade Department of Regulatory and Economic Resources, an Environmental Resource Permit (ERP) was obtained from the South Florida Water Management District (SFWMD) and an Individual Permit (IP) was obtained from the United States Army Corps of Engineers (USACE) within the schedule necessary to secure funding and enable the NPS to secure a contractor. Improvements recently opened and are being enjoyed by visitors to the Big Cypress National Preserve.

Cape Canaveral National Cemetery Environmental Assessment, US Department of Veterans Affairs Scottsmoor, FL. AECOM assisted in the preparation of a Specific Environmental Assessment (SEA) in compliance with the National Environmental Policy Act (NEPA) to develop and operate a cemetery for US veterans in North Brevard County, Florida. As part of the SEA, AECOM obtained a Jurisdictional Determination (JD) to clarify the extent of federally regulated wetlands and evaluated the potential for listed species to occur on the +/-320-acre site. AECOM ecologists specifically conducted quantitative surveys for the federally listed Florida scrub-jay (Aphelocoma coerulescens) and the state-listed gopher tortoise (Gopherus polyphemus) and Florida sandhill crane (Antigone canadensis). The results of the detailed fieldwork were summarized in the SEA and in individual reports. In addition, AECOM formalized the request for consultation with the United States Fish and Wildlife Service (USFWS) that ultimately resulted in an Endangered Species Act (ESA) determination of “may effect, not likely to adversely affect” several federally listed species. Environmental permits were secured from the St. Johns River Water Management District (SJRWMD) and the Florida Fish and Wildlife Conservation Commission (FWC). Kelley assisted the VA with the relocation of the on-site population of gopher tortoises to a long-term protected recipient site in the spring of 2015 just prior to construction of Phase 1 of the National Cemetery.

Third Party EIS – East Collier Property Owners, United States Fish and Wildlife (USFWS) Service, Collier County, FL. AECOM was hired to assist with the preparation of an Environmental Impact Statement under the direction of the USFWS related to the Eastern Collier Multispecies Habitat Conservation Plan (HCP and Incidental Take Permit (ITP) in compliance with the National Environmental Policy Act (NEPA). Kelley managed an interdisciplinary staff comprised of traffic engineers, biologists, environmental and transportation planners to produce the DEIS that evaluates the potential effects to the natural, physical, and human environments likely to occur as a consequence of the Service issuing ITPs for Covered Activities and Covered Species requested by a group of landowners acting jointly as the Eastern Collier Property Owners, LLC (ECPO) under Section 10 of the federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The ECPO anticipate pursuing various activities on approximately 152,000 acres of private lands in northeastern Collier County, Florida identified as the Rural Land Stewardship Area (RLSA). Of these lands, the ECPO intend to preserve and limit development of approximately 107,000 acres of habitat important to the Florida panther (FP) and other federally listed species (restricted to uses no more intensive than historical uses of these lands) while directing future residential development, commercial development, and earth mining (i.e., “Covered Activities”) to the remaining 45,000 acres minus the acreage of the already permitted Ave Maria project for a total maximum of 39,973 acres of potential new development within the 152,000-acre plan area. These Covered Activities will be implemented in a portion of the RSLA lands considered to be of lesser habitat quality for the FP. The ECMSHCP and ITPs (if issued) would cover the incidental take of 19 Covered Species--eight federally listed species, three species that are being considered for listing but are not currently federally listed, and eight non-federally listed species that are currently listed as threatened by the state of Florida. Any ITPs issued, and the biological analyses performed for our intra-Service consultation, would inform and facilitate future regulatory actions by the Corps of Engineers in the ECMSHCP plan area. The DEIS was published and updated based on the +/-2000 comments received and is currently being reviewed by the FWS.

Big Cypress National Preserve Hydrologic Restoration Master Plan Environmental Assessment, Collier, Miami-Dade and Monroe Counties, FL. AECOM was hired to assist the National Park Service (NPS) with the creation of a shared vision for managing backcountry access and wilderness at the Preserve. Public scoping began in 2014 enabling NPS and the planning team to develop a series of alternatives including management strategies. NPS also conducted a wilderness eligibility assessment to assist with the development of wilderness alternatives. Kelley led an interdisciplinary team and assisted with the Alternatives Workshop held as an open house forum and began leading the AECOM team that is currently assessing feedback in order to develop a National Environmental Policy Act (NEPA) document that analyzes resource impacts that have the potential to occur as a result of the range of alternatives developed. She facilitated the Preferred Alternative Workshop with the NPS Interdisciplinary Team and the draft EIS will be published in the spring of 2020.

Karen Brandon, PE

Natural Resources – Permitting Lead

Key expertise
Permitting
StormwaterDesign/Management
Ports/Marinas

Education
BS, Environmental Engineering, University of Florida, 1988

Years of experience
31 with AECOM | 38 Total

Training
FDEP Certified Erosion and Sediment Control Inspector

Registrations/Certifications
Professional Engineer: FL #38579
FDEP Certified Erosion and Sediment Control Inspector: #095
AECOM Cerytified Project Manager
AECOM Lead Verifier - Water Resources

Karen has over 37 years of regulatory and water resources experience in the design and permitting of large stormwater management, port/marine and utility projects with environmental impacts.

Professional history

Karen has also been involved in complex regional hydrologic modeling studies, general consulting for several 298 water control districts and community development districts, development of municipal stormwater master plans and stormwater utilities, and roadway projects. Karen has been an assistant city engineer and acting city engineer for the city of Palm Beach Gardens and town engineer for the town of Juno Beach, as well as district engineer for three community development districts.

Select project experience

Sediment Dredging, The Port of Palm Beach District Berth 17 Project, FL. Project manager and environmental permitting manager for the design of $10M project including a new slip, dredging, paving, grading, drainage, utility and lighting improvements. Permitting issues include potential impacts to hard corals, sea grasses, sea turtles and manatee habitat. Permitting agencies include FDEP, the US Army Corps of Engineers, the National Marine Fisheries Service and the Florida Wildlife Commission.

Glades Area Expansion Project, Florida City Gas, FL. Project manager for the surveying, preparation of permit plans and FDOT, SFWMD, local water control district, and local government right-of-way permitting of over 30 miles of natural gas pipeline from South Bay to west of Clewiston, Florida. Included environmental resource permitting through the FDEP and U.S. Army Corps of Engineers, as well as Section 408 Permitting through the Corps and railroad permitting through SFCE.

Bulkhead Reconstruction, The Port of Palm Beach District Slip No. 3 Improvements, FL. Project manager and environmental permitting manager for $16.7M in bulkhead reconstruction, rail, dredging, paving, grading, drainage, utility and lighting improvements to Slip 3 which had the potential for impacts to hard corals, sea grasses, sea turtles and manatee habitat. Included a NEPA Environmental Assessment. Permitting agencies included FDEP, the US Army Corps of Engineers, the National Marine Fisheries Services Protected Resource and Habitat Conservation Divisions, and the Florida Wildlife Commission.

SOF Boat Dock Facility, U.S. Navy, Monroe County, FL. Environmental permitting for improvements to an existing boat dock facility including dock demolition and reconstruction, dredging, installation of shoreline revetment, fenders and a wave attenuation structure with flushing culvert. Permitting issues included seagrasses and corals. Permitting agencies included the FDEP, the US Army Corps of Engineers, the NOAA/Florida Keys National Marine Sanctuary and the South Florida Water Management District for minor upland improvements.

Utility Right-of-Way Permitting, Beeline Community Development District, Palm Beach County, FL. Palm Beach County Land Development and Utility Right-of Way permitting for water main replacements, new fire mains and stormwater culvert crossings. Also included was Palm Beach County Health Dept permitting for the water mains.

Water Main Micro tunnel and Force Main Utility Tunnel, Miami-Dade Water and Sewer Department, Miami-Dade, FL. Permitting manager for the environmental regulatory permits from the Miami-Dade County Department of Environmental Resource Management, the FDEP, and the U.S. Army Corps of Engineers. Permitting was the critical path for the $37M project. Challenges included water quality and reduction of impacts to benthic resources in the Biscayne Bay Aquatic Preserve.

Justin Vandever, PE

Resilience/Sustainability/Climate Change Lead

Key expertise
Coastal and Marine Science
Climate Change Adaptation
Risk Assessment

Years of experience
10 with AECOM | 14 Total

Registrations/Certifications
Professional Engineer: CA #76245 (Civil)
AECOM Certified Project Manager
AECOM Lead Verifier – Climate Change & Resilience

Education
MS, Marine Science, College of William and Mary
BS, Civil and Environmental Engineering, Cornell University, 2004

Justin has extensive experience in coastal and marine science, engineering, and climate change adaptation. His project experience includes climate change vulnerability and risk assessments, sea level rise inundation mapping, coastal processes and flooding, design of coastal and estuarine restoration and monitoring projects, and response of coastal and estuarine environments to sea level rise. Justin has served as a quality reviewer and technical advisor on numerous coastal flooding and climate change-related projects.

Professional history

Justin has co-authored technical articles related to climate change vulnerability, including sea level rise impacts in San Francisco Bay, effects of coastal erosion on the California coast, and mitigating climate change through coastal wetland restoration and has presented at regional, nationwide, and international coastal conferences. Justin was selected as one of the American Society of Civil Engineers' "New Faces of Civil Engineering" in 2013.

Select project experience

Miscellaneous. Environmental Engineering Miami Beach, FL. Coastal Engineer on AECOM's project to assist the City of Miami Beach in conducting a sea level rise vulnerability assessment as part of a broader resiliency effort within the City. Justin led the development of sea level rise inundation maps to evaluate exposure of City assets to flooding and sea level rise and provided technical review of a climate science summary memo. Justin also assisted in the development of a citywide asset database and vulnerability assessment tool to support the City's capital planning process.

City of Naples, Stormwater Master Plan update, Naples, FL. Coastal Engineer on AECOM project to complete a Stormwater Master Plan Update for the City of Naples. Justin led completion of the climate adaptation chapter of the master plan, which evaluated the effects of sea level rise (SLR) on stormwater management within the city. The plan documented historical and future SLR projections and evaluated SLR and flooding impacts on stormwater system components such as pump stations, outfalls, and catch basins.

Economic Impacts and Sea Level Rise and Coastal Storms, Dania Beach, FL. Coastal Engineer on an AECOM project to conduct an analysis of the potential economic costs that could occur from failing to take action to protect Dania Beach's business communities from future storm surge and sea level rise impacts, as well as the economic benefits from adaptation actions that mitigate future coastal hazards to the City's commercial core. Justin served as a technical advisor to the economics team to help interpret coastal hazard mapping datasets used in the economic analysis.

Port of Long Beach, Climate Adaptation and Coastal Resiliency Strategy, Long Beach, CA. Provided coastal engineering expertise in support of an evaluation of climate change impacts, assessment of risks to the port, and preparation of a climate resiliency plan. Climate change and coastal hazards are anticipated to cause direct or indirect consequences to the port's infrastructure and operations. A climate adaptation and coastal resiliency plan was prepared for the port to enhance its infrastructure and operations.

Regional Adaptation Strategies Cost Estimating, San Francisco Bay, CA. Coastal Engineer, assisting MTC with sea level rise adaptation strategy costing for the Horizon initiative. AECOM is developing unit cost estimates for a number of physical adaptation strategies to adapt the Bay Area's shorelines to 2050 sea level rise of 1, 2, and 3 feet.

Federal Emergency Management Agency (FEMA) – Region IX, Risk Map Program - Coastal Hazard Analysis, Pacific Coast, CA. Technical lead on a team conducting tide frequency analysis, nearshore wave modeling, wave runup and overtopping, and coastal flood mapping for central California. FEMA performed a detailed coastal engineering study of the Pacific coast of California. Results from this study will be used to remap the coastal flood risk and wave hazards for the California coast.

Lauren Swan, ESP

Resilience/Sustainability/Climate Change Team

Key expertise
Master Planning
Resilience Solutions
Landscape Architecture Planning
Landscape Architecture Design

Education
MBA, Landscape Architecture, State University of New York, 2010
BA, Urban and Regional Planning, Florida Atlantic University, 2007

Years of experience
6 with AECOM | 14 Total

Certifications
Envision Sustainability Professional
AECOM Certified Project Manager

Lauren has experience in landscape architecture design, planning and project management for a variety of cross-disciplinary projects. From submittals to reviews and oversight, Lauren has worked in both public and private sectors with expertise in facilitation, design and strategic planning. Lauren oversees local community-based projects as well as large military projects requiring metric evaluation of Department of Defense compliance.

Professional history

Lauren's background combined with her understanding of Comprehensive Code and the Unified Facilities Criteria enables her to develop creative and resilient solutions to technical problems. Lauren led AECOM's work with 100RC resulting in the Resilient305 program and continues to actively work with communities to strengthen their climate and community resilience.

Select project experience

Resilience Services, FDOT District 6, Miami, FL. Project manager and lead contributor evaluating climate resilience projections, measures, and effects on transportation infrastructure.

Greater Miami and the Beaches Resilient305, Miami-Dade County, FL. Project Manager responsible for guiding extensive stakeholder engagement and research resulting in the development of a three-government Resilient305 Strategy to address issues of climate change, social equity, and infrastructure-based needs.

Resilient Reefs, Great Barrier Reef Foundation, Belize. Project manager and lead contributor evaluating Belize's Barrier Reef Reserve System to assess reef health and vulnerabilities. This information will be used to inform the government's reef protection policies and ensure the longevity of a healthy reef system.

Miami Beach Flood Mitigation & Resilience Study, Miami Beach, FL. Contributor to the climate change focused workshops and interviews under a vulnerability assessment documenting the climate stressors and shocks affecting Miami Beach. This assessment was used to inform city-wise strategies to mitigate flooding of public and private property. Strategies include policy changes for new construction and major renovations, specifically in the minimum building first floor elevations requirements.

Logistics Command 21st Century Plan, Naval Facilities Engineering Command (NAVFAC). Key contributor in the development of a Marine Corps Organic Industrial Base Facilities Plan for that evaluates asset condition and capacity against mission requirements and environmental vulnerabilities. The process included extensive stakeholder engagement combined with quantitative data analysis. The plan provides a prioritized project list of facilities for demolition, repair, consolidation, remediation, and construction.

Camp Lejeune US Marine Corps Asset Evaluations, NAVFAC, Camp Lejeune, NC. Key contributor working with stakeholders and conducting evaluation of critical assets to verify asset age and size and determine asset condition and capacity. Tasks included interior and exterior evaluation of key assets types: base facilities, stormwater infrastructure, electric equipment, transportation routes, and public use areas.

MCAS Beaufort US Marine Corps Installation Master Plan, NAVFAC, Beaufort, SC. Key contributor in leading stakeholder workshops to determine short-range and long-range needs based on site conditions and DoD planning guidance. Content includes planning and adaptation strategies for the following key asset types: base facilities, stormwater infrastructure, transportation routes, and public use areas.

MCLB Albany US Marine Corps Installation Master Plan, NAVFAC, Albany, GA. Key contributor in leading stakeholder workshops to determine short-range and long-range needs based on site conditions and DoD planning guidance. Content includes planning and adaptation strategies for the following key asset types: base facilities, stormwater infrastructure, transportation routes, and public use areas.

US Air Force Installation Development Plan, U.S. Air Force Civil Engineer Center (AFCEC), Multiple AFB Installations. Lead contributor to development of four Installation Development Plans for Cape Canaveral Air Force Station / Patrick AFB, Tinker AFB, Seymour Johnson AFB, and Joint Base Charleston. The plan process includes stakeholder interviews and workshops as well as analysis of quantitative data. Content includes planning and adaptation strategies for the following key asset types: base facilities, stormwater infrastructure, transportation routes, and public use areas.

Alhambra and Maggiore Parks, Coral Gables, FL. Contributor for landscape, hardscape, lighting, master planning, design, community workshops and construction services for a community park with onsite stormwater, native materials, inclusive play areas, civic scale trellis and seating area.

Tamarac Park Master Plan, Tamarac, FL. Contributor for a parks, recreation and open space masterplan that identifies existing conditions, needs assessments, planning framework and recommendations based on input from city staff and civic engagement.

Kings Bay Community Park, Coral Gables, FL. Lead contributor for the landscape, hardscape, lighting, site planning design, public outreach, and construction administration services for a linear park and pedestrian plaza with onsite stormwater retention located along the water’s edge.

Altos Del Mar Park, Miami Beach, FL. Contributor for landscape, hardscape, lighting, master planning, design, and community workshop services for the last oceanfront, undeveloped 2.5-acre park with proposed pedestrian paths, botanical garden like features, bocce court, and sand volleyball courts to create a park that is in keeping with the natural and urban landscape.

José Soler, PE

Seawall & Dock Construction Lead

Key expertise
Port & Marine Planning, Design and Construction
Dredging and Navigation Channels
Shoreline Protection & Upgrades
Waterfront & Berthing Structures
Container Terminal Development
Precast Structures

Education
BE, Civil Engineering, University of Puerto Rico, 1996

Years of experience
1 with AECOM | 24 Total

Registrations
Professional Engineer: FL #85451; PR #18272

José is a Director with AECOMs Americas Ports & Marine Group. He has 24 years of experience performing and managing numerous waterfront and maritime projects involving planning, coordination of design from conceptual through final and construction.

Professional history

José's project experience includes construction management of bulkheads, piers, dolphin structures, container terminals, waterside and landside improvements, cargo yard development, rail systems, as well as bridges. He has managed projects in the Caribbean and in the U.S.

Select project experience

Program Management Consultant Contract , PortMiami, FL. Integral member of AECOM PMC management team to the Port's Capital Improvement Program. Serving as Port's Technical and Management Advisor for major cruise terminal projects, including Terminals B, F and H. Other ongoing development projects include replacement of the North Bulkhead, Cargo Yard densification, development for an ERTG container yard, reefer racks, entry/exit gates, multi-story parking garage structures, flyover bridge structure, and bulkhead repairs.

North Bulkhead Wall Replacement Program, PortMiami, FL. Project manager for the North Bulkhead Wall system that will be replaced with a new wall along the northern extension of Dodge Island to serve all cruise operations berths. This complex wall reconstruction will require extensive construction phasing in order to minimize impacts to port operations. Currently in the earl stage of development, the program may include widening of the north apron, extensive waterside improvements, PBB and runway modifications, and relocation of bollards, fenders, and water stations.

Cruise Terminal B Design-Build, PortMiami, FL. Program manager responsible for providing Owner's Representative services for a new cruise terminal in a public-private partnership between Miami-Dade County and Norwegian Cruise Lines. Project includes upgrade of the seawall for flood and sea level rise protection.

Cruise Terminal V Design-Build, PortMiami, FL, Program manager responsible for providing Owner's Representative services for a new cruise terminal to accommodate the Virgin Voyages Scarlet Lady. Project includes dredging of the berth and portions of the Intra Coastal Waterway, a new bulkhead wall system, a mooring dolphin extension to accommodate the new vessel, and flood and sea level rise protection.

Cruise Terminal F Expansion and Berthing Re-Alignment Design-Build, PortMiami, FL. Program manager responsible for providing Owner's Representative services for the expansion and renovation of Cruise Terminal F. Project includes waterside improvements to accommodate berthing of Carnival's newest 6,000 passenger ships and provide improved flood and sea level rise protection.

Capital Improvement Budgeting, Port of Palm Beach, Riviera Beach, FL. Project engineer responsible for the evaluation and development of budget for the new Capital Improvement projects. Led the development and overseeing of the planning, design and construction of the Port's Capital Improvement and Replacement Program including construction of new berth capable of handling for 300' barge for RO/RO operation, including secant wall and concrete bulkhead structure, navigational and dolphin structures and dredging. Site conversion of existing high-rise building structure and parking into a soil improved heavy load Reefer Container Yard operation. Replacement of existing bulkhead structures with new steel sheet pile and construction of concrete cap, installation of mooring bollard, fenders and shore power stations. Managed the planning and construction of the Improvements projects to the In-Port rail system to meet Federal Rail Administration codes and regulation including the replacement of existing rail tracks, switches and signaling systems. Retrofit and improvement of existing berth, with the installation of

new sheet pile bulkhead wall, new soil anchors and tiebacks system, construction of new utilities, new prop wash wall, restoration of pavement and upland appurtenances. Led the coordination with Federal and States agencies such as the US ACE and the FDEP. [Prior to joining AECOM]

Crowley Maritime Isla Grande Terminal Improvements, San Juan, PR. Project director/project construction manager responsible for construction team in the Upland Redevelopment and Improvements of the existing Container over Chassis Storage Yard into a Heavy Load Five-High Storage Container Yard Handling Operation. The upland improvements included to increase the ground load capacity through a Cement Treated Base soil mixing process. Construction of new 38kV electrical substation, electrical power and communication ductbanks for new refrigerated container receptacles (Reefer Plugs). New entrance and exit gate structures with kiosks and cameras for automated driver, truck and container identification, weight scales and cargo delivery system. [Prior to joining AECOM]

Port of the Américas Phase III-A.2 & A.2.1, Ponce, PR. Project director/project construction manager responsible for the construction team in the construction of third and final government phase bid for the new world-class marine port terminal. The new phase developed 45 acres of waterfront property providing additional transshipment area with capability of 250,000 TEU's for a portwide total of 500,000 TEU's. The project included the realignment of an existing 2,500 linear meter storm channel with steel sheet pile and concrete cap side walls, installation of 260,000 linear feet of geopiers for soil capacity improvement, installation of new water and sanitary systems, harbor dredging, installation of a 750,000 cubic meters surcharge with 1,900,000 lf wick drains system for underground soil improvements, RTG's runways and tie downs, 13 structural steel reefers platforms and a 38kV electrical substation. Incorporated value-engineering process to the original project design for project construction efficiency, modifying the required clamshell dredge and scout ocean dump material disposition to a hydraulic dredge system with landside geotubes for material collection and upland disposition. [Prior to joining AECOM]

Port of the Américas Phase II, Ports Authority, Ponce, PR. Project director/project construction manager responsible for the construction team in the construction of second phase of a high priority government project design to increase economic activity to the island with the first world-class deep draft public marine port terminal in the Caribbean. The construction area for the new terminal was developed in a 35 acres waterfront property. The new terminal will provide a transshipment area with capability of 250,000 TEU's. Construction activities included demolition of existing structures, earthwork and surcharge installation and monitoring with accelerated settlement thought wick drains system installation. One of the most critical activity involved the construction of a new storm sewer system, with an 84-inch concrete outfall pipe at a 25 feet installation depth. The project included the installation of a 650,000 cubic meters surcharge with 1,063,000 of wick drains system for underground soil improvements, RTG's runways and tie downs, storm system and storm water treatment units, potable and fire distribution system. [Prior to joining AECOM]

John Carel, PE

Seawall & Dock Construction Team

Key expertise
Port & Marine Planning, Design and Construction
Dredging and Navigation Channels
Shoreline Protection & Upgrades
Waterfront & Berthing Structures
Container Terminal Development
Precast Structures

Education
MS, Civil Engineering, Michigan State University, 1972
BS, Civil Engineering, Michigan State University, 1971

Years of experience
27 with AECOM | 47Total

Training
FHWA Bridge Management
FHWA Safety Inspection of Highway Bridges Refresher

Registrations/Certificatoins
Professional Engineer: MA #49086; FL #71844; NJ #24804; NY #57347; SC #11885
AECOM Lead Verifier - Coastal & Marine

John has extensive marine, coastal, and structural engineering experience. His expertise includes project management, contract negotiations, design, construction, and rehabilitation of structures with a specialization in waterfront and maritime projects, including piers, jetties, wharves, bulkheads, shoreline revetments, dolphin structures, navigation aid structures and moorings, marine terminals, as well as bridges.

Professional history

hundreds of facilities including condition inspection surveys and evaluation of sites and facilities, structural design of new facilities and repairs to existing, preparation of contract and bidding documents both traditional design-bid-build and design build, environmental permitting, cost estimating, consultation during bidding and construction, due diligence studies, bid evaluation, and construction inspection services. He is familiar and accustomed to working for both public and private clients on commercial ports and public use facilities including ferry and passenger terminals, waterfront parks, bulkheads, seawalls and revetments.

Select project experience

SOF Key West, NAVFAC Southeast, Naval Air Station, Key West FL. Lead marine engineer for reconstruction of a small craft facility for joint special op forces. Work includes replacement of small craft basin timber wave fence with 144 LF concrete wave attenuator using concrete piles and precast planks, replacing fixed timber docks with 6 new concrete piers approx. 2,200 SF, relocating a floating jet ski dock, bulkhead repairs, bulkhead extension, replacing a boat ramp, and repairs and upgrade to revetments. The project work also included a pipe for basin flushing, boat wash facility, new Latrine/Shower building, site lighting and related site utilities including sewer force main.

Berth Engineering, Port Manatee, Palmetto FL. Lead engineer for Reconstruction of Berth 9 and Berths 4, 5, 12 and 14 Cathodic Protection including new steel combi-wall oversheeting to address deteriorated steel cellular cofferdam wharf. The new wall will also allow for the future deepening of the slip when the main channel is deepened. The wall will be anchored by using tie rods, secured to a transfer beam supported on the back wall of the cofferdams and held laterally with soil anchors. The project includes new fendering, mooring fittings, ship's utility stations, concrete and asphalt pavement to support mobile harbor cranes, forklifts and dockside equipment) and a drainage system. Lead Contract documents preparation efforts (plans, bid and technical specifications and cost estimates).

Waterfront Structures Design Improvements, USCG Station Marathon, Marathon FL. Project engineer for Concept through final design for improvements to Waterfront Structures. Project Work includes repairs to wharf, bulkheads and seawalls and replacement of boat ramp. Prepared drawings, specifications, cost estimates and environmental permit applications.

Port Miami Program Management, Miami FL. Assisted in development of standard marine specifications, design guidelines and Standards Manual. Also assisted various small task orders review of construction proposals.

Port Everglades Master Plan, Fort Lauderdale, Hollywood and Dania, FL. Marine Engineer assisted planners in developing feasible alternatives for port improvement projects, schedules and construction cost estimates for multiple projects over a 2 year horizon. **Former Kerr McGee Site, Jacksonville, FL.** Prepared conceptual environmental bulkhead sketches estimates of probable costs with provision for future conversion to marginal wharf.

Hurricane Irma Repairs, Refit Wharves and TPS Docks C&D, NAVFAC Southeast, Naval Submarine Base, Kings Bay, Georgia and Naval Air

Station Jacksonville FL. Lead design engineer of Design Build Team for two new submarine camels, new oil booms and repairs to wharves including refurbishing mooring fittings, cable tray and new ladders, and structural repairs to floating pier guide pile frames. Work includes preparation of construction plans and technical specifications. For Jacksonville Project reviewed plans for shoreline stone armor revetment, replacement of small timber pier, new timber bulkhead and stabilization of existing stone and concrete seawall. Prepared project specifications for all work.

Port Canaveral Berths 5 & 6, Canaveral Port Authority, Cape Canaveral FL. Marine Engineer responsible for Peer Review of construction change including addition of crane beams to allow use of rail mounded container cranes for an under construction berth designed for mobile harbor crane use. Review found potential for cost savings of approx. one million dollars.

Bush Terminal Park Improvements, Piers 2, and 4 to 5, NYC Economic Development Corporation, Brooklyn NY. Lead designer and prepared contract documents for new stabilizing sheet pile cutoff wall and replacement of promenade walkways.

Waterfront Building Code, New York City Department of Small Business Services, New York NY. Advisor and quality control reviews for development of a new waterfront building code for the City of New York.

Reconstruction of Fender Systems, NYCDOT Slip 1, St. George, Staten Island NY. Quality control on basis of design and construction documents and assisted with preparation of Contract Documents for catwalk and gangway systems.

Bayport Container Terminal, Houston Port Authority, Houston TX. Concept study for evaluation of existing wharf to support new larger Ship-to-Shore Cranes including proposed concepts and costs for upgrades. Subsequently, provided QC reviews of construction documents for strengthening including new drilled shafts and subcaps to strengthen crane beams and tiedowns.

Carney Point Township Terminal Planning Study, Chemours, Chambers Works, NJ. Prepared concept study for proposed marine terminal at site of former DuPont Chemical Plant.

Springmaid Pier Reconstruction, Myrtle Beach SC. Performed QC reviews of drawing design submissions for replacement of pier destroyed during hurricane.

Long Slip Canal Fill and Rail Enhancements, NJ Transit, , Hoboken NJ. Prepared contract specifications for structural work including Concrete Combined Sewer Outfall, and related sheeting and sheet piling.

South Carolina State Ports Authority, Hugh L. Leatherman Sr. Container Terminal, Charleston SC. Project engineer marine lead in charge of the design and preparation of Plans and Technical Specifications for the preliminary design of a 3,500 foot, 3 berth marginal wharf container berth and final design allowing for construction of up to 2,700 feet of wharf including 2 of the 3 berths as budget allows. The work includes construction of a 122 feet wide concrete wharf supported on precast prestressed concrete piles with steel stingers. The wharf consists of cast-in-place pile caps and crane beams, precast/pre-stressed deck planks with cast-in-place concrete topping, cone fenders with UHMWPE faced steel panels for berthing, crane rails and appurtenances, bollards for mooring, ships' water service stations and water piping, electrical power cable horn vaults and conduits, removal and replacement of existing stone revetment stone, extension of placement of new armored revetment and stone toe, dredging with upland disposal of dredged material, and other ancillary work. Currently responsible for review and approval of construction submittals.

Station Little Creek, United States Coast Guard, Virginia Beach VA. Project engineer for evaluation of structural adequacy of existing sheet pile bulkhead under proposed dredging.

Hammels Wye Flood Mitigation, New York City Transit Authority, Rockaway, Queens NY. Developed alternative conceptual designs for wave fences and hardening of subway infrastructure.

Whitestone and Throgs Neck Bridges, Triboro Bridge and Tunnel Authority, Queens and the Bronx, NY. Provided QC reviews of design-build plans and specifications for new fender systems protecting the main suspension bridge towers.

Limetree Bay Terminals LLC (former Hovensa Marine Terminal, Saint Croix, U.S. Virgin Islands. Project engineer for inspection and report on condition of Dock 4 prior to its recommissioning.

Indian Navy, Project Seabird, Marine Works Consultancy Package I, Naval Base Karwar, India Technical advisor/quality control reviewer providing technical guidance on pier and wharf design concepts and performed QC reviews on proposed construction types and basis of design.

Jae Park, PhD, CFM

Grant Writing/Funding Assistance Lead

Key expertise
Grant Management and Policies
Hazard Mitigation
Resiliency and Disaster Reovery

Education
PhD, Urban and Regional Science, Texas A&M University, 1998
MS, Community and Regional Planning, Iowa State University, Ames, 1992

Years of experience
14 with AECOM | 28 Total

Certifications
Certified Flood Plain Manager
AECOM Lead Verifier - Coastal & Marine

Dr. Park has 28 years of experience and expertise in the areas of hazard mitigation, resilience and disaster recovery, grants management, and policies.

Professional history

Dr. Park has assisted many local, state, and federal governments rebuild resilient communities after major disasters such as Hurricanes Fran, Floyd, Isabel, Katrina, Sandy, Matthew, and Maria. Currently Dr. Park is a FEMA Hazard Mitigation Assistance contract program manager for AECOM. Prior to joining AECOM, he served as a policy advisor and chief policy analyst for the Mississippi Governor Office of Recovery and Renewal in coordinating Hurricane Katrina. He was an Assistant Director for Mitigation, Division of Emergency Management, State of North Carolina. During his tenure, he was instrumental in development of an overall long-term vision for the Hazard Mitigation and oversaw managing $800 million mitigation funds for implementing various hazard mitigation planning and projects.

Select project experience

FEMA Hazard Mitigation Assistance (HMA) Program Service. Program manager for to enhance quality and speed of HMA grant awards, refine delivery, and expand national outreach for all types of mitigation. AECOM is developing a program strategy to ensure that best practices, new ideas, and lessons learned are incorporated. AECOM has been providing technical support to facilitate the development of new Building Resilient Infrastructure and Community grant program under Disaster Recovery Reform Act of 2018. AECOM also is responsible for maintenance of HMA program guidance, policies, regulations, job aids, and online outreach communications.

Carolina Hurricane Matthew Disaster Resilience and Redevelopment Plan, NC. Technical advisor for development of Resilient Redevelopment Plans for the counties and municipalities impacted by Hurricane Matthew in State of North Carolina. The plan development includes activities including but not limited to public meeting, identify and verify the actual damages, risk assessments and then identify actionable strategies that will help advance recovery and promote resilience in the impacted communities. The resilient recovery strategies will be targeted to housing, infrastructure, economic development and ecosystem protection. Additional duty includes working with NC Governor's office and various state agencies in preparing Congressional Recovery funding request.

Multidisciplinary Planning Services - Hampton Roads Region, Norfolk VA and Virginia Beach. Resilience funding strategy lead for developing a joint land use study with impacted local governments and Navy installations in Norfolk and Virginia Beach to carry out resilience measures to reduce the impacts of flooding, erosion, and extreme coastal storm events on critical infrastructure that supports Navy operations in Hampton Roads. Leads development of Implementation Strategy, with responsible parties, timelines, and multiple prospective program funding sources identified for each strategy.

FEMA Unified Hazard Mitigation Assistance Grant Program Guidance Development and Updates. Task lead to develop Unified Hazard Mitigation Assistance Program guidance for five hazard mitigation funding programs: PDM, FMA, RFC, SRL, and HMGP. The intent of this alignment is to enhance the quality and speed of grant awards on an allocation and competitive basis to State, local, and Tribal entities for worthwhile, cost-beneficial activities designed to reduce the risks of future damage in hazard-prone areas. Supported updating the HMA Guidance for FY 2015, which is a comprehensive document that details the specific eligibility, implementation and close out criteria of the HMA grant programs.

HUD National Disaster Resilience Competition (NDRC) Support for State of MA, MS and NM. Task lead for HUD set aside $1 billion available to the communities that have been struck by natural disasters in recent years. The NDRC is designed to promote risk assessment and planning and will fund the implementation of innovative resilience projects to better prepare communities for future storms and other extreme events. Dr. Park supported developing HUD NDRC Phase II grant applications for MA, MS and NM and the assistances ranged from resilience project scoping, program compliance check, data collection, and benefit cost analyses for various projects, such as wildfire mitigation, dam restoration, coastal protection, storm water management and green infrastructure, and renewable energy.

Mississippi Disaster Recovery and Renewal (Mississippi Office of the Governor). Policy advisor and chief analyst for the Mississippi Governor Office of Recovery and Renewal in coordinating Hurricane Katrina recovery efforts over $10 billion. Services provided include disaster recovery policy guidance and counsel; support implementation of the recovery recommendations of the Governor's Commission; and provide training, education, and outreach programs to government officials, organizations, and individuals to help them make more informed decisions regarding disaster recovery. He also coordinated community long-term recovery planning efforts with FEMA and impacted community leaders.

Division of Emergency Management, NC. Assistant director for mitigation for eleven presidentially declared disasters and worked with FEMA in setting hazard mitigation and recovery policies after the Hurricane Floyd. Primary task of the position centered on the development and implementation of a comprehensive mitigation program involved with grants management, hazard mitigation planning, NFIP and legal supports. He oversaw managing $800 million federal and state funds for implementing various hazard mitigation projects, including buyout of 5,000 flood damaged structures, residential elevations and storm water management.

Amy Baker, PE, PMP, CFM

Grant Writing/Funding Assistance Team

Key expertise
Grant Management and Policies
Hazard Mitigation
FEMA Hazard Mitigation and Public Assistance
Technical Assistance Contracts
HUD CDBG-DR

Education
BSE, Civil Engineering, Tulane University, 1998

Years of experience
17 with AECOM | 22 Total

Registrations/Certifications
Professional Engineer: LA #30484; SC #35074; TX #129148
Project Management Institute: PMP #1510737
Certified Flood Plain Manager

Amy has 22 years of experience as an engineer and manager and is an Associate Vice President at AECOM and provides subject matter expertise for recovery, mitigation and resiliency efforts.

Professional history

Amy has provided program management leadership for some of the largest infrastructure recovery programs nationwide. During this time, she has provided extensive support assistance to local jurisdictions involved in the post-disaster recovery directly, and through USACE and FEMA. She focuses the management of projects (ranging from tens of thousands to multimillions of dollars in contract value and a billion of dollars in grant value) that support the long-term resilience of the built environment. Amy has designed and led multidisciplinary teams consisting of direct staff and subconsultants, which at times exceeded more than 1,000 professionals. She brings more than 15 years of experience supporting other disaster grant programs, including FEMA Hazard Mitigation and Public Assistance-Technical Assistance Contracts, Housing and Urban Development (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR), and DOT New Starts.

Select project experience

Community Resilience Support Services IDIQ, National Institute of Standards and Technology (NIST). Program manager / project executive for the AECOM team of national resilience experts providing technical support for its research program, and meeting/conference planning and support. The research support activities include stakeholder outreach, technology transfer, and research and development tasks that lead to tools to assess resilience and support decision making in communities. Responsible for overall management of the $9M IDIQ contract, with multiple task orders.

Environmental Planning and Historic Preservation Technical Assistance to State and Locals for Hazard Mitigation Assistance Grants, Federal Emergency Management Agency, Nationwide. Project manager and subject matter expert under Booz Allen Hamilton's HMTAP Non-AE Nationwide EHP task orders. Provided subject matter expertise in execution of technical assistance and EHP delivery for FEMA grants. Responsible all components of her teams' task order execution leading to the successful delivery of technical assistance, including financial, subcontracting, technical, and staffing responsibilities. Served as the main point of contact with the BAH project manager for these efforts.

Management and Design of the Community Development Block Grant Disaster Relief Projects, City of Norman, OK. Grants lead for the City of Norman HUD CDBG-DR funding from a series of declared storms (tornadoes, wildfires and rain). Working with the State of Oklahoma, ODOC, under the Action Plan, the City has moved forward with a roadway repair program of at least 7 major roads. The City of Norman contracted program management, design, construction management and grants support. Responsible for management portion of this job, coordinating such issues as Section 3 compliance and reporting, WDBE efforts, monthly progress reporting, and general CDBG-DR policy issues with the City. Supporting compliance with HUD CDBG-DR requirements, including reporting.

Environmental Planning and Historic Preservation Technical Assistance to State and Locals for Hazard Mitigation Assistance Grants, Federal Emergency Management Agency, Nationwide. Task order manager for three HMTAP nationwide task orders. Provided technical assistance and programmatic support related to National Environmental Policy Act and other applicable EHP laws, executive orders, regulations, and guidance to applicants and subapplicants throughout the United States. Responsible for coordinating nationwide cadre of EHP staff delivering technical assistance. Managed all components of task order execution leading to the successful delivery of technical assistance, including financial, subcontracting, technical, and staffing responsibilities. Served as the main point of contact with the FEMA project manager for these efforts.

Hazard Mitigation Assistance Contract, Federal Emergency Management Agency, Nationwide. Deputy project manager/ subject matter expert for on-site coordination lead and program support lead for the contract support of this program. FEMA's HMA portfolio of pre and post-disaster grants on average exceeds $1 Billion per year over the last decade. The HMA Contract provided grants management, policy and project management support to the FEMA Branch tasked with this portfolio management. Throughout her duration supporting the contract, responsible for administration of the day-to-day on-site support of HMA contract staff; strategy and policy support for the pre-disaster mitigation program, hazard mitigation grant program and flood management assistance programs; grant management activities; data management; and reporting associated with the PDM-Joint Explanatory Statement (JES) program.

Hazard Mitigation Technical Assistance Program Task Order 50 – Pre-Disaster Mitigation-Joint Explanatory Statement, Federal Emergency Management Agency, Nationwide. Task order coordinator / project manager for a $2 million HMTAP task order to provide technical assistance and training to FEMA Headquarters, Regions, applicants, and subapplicants for congressionally earmarked funds under the Pre-Disaster Mitigation Grant Program. Worked with congressional mandates, shaped policy and statutes, and tracked rules and regulations that were under active interpretation by legislators. Focal points of this support were the development of strategy to address congressional allocations through PDM-JES; delivery of cost-effective engineering and EHP technical assistance; and detailed data management of all technical assistance efforts. Efforts included supporting Regional trainings, local workshops, development of program communication and educational tools, and data management and analysis of hundreds of applications. Efforts also included coordinating staff resources from across the country to meet individual technical assistance needs of JES applicants.

Carlton Gordon, MRSA

Asbestos, Mold & Lead Based Paint Team

Key expertise
Industrial Hygiene
Asbestos Sampling, Surveys, & Abatement
Lead Sampling & Abatement
Indoor Air Quality
Radon Sampling & Mitigation
Mold Investigations & Remediation

Education
BA, Communications Studies/ Speech Communcation and Rhetoric, State University of New York, 2000

Years of experience
15 with AECOM | 15 Total

Training
40-hour OSHA HAZWOPER
8-Hour OSHA HAZWOPER Annual Refresher

Registrations/Certifications
Floriad Certified Mold Assessor: # MRSA #2163
Florida EPA/AHERA Certified Asbestos Inspector
Florida EPA/AHERA Certified Asbestos Supervisor

Carlton is skilled in environmental fields as environmental health and safety, indoor air quality, asbestos, mold, lead, radon, corrosive drywall and Phase I and II investigations.

Professional history

Carlton has conducted various project oversights to ensure compliance with applicable federal, state, and local requirements for safe work practices in Florida for 14 years.

Select project experience

Asbestos Survey Reports, City of Miami Police Department Central Station HQ, Miami, FL. Prepared asbestos survey reports and assisted with abatement specifications to describe the scope of work and define the minimum health and safety requirements.

Mold Assessments, FDOT Miramar Hub, Miramar, FL. Performed mold assessment inside a newly constructed hub structure adjacent to interstate I-75 that experienced water intrusion and high humidity conditions. Provided mold remediation oversight and air sampling following removal of mold-impacted building material.

Ambient Air Monitoring, City of Miami Parks and Recreation, Miami, FL. Performed ambient air monitoring during excavation and removal of topsoil at park playground where toxic ash had been dumped at Curtis and Bayfront Parks. Provided oversight of contractor activities and personal monitoring for contractor. Conducted asbestos and lead paint surveys prior to demolition / renovation activities at park facilities including Fern Isle and Curtis parks.

Asbestos and Lead Paint Assessments, City of Titusville, Water Resources Department, Titusville, FL. Performed asbestos and lead paint assessments for two decommissioned water tanks scheduled for demolition.

Mold Assessments and Air Monitoring, Naval Support Activity, Panama City, FL. Performed mold assessments and air monitoring following hurricane damage. Conducted pre-renovation asbestos and lead paint surveys in several buildings base wide that were impacted by Hurricane Michael in 2018.

Pre-renovation Asbestos and Lead Paint Surveys, Miami-Dade County Pre-Trial Detention Center, Miami, FL. Performed pre-renovation asbestos and lead paint surveys throughout the kitchen and former dormitory areas, including the roofs. Prepared project deliverables.

Pre-demolition Asbestos and Lead Paint Surveys, Joint Base Charleston, Charleston, SC. Performed pre-demolition asbestos and lead paint surveys in secured building that was scheduled for demolition.

Pre-renovation Asbestos and Lead Paint Surveys, NAVFAC, Naval Air Station Jacksonville, Jacksonville, FL. Performed pre-renovation asbestos and lead paint surveys in several buildings scheduled for upgrade by NAVFAC.

Asbestos and Lead Paint Surveys, Private Aerospace Manufacturer – Jupiter, FL. Performed asbestos and lead paint surveys throughout the multiple manufacturing and test buildings.

Asbestos Inspection and Abatement, Orlando Utilities Commission Orlando, FL. Conducted inspection of multiple exterior electrical cabinets and an underground tunnel vault for the presence of asbestos-containing materials (ACM). Performed oversight during abatement and disposal work performed by subcontractor and performed final inspections.

Scott Millard

Asbestos, Mold, Lead-based Paint Abatement

Key expertise
Health and Safety Management
Risk Assessments
Compliance Audits
Safety Training
Project Estimating
Project Management

Education
AA, Broward Community College

Years of experience
7 with CES | 28 Total

Training
40-hour OSHA 1910.120 HAZWOPER
8-hour OSHA 1910.120 HAZWOPER Annual Refresher
30-hour OSHA Construction Industry Outreach
OSHA 511 General Industry
Basic Incident Command
DOT Hazardous Materials Shipping (HM172)
SSPC C-1 Basic Coatings Inspection
SSPC C-5 De-leading Industrial Structure

Certifications
Mold Remediator, FL #MRSR1954

Scott's experience includes over 27 years in the construction industry with a concentration in demolition and remediation contracting.

Professional history

Scott is a licensed mold remediation contractor with extensive asbestos abatement, mold remediation and demolition project experience. In addition, he has estimated, designed and managed many large-scale asbestos projects, including the abatement on several bridge projects.

Select experience

CSX Bascule RR Bridge, Handex Consulting and Remediation, LLC. Project manager overseeing the abatement of 21,682 SF of asbestos containing paint & lead.

Broward County Courthouse, Alpha Wrecking Group, Broward County, FL. Project manager for the removal of asbestos containing material; 12,000 SF duct insulation with mastic, 10,000 SF flooring with mastic, 2,000 SF TSI.

Lead Abatement - Miami Beach Convention Center-, Alpha Wrecking Group, Miami Beach, FL. Project manager for lead abatement.

Asbestos Abatement - Terminal Air Handler – PBIA Ph 2, Hill York Air Conditioning Services and Energy Solutions. Project manager for asbestos abatement; 675 SF fire putty.

Seminole Trailer Park Abatement of Trailers and underground piping, Alpha Wrecking. Project estimator and project manager for abatement of 55 trailers and 15,000 linear feet of underground water pipe with asbestos.

Sears and Auto Center Asbestos Abatement, Sterling Organization, Pompano, FL. Project estimator and project manager abatement of asbestos containing materials throughout the two buildings and selective interior demolition.

Mold Remediation, FDOT Broward Operations Center, FL. Project estimator and project manager for remediation and restoration of water damaged and microbial impacted building materials in three buildings.

Residential Sound Insulation, Broward County Aviation Department project, DEC Contracting, Broward County, FL. Project estimator and project manager for removal of asbestos and lead paint coated building materials for the coordinated replacement of windows, doors and HVAC components to reduce outside noise from airport activities such as outgoing and incoming flights.

Terminal 3 Renovation Asbestos and Lead Abatement, Ft Lauderdale/Hollywood International Airport, FL. Project estimator and project manager for removal of building components with asbestos and lead in coordination with other trades and airport staff for the renovation of two active terminals.

The Standard At Coral Gables Abatement And Remediation, FL. Project estimator and project manager for abatement of asbestos containing materials, remediation of PCB containing light ballasts and window caulking as well as clean up and disposal of miscellaneous hazardous material items such as mercury thermostats and light bulbs.

John Tostanoski

Asbestos, Mold, Lead-based Paint Abatement

Key expertise
Management
Risk Assessments
Compliance Audits
Health & Safety

Education
BS, Environmental Sciences, Florida International University, 1975

Years of experience
16 with CES | 46 Total

Training
40-hour OSHA HAZWOPER
Certified Miners Safet & Health Administration (MSHA)

Certifications
Mold Remediator FL MRSR2306
Certified CPR and First-Aid

John has 46 of experience in the environmental contracting and consulting industry, including project management, analytical testing, contamination assessment and remediation, asbestos and lead assessment and remediation, indoor air quality, expert testimony and regulatory intervention.

Professional history

John's previous experience as President of both public and private environmental firms has included the management and responsibility of all aspects of administrative, financial, marketing, personnel, and quality oversight disciplines.

Select experience

Right of Way Asbestos Abatement and Demolition Contracts, Department of Transportation District 4, Districtwide, FL. Project Manager overseeing asbestos abatement and demolition of several locations for the DOT throughout five south east Florida counties.

Right of Way Asbestos Abatement and Demolition Contracts, Department of Transportation District 6, Districtwide, FL. Project Manager overseeing asbestos abatement and demolition of several locations for the DOT throughout Miami-Dade & Monroe counties.

John Simmons, Jr.

Asbestos, Mold, Lead-based Paint Testing

Key expertise
Environmental Remediation
Environmetnal Compliance
Mold, Lead, Asbestos Consulting
Project Management

Years of experience
29 with GLE | 35 Total

Training
EPA Model Lead-Based Paint Risk Assessor
RMD's LPA-1/XRF Lead Paint Inspection System
AHERA Asbestos Contractor/Supervisor
AHERA Asbestos Inspector
AHERA Asbestos Management Planner
NIOSH 582: Sampling & Evaluating Airborne Asbestos Dust

Registrations
EPA Lead-Based Paint Assessor: FL
Radon Measurement Technician: FL

John as 35 years of experience and serves as the Director of South Florida Operations. He manages the daily operations, business development, client relations, and contract negotiations for the area. His experience in the environmental consulting services field includes a diverse background in facilities consulting, contracting, general construction, environmental remediation, and environmental compliance.

Professional history

John has a proven ability to manage regional and national contracts for a variety of clients that include public sector, private and industrial clients. He has also served as an instructor for EPA-approved Asbestos Worker and Supervisor courses at the University of Florida.

Selected project experience

Lead Based Paint Surveys - Annie Coleman, Miami-Dade Public Housing Community Development, (MDPHCD. Project Manager. Lead-based paint inspections were conducted utilizing an XRF instrument to determine lead content in general compliance with methodologies established by HUD at 27 units in the Annie Coleman community.

Environmental Consulting Contract, BrowardHealth, Broward County, FL. Contract Manager. GLE recently acquired an Industrial Hygiene term contract with Broward Health. Projects thus far have included preliminary mold assessments, visual mold assessments, pre-renovation asbestos surveys, and emergency bacterial water samplings. Mr. Simmons acts as Contract Manager and oversees all efforts for BrowardHealth.

Environmental Consulting Contract, Miami-Dade Aviation Department, Miami-Dade, FL Contract manager for miscellaneous hazardous engineering services. Completed hundreds of projects totaling over $1.75 million in fees. Work has included facilities consulting, including mold, lead, asbestos, and radon assessments and remedial.

Environmental Consulting Services, Jackson Memorial Hospital, Miami, FL. Performed over 463 projects related to indoor air quality, mold, asbestos consulting, preparation of contamination assessment plans, performance of contamination assessments, and risk assessments.

Environmental Term Contract, The School Board of Broward County, Broward County, FL. Completed over 1,500 projects for SBBC under this contract, included in the scope are asbestos, lead, mold and related IAQ consulting services and remedial actions. GLE performed IAQ and mold evaluations of over 30 school campuses. After each project was completed, GLE's architectural division designed remedial and replacement activities which were performed under the supervision of GLE.

Environmental Consulting Services, Florida Atlantic University, Boca Raton, FL . Contract Manager for asbestos, lead-based paint mold and indoor air quality consulting for Florida Atlantic University. In this capacity, GLE performs asbestos renovation and demolition surveys, IAQ and mold assessments and air testing, designs abatement and remediation plans, and provides air-monitoring services for facilities throughout the Boca Raton, Davie, and Harbor Branch Campuses.

Edward Marks, PG, WWC

Drilling Services

Key expertise
Florida Geology & Hydrology
Well Design and Installation
Aquifers
Contaminant Migration
Chemical Injections
Insitu Remediation

Education
BS, Geology and Geography, Florida State University
2001

Years of experience
3 with Earth Tech | 19 Total

Training
40-Hour OSHA HAZWOPER
8-Hour OSHA HAZWOPER
Corporate & Jobsite Safety
Confined Space Resuce Manager
Stormwater Management Inspector
Marine and Land Emergency Spill Containment and Cleanup
FDEP Sampling SOPs

Registrations/Certifications
Professional Geologist: FL #2553
Water Well Contractor: FL #11368
First Aid and CPR Certified

Ed is a Professional Geologist, Licensed Well Driller and Project Manager at Earth Tech Drilling 19 years of experience in the environmental/ geotechnical industry.

Professional history

Edward began his career at the Florida Geological Survey at the FDEP, then transitioning to a Fortune 500 engineering and environmental consulting corporation in 2001 where he specialized in environmental assessments and remediation projects for both public and private sectors. Ed also specializes in Corporate and Jobsite Safety.

Select project experience

Herbert Hoover Dike, FL. Tasked with collecting core samples from the Herbert Hoover Dike System surrounding Lake Okeechobee using the 4”x6” over-cased sonic drilling method. The recovered core samples were contained and organized into core boxes for the client. The project was completed successfully, on time and within budget with no technical issues.

American Creosote Works, FL. Tasked with collecting a total of 593 linear feet of core samples and installing four MWs using the 4”x6” over-cased sonic drilling method. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

Petroleum Products Corp, FL. Tasked with collecting a total of 314 linear feet of core samples and using the 4”x6” over-cased sonic drilling method and subsequent borehole abandonment of 314 linear beet. Seven MWs total were also installed. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

G-Bar Service, FL. Tasked with installing 15 Deep Wells totaling 1,355 linear feet with 1,050 linear feet of 8” temporary over-ride casing. collecting a total of 6”x8” over-cased sonic drilling method. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget.

Former Northrop Grumman, FL. Tasked with installing six MWs and collecting a total of 275 linear feet of core samples using sonic drilling method. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

County Line Project, FL. Tasked with installing five MWs and collecting a total of 467 linear feet of core samples using sonic drilling methods. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

Dania Pointe South Parking Garage, FL. Tasked with collecting a total of 1,500 linear feet of core samples using sonic drilling to assess for the presence of C&D landfill material. The recovered core samples were contained in plastic core bags and organized for the client at each boring location. The ETD crew subsequently abandoned each of the borings, totaling 1,500 linear feet. The project was completed successfully, on time and within budget with no technical issues.

Willie Smitherman, WWC, CPS, CPI

Drilling Services

Key expertise
Contaminated and Hazardous Materials Investigations
Environmental Studies
Drilling

Education
BS, Business Administration, Florida State University, 1981

Years of experience
28 with JAEE | 38Total

Training
Hazardous Materials / Waste Manager
National Hazardous Waste Site Investigation
Revised Hazardous Ranking System
Hazardous Ranking System
Professional Development Programs
Quality Assurance Certificate (Auditor / Technical Expert)

Registrations/Certifications
Water Well Contractor: FL #11212
Certified Environmental Specialist
Certified Environmental Inspector

Willie has 38 years of experience conducting drilling services for Phase I and Phase II environmental site assessments, contamination assessment investigations, and environmental audits.

Professional history

Willie provides onsite analyses of volatile organic compounds using a portable gas chromatograph to delineate contamination plumes and remedial system startups. In addition, conducts site assessments and investigations, soil and groundwater sampling using Geoprobe system, oxygen release compounds into formation, provide conductivity reading for lithology, installing permanent and temporary monitoring wells, and verifying onsite start-ups for remediation systems.

NUS Corporation's Superfund Division. Responsible for controlling activities related to the procurement of supplies, equipment and services for field investigations in US EPA Region 4 including:

- Prepared source lists for contract actions.
- Prepared solicitations for contracted services.
- Conducted prebid conferences held prior to submittal of bids.
- Coordinated the evaluation of bids and the selection of the successful offeror
- Coordinated the negotiation of technical issues and/or price with successful offeror
- Coordinated closeout of subcontract agreements
- Prepare evaluations on completed contracts

Conducted site investigations and site assessments for hazardous waste sites in US EPA Region 4 including:

- Provided guidance and training in the application of US EPA Environmental Services Division (ESD) sampling protocol to make sure proper compliance and documentation
- Proficient with CERCLA/SARA and RCRA government regulations.
- Supervised and manage all aspects of work plans, study plans, safety plans, equipment lists and assemblage of sampling personnel.
- Interpreted chemical analyses and prepare responses for submission to US EPA.
- RI/FS and Site Investigation Overviews
- Extensive site work coordination with federal, state and local.
- Performed over 150 site investigations.

Developed and completed investigations of hazardous waste sites to be placed on the National Priorities List (NPL) including:

- Proposed and placed 5 sites in the Federal Register for inclusion on the National Priorities List.
- Cognizant of objectives, application and concepts of HRS as presented in the National Contingency Plan (NCP).
- Proficient with the latest HRS Model proposed in the Federal Register.
- Monitor activities affecting quality performed by the Field Investigation Team including developing, implementing and maintaining quality assurance program
- Monitored project activities to verify compliance
- Audited internal files
- Provided expertise for project management

Anthony Sullivan

Grant Writing / Funding Assistance

Key expertise
Grant Writing
Funding Assistance
Federal Reimbursements

Education
BS, Chemistry/Biology, Mississippi Valley State University, 1986

Years of experience
15 with SRC | 29Total

Anthony is President and Director of Environmental Affairs/Funding Sources with 29 years of environmental cost recovery experience. SRC coordinates the preparation of various local, state and federal reimbursement and low interest applications to private and governmental agencies.

Professional history

Anthony has worked with Miami-Dade Aviation Department (MDAD) since 1994 to secure reimbursement of petroleum cleanup at Miami International Airport (MIA). He served as the focal point consultant for MIA petroleum reimbursement and eligibility issues associated with the Florida Department of Environmental Protection (FDEP). He reviewed technical and financial documentation before submittal to Dade Environmental Resource Management (DERM) and the FDEP regarding Inland Protection Trust Fund (IPTF) issues. To date, MIA has been reimbursed $29.2 million dollars from the IPTF. Anthony recommended language to MIA and its legal representatives that have benefited all airports in the state under the Preapproval Advance Cleanup, Florida Statute 376.30713(4). He also was the Director of Environmental Affairs/Funding Sources for AECOM (formerly Metcalf & Eddy) cost recovering more than $142 million for clients.

Selected project experience

Trust Fund Management, FDEP, Statewide, FL. Senior project manager for Petroleum Leaking Underground Storage Tank (LUST Program), Inland Petroleum Trust Fund (IPTF)-Florida, Oil Spill Liability Trust Fund (OSLTF), Airport and Airways Trust Fund (AATF), State Revolving Fund Loan Program (SRF)-Florida, Brownfields Cleanup, USDA Rural Development, EPA Various Programs and Federal, State and Local Earmarked Appropriations etc.

Cost Recovery, Miami Dade County Aviation Department, Miami-Dade County, FL. Contracted directly with the Office of the County Attorney-Aviation Division (Miami-Dade County) to provide legal “work product” in pursuing supplemental payments of denial costs by Florida Department of Protection resulting in an additional $5.2 million reimbursement. Provided legal deposition behalf of MDAD in collection of unpaid claims by airport environmental liability insurers.

Focal Reimbursement Management, Miami Dade County Aviation Department (MDAD), Miami-Dade County, FL. Assisted MDAD with providing supporting documentation to Federal Aviation Administration (FAA) associated with the Airport and Airways Trust Fund (AATF) grant application process.

Funding Resource Management, City of Hollywood, FL. Prepared and provided documentation in the initial City of Hollywood, Florida request for inclusion (RFI) form to receive loans from the State Revolving Fund (SRF) program.

Environmental Cleanup Costs, Miami International Airport, Miami, FL. Managed Miami International Airport (MIA) nearly $40 million submittal of environmental cleanup costs. To date, MIA has been reimbursed $29.2 million. In addition, recovered $5.6 million for Miami-Dade Transit (MDT). Provided oversight and auditing expertise to MIA to ensure compliance with local and state programs governed by the Bureau of Petroleum Storage Systems (BPSS).

Trust Fund Management, Florida Inland Protection Trust Fund, FDEP, Statewide, FL. Served as senior project manager overseeing the annual budget of $160 million Florida Inland Protection Trust Fund. Prepared, reviewed or supervised the technical reviews of nearly 7,400 reimbursement applications under the IPTF program. Presented lectures and training presentations to major oil companies, such as Shell Oil, Mobil Oil, Amoco Corporation; and environmental consulting firms throughout Florida.

Christina Raschke

Analytical Laboratory Services

Key expertise
Field Testing
Client Services
Project Management

Education
Master of Physical Therapy, Nova Southeastern University
BS, Biology, Nova Southeastern University

Years of experience
13 with Pace | 13 Total

Christina has been in the Environmental Laboratory field since April of 2006 and brings hands-on experience including supervisory position in the laboratory and over 10 years of Client Services/Project Manager experience with her.

Professional history

Christina is responsible for the coordination and tracking of tasks, schedules, and deliverables for projects related to environmental analysis, compliance, permitting and remediation. She generates and reviews reports, invoices and deliverables prepared by team before submitting to client. In addition, she is responsible for preparation and submittal of specified reporting formats, such as EDDs, ADaPT, Drinking Water Forms. Minimizes risks on projects by ensuring project documents are complete, current, and stored appropriately. She also manage day-to-day client interaction. Interacts with laboratory personnel and works with Sales/Marketing personnel to help meet customer's needs.

Select project experience

City of Miami Outfall, AECOM, Florida, 2013-Present, $35K Annually.
Providing analytical testing to several surface water locations within the City of Miami. Scope of work includes water quality parameters such as metals, phosphorus, bacteriological, nitrogen, solids and more. Frequency 3 events, QA/QC included in triplicate.

Laboratory Testing Services, City of Plantation, Florida, 2014-2018, $40K.
Manage and coordinate with City personnel in order to provide Field and Analytical Testing Services to various locations within City of Plantation limits. At the water plant, scope included full drinking waters standards, primary and secondary. In addition, to perform the municipal wastewater indicator parameters for ground water samples as regulated. Ms. Raschke will review and finalize analytical report and provide required state regulated reported format as applicable.

Derek Zeman, PSM, RPLS

Subsurface Utility Engineering

Key expertise
Subsurface Utility Engineering
Water Resources
LiDAR

Education
High School Diploma

Years of experience
2 with DRMP | 33 Total

Registrations
Professional Surveyor and Mapper: FL #5655,
Registered Professional Land Surveyor: TX #6305

Derek is DRMP's South Florida Survey and Subsurface Utility Engineering Manager for DRMP's Surveying and Mapping/Geomatics Division.

Professional history

Derek is a Senior Project Manager for both public and private sector clients specializing in transportation, land development, design surveys and laser scanning. He is currently responsible for servicing municipal continuing survey service clients, overseeing field operations and production staff, coordinating with the civil engineering group and providing overall QA/QC deliverables. His experience also includes several large-scale water resources projects over the past 12 years while serving as primary point of contact and project manager on projects for the South Florida Water Management District (SFWMD).

Derek's experience ranges from LiDAR laser scanning surveys performed for Tesla, platting reviewer for municipalities, above- and below-ground design surveys and boundary/ topographic surveys for several resorts in the Bahamas. In addition to his day-to-day responsibilities, he also serves as a board member on the Palm Beach County Land Development Review Advisory Board (LDRAB) as well as the Florida Atlantic University Geomatics Student Advisory Board.

Selected project experience

SR 7/US 441 3R Milling and Resurfacing from Atlantic Boulevard to Sample Road, FDOT District 4, Broward County, FL. Project surveyor for the survey of the design/construction documents for this milling and resurfacing project, approximately 2.75-miles. Project included the pavement design for the milling and resurfacing of the 6-lane divided principal urban arterial. The project also required widening the roadway to provide dual left turn lanes at select signalized intersections. The scope of work also included addressing ADA deficiencies (curb ramps, sidewalk pedestrian clearance, concrete bus pads and pedestrian push buttons), upgrading existing strain pole signals with mast arm assemblies and upgrading the signing and pavement markings. Other responsibilities included directing the subconsultant to design and incorporate into the plans the landscape improvements within the existing and upgraded medians, and the development of a maintenance agreement between the FDOT and the Town of Margate, Florida as the maintaining agency.

Coral Ridge Drive, FDOT District 4, Broward County, FL. Survey and subsurface utility engineering manager for design survey of the widening, milling and resurfacing the existing off-system 4-lane divided highway from Southgate Boulevard to Holmberg Road, approximately 5.5 miles within the City of Coral Springs. The project consists of widening the road to add buffered bike lanes, adding sidewalk at gap locations, performing drainage upgrades, providing signing and pavement markings and improving substandard ADA elements. In addition, this project will upgrade existing intersection signals to mast arms at West Atlantic Boulevard, Royal Palm Boulevard, W Sample Road, Wiles Road, Westview Drive and Sawgrass Expressway. Coral Ridge Drive between Southgate Boulevard and Holmberg Road is a heavily residential area with large pockets of commercial properties and will require a significant public involvement effort. This project includes utility coordination, permitting, survey and geotechnical exploration.

University Drive, FDOT District 4, Broward County, FL. Subsurface utility engineering leader and project surveyor responsible for the design survey of the reconstructing/widening/milling and resurfacing of the existing suburban 4-lane divided highway to a 6-lane divided urban highway from just south of Cardinal Road/NW 40th Street to the Sawgrass Expressway/SR 869, approximately 1.6-miles within the City of Coral Springs. Project includes roadway design, lighting design, signing and pavement marking, signalization, ITS, miscellaneous structures, utilities, surveying and right-of-way mapping, permitting, landscaping and public involvement.

Miscellaneous Surveying Services, FDOT District 4, FL. Project surveyor responsible for providing quality control assistance for miscellaneous engineering design surveys consisting of GPS control, bench levels, aerial targets for fixed wing and LAMP, bridge, channel, drainage and lake surveys, right-of-way maps and locating all underground utilities with subsurface utility engineering.

Southbound I-95 Weigh-in-Motion (WIM) Station, FDOT District 4, Martin County, FL. Project Surveyor responsible for the survey coordination phase of this design-build project. This project was a multidiscipline effort involving roadway, architectural, drainage, environmental permitting, signing and pavement markings, signalization, roadway lighting, electrical, mechanical, structural and landscape architecture design. The project also consisted of site civil providing for potable water, self-supportive septic treatment, a package water treatment plant and an emergency power generator. The WIM/static scale system is designed to sort potential overweight and over-height trucks by requiring potential violators to travel through the station. The southbound I-95 WIM station in Martin County is the first of its kind in Florida to weigh trucks in-motion with sensors embedded in the outside at-speed travel lane of I-95.

Dixie Highway Reconstruction Design-Build, FDOT District 4, Broward County, FL. Survey project manager for this design-build project involving the realignment of Dixie Highway from south of Hillsboro Boulevard in Broward County to north of the Hillsboro Canal in Palm Beach County, approximately 0.75-miles. The project included the realignment of Dixie Highway, a 4-lane divided urban arterial, to ultimately bridge the Hillsboro Canal, NE 2nd Avenue, Florida East Coast Railway (FEC), North River Avenue, NE 1st Avenue and NE 2nd Street. A pedestrian pathway structure and an off-ramp structure from Dixie Highway to NE 2nd Avenue will also be constructed. A bathymetric survey was performed on the Hillsboro Canal to provide information regarding the conditions beneath both the FEC and the Dixie Highway bridge. Conventional survey methods were used to extend the digital terrain model (DTM) above the high water line.

Continuing Survey Services Contract, South Florida Water Management District, FL. Project and client manager for two consecutive 5-year contracts. Projects varied from simple sketch and legal descriptions to boundary and topographic surveys over thousands of acres.

Continuing Survey Services Contract, Port of Palm Beach, Riviera Beach, FL. Project manager for more than five years on more than 60 task assignments. Assignments included routine hydrographic surveys of the inlet and channel around Peanut Island into the port slip areas, sketch and legal descriptions of numerous lease parcels and an overall boundary survey/plat.

Kissimmee River Boundary and Topographic Surveys, South Florida Water Management District, FL. Project manager responsible for the overall delivery of this project. Responsible for preparing boundary and topographic surveys for tracts 19-103-1818 and 19-103-184, respectively. The parcels are located in Sections 10, 28 and 29 of Township 36 South, Range 33 East, Highlands County. Three parcels were located along the Kissimmee River and had been purchased from Lykes Brothers, Inc. The survey established the property corners for fencing and land management purposes. The survey effort included research, recovery of existing sectional control in the area, establishment of state plane coordinates, preparation of SFWMD benchmark description sheets and completing certified corner records for all found or set sectional breakdown corners and filed with the FDEP. The project was completed within the timeframe and budget approved by the SFWMD.

Surveying and Mapping Services, Town of Lake Park, Palm Beach County, FL. Project manager responsible for reviewing plats for compliance with Florida Statute Chapter 177 and Town ordinances.

George Bush Boulevard Bridge Rehabilitation Project, Palm Beach County Roadway Division, Palm Beach County, FL. Project manager responsible for high definition laser scanning on the top deck of the bridge and under bridge support structures. Special attention was given to detailing the piling spacing, decking widths, spans and areas of erosion. After the fieldwork was completed, a 3D image (or point cloud) was created using Leica Geosystems Cyclone Version 7.0.3 to create an accurate 3D plan. This work was integral to the preparation of detailed structural engineering plans for the design and construction of the rehabilitation improvements.

Eugene Collings-Bonfill, PE, PSM

Surveying & Mapping

Key expertise
Civil Engineering
Land Surveying & Mapping

Education
MS, Civil Engineering University of Miami
BS, Civil Engineering, University of Miami

Years of experience
10 with JBONFILL | 21 Total

Training
30-hour OSHA

Registrations/Certifications
Professional Engineer: FL #77583
Professional Surveyor & Mapper: FL #PSM7037
Certified Floodplain Manager
Designated Design-Build Professional
Advanced Method of Transportation
FDEP SWPPP

As Vice President and Director of Engineering Services Eugene is responsible for overseeing the surveying efforts included in Civil Engineering projects.

Professional history

Eugene's project management experience allows him to allocate the needed resources to expedite project schedules and meet budget requirements. As Land Surveying Project Manager, he manages project priorities, work schedules and coordination with consultants to deliver the land surveying program ensuring quality control of survey products and data integrity are met.

Select project experience

Topographic Right of Way (ROW) Survey of Campbell Drive, City of Homestead Maintenance & Construction Department, Homestead, FL. Land surveyor and mapper for Topographic ROW Survey of Campbell Drive from SW 312 Street/Campbell Drive from SR 997/Krome Avenue to SR 5/US 1 Homestead, FL. Description: Approximately 5,000 LF of ROW Survey for roadway reconstruction project.

Topographic ROW Survey of NW South River Drive, Miami-Dade County Department of Transportation & Public Works, Miami, FL. Land surveyor and mapper for Topographic ROW Survey of NW South River Drive between NW 28th Avenue and NW 32nd Avenue Miami, FL. Approximately 5,400 LF of ROW Surveys for design and construction.

Sketch & Legal Descriptions for Storm Water Management Conservation Areas, City of Hialeah Public Works, Roadway, WASD, 2015-2015, $8,380. Land surveyor and mapper for Sketch & Legal Descriptions of 6 individual parcels along NW 154th Street and 1 parcel including all 6 parcels along NW 154 Street plus area along NW 102nd Avenue, Hialeah FL. Sketch & Legal Description of complete ROW for 6 parcels located along NW 154th Street from NW 97th Avenue to NW 105th Avenue. Approximately 5.23 Acres/ 1,500 LF ROW. Sketch and Legal Description of above parcels plus the complete ROW of NW 102nd Avenue from NW 154 Street to NW 166 Street. Approximately 15.79 Acres / 5,400 LF of ROW.

Vizcaya Museum and Gardens, Miami-Dade County Parks Recreation and Open Spaces, Miami, FL. Land surveyor and mapper for Boundary and Topographic Survey including Underground Utility Location, Tree Survey, Legal Description, ROW Topographic Surveys.

Wagner Creek Canal and Seybold Canal Dredging, City of Miami Capital Improvements, Miami, FL. Land surveyor and mapper for Marine Structure Survey for an independent condition assessment of the marine structures in Wagner Creek and Seybold Canal in support of the Wagner Creek/Seybold Canal Restoration Project. Marine structures included sea walls, bulkheads, sheet piling, docks and timber pilings, pipelines, concrete debris, bridges, trees. Plan & Profile Views. Survey Baseline including adjacent lots. Canal Centerline, Water Level Delineation, Canal Utility Crossings & Outfalls. Survey of all general obstructions within canal ROW and easement limits. Canal Cross Sections at 100' intervals. GPS for each property. Folio Numbers, address for Seybold Canal &Wagner Canal. Tabular report of field findings, condition of the structures, digital pictures & video of the structures.

Topographic ROW Survey of Main Highway, Coconut Grove Business Improvement District (BID), Miami, FL. Land surveyor in charge for Topographic ROW Survey of Main Highway from Franklin Avenue to Grand Avenue Miami, FL. Description: Approximately 1,910 LF of ROW for road restoration project including sidewalk replacement.

Topographic ROW Survey of Palm Grove, City of Miami Capital Improvements and Transportation Program, Miami, FL. Land surveyor in charge for NE 71st Street and 4th Court to Biscayne Boulevard and NE 5th Avenue between 70th Street and 72nd Street Miami, FL. Description: Approximately 2,848 LF of ROW for Design and construction of street reconstruction project including sidewalk replacement.

Oria Jannet Suarez, PSM

Land Surveying and Mapping

Key expertise
Land Surveying and Mapping

Education
BA, Architecture, Central University, Caracas Venezuela
Bachelor Degree, Equivalency Silny and Associates, Miami FL

Years of experience
20 with JBONFILL | 35 Total

Registrations
Professional Surveyor and Mapper: FL. #6781

Oria is the Vice President/Surveyor of Record/Surveyor in Charge for all Land Surveying efforts.

Professional history

Oria has provided project management and supervision as well as the direction of field and office work. She is well versed in Civil3D software and is familiar with all aspects of surveying and mapping work. All field and office land surveying work is performed under her direct supervision and technical direction.

Select project experience

Main Highway Topographic ROW Survey, Coconut Grove Business Improvement District, Miami, FL. Land surveyor in charge for Topographic ROW Survey of Main Highway from Franklin Avenue to Grand Avenue for approximately 1,910 LF of ROW for road restoration project including sidewalk replacement.

Topographic ROW Survey of Palm Grove, City of Miami Capital Improvements and Transportation Program (CITP), Miami, FL. Land surveyor in charge for NE 71st Street and 4th Court to Biscayne Boulevard and NE 5th Avenue between 70th Street and 72nd Street. Description: Approximately 2,848 LF of ROW for Design and construction of street reconstruction project including sidewalk replacement.

Topographic ROW Survey of SW 1st Avenue, City of Miami CITP, Miami, FL. Land surveyor in charge for Topographic ROW Survey of SW 1st Avenue between SW 7th Street to SW 15th Road for approximately 2,923 LF of ROW surveys for road milling and resurfacing projects.

FIU Mixed Use Field 24 Acres and Preserve, FIU Facilities Management/ Facilities Development Department, 2016, $24,275. Land Surveyor in Charge of Topographic Survey of +/- 26 acres for design and construction including: Location of all above ground improvements relative to Florida State Plane Coordinates System Grid. Location of all walls, fences. Location of all above ground known/visible utility services, poles, wires, hydrants, catch basins, manholes, inverts, curbs, street alleys, sidewalks, curb grades, adjacent grade, description of materials, walkways, parking, curbs, asphalt areas. Complete ROW survey of a portion of East Campus Circle and SW 17th Street, conduct underground utility location by GPR, prepare tree survey with table, conduct bathymetric survey of lake for approximately 0.81 Acres (grid no greater than 25' spacing).

Topographic ROW Surveys of Intersections throughout Miami-Dade County, Miami-Dade County Department of Transportation and Public Works, Various Locations. Land Surveyor in Charge for 23 separate street intersections for design and construction projects**:**

- NE 6 Avenue and NE 171 Street, North Miami Beach FL
- Mowry Drive and SW 182 Avenue, Homestead FL
- NE 6 Avenue and NE 149 Street, Miami FL
- NW 10 Avenue and NW 62 Street, Miami FL
- I95 SB and NW 62 Street, Miami FL
- I95 NB and NW 62 Street, Miami FL
- Ludlam Rd and W 53 Street, Hialeah FL
- Ludlam Rd and W 60 Street, Hialeah FL
- N Miami Avenue and N 62 Street, Miami FL
- N Miami Avenue and N75 Street, Miami FL
- N Miami Avenue and N 95 Street, Miami Shores FL
- SW 172 Avenue and SW 328 Street, Homestead FL
- Miller Drive and SW 93 Avenue, Miami FL
- SW 92 Avenue and SW 32 Street, Miami FL
- SW 92 Avenue and SW 48 Street, Miami FL
- SW 102 Avenue and SW 48 Street, Miami FL
- NW 2 Avenue and NW 62 Street, Miami FL
- Miller Drive and SW 102 Avenue, Miami FL
- W 10 Avenue and West 29 Street, Hialeah FL
- West 8 Avenue and West 29 Street, Hialeah FL
- West 8 Avenue and West 33 Street, Hialeah FL
- SW 72 Avenue and SW 82 Street, Miami FL
- NE 2 Avenue and NE 199 Street, Miami Gardens FL

Fernando Miralles, PhD, BCEE, D.WRE, PMP, F.ASCE

Resiliency/Climate Change

Key expertise
Climate Change
Environmental Management

Education
PhD, Water Resources, Massachusetts Institute of Technology, 1992
MS, University of California, 1989
BS, Mechanical Engineering, Universidad Simon Bolivar, Caracas, 1987

Years of experience
3 with 300 Engineering | 23 Total

Registrations/Certifications
Board Certified Environmental Engineer (BCEE)
Diplomate, Water Resources Engineer (DWRE)
Project Management Professional (PMP)

Dr. Miralles is an environmental and water resources engineer with over 25 years of experience in water resources, water supply and sanitation systems.

Professional history

Dr. Miralles expertise includes hydrologic and water quality modeling for stormwater management and flood prevention; integrated urban water master planning; development of numeric models for basin management; climate-hydrology-vegetation interactions in wetlands ecohydrological modeling of agricultural and urban runoff; analysis of the impact of climate change on water resources management; debris flow modeling; evaluation of numerical models for aquifer storage and recovery; development of simulation models of sea driven coastal flooding; development of integrated energy-water nexus modeling tools, analysis and QA/QC of hydrologic modeling results.

Dr. Miralles is the Executive Director of the NOAA Cooperative Institute for Climate and Satellites (CICS), serves as Principal Investigator of NASA's Cooperative Agreement for Earth System Science, and is member of the National Academies Committee on Independent Scientific Review of the Everglades Restoration Program (CISRERP). Over his career, he has consulted internationally with USAID, IDB, CAF and the World Bank on topics dealing with climate change, sustainability and water. He has also been a member of the faculty at the Massachusetts Institute of Technology, Northeastern University, the University of Miami, Florida International University and the University of Maryland. He has been a Principal Investigator in over $160M in projects funded by US and international agencies. He has conducted and directed climate change and water resources projects in over thirty countries.

Selected project experience

Extreme Precipitation Events Analytical Study - Superstorm Sandy, NOAA. This climatological study of precipitation data was focused on forecast errors in order to provide the basis for analysis to understand, and ultimately improve quantitative precipitation forecasting. Analysis of events in which precipitation forecasts were poorly predicted informed both observational needs, reveal areas of required numerical model improvement using ICPR, and offer forecasters guidance regarding predictability (or lack thereof) during specific extreme weather regimes.

Cooperative Agreement, NASA Earth System Science, NASA. Monitoring and analyzing variations in the terrestrial water cycle using appropriate NASA (and other) remote sensing and modeling tools. Services Performed: Produce quantitative estimates over of lake levels, river discharge, soil moisture, and groundwater and the variations in these water resources variables. This study involved the use of ICPR numerical modeling and data assimilation from around the globe to demonstrate the results of NASA earth sciences products.

NOAA Cooperative Institute for Climate and Satellites. Executive director of the NOAA Cooperative Institute for CICS, a national consortium of 20 institutions spanning academia, non-profit, public and private sector organizations focused on research, education and outreach/engagement in the use of satellite observations and Earth System models to advance the national climate mission, including monitoring, understanding, predicting and communicating information on climate variability, climate change and sea level rise. CICS is based at the University of Maryland, College Park, where Dr. Miralles holds an appointment as Professor in the Dept. of Atmospheric and Oceanic Science. At CICS, Dr. Miralles leads a group of 150 between academic faculty, research scientists and technical support staff. In these positions, Dr. Miralles has led the development of strategic plans, budget formulation and execution, fundraising and annual reporting to shareholders.

Diego Mejia

Waste Disposal / Emergency Response

Key expertise
Environmental Projects
Decontamination
Emergency Response
Remediation

Years of experience
9 with NRC / US Ecology | 11Total

Training
OSHA HAZWOPER 40-Hour Initial Course
OSHA HAZWOPER 8-Hour Annual Refresher
Confined Space Entry and Rescue
First Aid/AED/CPR Training
Respiratory Protection Fit Test and Training
Supervisory Responsibilities
Identifying and Handling Hazardous Materials

Diego has 9 years of experience in the environmental industry dealing with a wide variety of environmental projects including decontamination, emergency response, remediation, and industrial services projects and contracts. He is well versed in the evaluation of scopes, training of personnel, and resource management.

Select Experience

NRC/ US Ecology, Inc., Fort Lauderdale, Florida, 2010 – Present.
Project Supervisor. Experience includes:

- Confined space Supervisor
- Oversees the transportation of liquid and solid waste
- Required to understand and comply with all DOT and HAZMAT REGS
- Overall site management including planning, scheduling, budget analysis
- Management of subcontracts and vendors
- Conducting Phase I & II Environmental Site Assessments
- Implementing health and safety procedures, spill prevention and permit conditions
- Geotechnical and environmental support

Overland Contracting, Inc., Overland, Kansas, 2008-July 2010. Insert role and project description.

Experience includes Upgrading and decommissioning cellphone towers

Jeff Roccapriore

Waste Disposal

Key expertise
Waste Disposal
Safety
Environmental Compliance

Education
BS, Ocean Engineering, Florida Atlantic University, 1991

Years of experience
13 with WM | 29 Total

Certifications
24 hr Landfill Operator: Class I, Class III and C&D

Jeff has 29 years of experience in the environmental industry dealing with a wide variety of waste disposal projects.

Select project experience

Monarch Hill, Waste Management, Inc. of Florida. District Manager of 382-acre Class I Municipal Solid Waste landfill receiving 1.2-1.5 million tons/year of waste with key accomplishments in profitability while keeping near zero incident rates in Environmental Compliance and Safety. Jeff's responsibilities include:

- Managing over $20 million per year of operating expenses;
- Capital spending over $5 million per year
- Reviewing and evaluating the business unit performance over market area goals and adjust performance to meet key objectives
- Counseling over 30 direct reports as to execution of programs
- Implementing and maintaining programs to improve safety, productivity, environmental compliance; landfill development and operations, waste approvals and acceptance, and efficiency, cost-effective construction
- Organizing and scheduling resources required to accomplish objectives
- Interacting with Engineer, Environmental Protection Manager, Gas Operation Manager, Heavy Equipment Manager, Renewable Energy Manager and other Market Area personnel to drive programs and acquire resources as needed
- Mentoring District/Operations Manager Trainees placed in and currently employed with Waste Management

Waste Management, Inc. of Florida. Market area engineer was responsible for:

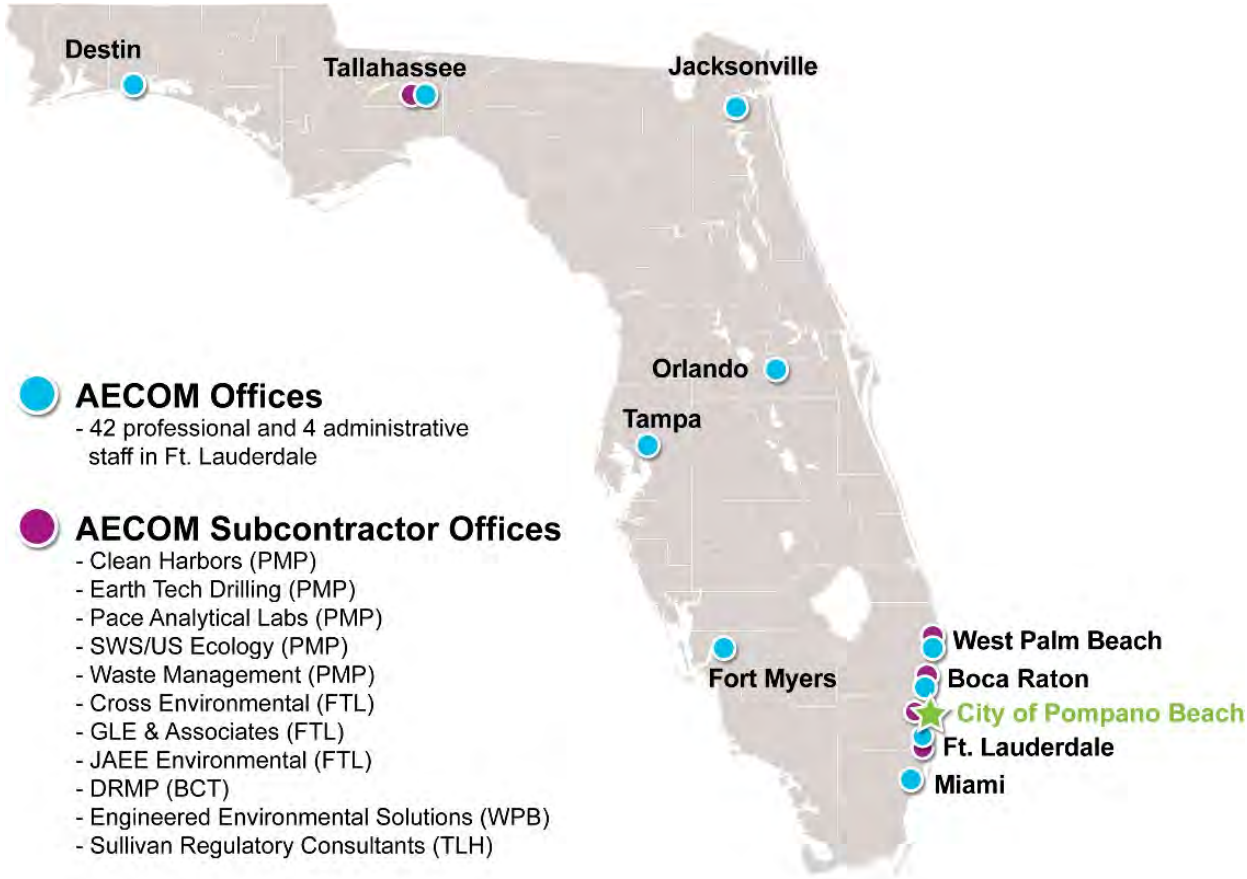
- Preparing specific budgets forecasted to 5 years and general development budgets for the life of the site;
- Capital spending for over $5,000,000 per year
- Coordinating with engineering consultants to prepare construction drawings, specifications, bid packages and other engineering requirements.
- Managing capital construction projects related to landfill gas collection, leachate collection, cell and cap construction, surface water management, and general site development
- Coordinating and meet with local and state regulators regarding the compliance requirements associated with air, groundwater, surface water, and other environmental compliance
- Coordinating with consultants in preparing permit applications and/or modifications associated with aspects of landfill expansion and development

TAB 09

OFFICE LOCATIONS

AECOM has several Florida offices with staff that can be made readily available to serve this contract. Our Southeastern Regional Headquarters are based at 3201 West Commercial Boulevard, Fort Lauderdale, less than 10 minutes from Pompano Beach. This office is centrally located within Broward County, with easy access to either I-95 or Florida's Turnpike. The Fort Lauderdale office has 42 professional staff and 4 administrative staff. This office is staffed by Environment, Water, Buildings + Places, and Transportation Business Line professionals.

AECOM also has offices located in Miami, Boca Raton, West Palm Beach, Fort Myers, Orlando, Tampa, Jacksonville, Tallahassee, and Destin, Florida that can support this contract. Our Florida offices are staffed by over 1,400 employees. Refer to the AECOM Team Offices Map for the locations of our offices and those of our subcontractor team members.



TAB 10

LOCAL BUSINESSES

Local Business Exhibit “B” Letter of Intent to perform as a local subcontractor forms have been completed, signed, and uploaded electronically through the City’s eBid System and have been uploaded to the Response Attachment tab, titled “AECOM_ Tab 10 Local Business_LOI E-22-20.pdf.” The following subcontractors meet the local requirements:

Analytical Services

- Pace Analytical Services, LLC
  2254, 3610 Park Central Boulevard North
  Pompano Beach, FL 33065

Drilling Services

- Earth Tech Drilling, Inc.
  2703 NW 19th Street
  Pompano Beach, FL 33069

Waste Disposal / Emergency Response

- Clean Harbors Environmental Services, Inc.
  1400 Northwest 13th Avenue
  Pompano Beach, FL 33069

Waste Disposal

- Waste Management Inc of Florida
  2700 Wiles Road
  Pompano Beach, FL 33073

TAB 11

LITIGATION

AECOM is a large professional services company that executes thousands of projects annually. As with any large service company, from time to time, AECOM is involved in claims and litigation. However, we strive to avoid litigation and have a risk management program in place that includes early recognition of situations that might give rise to a claim, open lines of communication, and proactive dispute resolution.

None of our current litigation could reasonably be expected to have a material adverse effect on AECOM or its ability to perform under the contract contemplated by the solicitation. If you require additional information, please contact Lusanna Ro, Southeast Region Chief Counsel, at 804-515-8567 or Lusanna.ro@aecom.com.

TAB 12

CITY FORMS

AECOM has completed, signed, and submitted the Information Page Form and the other required forms which were all electronically submitted through the City's eBid System in the Response Attachment tab.

A copy of AECOM's latest financial statement has been uploaded to the Response Attachment tab in the City's eBid System as a separate file titled "AECOM_Financial Statements_LOI E-22-20.pdf" and is marked "Confidential." For more detailed information regarding AECOM's financial stability, please visit investors.aecom.com, where a full financial report can be downloaded.

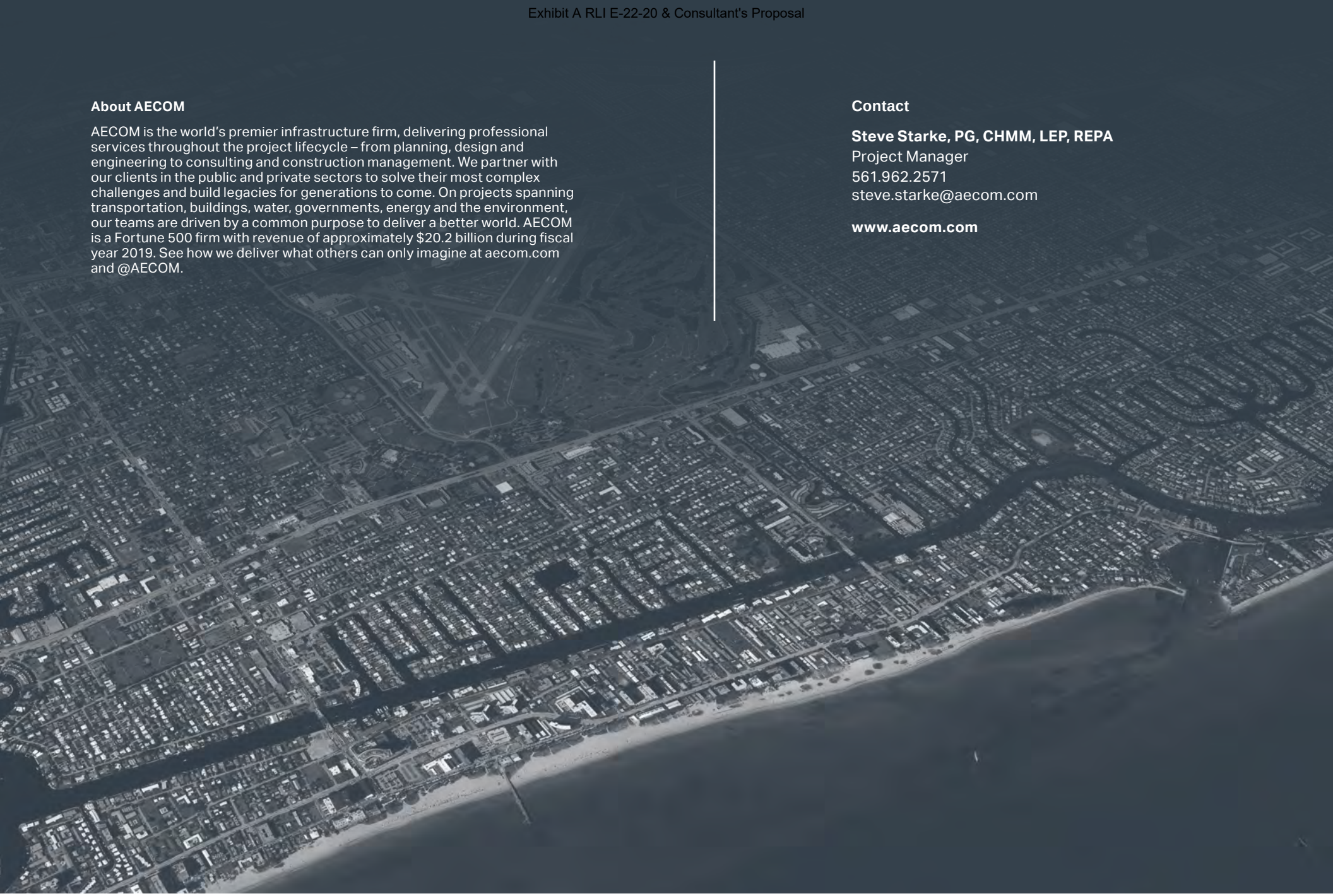
About AECOM

AECOM is the world's premier infrastructure firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to consulting and construction management. We partner with our clients in the public and private sectors to solve their most complex challenges and build legacies for generations to come. On projects spanning transportation, buildings, water, governments, energy and the environment, our teams are driven by a common purpose to deliver a better world. AECOM is a Fortune 500 firm with revenue of approximately $20.2 billion during fiscal year 2019. See how we deliver what others can only imagine at aecom.com and @AECOM.

Contact

Steve Starke, PG, CHMM, LEP, REPA
Project Manager
561.962.2571
steve.starke@aecom.com

www.aecom.com



AECOM Imagine it Delivered

RLI NO. E-22-20
ENVIRONMENTAL TESTING SERVICES
EXHIBIT B – FEE/RATE SCHEDULE

JOB CLASSIFICATION	PROPOSED HOURLY BILLING RATE
Principal-in-Charge	$120.00
Project Manager	$210.00
Assistant Project Manager	$168.00
Senior Engineer	$196.00
Engineer	$126.00
Senior Geologist	$154.00
Senior Scientist	$168.00
Geologist/Scientist	$98.00
Resilience/Climate Change Specialist	$168.00
Senior Ecologist/Biologist	$154.00
Certified Industrial Hygienist	$182.00
Technical Advisor/Quality Assurance/Quality Control	$182.00
Senior Planner	$168.00
Planner	$112.00
Senior Architect	$182.00
Architect	$126.00
Senior GIS Specialist	$154.00
GIS Specialist	$98.00
Senior Technician	$98.00
Technician	$70.00
CADD Technician	$84.00
Adm. Support	$70.00

Notes:
1. Other Job Classifications maybe added based on specific Task Assignments after City's approval
2. All Subconsultant charges will be billed with 5% markup

EXHIBIT C

INSURANCE REQUIREMENTS

CONSULTANT shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the City's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to City staff responsible for oversight of the subject project/contract.

CONSULTANT is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONSULTANT, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONSULTANT under this Agreement.

Throughout the term of this Agreement, CONSULTANT and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

A. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONSULTANT 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 as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONSULTANT's negligent acts or omissions in connection with CONSULTANT's performance under this Agreement.

(2) Such Liability insurance shall include the following <u>checked types of insurance</u> and indicated minimum policy limits.

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

(3) If Professional Liability insurance is required, CONSULTANT agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of three (3) years unless terminated sooner by the applicable statute of limitations.

C. Employer's Liability. If required by law, CONSULTANT and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability

Insurance in the minimum amount of One Hundred Thousand Dollars ($100,000.00) per employee, Five Hundred Thousand Dollars ($500,000) per aggregate.

D. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONSULTANT, the CONSULTANT shall promptly provide the following:

(1) Certificates of Insurance evidencing the required coverage;

(2) Names and addresses of companies providing coverage;

(3) Effective and expiration dates of policies; and

(4) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

E. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

F. Waiver of Subrogation. CONSULTANT hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONSULTANT shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONSULTANT enter into such an agreement on a pre-loss basis.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/30/2021

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
Marsh Risk & Insurance Services
CA License #0437153
633 W. Fifth Street, Suite 1200
Los Angeles, CA 90071
Attn: LosAngeles.CertRequest@Marsh.Com
CN101348564-STND-GAUE-21-22 03 2026

CONTACT NAME: James Vogel
PHONE (A/C, No, Ext): 213-346-5098 **FAX (A/C, No):** 212-948-0533
E-MAIL ADDRESS: James.l.vogel@marsh.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : ACE American Insurance Company	22667
INSURER B : N/A	N/A
INSURER C : Illinois Union Insurance Co	27960
INSURER D : SEE ACORD 101	
INSURER E :	
INSURER F :	

INSURED
AECOM
AECOM Technical Services, Inc
110 East Broward Blvd, Suite 700
Fort Lauderdale, FL 33301

COVERAGES **CERTIFICATE NUMBER:** LOS-002539900-02 **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 CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			HDO G72486304	04/01/2021	04/01/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 3,000,000 $ 3,000,000 $ 5,000 $ 3,000,000 $ 4,000,000 $ 4,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			ISA H25549211	04/01/2021	04/01/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 3,000,000 $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		SEE ACORD 101	04/01/2021	04/01/2022	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 3,000,000 $ 3,000,000 $ 3,000,000
C	ARCHITECTS & ENG. PROFESSIONAL LIAB.			EON G21654693 005 "CLAIMS MADE"	04/01/2021	04/01/2022	Per Claim/Agg Defense Included	2,000,000

APPROVED
By Danielle Thorpe at 9:09 pm, Apr 04, 2021

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: Contract: RLI E-20-20 Continuing Contract for Professional Environmental Testing
For RFP/RFQ Purposes.

City of Pompano Beach is named as additional insured for GL coverage, but only as respects work performed by or on behalf of the named insured and where required by written contract. This insurance is primary and non-contributory over any existing insurance and limited to liability arising out of the operations of the named insured and where required by written contract with respect to the GL & AL coverages. Waiver of Subrogation is applicable where required by written contract with respect to GL, AL and WC. Contractual Liability is included in the General Liability coverage.

CERTIFICATE HOLDER
City of Pompano Beach
Attn: Matthew Kudma, PMP/Engineering Project Manager II
1201 NE 5th Avenue
Pompano Beach, FL 33060

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
of Marsh Risk & Insurance Services
James L. Vogel

Florida's Warmest Welcome

CITY OF POMPANO BEACH
REQUEST FOR LETTERS OF INTEREST
E-22-20

CONTINUING CONTRACT FOR PROFESSIONAL ENVIRONMENTAL TESTING

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

July 9, 2020

CITY OF POMPANO BEACH, FLORIDA

REQUEST FOR LETTERS OF INTEREST
E-20-20

CONTINUING CONTRACT FOR PROFESSIONAL ENVIRONMENTAL TESTING

Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing 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 of Pompano Beach is seeking qualified engineering firms to work on various projects for the City. The projects range in magnitude from small-scale to large or specialized designs.

The types of projects to be undertaken may include, but are not limited to:

- The City's approved Capital Improvement Plan (CIP) maybe found here: Adopted Capital Improvement Plan FY 2020-2024
- Preparation of Phase I, Phase II, and Phase III assessments
- Roadway, Streetscape or Parking Lot projects.
- Water or Reuse Main projects.
- Gravity Sewer Main projects.
- Force Main projects.
- Lift station/pump station rehabilitation projects.
- Parks and Recreational Facilities.
- Seawall and dock construction and repair.
- Storm Water/Drainage Improvement projects
- Consultation for Emergency Water/Wastewater/Stormwater Repairs.
- Inspection Services for Emergency Water/Wastewater/Stormwater Repairs.
- Canal and lake dredging.
- Grant reimbursement, FAA and FDOT support and compliance.

- SRF support and Davis Bacon Wage Reporting requirements
- Support Services for Remediation
- Demolition Projects

Scope of Services

The City intends to issue multiple contracts to engineering firms to provide continuing professional services to the City for various projects as-needed. 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 $500,000.00.

The scope of services may include, but is not limited to, the following:

- Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis.
- Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City)
- Provide project management services for projects, including turbidity monitoring.
- Prepare recommendations and cost estimates for compliance with regulatory requirements.
- 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.
- Prepare reports for regulatory compliance monitoring and assessments.
- Reporting on endangered animals (turtles and owls)

Firms must have demonstrated and specific experience in coordinating with local, county, state, and federal regulatory agencies as it relates to environmental regulatory requirements. Additionally, if firms do not have in-house testing capabilities, they must detail the nature and extent of partnerships with a qualified firm or laboratory. Laboratories performing analytical work must be NELAC certified for the analytes of interest and operate under a Laboratory Quality Manual following NELAC requirements. Firms performing environmental sampling or field data collection must have a Field Sampling Quality Manual and follow the current Florida Department of Environmental Protection Standard Operating Procedures.
Firms must have previous municipal experience and must be licensed to practice **Professional Environmental Testing** in the State of Florida, as required by all applicable Florida State Statutes and Board of Professional Regulation.

A. Task/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.

B. Term of Contract

The Term of this Contract shall be for an initial period of five (5) years from the date of execution by both the City and the Consultant.

C. Project Web Requirements:

1. This project will utilize e-Builder Enterprise™, a web-based project management tool. This web-based application is a collaboration tool, which will allow all project team members continuous access through the Internet to important project data as well as up to the minute decision and approval status information.

   e-Builder Enterprise™ is a comprehensive Project and Program Management system that the City will use to manage all project documents, communications and costs between the Lead Consultant, Sub-Consultants, Design Consultants, Contractor and Owner. e-Builder Enterprise™ includes extensive reporting capabilities to facilitate detailed project reporting in a web-based environment that is accessible to all parties and easy to use. Training will be provided for all consultants selected to provide services for the City of Pompano Beach.

2. Lead and Sub-Consultants shall conduct project controls outlined by the Owner, Project Manager, and/or Construction Manager, utilizing e-Builder Enterprise™. **The designated web-based application license(s) shall be provided by the City to the Prime Consultant and Sub-Consultants.** No additional software will be required.

   Lead Consultant and Sub-Consultants shall have the responsibility for logging in to the project web site on a daily basis, and as necessary to be kept fully apprised of project developments and required action items. , These may include but are not limited to: Contracts, Contract Exhibits, Contract Amendments, Drawing Issuances, Addenda, Bulletins, Permits, Insurance & Bonds, Safety Program Procedures, Safety Notices, Accident Reports, Personnel Injury Reports, Schedules, Site Logistics, Progress Reports, Correspondence, Daily Logs, Non-Conformance Notices, Quality Control Notices, Punch Lists, Meeting Minutes, Requests for Information, Submittal Packages, Substitution Requests, Monthly Payment Request Applications, Supplemental Instructions, Owner Change Directives, Potential Change Orders, Change Order Requests, Change Orders and the like. All supporting data including but not limited to shop drawings, product data sheets, manufacturer data sheets and instructions, method statements, safety SDS sheets, Substitution Requests and the like will be submitted in digital format via e-Builder Enterprise™.

D. 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 preferences 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.

E. Required Proposal Submittal

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 10 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)

F. Insurance

CONTRACTOR shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the CITY's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to CITY staff responsible for oversight of the subject project/contract.

CONTRACTOR is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONTRACTOR, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONTRACTOR under this Agreement.

Throughout the term of this Agreement, CONTRACTOR and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

1. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. 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.

2. Liability Insurance.

(a) Naming the City of Pompano Beach as an additional insured as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONTRACTOR's negligent acts or omissions in connection with Contractor's performance under this Agreement.

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

Type of Insurance		Limits of Liability		
GENERAL LIABILITY:		Minimum $1,000,000 Per Occurrence and $2,000,000 Per Aggregate		
* Policy to be written on a claims incurred basis				
XX	comprehensive form	bodily injury and property damage		
XX	**premises - operations**	**bodily injury and property damage**		
__	**explosion & collapse hazard**			
__	underground hazard			
XX	products/completed operations hazard	bodily injury and property damage combined		
XX	contractual insurance	bodily injury and property damage combined		
XX	broad form property damage	bodily injury and property damage combined		
XX	independent contractors	personal injury		
XX	personal injury			
__	sexual abuse/molestation	Minimum $1,000,000 Per Occurrence and Aggregate		
__	liquor legal liability	Minimum $1,000,000 Per Occurrence and Aggregate		
AUTOMOBILE LIABILITY:		Minimum $1,000,000 Per Occurrence and Aggregate. Bodily injury (each person) bodily injury (each accident), Property damage, bodily injury and property damage combined.		
XX	comprehensive form			
XX	owned			
XX	hired			
XX	non-owned			
REAL & PERSONAL PROPERTY				
__	comprehensive form	Agent must show proof they have this coverage.		
EXCESS LIABILITY			Per Occurrence	Aggregate
__	other than umbrella	bodily injury and property damage combined	$1,000,000	$1,000,000
PROFESSIONAL LIABILITY			Per Occurrence	Aggregate
XX	* Policy to be written on a claims made basis		$1,000,000	$1,000,000

(c) If Professional Liability insurance is required, Contractor agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of four (4) years unless terminated sooner by the applicable statute of limitations.

CYBER LIABILITY	Per Occurrence	Aggregate
__ * Policy to be written on a claims made basis	$1,000,000	$1,000,000

__ Network Security / Privacy Liability
__ Breach Response / Notification Sublimit (minimum limit of 50% of policy aggregate)
__ Technology Products E&O - $1,000,000 (only applicable for vendors supplying technology related services and or products)
__ Coverage shall be maintained in effect during the period of the Agreement and for not less than four (4) years after termination/ completion of the Agreement.

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3. Employer's Liability. If required by law, CONTRACTOR and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability Insurance in the minimum amount of One Hundred Thousand Dollars ($100,000.00) per employee, Five Hundred Thousand Dollars ($500,000) per aggregate.

4. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONTRACTOR, the CONTRACTOR shall promptly provide the following:

(a) Certificates of Insurance evidencing the required coverage;

(b) Names and addresses of companies providing coverage;

(c) Effective and expiration dates of policies; and

(d) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

5. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

6. Waiver of Subrogation. CONTRACTOR hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONTRACTOR shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONTRACTOR enter into such an agreement on a pre-loss basis.

G. 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.

Proposals will be evaluated using the following criteria.

Line	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)	0-15
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	0-15
3	Proximity of the nearest office to the project location: a. Location b. Number of staff at the nearest office	0-15
4	Current and Projected Workload Rating is to reflect the workload (both current and projected) of the firm, staff assigned, and the percentage availability of the staff member assigned. Respondents which fail to note both existing and projected workload conditions and percentage of availability of staff assigned shall receive zero (0) points	0-15
5	Demonstrated Prior Ability to Complete Project on Time Respondents will be evaluated on information provided regarding the firm's experience in the successful completion and steadfast conformance to similar project schedules. Provide an example of successful approaches utilized to achieve a timely project completion. Respondents who demonstrate the ability to complete projects on time shall receive more points.	0-15
6	Demonstrated Prior Ability to Complete Project on Budget Proposers will be evaluated on their ability to adhere to initial design budgets. Examples provided should show a comparison between initial negotiated task costs and final completion costs. Respondents should explain in detail any budgetary overruns due to scope modifications. Respondents which fail to provide schedule and budget information as requested will receive zero (0) points.	0-15
7	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

Additional 0-5% for Tier1/Tier2 Local Business will be calculated on combined scoring totals of each company.

NOTE:
Financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure; however, financial statements submitted to prequalify for a solicitation, and are not required by the City, may be subject to public disclosure.

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 Solicitation, 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.

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.

H. 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.

I. Right to Audit

Contractor's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, subcontract files (including proposals of successful and unsuccessful bidders), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by Owner's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the contractor or any of his payees pursuant to the execution of the contract. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this contract.

For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent or authorized representative shall have access to said records from the effective date of this contract, for the duration of the Work, and until 5 years after the date of final payment by Owner to Consultant pursuant to this contract.

Owner's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article. Owner's agent or its authorized representative shall give auditees reasonable advance notice of intended audits.

Contractor shall require all subcontractors, insurance agents, and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in any written contract agreement. Failure to obtain such written contracts which include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the Contractor pursuant to this contract.

J. Retention of Records and Right to Access

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, as amended. Specifically, the Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service;

2. Upon request from the City’s custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a

reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;

3. 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;

4. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

5. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

K. 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.

L. 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.

M. 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.

N. 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.

O. Contract Terms

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

The contract shall include as a minimum, the entirety of this Solicitation 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.

P. Waiver

It is agreed that no waiver or modification of the contract resulting from this Solicitation, 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.

Q. Survivorship Rights

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

R. Termination

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

Should either party fail to perform any of its obligations under the contract resulting from this Solicitation 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.

S. Manner of Performance

Proposer agrees to perform its duties and obligations under the contract resulting from this Solicitation 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 Solicitation 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.

T. Acceptance Period

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

U. Conditions and Provisions

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

Proposer's response shall not contain any alteration to the document posted other than entering data in spaces provided or including attachments as necessary. By submission of a response, Proposer affirms that a complete set of bid documents was obtained from the eBid System or from the Purchasing Division only and no alteration of any kind has been made to the solicitation. Exceptions or deviations to this proposal may not be added after the submittal date.

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

The City reserves the right to postpone or cancel this solicitation, 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.

V. Standard Provisions

1. Governing Law

   Any agreement resulting from this Solicitation 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. Permits

The selected Proposer shall be responsible for obtaining all permits, licenses, certifications, etc., required by federal, state, county, and municipal laws, regulations, codes, and ordinances for the performance of the work required in these specifications and to conform to the requirements of said legislation.

8. 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 Solicitation. Ignorance on the part of the firm will in no way relieve the firm from responsibility.

9. 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.

10. 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.

11. 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.

12. Public Records

a. 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, as amended. Specifically, the Contractor shall:

   i. Keep and maintain public records required by the City in order to perform the service;

   ii. Upon request from the City's custodian of public records, provide the City with a copy of requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes or as otherwise provided by law;

   iii. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City; and

iv. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.

b. Failure of the Contractor to provide the above described public records to the City within a reasonable time may subject Contractor to penalties under 119.10, Florida Statutes, as amended.

PUBLIC RECORDS CUSTODIAN

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK
100 W. Atlantic Blvd., Suite 253
Pompano Beach, Florida 33060
(954) 786-4611
RecordsCustodian@copbfl.com

W. Questions and Communication

All questions regarding the Solicitation are to be submitted using the Questions feature in the eBid System. 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. Addenda will be posted to the solicitation in the eBid System, and it is the Proposer's responsibility to obtain all addenda before submitting a response to the solicitation.

X. Addenda

The issuance of a written addendum or posting of an answer in response to a question submitted using the Questions feature in the eBid System are the only official methods whereby interpretation, clarification, or additional information can be given. If any addenda are issued to this solicitation the addendum will be issued via the eBid System. 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. Addenda will be posted to the solicitation in the eBid System.

Y. Contractor Performance Report

The City will utilize the Contractor Performance Report to monitor and record the successful proposer's performance for the work specified by the contract. The Contractor Performance Report has been included as an exhibit to this solicitation.

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

PROPOSER INFORMATION PAGE

_____, _____
(number) (Title)

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 solicitation. I have read the solicitation 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) _____ Title _____

Company (Legal Registered) _____

Federal Tax Identification Number _____

Address _____

City/State/Zip _____

Telephone No. _____ Fax No. _____

Email Address _____

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 IN THE EBID SYSTEM.

PROJECT TEAM

SOLICITATION 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		

(use attachments if necessary)

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

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: _____

Vendor FEIN: _____

Section 287.135, Florida Statutes, prohibits agencies from contracting with companies, for goods or services over $1,000,000, that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify

Exhibit – Contractor Performance Report

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

CITY OF POMPANO BEACH
CONTRACTOR PERFORMANCE REPORT

1. Report Period: from _____ to _____

2. Contract Period: from _____ to _____

3. Bid# & or P.O.#: _____

4. Contractor Name: _____

5. City Department: _____

6. Project Manager: _____

7. Scope of Work (Service Deliverables): _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Exhibit – Contractor Performance Report

CATEGORY	RATING	COMMENTS
1. Quality Assurance/Quality Control - Product/Services of high quality - Proper oversight - Communication	Poor =1 Satisfactory =2 Excellent =3	
2. Record Keeping -Accurate record keeping -Proper invoicing -Testing results complete	Poor =1 Satisfactory =2 Excellent =3	
3. Close-Out Activities - Restoration/Cleanup - Deliverables met - Punch list items addressed	Poor =1 Satisfactory =2 Excellent =3	
4. Customer Service - City Personnel and Residents - Response time - Communication	Poor =1 Satisfactory =2 Excellent =3	
5. Cost Control - Monitoring subcontractors - Change-orders - Meeting budget	Poor =1 Satisfactory =2 Excellent =3	
6. Construction Schedule - Adherence to schedule - Time-extensions - Efficient use of resources	Poor =1 Satisfactory =2 Excellent =3	
SCORE	**_____**	**ADD ABOVE RATINGS/DIVIDE TOTAL BY NUMBER OF CATEGORIES BEING RATED**

RATINGS

Poor Performance (1.0 – 1.59)*: Marginally responsive, effective and/or efficient; delays require significant adjustments to programs; key employees marginally capable; customers somewhat satisfied.*

Satisfactory Performance (1.6 – 2.59)*: Generally responsive, effective and/or efficient; delays are excusable and/or results in minor program adjustments; employees are capable and satisfactorily providing service without intervention; customers indicate satisfaction.*

Excellent Performance (2.6 – 3.0): *Immediately responsive; highly efficient and/or effective; no delays; key employees are experts and require minimal direction; customers expectations are exceeded.*

Would you select/recommend this contractor again? _____ Yes _____ No

Please attach any supporting documents to this report to substantiate the ratings that have been provided.

_____	_____	_____
Ratings completed by (print name)	Ratings completed by signature	Date
_____	_____	_____
Department Head (print name)	Department Head Signature	Date
_____	_____	_____
Vendor Representative (print name)	Contractor Representative Signature	Date

Comments, corrective actions etc., use additional page if necessary:

_____

_____

_____

_____

_____

_____

_____

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_____

_____

City of Pompano Beach Florida

Local Business Subcontractor Utilization Report

Project Name (1)		Contract Number and Work Order Number (if applicable) (2)	
Report Number (3)	Reporting Period (4) to	Local Business Contract Goal (5)	Estimated Contract Completion Date (6)
Contractor Name (7)		Contractor Telephone Number (8) ( ) -	Contractor Email Address (9)
Contractor Street Address (10)	Project Manager Name (11)	Project Manager Telephone Number (12) ( ) -	Project Manager Email Address (13)

Local Business Payment Report

Federal Identification Number (14)	**Local Subcontractor Business Name** (15)	**Description of Work** (16)	**Project Amount** (17)	**Amount Paid this Reporting Period** (18)	**Invoice Number** (19)	**Total Paid to Date** (20)
				Total Paid to Date for All Local Business Subcontractors (21) **$**		0.00

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

Contractor Name – Authorized Personnel (print) (22)	Contractor Name – Authorized Personnel (sign) (23)	Title (24)	Date (25)

Local Business Subcontractor Utilization Report Instructions

Box (1) **Project Name –** Enter the entire name of the project.

Box (2) **Contract Number (work order) –** Enter the contract number and the work order number, if applicable (i.e., 4600001234, and if work order contract include work order number – 4600000568 WO 01).

Box (3) **Report Number -** Enter the Local Business Subcontractor Utilization Report number. Reports must be in a numerical series (i.e., 1, 2, 3).

Box (4) **Reporting Period -** Enter the beginning and end dates this report covers (i.e., 10/01/2016 – 11/01/2016).

Box (5) **Local Contract Goal -** Enter the Local Contract Goal percentage on entire contract.

Box (6) **Contract Completion Date -** Enter the expiration date of the contract, (not work the order).

Box (7) **Contractor Name -** Enter the complete legal business name of the Prime Contractor.

Box (8) **Contractor Telephone Number -** Enter the telephone number of the Prime Contractor.

Box (9) **Contractor Email Address -** Enter the email address of the Prime Contractor.

Box (10) **Contractor Street Address –** Enter the mailing address of the Prime Contractor.

Box (11) **Project Manager Name -** Enter the name of the Project Manager for the Prime Contractor on the project.

Box (12) **Project Manager Telephone Number –** Enter the direct telephone number of the Prime Contractor's Project Manager.

Box (13) **Project Manager Email Address –** Enter the email address of the Prime Contractor's Project Manager.

Box (14) **Federal Identification Number –** Enter the federal identification number of the Local Subcontractor(s).

Box (15) **Local Subcontractor Business Name** – Enter the complete legal business name of the Local Subcontractor(s).

Box (16) **Description of Work –** Enter the type of work being performed by the Local Subcontractor(s) (i.e., electrical services).

Box (17) **Project Amount –** Enter the dollar amount allocated to the Local Subcontractor(s) for the entire project (i.e., amount in the subcontract agreement).

Box (18) **Amount Paid this Reporting Period** – Enter the total amount paid to the Local Subcontractor(s) during the reporting period.

Box (19) **Invoice Number** – Enter the Local Subcontractor's invoice number related to the payment reported this period.

Box (20) **Total Paid to Date** – Enter the total amount paid to the Local Subcontractor(s) to date.

Box (21) **Total Paid to Date for All Local Subcontractor(s)** – Enter the total dollar amount paid to date to all Local Subcontractors listed on the report.

Box (22) **Contractor Name Authorized Personnel (print)** – Print the name of the employee that is authorized to execute the Local Subcontractor Utilization Report.

Box (23) **Contractor Name Authorized Personnel (sign)** – Signature of authorized employee to execute the Local Subcontractor Utilization Report.

Box (24) **Title –** Enter the title of authorized employee completing the Local Subcontractor Utilization Report.

Box (25) **Date –** Enter the date of submission of the Local Subcontractor Utilization Report to the City.

REQUESTED INFORMATION BELOW IS ON LOCAL BUSINESS PROGRAM FORM ON THE BID ATTACHMENTS TAB. BIDDERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

CITY OF POMPANO BEACH, FLORIDA
LOCAL BUSINESS PARTICIPATION FORM

Solicitation # & Title: _____ Prime Contractor's Name: _____

Name of Firm, Address	Contact Person, Telephone Number	Type of Work to be Performed/Materials to be Purchased	Contract Amount

LOCAL BUSINESS EXHIBIT "A

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

Solicitation 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:

_____

_____

_____

_____

at the following price: _____

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

_____
(Street Address)

_____
(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"

LOCAL BUSINESS EXHIBIT "C"
LOCAL BUSINESS UNAVAILABILITY FORM

Solicitation #_____

I,_____
(Name and Title)

of_____, certify that on the _____day of

_____, _____, I invited the following LOCAL BUSINESS(s) to bid work
(Month) (Year)

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 "C"

LOCAL BUSINESS EXHIBIT “D”
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION

Solicitation #_____

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 amount.

_____ $_____

_____ $_____

_____ $_____

8. Other comments: _____

_____

_____

_____

_____

LOCAL BUSINESS EXHIBIT “D”

Online Questions & Answers

Event Information

Number:	E-22-20
Title:	Continuing Contracts for Professional Environmental Testing Services
Type:	Request for Letters of Interest
Issue Date:	7/9/2020
Question Deadline:	8/3/2020 05:00 PM (ET)
Response Deadline:	8/24/2020 02:00 PM (ET)
Notes:	Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites professional firms to submit qualifications and experience for consideration to provide professional environmental testing 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.

Published Questions

Question	Is a firm allowed to submit as both prime and on another team (in which another firm is submitting as prime)?
Answer	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
Asked	8/3/2020 11:24 AM (ET)

Question	How many references does the prime firm need to provide? Can the prime use reference from our subcontractors.
Answer	Two to three (maximum) references will be sufficient. A firm may NOT use the references of their subcontractors.
Asked	7/28/2020 03:28 PM (ET)

Question	Section Y – Contractor Performance Report. If Contractor Performance Report is to be submitted with the proposal, is it to be used in the reference section. If so how many references do we need. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
Answer	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
Asked	7/28/2020 03:23 PM (ET)

Question	Surveying and Landscaping is not listed in the Scope of Services; however, they are listed on the Project Team form. If Landscaping is required, are you referring to Landscape Architecture services?
Answer	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying.
Asked	7/27/2020 03:15 PM (ET)

Question	On the Local Business Exhibit "B", Local Business Letter of Intent to Perform as a Local Subcontractor, it asks for a price amount. Since the projects and scopes of work to be assigned are not known at this time, can we state "To Be Determined" (TBD) on the form?
Answer	Yes.
Asked	7/16/2020 02:48 PM (ET)

Question	Does the Local Business Subcontractor Utilization Report have to be included with the RFP Response or will this report be utilized once the contract is awarded?
Answer	Do not include the local business subcontractor utilization report in your proposal. Its inclusion in the solicitation is the City's notice to the would-be selected firms that their local business commitments will be tracked.
Asked	7/16/2020 02:46 PM (ET)

Question	Section Y – Contractor Performance Report. Please confirm this form is to be used once the contract is awarded and is only provided as an exhibit for informational purposes.
Answer	Do not include the contractor performance report in your proposal. This informational exhibit's inclusion in the solicitation is the City's notice to the would-be selected firms that their performance will be tracked.
Asked	7/16/2020 11:10 AM (ET)

Question	Section G – Selection/Evaluation Process. The RFP states Current and Projected Workload is listed as one of the Selection Criteria; however, there is not a designated section for the current workload. Please indicate where this should be discussed in, level of detail and describe how this will be evaluated.
Answer	Incorporate this information at your descension. The evaluation is discussed in Section G, Item #4.
Asked	7/16/2020 11:09 AM (ET)

Question	Section E – Required Proposal Submittal – References. The RFP state that the propose list any prior projects performed for the City of Pompano Beach. What is the timeframe for the list of projects, what detail needs to be provided (i.e., name of project, completion year, cost, etc.). Is this being used to show current workload with the City? Please clarify.
Answer	Please limit the list to projects completed in the past 5 years. Project detail should be provided for each project performed in the City of Pompano Beach. Current projects which have not been completed should be included in the current project workload (Section G).
Asked	7/16/2020 11:09 AM (ET)

Question	Section E – Required Proposal Submittal – References. The RFP does not state the specific number of references that are required. Please clarify.
Answer	Two to three (maximum) references will be sufficient.
Asked	7/16/2020 11:09 AM (ET)

Question	Section E – Required Proposal Submittal – Schedule. For the Schedule section, the RFP requests the proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines. Each scope of work / types of projects would entail unique, project specific tasks; therefore, please elaborate on what type(s) of timelines you are referring to. Would this be one generic timeline?
Answer	Firms awarded a contract will be required to provide a detailed schedule during the issuance of a task order. For the RLI, please provide a technical approach on how your firm proposes to maintain a schedule on a task order.
Asked	7/16/2020 11:08 AM (ET)

Question	Project Team Form. On the Project Team form, there are only two blank lines for “Other Key Member” under PRIME section and only three blank lines under SUB-CONSULTANT section. Please clarify that the proposer can add additional “Other Key Member” lines to the form for both the PRIME and SUB-CONSULTANT?
Answer	Firms may submit specialty subconsultants on the project team form. During the preparation of a Task Order, the City may choose to use a professional firm with an active City contract to perform subconsultant work, proposed by the prime firm.
Asked	7/16/2020 11:08 AM (ET)

Question	Please clarify if the City is requesting us to describe our firm's environmental engineering services related to the types of projects or is the City looking for experience performing the actual services listed under Introduction (i.e. environmental engineering services related to parks and recreational facilities or actual design and/or construction of parks and recreational facilities)?
Answer	This RLI is requesting information on Professional Environmental testing. Please note the City is advertising individual RLI's for Professional Civil Engineering, CEI, Landscape Architectural Services, and Professional Surveying. Construction is not part of this RLI.
Asked	7/16/2020 11:08 AM (ET)

Question	Scope of Services. Under "Scope of Services", the RFP states "The scope of services may include, but is not limited to, the following:" •Prepare preliminary reports and/or alternative recommendations. This may include various types of research, modeling, testing and field data analysis. •Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. Federal, State, County and City) •Provide project management services for projects, including turbidity monitoring. •Prepare recommendations and cost estimates for compliance with regulatory requirements. •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. •Prepare reports for regulatory compliance monitoring and assessments. •Reporting on endangered animals (turtles and owls)
Answer	The RLI contains a list of services where the City may require professional environmental testing.
Asked	7/16/2020 11:08 AM (ET)

Question	Introduction: The RFP says, "The types of projects to be undertaken may include, but are not limited to: • The City's approved Capital Improvement Plan (CIP) maybe found here: Adopted Capital Improvement Plan FY 2020-2024 • Preparation of Phase I, Phase II, and Phase III assessments • Roadway, Streetscape or Parking Lot projects. • Water or Reuse Main projects. • Gravity Sewer Main projects. • Force Main projects. • Lift station/pump station rehabilitation projects. • Parks and Recreational Facilities. • Seawall and dock construction and repair. • Storm Water/Drainage Improvement projects • Consultation for Emergency Water/Wastewater/Stormwater Repairs. • Inspection Services for Emergency Water/Wastewater/ Stormwater Repairs. • Canal and lake dredging. • Grant reimbursement, FAA and FDOT support and compliance. • SRF support and Davis Bacon Wage Reporting requirements • Support Services for Remediation • Demolition Projects
Answer	The RLI contains a list of project types where the City may require professional environmental testing.
Asked	7/16/2020 11:06 AM (ET)

Question	Can you please list who the incumbent firms for this contract are?
Answer	GFA International, Inc., Professional Service Inc., E Sciences, Inc.
Asked	7/14/2020 11:43 AM (ET)

Question	Who will be on the selection committee?
Answer	Qualified City staff to be determined.
Asked	7/14/2020 08:42 AM (ET)

Question	What are amount of awards per consultant under the previous contract?
Answer	GFA $24,000.00 E Sciences $297,872.54 Professional Services $31,290 The City reserves the right to award contracts in its best interest. Past business is no indication of future contract awards.
Asked	7/14/2020 08:41 AM (ET)

Question	Is a certificate of Insurance Required with the proposal submittal and if so should it be uploaded under the Attachments tab within the Ebid System or a separate tab within the proposal response?
Answer	The certificate of insurance will be required for each SELECTED firm prior to contract negotiation.
Asked	7/14/2020 08:41 AM (ET)

Question	1. Who are the incumbent firms for this contract? 2. Besides the Transmittal Page, are there any other page limits on the RFP response? 3. Is there a contract funding limit?
Answer	1. GFA International, Inc., Professional Service Inc., E Sciences, Inc. 2. There is a 250MB limit for each attachment uploaded, but no limit on the number of attachments. 3. The RLI under "Scope of Services" discusses limits/restrictions. The City's approved Capital Improvement Plan as referenced in the RLI contains estimates of projects to be funded over the next 5 years.
Asked	7/10/2020 11:37 AM (ET)

Question	What City entity is this contract with (CRA, Engineering, etc.)?
Answer	Awarded City contracts will be available for use by any applicable department.
Asked	7/9/2020 03:47 PM (ET)

City of Pompano Beach

Letter of Interest

Continuing Contract for Professional Environmental Testing

E-22-20

August 24, 2020

AECOM

Submitted by:

AECOM Technical Services, Inc.
3201 West Commercial Boulevard,
Suite 134
Ft. Lauderdale, FL 33309

Contact:

Steve Starke, PG, CHMM, LEP, REPA
Project Manager
561.962.2571
steve.starke@aecom.com

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AECOM Imagine it. Delivered.

AECOM Technical Services, Inc.
3201 West Commercial Boulevard
Suite 134
Fort Lauderdale, FL 33309
Tel. 305.790.5829

August 24, 2020

Uploaded via: https://pompanobeachfl.ionwave.net

Mr. Jeff English
City of Pompano Beach
Purchasing Office
1190 NE 3rd Avenue, Building C
Pompano Beach, Florida 33060

Subject: Request for Letters of Interest E-22-20
Continuing Contract for Professional Environmental Testing

Dear Mr. English:

AECOM Environment (AECOM) appreciates the opportunity to submit this letter of interest to the City of Pompano Beach (the City) regarding continuing environmental testing and consulting services. AECOM stands ready to assist the City with the management and execution of projects awarded to us and we are committed to their success.

AECOM is a comprehensive provider of the services outlined in the City's Request for Letters of Interest (RLI) and we have provided engineering and environmental consulting services in Florida for more than 60 years, as well as to the City under two previous environmental contracts. We have professionals on staff, including environmental and civil engineers, geologists, and construction managers, who are conveniently located in Fort Lauderdale, Broward County, Florida. When needed, we can also provide talented staff from our other Florida offices, including Miami, Ft. Myers, Boca Raton, West Palm Beach, Orlando, and Tampa.

Our team has a broad cross section of skills and resources to address each project's specific needs. AECOM has selected Steve Starke, PG, CHMM, LEP, REPA to serve as Project Manager. Steve has served on numerous environmental services contracts and brings to our team more than 35 years of experience. Our proposed Assistant Project Manager is Delana Beculhimer, LEP. Delana has over 17 years of environmental experience.

AECOM's team has been organized into eight functional work groups: Phase I, II, and III Assessments; Engineering Services; Asbestos, Mold, and Metals-Based Paint; Sediment Dredging; Remedial Design; Remedial Construction; Natural Resources; and Resilience/Sustainability/Climate Change. Each group comprises staff with extensive experience in their respective disciplines.

TAB 01

LETTER OF TRANSMITTAL

AECOM provides unparalleled support for its municipal clients and is an industry leader in Brownfields and petroleum site/underground storage tank assessments, environmental site assessments, construction project management for remedial implementation, and natural resources protection. We believe our comprehensive in-house combination of expertise and experience will produce the right balance of knowledge and support for the City. AECOM's experience is highlighted by the successful completion of many significant projects in Florida and throughout the country, combined with world-class capabilities in site restoration, agency interaction, waterfront renewal planning, sustainable design, permitting, and award-winning Brownfields redevelopment projects. The AECOM team commits to delivering high quality products and cost savings through innovative concepts, technologies, equipment, and procedures.

Because it is our goal to always be mindful of the impact that engineering and redevelopment projects can have on surrounding residents, businesses, and property owners, the AECOM team will work in close consultation and coordination with the City and other city agencies to uniquely tailor our efforts to meet the needs and requests of the City's local constituency. Our collaborative efforts will be driven by principles of open communication, teamwork, and efficiency, and we are committed to developing management and reporting frameworks that will foster a successful and productive working environment while minimizing disruption to the City's residents.

AECOM also understands that the successful completion of assessment and remediation work can have significant positive implications for Pompano Beach communities. These include job creation, revitalization to the area via the creation of future community assets, addition of new revenue sources, expansion of the tax base, and increased public recognition of the City as a continually improving South Florida community.

We at AECOM appreciate the opportunity to work with you and look forward to receiving your response. Should you have questions concerning this qualifications package, please contact me or Vik Kamath.

Sincerely,

Steve Starke, PG, CHMM, REPA, LEP
Project Manager
steve.starke@aecom.com | 954.275.8306

Vivek (Vik) Kamath, PE
Principal-in-Charge / Authorized Signatory
vik.kamath@aecom.com | 305.790.5829

TAB 02

TECHNICAL APPROACH

Introduction

AECOM is an interdisciplinary firm with extensive experience providing a wide range of environmental engineering, water, transportation, and construction management services for projects throughout Florida. We also bring the experience and expertise of a global firm operating in 150 countries, with over 56,000 design and construction professionals worldwide. AECOM is the nation's largest and most capable design firms. AECOM is also a leader in resiliency, climate change, and disaster recovery practices across North America. The AECOM team recognizes that climate change poses an existential threat to the continued vitality of the City of Pompano Beach's coastal communities and to the health and well-being of those who live, work, and pursue leisure in this vibrant city.

For this important contract with the City, we have assembled a team with the skills and expertise needed to efficiently and effectively return a valuable product to the citizens of Pompano Beach. Our team is uniquely qualified to assist the City based on our experience with the following:

- AECOM previously served as an environmental engineering consultant to the City of Pompano Beach on two separate contracts
- AECOM is also currently providing or has previously provided environmental services to the City of Miami, City of Miami Gardens, City of Miami Beach, City of Coral Gables, City of Doral, City of Opa-Locka, City of Homestead, City of Hollywood, and Cooper City
- AECOM has served as the Contamination Assessment and Remediation (CAR) consultant for Florida Department of Transportation (FDOT) District 4 (Southeast Florida) for the past 25 years, performing services similar to those anticipated under this contract
- For the past 30 years, our team has served as the Environmental Consultant to Miami-Dade County Regulatory and Economic Resources Department (RER)

AECOM Environmental Services for City of Pompano Beach

Phase I /II ESAs	14
Remedial Evaluation/ Waste Disposal	01
Remediation	07
Groundwater Sampling/ Monitoring	12
Waste Characterization	01
Asbestos/Lead Paint Surveys	01
Emergency Response	02

- AECOM currently serves as one of Florida Department of Environmental Protection's (FDEP's) statewide Petroleum Contamination Consultants, as well as an FDEP Hazardous Waste/Dry Cleaner Solvent, State-Owned Lands, and Site Investigation Section Consultant

Our team maintains the full suite of capabilities anticipated under this agreement. These will be discussed in detail in Tab 7 Statement of Skills and Experience of the Project Team, including:

- Preparation of Phase I, Phase II, and Phase III assessments
- Roadway, Streetscape or Parking Lot projects
- Water or Reuse Main projects
- Gravity Sewer Main projects
- Force Main projects
- Lift station/pump station rehabilitation projects
- Parks and Recreational Facilities
- Seawall and dock construction and repair
- Storm Water/Drainage Improvement projects
- Consultation for Emergency Water/Wastewater/Stormwater Repairs
- Inspection Services for Emergency Water/Wastewater/Stormwater Repairs
- Canal and lake dredging
- Grant reimbursement, FAA and FDOT support and compliance
- State Revolving Fund (SRF) support and Davis-Bacon Wage Reporting requirements
- Support Services for Remediation
- Demolition Projects
- Preparation of preliminary reports and/or alternative recommendations
- Preparation of permit applications and submittal packages as required for permit issuance of agency permits (i.e. Federal, State, County, and City)
- Providing project management services for projects, including turbidity monitoring
- Preparing recommendations and cost estimates for compliance with regulatory requirements
- Providing project close-out services
- Preparing reports for regulatory compliance monitoring and assessments
- Reporting on endangered animals (e.g. turtles and owls)

Project descriptions for selected projects conducted in the tri-county area (Broward, Palm Beach, Miami-Dade), as well as projects performed for the City of Pompano Beach, can be found in Tab 4 References.

Design Philosophy and Process

One word can consistently be used to summarize what AECOM will provide to the City of Pompano Beach – Value. AECOM recognizes that it is crucial to get the most from available funding. Our goal, therefore, is to provide the City with experienced local personnel and the resources of a global company to provide high-quality, cost-effective services in a timely manner. To achieve this goal, AECOM will apply realistic, rational, and proven methods to the work we perform while focusing on the end result, but always with an eye toward improvement, innovation, and cost efficiency. AECOM understands that "success" is dependent on understanding the goals and achieving the objectives of the different programs we support. For example, we have been successful in meeting tight budgeting goals on projects using a cost-effective, risk-based approach to achieve closures from regulatory agencies. AECOM is also experienced in and available to assist the City with writing state and federal grant applications for funding programs with agencies such as FDEP (e.g. Brownfields), FEMA (e.g. BRIC), EPA (e.g. WIFIA), HUD (e.g. CDBG), etc.

AECOM has been providing environmental consulting services in Florida for more than 60 years. With over 250 technical disciplines in-house, AECOM has both the basic and the niche specialties found only within one of the largest environmental consulting companies in the United States. Our professionals have years of diverse experience providing comprehensive environmental services, which include contamination assessment and hazardous waste remediation focused on cleaning up the environment, to biological and ecological studies that focus on preserving the environment. We also pride ourselves in being able to rapidly mobilize to perform environmental emergency response and construction oversight on a wide variety of projects.

AECOM's strength in providing meaningful scopes of work, work plans, and preliminary assessments is derived from our ability to communicate with our client, characterize the problem quickly, identify key project components, and select simple, effective approaches to minimize the time to reach a solution. AECOM employs both proven and innovative methods, as well as effective management procedures. Each scope of work, work plan, or preliminary assessment is tailored to site-specific requirements, applicable regulations, and the assignment given. Deliverables are clearly defined and include milestones, status reports, drawings, and specifications, as needed.

With a strong local presence in Broward County, and having worked with the Broward County Environmental Protection and Growth Management Department (BCEPGMD), as well as the FDEP, on numerous environmental investigation and site rehabilitation projects, AECOM is very familiar with the regulations and the changes that have taken place over the years. We have successfully negotiated risk-based closure strategies for many of our clients, saving thousands of dollars in remediation costs. As an example, for the City of Coral Gables, we negotiated a conditional closure for the Biltmore Golf Course maintenance facility using a combination of engineering and institutional controls, significantly reducing site closure costs. These methods have also been used successfully during the site investigation at the Virginia Key Landfill.

AECOM understands the importance of performing preliminary site assessments, including but not limited to, thorough review of existing site information and scientific data. To streamline assessment activities, reduce the number of monitoring well installations, and minimize investigative derived waste (IDW), AECOM routinely uses advanced assessment technologies, such as direct push technology, rotosonic drilling methods, an on-site mobile laboratory, and microwells to cost effectively target the source. We will work very closely with the City to develop a strong working relationship that will result in cost-effective and timely solutions. For example, AECOM will diligently work directly with City representatives during the assessment process to clearly define the overall and optimum site closure goal, depending on the property's ultimate use or future use. This includes assessment of the chemicals of concern, as well as delineation of solid waste. There are many instances that "Closure with Conditions" is an acceptable alternative to our clients, which can often greatly reduce assessment and remediation costs for a project. We have used this option on several projects, including Bayfront, Grapeland, and Blanche Parks in Miami-Dade County. There are other instances where clients prefer only "Closure with No Conditions" for a property, in which case we discuss the data objectives and jointly make decisions for the next step, based on what the results are indicating. We keep the solution in mind, making sure the data we are collecting will provide value to any remedial alternative, be it natural attenuation, risk management, engineering/institutional controls, or advanced active remedial technologies.

AECOM has accrued a high level of experience in designing and installing groundwater and subsurface treatment systems, either in combination with product recovery systems or as stand-alone plume containment systems. In addition, AECOM provides professional Operation and Maintenance services on remediation and construction projects and programs worldwide.

AECOM's philosophy for Operation and Maintenance services is based on four principles:

1) Make worker safety a priority

2) Operate and maintain systems at peak facility efficiency

3) Achieve or exceed regulatory requirements

4) Employ cost-effective systems and strategies

These goals can often be enhanced by using remote telemetry systems to reduce system downtime and field maintenance costs. The AECOM team has extensive experience conducting Asbestos Hazard Emergency Response Act (AHERA) asbestos inspections and developing facility management plans. Our AHERA/EPA certified staff is prepared to respond to every phase of AHERA asbestos management. AECOM's philosophy is to treat asbestos abatement as a combination construction and industrial hygiene project. We have previously conducted asbestos work for the City of Pompano Beach, FDOT, the City of Orlando, and most recently for the City of Miami Police Department. AECOM also has experience in conducting lead paint building surveys using X-ray fluorescence (XRF) in the field or the paint-chip method. In addition, we have utilized our team of subcontractors for asbestos, metals-based paint (MBP), and mold surveys and remediation on hundreds of projects within the state of Florida.

AECOM believes sustainability should focus on comprehensive system designs to maximize environmental, social, and economic benefits, while reducing, and preferably eliminating, potential impacts to the natural environment. Drawing on a large pool of diverse and experienced staff, AECOM provides the vision needed to develop design strategies that will deliver superior sustainability and performance. We recently completed a bench-scale test for the City of Miami to assist with development of a sustainable methodology for copper mitigation in stormwater outfalls.

AECOM recognizes the City's mandate to conduct environmental engineering and related services in a timely fashion, with unsurpassed quality, and at cost-effective pricing. We can do this by being a local company with a global reach. We have consistently upheld these tenets across multiple projects. Our team is backed by the resources of one of the world's largest engineering firms. Our proven management strategies, innovative technologies, and strong working relationships with the regulatory community have resulted in outstanding projects that we and the City can be proud of. Our team of asbestos/metals-based paint/mold specialists and national experts in resiliency, climate change, and environmental health and safety (EHS) are here to assist you in keeping the City of Pompano Beach at the forefront of environmental safety and sustainability.

Digital Innovations

Technological advancements are bringing about new ways to optimize project delivery, increase productivity and create efficiencies throughout project execution. By rethinking technology's role in how we design, build and operate we are able to unlock the best outcomes for Marathon. We are pushing the industry forward through the creative application of existing tools and by inventing new ones. Below is a high-level summary of how AECOM is accelerating the industry's digital transformation to solve our clients' most complex challenges, reduce labor requirements, and drive cost savings through innovation.

Barcoding for Spill Prevention Control, Regulatory Inspections. AECOM is using barcoding and iPad technology in the field to identify equipment, with numbering scheme coordinated with the client to provide consistency across departments. Barcodes are placed in standardized location for easy maintenance/inventory; equipment photographs are collected, providing serial and model number, barcode and label location. Data gathered can be used for spill prevention control plans and regulatory inspections.

Mobile Apps for Waste Inventory/Compliance Inspections. Incorporation of bar codes/data reader technologies, EHS MIS data management tools (EMIS) to support RCRA compliance programs and machine learning tools that incorporate waste characterization business logic.

EHS(Q) Management Information Systems. AECOM is an industry leading EHS MIS service provider, supporting clients in requirements gathering, system selection process, business/workflow analysis and the configuration and implementation of commercial EHS software systems. We also work with vendors on their product roadmap, providing subject matter expertise. Our deployed systems have a consistently

Digitized Maintenance Records, GIS for Asset Inventory/Condition Assessments of Sanitary Sewer Systems. Using pole camera technology to capture detailed pipe information, converting CAD as-built drawings, digitizing maintenance records & interviewing utility personnel, AECOM is leveraging ESRI GIS applications and web-based assessments to automate updates. Assets are ranked by risk for repair and replacement for maintenance scheduling and prioritization. Able to list repair/replace requirements to assist w/ future capital planning, improve practices and provide key performance indicators to keep data up to date and accurate.

Climate Action for Urban Sustainability Tool (CURB). CURB is a decision support tool for cities globally to assist with GHG emission abatement planning efforts. C40, the World Bank and Bloomberg Philanthropy supported development of CURB and is available on their websites. Using relatively simple data inputs, the tool provides emission abatement, cost /cost savings estimates, and identifies key quantitative and qualitative co-benefits.

Disaster Resilience Scorecard. Developed jointly with IBM, the Scorecard helps cities understand their ability to withstand and bounce back from disruptive events. It establishes a baseline measurement of a city's current level of disaster resilience and tracks progress against preliminary or detailed indicators. AECOM can support clients through full Scorecard completion or use as the basis of a one- or two-day workshop. The Scorecard was the basis for AECOM's Disaster Resilience Survey tool for Small Businesses that was applied to over 200 small businesses in New Orleans. The Scorecard was also tailored specifically for utilities and was the basis for workshops for a large SE water utility. This approach to disaster resilience could be applied to companies and agencies, as well.

Unmanned Aerial Vehicles (UAVs) for Impact. UAVs are well suited to areas where it is important to be non-disruptive, or where the areas are large and access may be otherwise difficult. AECOM has used the technology for floodplain mapping, surveying and assessing rail lines, roads, bridges, homes and dams after extreme weather events.

Disaster Resilience Solutions

AECOM has more than 30 years of experience helping public and private sector organizations prepare for, respond to, and recover from disasters of all kinds. Our staff includes emergency management specialists who know how to prepare and how to respond in a way that will keep City staff and residents secure; and our engineers, certified industrial hygienists, planners, scientists, construction managers, and other specialists can support your departments of emergency management, transportation, environment, facility management and construction teams.

To this end, our focus on our clients is one of the strongest aspects of AECOM. During the Coronavirus pandemic, for example, this focus is more important than ever. We live here too. We look for ways where we can use our deep expertise and experience to help our communities along the paths of recovery. Since the onset of the pandemic, we have been called upon for our expertise in environmental controls; recommendations of decontamination chemicals, disinfection and decontamination protocols; personal protective equipment (PPE); HVAC/Filtration system protocols; equipment decontamination/material disposal; EHS training; and administrative controls. We have been supporting our clients to implement programs/projects with a safe and phased return to Operations, including developing an Environmental Management System (EMS) to streamline management of EHS and sustainability data, track COVID-19 incidents; analyze industrial hygiene exposure assessments and monitoring, as well as track follow-up actions taken, testing status, quarantine period and prepare reports and statistics, including COVID-19 case maps.

Staffing Methodology

Our staffing strategy, designed specifically for the City of Pompano Beach, is to match both upcoming and potential City projects with our professional expertise and experience. To form our team, we selected key personnel with excellent communication practices and successful experience working on various environmental engineering projects. Our team offers one of the largest and most broad-based environmental staffs in Florida and we maintain excellent relationships and rapport with the regulatory agencies, which is critical for this contract. Our project team is further described in Tab 5 Project Team Form, Tab 6 Organizational Chart, and Tab 8 Resumes of Key Personnel.

Manpower Planning, Including Scheduling and Allocation of Resources

With four local offices in South Florida, AECOM has the ability to plan, schedule, and allocate resources for projects ranging from a Phase I environmental site assessment or an asbestos survey to a complex remediation project. With the depth of our resources, we are able to do this with very short notice. A recent example is a project for the City of Miami that involved the emergency repairs for the environmental engineering controls at Blanche Park. The City of Miami Parks Department notified AECOM about the need to shut down this popular park to do repairs needed to enhance the safety of those using the park. During the course of these field activities, the Parks Director expanded AECOM's scope to cover additional field activities. AECOM was able to accommodate these activities without delays and in a matter of days. The AECOM team mobilized to the site and directed the remedial activities, and the park was opened within a matter of weeks. Scheduling is further discussed in Tab 2 Schedule. Refer to Tab 9 Office Locations for details regarding our team's locations.

Timely Completion of Projects / Phases

As one of the largest engineering firms in the United States, our clients routinely rely on us for timely completion of projects. The Bayfront Park project is one example. There was a very small logistical window to implement the corrective action plan for the Park during the off-season from June to October2016. Managed by our local team, AECOM completed this project well ahead of schedule to meet the requirements of the City of Miami and the Bayfront Park Trust. This prevented potential loss of revenue from large park events, such as the Ultra Music Festival**.**

Capacity to Provide On-call Services in a Timely Manner

The AECOM team has 46 environmental staff located in Fort Lauderdale within 10 minutes of the City of Pompano Beach. The strength and depth of these resources clearly demonstrate our capacity to provide on-call services in a timely manner. We have previously served as an environmental emergency response contractor for the Miami-Dade County Department of Environmental Resources Management (DERM) and the FDOT, as well as major oil company clients, among others. Our team consists of multidisciplinary staff that lives and works in the South Florida area and is available within a matter of minutes to a few hours to respond to services the City may need.

Computer Aided Design and Drafting Capabilities

AECOM is an engineering firm providing services in multiple disciplines, such as transportation, water/wastewater, environmental engineering, sustainability, and ecosystem assessment and restoration. Our local offices not only staff computer aided design and drafting capabilities, but also have the capability to provide Unmanned Aircraft Systems (drone) surveys for our clients. These services are available from our Miami office. Our staff is equipped with and trained in the use of GIS software and GPS equipment, which enables us to graphically illustrate a variety of types of data associated with our projects. This further enhances our deliverables and provides a greater depth of understanding of the data we are presenting to both our clients and the regulatory community.

QA/QC Procedures, Including Timely Reporting, and Reviewing Pay Applications and Change Orders

AECOM's Quality Management System (QMS) (ISO 9001 compliant) extensively documents the AECOM Culture of Quality and is strictly followed to maintain the highest integrity of our final products and deliverables. The QMS addresses and details quality policy, quality procedures, quality instructions, and quality forms. Many of our federal clients mandate this internationally recognized level of quality management; therefore, the City of Pompano Beach can be confident that our deliverables have been detail checked and have undergone an extensive independent technical review. The detailed evaluation of documents is completed by senior, highly qualified, and project-independent professionals to advise on accuracy, completeness, and technical adequacy. The reviewer also evaluates the basis and validity of calculations, significant conclusions, opinions, assumptions, evaluations, recommendations, and design. The local AECOM team has been working with local county and state regulatory agencies for more than 30 years. We realize that there are often strict regulatory deadlines. Having former regulators on our team, such as our Principal-in-Charge, Vik Kamath, helps us better understand the need for timely completion of reports and submittals to the regulatory agencies. During construction oversight, our team also understands the need to review pay applications and change orders in a timely manner without disrupting the project schedule.

Prior Experience with Governmental Agencies

Having worked in the Broward County area for more than 30 years, our local team has many years of experience with Broward County Environmental Protection and Growth Management and FDEP. Our Principal-in-Charge, Vik Kamath, PE, is a former FDEP engineer and administrator; and our Project Manager, Steve Starke, PG, has been the manager on large-scale environmental contracts with DERM, FDEP, FDOT, City of Pompano Beach, City of Miami Beach, and the City of Miami, among others.

Our team routinely refers to Florida Administrative Code Chapter 62-780, as well as other pertinent regulatory guidelines, while working on environmental assessment and remediation projects.

AECOM is a State of Florida FDEP remediation contractor with contracts in the Petroleum Restoration Program, the FDEP HazWaste Program, the FDEP State-Owned Lands Program, and the FDEP Site Investigation Section Program. We have also performed environmental services for numerous cities in South Florida, including the City of Pompano Beach, City of Miami, City of Miami Beach, City of Coral Gables, City of Hialeah, City of Hollywood, and Cooper City, among others. Finally, we have regulatory experts in other disciplines, such as ecological/biological assessments and restoration projects, who routinely work with FDOT and other governmental clients.

Maintaining Time Schedules and Cost Controls

To make sure work is completed on time, a dynamic schedule is established and deliverables are identified at the beginning of each project. The identification of schedule activities and significant milestones for each task are provided by the individual task managers based on their understanding of the project scope and their prior experience on similar projects. Major project activities as well as the deliverables are shown on the schedule. Deliverable submittal dates and major project events are classified as project milestones. The activities needed to meet these milestone dates are identified and logically scheduled to support their achievement. These items, along with action lists, are monitored and updated in conjunction with the schedule as tangible means of tracking the progress of individual tasks/phases and identifying/reacting to problem areas.

Schedule tracking is accomplished by comparing project status to planned milestones. Various scheduling tools are available, but we find that simple bar charts are adequate for schedule control of most projects. Project team understanding of what is required is the best resource for keeping a project on schedule. Monthly project schedule reviews by the Project Manager will be a key to keeping the team and the City informed of progress and identifying schedule and within budget. When projects are delayed, it is typically due to

The ability to stay within the projected budget is a function of developing a complete scope of services that anticipates the activities required to complete the design work, identifying an experienced team to perform the work, and then developing a realistic schedule. Our experience in providing a wide variety of services to our clients allows us to develop comprehensive scopes of services. We take the time to meet with our clients to fully understand the intent and goals of the project so that the appropriate tasks and work efforts are included in our proposals.

Next we identify the appropriate staff that will work on the project. Typically, we include a mixture of project level and staff level engineers. This core staff is supplemented by other disciplines as needed. Finally, we develop realistic schedules that include sufficient time to prepare the milestone deliverables and for client review. Oftentimes on more complex projects, we recommend that review meetings be held so that review comments can be discussed.

We have found that this approach significantly increases our client's engagement in the process and results in fewer comments as the project progresses.

Providing clients with accurate cost estimates is an important component of a successful project. AECOM maintains a library of cost estimates that have been obtained from the various projects we have completed to help in developing accurate cost estimates.

Below is a list of example projects that AECOM has completed within the past three years. Each project was managed by the proposed Project Manager or Assistant Project Manager, Steve Starke and Delana Beculhimer.

Each project was completed under a Master Services Agreement (MSA) with individual task work orders, similar to the City. Each project was completed on time and under budget.

Project Name	Client Name | Contract	AECOM Project Manager	Initial Budget	Final Cost
SR 9/I-95 Park and Ride/FPL Parcel Level II Soil and Groundwater Assessment	FDOT District 4 **|** Contract BDY43	Delana Beculhimer	$ 40,108	$ 32,988
I-75 Level III Soil Excavation	FDOT District 4 **|** Contract BDY43	Steve Starke	$1,009,456	$ 958,448
Glades Road Level II Soil and Groundwater Assessment	FDOT District 4 **|** Contract BDY43	Steve Starke	$ 44,471	$ 27,056
I-95 Level II Soil and Groundwater Assessment	FDOT District 4 **|** BDY43	Delana Beculhimer	$ 24,581	$ 20,430
I-95 Bridge Asbestos Abatement	FDOT District 4 **|** BDY43	Delana Beculhimer	$ 47,379	$ 28,654
CR 510 Level II Soil and Groundwater Assessment	FDOT District 4 **|** BDY43	Delana Beculhimer	$ 125,405	$ 102,923
Northwood Rail Corridor Level III Remediation	FDOT District 4 **|** BDY43	Steve Starke	$1,071,498	$ 796,857
I-75 Segment E Level II Soil and Groundwater Assessment and Level II Soil Disposal	FDOT District 4 **|** BDY43	Steve Starke	$ 117,280	$ 109,453
Turkey Lake Level II Soil Assessment	Florida's Turnpike Enterprise **|** BE266	Delana Beculhimer	$ 57,836	$ 48,455
Citrus Sands Level III Natural Attenuation Monitoring	Florida's Turnpike Enterprise | BE266	Steve Starke	$ 49,164	$ 43,243
Peters Road Asbestos Pipe Excavation Oversight	FDOT District 4 | BDY43	Steve Starke	$ 39,400	$ 27,621
SR 7 Pond 8 Level II Soil and Groundwater Assessment/Level III Soil and Groundwater Remediation of Arsenic	FDOT District 4 | BDY43	Delana Beculhimer	$ 485,488	$ 375,467
SR 713 Level II Soil and Groundwater Assessment/Level III Soil and Groundwater Remediation	FDOT District 4 | BDY43	Delana Beculhimer	$ 551,412	$ 506,744

TAB 03

SCHEDULE

AECOM understands that “time is money” and that effective schedule control is necessary for multi-task efforts. AECOM uses Primavera SureTrak and Microsoft Project for preparing project schedules. Initially, the AECOM Project Manager will review the projected schedule with the City during the planning phase. A resource-loaded schedule is then developed to correspond to the proposed scope of work for each project that the City assigns to AECOM. The sequencing of events, estimates of time frames, and external constraints (such as permitting, site access, and regulatory approval) are input into SureTrak/Project. The software generates a resource-loaded schedule by task that serves as the baseline schedule. Each schedule clearly identifies critical milestones and provides a means to focus effort for on-time completion of the project.

Project types, such as described in the City of Pompano Beach RFP, are very dynamic, and conditions can change rapidly, often with limited notice, resulting in slippage of the schedule if the environmental consultant is not able to consistently respond quickly or if appropriate measures are not in place so that corrective action measures can be implemented immediately. AECOM uses Primavera SureTrak and Project to manage these situations, so that the schedule clearly identifies important milestones and provides a means for the Project Manager to focus effort and promote on-time completion of the project.

AECOM’s Project Manager, Steve Starke, will be directly responsible for project control and monitoring. He will receive updates from the task managers and technical staff and then discuss with the Principal-in-Charge, Vik Kamath, any corrective actions, if needed.

TAB 04

REFERENCES

AECOM's business philosophy is that repeat clients are developed by providing exceptional services that exceed expectations. Nationally, we have been re-selected with city, county, and state clients for comprehensive environmental testing services. The most effective measure of past performance is what our customers say about us. Please find the requested reference information below.

City of Miami – Bayfront Park

Miami, FL

Keith Ng
City of Miami
Project Manager
305.416.1298
keithng@miamigov.com

Cost
$230,000 (fee) | $989,000 (construction)

Performance Dates
6/2016 - 6/2018

Key Staff: Steve Starke, Vik Kamath, Fernando Navarrete, Mike Powell, Dan Levy

AECOM has been a consultant for the City of Miami for the past 14 years on multiple Environmental Engineering contracts that are similar to this proposed contract with the City of Pompano Beach. We have provided services to the City of Miami ranging from asbestos surveys at Fern Isle Park and the City of Miami Police Station, to annual sampling of the City's stormwater outfalls after major rain events in accordance with the City's NPDES permit, to conducting offshore sampling for Red Tide monitoring. We have performed Phase I and Phase II Environmental Site Assessments for the City at the former Miami Arena, in Little Haiti, and along N. River Drive, to name a few. We have replaced and sampled a contaminated irrigation well at Grapeland Park, performed source removal activities at Douglas Park, and performed other environmental engineering services at multiple locations within the City of Miami, including various assessments; groundwater monitoring; installation of engineering controls; and preparation of Engineering Control and Maintenance Plans and Deeds of Restrictive Covenant and/or cleanups at Curtis Park, Douglas Park, Blanche Park, and Regatta Park, among others.

Provided below are details of one of our City of Miami projects at Bayfront Park in downtown Miami. Contaminated groundwater and soil, as well as buried waste, had previously been identified at Bayfront during assessment activities. AECOM was subsequently tasked by the City of Miami to provide environmental engineering services for implementation of a Corrective Action Plan (CAP) for implementation of engineering controls at the Park. Bayfront Park is a large waterfront park, bordering Bayside Marketplace, that is frequently used for concerts and other large public events, such as the Ultra Music Festival. The Bayfront Trust, which manages the Park, was concerned about how the proposed remedial activities would affect these events. AECOM participated in meetings with the Bayfront Trust Board members, as well as public meetings, to discuss the proposed remedial construction work and the most strategic scheduling, as to least affect the Park's events and operations. This work consisted of conducting groundwater monitoring, as well as air monitoring and source removal activities. Prior to the commencement of soil/waste excavation activities, the AECOM Team assisted the City with obtaining the local permits for the proposed CAP approved by Miami-Dade County DERM.

The construction contractor commenced excavation of impacted soils starting the week of June 13, 2016. The excavated areas were lined with a high visibility 8-oz geotextile liner prior to backfilling with clean fill to provide engineering controls. The excavation area was later restored with new sod placed on top of the clean soils. The areas around tree trunks were covered with bonded rubber mulch, under the direction of a certified arborist, in accordance with the plans approved by DERM. Asphalt areas were repaved after construction.

Background air sampling, mobilization, and fence installation were completed by the first week of June 2016. Permitting activities with the City of Miami were completed during the week of June 6, 2016. Excavation activities in Phase I consisted of removing 12 inches of impacted soils in four areas, followed by installation of the liner and placement of lime rock and a soil/sand mix, with sod on the surface. Phase I started during the third week of June and was completed on July 22, 2016, followed by a DERM inspection on July 24, 2016.

Construction work in Phase II in two areas commenced on July 20, 2016, and was completed with sod during the last week of August 2016. The construction fence was removed, following the final DERM inspection, on September 14, 2016.

The Ambient Air Monitoring Program continued through the first week of September 2016. AECOM subsequently provided a Certificate of Completion Report, documenting the construction and air monitoring activities to the City and to DERM.

Groundwater monitoring was completed and a No Further Action with Conditions (NFAC) was approved on May 1, 2017. AECOM then prepared an Engineering Control and Maintenance Plan, which was approved by DERM in February 2018, and assisted the City with preparation of a Deed of Restrictive Covenant (DRC) for the Park, which was submitted to DERM in June 2018.

Wagner Creek Seybold Canal Restoration – Sediment Dredging and Remediation

Miami, FL

Robert Fenton
Construction Manager
City of Miami
786.263.2133
rfenton@mmiamigov.com

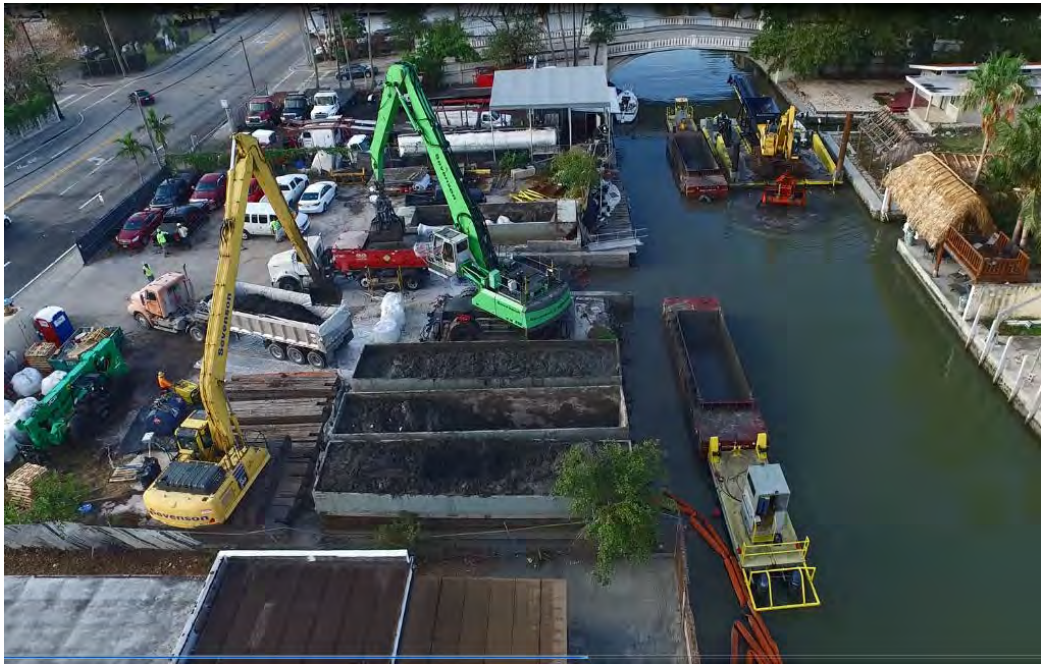
Cost
$3,200,000 (fee) | $14,000,000 (construction)

Performance Dates
4/2017 – 06/2018 (services) | 07/2017 – 06/2018 (construction)

Key staff: Dan Levy, Vik Kamath, Babu Madabhushi, Keith Stannard, Mike Powell

AECOM / Sevenson Environmental Services (AECOM/SES) provided Design-Build services to the City of Miami to remove contaminated (dioxin) sediment from Wagner Creek and Seybold Canal. These waterways were considered the most contaminated in the state of Florida. The sediments in Wagner Creek contained elevated levels of dioxins; and dredging was needed to remove the contaminated sediments and restore this aquatic habitat and manatee refuge area, as well as restore the drainage features of these waterways, which are designated as Outstanding Florida Waters (OFWs). The key to project success was AECOM's design of three innovative dredge approaches. AECOM's plan was developed based on the use of specialized dredge equipment that was built specifically for this project. Key advantages included:

- Ability to access the site and transfer material continuously
- Fast track a permitting program that could obtain regulatory approval from FDEP, United States Army Corps of Engineers (USACE), Miami-Dade County DERM, and FWC within 90 days of contract award
- Use of aqua dams, moon pools, and air curtains to provide protection of the endangered manatees



The City was in jeopardy of losing millions of grant dollars if the project was not substantially completed by March 2018. AECOM was successful in obtaining permits in time to allow for project start and secured funding.

AECOM was responsible for the engineering dredge design for the six operational sections (OS1- OS6), design and permitting of the off-site staging area, pre- and post- structural engineering evaluations, permitting an innovative dredge plan, public outreach, regulatory compliance, manatee protection, and on-site environmental and quality assurance inspections of the dredging activities.

Awarded the WEDA 2018 Environmental Excellence Award

Two of the key accomplishments included: 1) an extensive community outreach effort that successfully promoted a clear understanding of environmental issues associated with restoring these contaminated waterways, and 2) AECOM's public outreach team that promoted communication with the project stakeholders, and most importantly the residents, which stimulated meaningful discussions and a deep understanding of environmental issues affecting the surrounding neighborhoods.

The project was a huge success and received two prestigious Environmental Awards last year, a national award from the Western Dredging Association (WEDA) and a regulatory award from FDEP for environmental excellence in dredging.

Awarded the Florida Department of Environmental Protection (FDEP) 2018 Award for Superior Excellence

Jennifer Smith, FDEP SE District Director commented, "On behalf of the DEP, I am thrilled to recognize AECOM and SES for coming up with a dredging solution to a decades-long environmental problem."

Florida's Turnpike Enterprise – NW 170th Street Ramp

Hialeah, FL

Philip Stein
Environmental Administrator
Florida's Turnpike Enterprise
407.264.3301
philip.stein@dot.state.fl.us

Cost
$54,000 (Assessment) | $697,000 (Construction)

Performance Dates
1/2019 – 7/2020

Key Staff: Steve Starke, Delana Beculhimer, Matt Holbrook, Pete Verbanac

AECOM has provided consulting services across the state of Florida for the Florida Department of Transportation (FDOT) in Districts 1-7, as well as Florida's Turnpike Enterprise (FTE). These services have included environmental consulting services, highway and bridge design, construction engineering inspection services, safety and traffic engineering, intelligent transportation system (ITS) planning and design, traffic operations design, and development of the Severe Incident Response Vehicle (SIRV) Program, as well as structural and drainage planning and design. We have been an FDOT Contamination Assessment and Remediation (CAR) contractor since 1995, working under seven different CAR contracts. Our CAR services have included Level I/II Environmental Site Assessments; asbestos, metals-based paint, and mold surveys/abatement; environmental construction/remediation; construction dewatering/contaminated effluent treatment; emergency response actions and source removals; construction plans reviews; soil reuse; waste disposal; underground storage tank removals/closures; maintenance of traffic (MOT); utility installation; and in-house environmental labor support.

For the recent NW 170th Street Ramp project completed for the FTE under our current CAR contract, AECOM was requested to conduct a soil and groundwater assessment, and subsequently to conduct the excavation and disposal of contaminated/unsuitable materials, and then backfill a portion of NW 107th Avenue, adjoining south of NW 170th Street. This work was conducted as part of the FTE's preparation for construction of a ramp for a new interchange between the SR 821 Homestead Extension of Florida's Turnpike and NW 170th Street, in Hialeah Gardens, Miami-Dade County. This area was formerly used as a construction and demolition (C&D) landfill.

AECOM conducted a subsurface environmental assessment in this area, beginning in January 2019, consisting of the installation and sampling of soil borings (SBs), temporary monitoring wells (TMWs), and test pits (TPs). The assessment was completed and an Impact to Construction Assessment Report (ICAR) was submitted in April 2019. The results of the assessment indicated that TRPH exceeded the residential Soil Cleanup Target Level (SCTL) in SB-9 and the leachability SCTL in SB-7 and SB-10. However, the TRPH speciation analyses in these three soil samples, for all aliphatic and aromatic carbon ring groups, were reported below their respective lab detection limits or below the applicable Chapter 62-777 Florida Administrative Code (FAC) SCTL criteria. The TRPH speciation results indicated that TRPH was not likely a contamination issue in the soil within the project area. The soil analytical results also indicated that the arsenic concentrations in SB-7 and SB-9 exceeded the SCTL. The follow-up Synthetic Precipitate Leaching Procedure (SPLP) analysis of arsenic in SB-7 and SB-9 indicated that the arsenic in the soil at these two locations was not likely to present a leaching risk to the groundwater.

The ammonia concentrations detected in the groundwater at the five sampling locations indicated that ammonia in TMW-10 exceeded the groundwater cleanup Target Level (GCTL). The ammonia concentrations detected in the other four TMWs were below the GCTL. The five ammonia concentrations exceeded the Fresh/Surface Water Cleanup Target Level (FSWCTL). In addition, the calculated values for unionized ammonia in TMW-6 through TMW-10 exceeded the FSWCTL. All other analyzed constituents were below the respective GCTLs. The ammonia concentrations in the groundwater at all five TMW locations exceeded the FSWCTL. Further, the calculated values indicated that the unionized ammonia in TMW-6 through TMW-10 exceeded the FSWCTL, thereby presenting a potential risk to surface water discharge of dewatering effluent.

Utilizing a small excavator, AECOM field staff oversaw the excavation of five test pits (TP-1 through TP-5) along the south side of NW 170th Street on June 12 and 13, 2019. The test pit depths were terminated at a consolidated limestone horizon (approximately 1.5 to 3.5 feet below grade). Soil samples for vapor screening were collected from the four walls of each test pit using an Organic Vapor Analyzer (OVA) to screen for organic vapors and a landfill meter to monitor for potential methane exposure in the former landfill site. The test pit excavations indicated that solid waste/debris and elevated organic vapors were observed within the subsurface.

The FTE authorized AECOM to conduct the excavation and disposal of contaminated soil and solid waste from the site in order to prepare the area for construction of the Turnpike ramp. AECOM also oversaw the removal and recycling of discarded tires and solid waste/construction debris that were present at the surface around the work area. Prior to initiating excavation work, silt fences were erected along the corridor to protect the adjacent canals.

The excavation and stockpiling of muck and organic soils within the proposed roadway construction area began on April 22, 2020, and continued through May 12, 2020. A total of 6116.84 tons of muck and soil (commingled with limited amounts of C&D debris) were excavated and ultimately transported offsite for disposal as non-hazardous materials at the Medley Landfill in Medley, Florida. The used tires (total of 7.06 tons) were loaded and removed from the site and transported to a tire recycling facility on May 15, 2020. Construction debris (total of 94.83 tons) that was scattered over the ground surface was disposed at the Medley Landfill on April 28, 2020.

Backfilling, grading, and compaction of the subgrade areas began on April 30, 2020, and was completed on May 14, 2020. A total of 4,067.73 tons of A3 sand and 6,546.90 tons of lime rock were placed within the project. As part of the backfilling and compaction process, density/Proctor tests were performed in selected 500-foot completed areas from May 4 through 6, 2020, and May 12 through 14, 2020. All density tests performed at the site measured acceptable compaction values ranging from 100% to 103%.

A final elevation survey, detailing the final excavation profiles, was prepared to document the finished excavation profile within the work area and enable FTE to initiate construction of the proposed Turnpike ramp. A Soil/Solid Waste Excavation and Disposal Report, documenting field activities, was submitted in July 2020.

TAB 05

PROJECT TEAM FORM

AECOM has completed and submitted the AECOM Project Team Form electronically through the City's eBid System and uploaded to the Attachments Response tab, titled "AECOM_Project Team Form_LOI E-22-20."

TAB 06

ORGANIZATIONAL CHART

The City of Pompano Beach is seeking a partner who is experienced in managing multiple projects and services areas. AECOM has the understanding and capabilities to deploy these services in alignment with your expectations. AECOM's framework for the program is rooted in our local team that is connected to an overarching regional leadership team. The Project Manager will be supported by the Assistant Project Manager, Discipline Leaders, and professional staff located within the Broward, Palm Beach, and Miami- Dade County areas. The staff assembled has the depth and capacity to deliver the work outlined and to provide guidance and support to the City.

The management team from AECOM assigned to this project is committed to being overwhelmingly responsive to the needs of the project and more than willing to work with the City to make sure that tasks are completed successfully. Our proposed program team has been identified for delivery of the requested services.

The organizational chart of our proposed program team is provided below. It presents AECOM's proposed key personnel.

Steve Starke, PG, CHMM, LEP, REPA

Project Manager

Steve specializes in petroleum and hazardous waste assessments and remedial design and implementation, and is highly experienced in the management of multiple-site, indefinite-delivery order contracts and performance-based contracts. His clients have included the City of Pompano Beach (Environmental Engineering and CRA contracts), City of Miami, City of Miami Beach, City of Opa Locka, City of Hollywood, Cooper City, Miami-Dade County DERM, Miami-Dade Aviation Department (MDAD), Broward County, Palm Beach County, Port of Palm Beach, FDOT (District 4 and Turnpike), FDEP, FEMA, USCG, US National Park Service, as well as numerous major oil and private clients.

In supporting this contract, the work group leaders will report to Steve. Steve has been working on environmental services contracts for more than 35 years. Steve will:

- Utilize staff resources from the appropriate work group(s) based on the individual scope of service requested.
- Serve as the single point of contact and Project Manager responsible to the City of Pompano Beach and will be available on a 24/7/365 basis.
- Have oversight responsibility for the performance of the work on the contract, including preparation of work plans and cost estimates, management level responsibility for coordinating project tasks. and the assignment and deployment of personnel needed for each project.

Delana Beculhimer, LEP

Assistant Project Manager

Delana is a Project Manager with 17 years of experience conducting assessment, remediation, monitoring, and closure of metals and petroleum-contaminated sites for FDOT (District 4 and Turnpike); FDEP State Owned Lands, Petroleum, and Site Investigation Section; and private clients.

Delana's experience includes Level I/Level II/Level III assessments; roadway/stormwater/drainage improvement contamination assessment and remediation; tank removals/waste disposal; site remediation; asbestos/metal-based coating surveys; report preparation; preparing cost estimates; and project closeout services. She has conducted groundwater elevation surveys, natural attenuation monitoring, field data collection, supervision of drilling operations for soil borings, installation of groundwater monitoring wells, soil and groundwater sampling, and aquifer slug tests. In addition, she has prepared various types of environmental site assessment reports, contamination assessment reports, source removal reports, tank closure assessment reports, and sediment characterization reports.

Delana will provide technical support and project management for the environmental services identified within each scope of services for the City of Pompano Beach.

Vik Kamath, PE

Principal-in-Charge

Vik is a senior project engineer and the South Florida Remediation Department Manager. He manages a wide variety of environmental engineering projects ranging from corrective action plans, groundwater remediation, landfill closures, solid and hazardous waste management, methane gas mitigation projects, petroleum storage tanks, waste to energy plants, and wastewater treatment and disposal facilities. Prior to joining AECOM, Vik served as the Program Administrator for Waste Management at the FDEP office in West Palm Beach. During his tenure at AECOM, Vik has managed small as well as large remediation projects for the City of Miami. Having worked for the State of Florida for over 20 years as an engineer and administrator, he has a thorough understanding of state, local, and federal regulations and serves as an expert regulatory technical advisor for private and municipal clients in Palm Beach, Broward, and Miami-Dade Counties.

Vik will provide engineering and project management support to the Project Manager for the duration of this contract and will assign engineering staff, as needed, to complete remedial design projects for the City of Pompano Beach.

Luis Smith, CIH, CIEH, FLAC

Asbestos, Mold, and Lead Based Paint Lead

Luis is a Certified Industrial Hygienist (CIH) and Florida Licensed Asbestos Consultant (FLAC) with over 30 years of experience providing industrial hygiene consulting services to a diverse group of clients, including government, utilities, military, health care, insurance, construction, property developers, property managers, legal, manufacturing, pharmaceuticals, automotive, etc. Luis specializes in the indoor air quality practice and has extensive experience performing microbiological assessment and remediation projects involving fungi, bacteria, arthropods, algae, etc. In addition, he has managed numerous asbestos surveys and abatements. Luis also provides health and safety consulting services and has completed compliance audits at various types of facilities.

Babu Madabhushi, PhD

QA/QC

Dr. Madabhushi has 25 years of experience in conducting and managing environmental engineering projects. He served as local quality manager for AECOM's Miami office and is one of AECOM's quality lead verifiers in the state of Florida. He was instrumental in the AECOM Miami office acquiring ISO-9001 certification. His technical expertise is in the areas of sediment dredging, soil and sediment assessment, contamination assessment, remedial investigation and feasibility studies, soil and groundwater remediation, bioremediation, and operation and maintenance of remedial systems. Babu is extremely knowledgeable of FDEP and USACE regulations and standards. He coordinated with Florida Fish and Wildlife Conservation Commission (FWC) during the dredging projects at Flamingo Marina, Everglades Marina, and the Wagner Creek and Seybold Canal dredging projects, where he was involved in obtaining permits and the execution of dredging activities.

Fernando Navarrete, PhD, PE

Engineering Services Lead

Dr. Navarrete has 26 years of experience in water resources projects design including water and stormwater rehabilitation projects, hydraulic and hydrologic modeling, groundwater modeling and monitoring, stormwater management, and complete design of water resource projects. Some of his clients include the South Florida Water Management District (SFWMD), FWC, Broward County, FPL, City of Miami, City of Oakland Park, and City of Miramar.

Dan Levy, PG

Sediment Dredging Lead

Dan is a Vice President with the AECOM Environmental Business Line and has 34 years of experience in the environmental industry. Dan's experience includes research and development of innovative treatment technologies for the prevention of Harmful Algal Blooms (HABs) and implementation of innovative algae harvesting technology to remediate toxic algal blooms from Florida's lakes and canals. In cooperation with FDEP, Dan served as the Project Director for the algal bloom restoration programs that occurred in 2018 in Lee and Martin Counties, Florida. He is also the co-inventor of the patented SEDCUT dredging technology that was developed for the removal of nutrient-rich phosphorus-laden sediments from Lake Okeechobee. The technology was developed in collaboration with the

SFWMD and USACE and received the honor award for innovation. Dan is also the recipient of the 2018 Western Dredging Association (WEDA) Environmental Excellence Award and the FDEP Southeast District Superior Excellence Distinction Award for outstanding environmental practices in restoring one of Florida's most polluted waterways and the 2019 Environmental Business Journal (EBJ) Award for Social Contribution for development of an innovative Algae Harvesting program that can restore nutrient-impacted waterways.

David Hayman, PE

Remedial Design Lead

David is a senior engineer with 28 years of environmental consulting experience. He has extensive experience in management, preparation, design, and construction of various environmental engineering projects for federal, state, and municipal agencies. Dave also has extensive experience with dewatering permit applications and contaminated dewatering effluent treatment. He will be our chief design engineer for remedial treatment systems that may be needed on this contract.

Rich Ulkus, GC

Remedial Construction Lead

Rich is a licensed General Contractor with more than 40 years of experience in the planning and construction management of a wide range of water and wastewater treatment projects. He also has experience in site decontamination and demolitions, groundwater cleanup, soil vapor extraction and remediation, underground storage tank removals, and hazardous and regulated waste disposal.

Keith Stannard

Natural Resources Lead

Keith has 25 years of experience in conducting and managing environmental programs and ecological investigations for various public and private sector projects, including linear facilities (roadways, railways, pipelines), site development (industrial, residential, mixed-use), and special-purpose projects (offshore facilities, marinas, dams, maintenance dredging, basin studies, etc.). Keith has an in-depth knowledge of federal, state, and local environmental regulatory criteria and associated agency procedures in relation to ecosystem restoration and management. He also has extensive experience with marine and terrestrial habitat ecology, wetland and upland mitigation, threatened and endangered species conservation and ESA Section 7 consultation, and ecosystems restoration and management.

Justin Vandever

Resilience/Sustainability/Climate Change Lead

Justin has extensive experience in coastal and marine science, engineering, and climate change adaptation. His project experience includes climate change vulnerability and risk assessments, sea level rise inundation mapping, coastal processes and flooding, design of coastal and estuarine restoration and monitoring projects, and response of coastal and estuarine environments to sea level rise. Justin has served as a quality reviewer and technical advisor on numerous coastal flooding and climate change-related projects. He has co-authored technical articles related to climate change vulnerability, including sea level rise impacts in San Francisco Bay, effects of coastal erosion on the California coast, and mitigating climate change through coastal wetland restoration, and has presented at regional, nationwide, and international coastal conferences. Justin was selected as one of the American Society of Civil Engineers "New Faces of Civil Engineering" in 2013.

José Soler, PE

Seawall and Dock Construction Lead

José is a Director with AECOMs Americas Ports & Marine Group. He has over 23 years of experience performing and managing numerous waterfront and maritime projects involving planning and coordination of design from conceptual through final and construction. His project experience includes construction management of bulkheads, piers, dolphin structures, container terminals, waterside and landside improvements, cargo yard development, and rail systems, as well as bridges. He has managed projects in the Caribbean and in the US. José will work alongside our environmental team members on seawall or dock projects for the City.

Jae Park, PhD, CFM

Grant Writing/Funding Assistance Lead

Dr. Park has 28 years of experience and expertise in the areas of hazard mitigation, resilience and disaster recovery, grants management, and policies. He has helped many local, state, and federal governments rebuild resilient communities after major disasters such as Hurricanes Fran, Floyd, Isabel, Katrina, Sandy, Matthew, and Maria. Currently, Dr. Park is a FEMA Hazard Mitigation Assistance contract program manager for AECOM. Prior to joining AECOM, he served as a policy advisor and chief policy analyst for the Mississippi Governor's Office of Recovery and Renewal in coordinating Hurricane Katrina. He was an Assistant Director for Mitigation, Division of Emergency Management, State of North Carolina. During his tenure, he was instrumental in development of an overall long-term vision for Hazard Mitigation and oversaw managing $800 million in mitigation funds for implementing various hazard mitigation planning projects.

Subcontractors

AECOM has added strategic teaming partners to our team for the City of Pompano Beach's E-22-20, Continuing Contract for Professional Environmental Testing contract. Those firms include:

Asbestos, Mold, Lead-based Paint Abatement

CES CROSS ENVIRONMENTAL SERVICES, INC. is a specialty environmental contractor with primary focus on abatement and demolition work. After being organized in 1988 by current President and CEO, Clyde A. Biston, CES has grown into one of the largest asbestos abatement firms in the state of Florida. From its four offices, CES has performed and continues to pursue projects in the 12 states where licensing is maintained. Projects include:

- Broward College Asbestos Abatement/Demolition
- Bear cut Bridge Rehabilitation Asbestos Abatement, Key Biscayne, Florida
- Florida Department of Transportation, Districts 4 and 6 Demolition and Asbestos ROW Contracts

Florida-certified mold remediators Millard Scott and John Tostanoski will be supporting AECOM on this contract.

Asbestos, Mold, Lead-based Paint Testing

GLE specializes in providing environmental, architectural and engineering, and construction consulting services to both private and public sectors. Their staff consists of nearly 90 multi-disciplined professionals. They have worked on many complex issues for various property types.

GLE's environmental professionals can provide analysis of single-building elements or entire buildings as part of their services for public agencies to comply with federal, state, and local regulations associated with lead, asbestos, industrial hygiene, indoor air quality, radon, and other environmental concerns. GLE holds asbestos and industrial hygiene contracts with Palm Beach County, Palm Beach County School Board, Miami-Dade Aviation Department, and the School Board of Broward County. John Simmons, a Florida EPA Lead-Based Paint Assessor and Florida Radon Measurement Technician, will support AECOM for this contract.

Drilling Services

EARTH TECH DRILLING 954-974-2424 located in Pompano Beach, is South Florida's leading drilling contractor, serving Miami Dade, Broward, and Palm Beach Counties. They specialize in environmental, geotechnical, direct push, and water well drilling, as well as vacuum excavation / daylighting. ETD is an SBE-certified firm and combines the skills and resources of highly experienced drillers and technicians with state of the art equipment to provide direct push, hollow stem auger, mud, and air rotary drilling services. ETD has extensive experience throughout Florida and the southeastern US. Services include monitoring wells, sparge wells, cluster wells, direct push, and well abandonments. ETD has provided drilling services for the following Level II projects:

- SR 7, Broward County, FL
- SR 80, Palm Beach County
- Interstate 75, Broward and Palm Beach Counties
- University Drive, Broward County
- Hollywood/Pines Boulevard, Broward County
- Powerline Road, Broward County
- Sample Road, Broward County

Ed Marks, PG, WCC, will support AECOM under this contract.

located in Davie, Florida, JAEE has been serving Palm Beach County for 20 years. JAEE specializes in environmental drilling using direct push technology. They currently employ 11 people with experience ranging from 5 to 28 years in the field.

Willie Smitherman is a Florida Certified Water Well Contractor, Certified Environmental Specialist, and Certified Environmental Inspector, and will be supporting AECOM for this contract.

Grant Writing/Funding Assistance

Anthony Sullivan is President and Director of Environmental Affairs/Funding Sources for Sullivan Regulatory Consultants, with 29 years of environmental cost recovery experience. SRC coordinates the preparation of various local, state, and federal reimbursement and low interest applications to private and governmental agencies.

Anthony has worked with Miami-Dade Aviation Department (MDAD) since 1994 to secure reimbursement of petroleum cleanup at Miami International Airport (MIA). He served as the focal point consultant for MIA petroleum reimbursement and eligibility issues associated with FDEP.

Laboratory Services

located in Pompano Beach, provides full-service environmental monitoring and analytical testing services for a wide variety of projects. They have more than 40 years of experience in environmental testing, coupled with the latest scientific and technological innovations. Pace was one of the first labs to help clients adjust to the new environmental regulations. And as those regulations evolved, so did Pace. Pace is made up of three major divisions: Environmental Services, Life Sciences Division, and Scientific Professional Services Division.

Pace Life Sciences provides full-service, extensive drug analysis capabilities with concomitant process understanding, by leveraging analytical methods, physicochemical, biophysical, and/or biopharmaceutical characterization. The combination of Pace's experience and cutting edge, GMP, and FDA approved facilities allows them to assist clients to analyze their novel drug entities.

Our Scientific Professional Services division provides scientific staffing, product regulatory services, and instrument support, allowing customers to focus on their core business and respond to workload demand. Pace has expertise and experience in the areas of hazard communication, product stewardship, and raw material data management for companies of various sizes, both domestic and global. And, with over 20 years of experience with instrument support service, Pace can help optimize efficiency and control costs.

Pace is NELAC certified (E83079, E86240, E84129) for the analytes of interest and operates under a Laboratory Quality Manual following NELAC requirements and has municipal experience. Pace licensed to practice in Pompano, Florida. Christina Raschke will be supporting AECOM for this contract.

Subsurface Utility Engineering

Founded in 1977, DRMP was among the first firms in Central Florida to offer its clients a full-service firm with a multidiscipline approach to civil engineering and surveying services. DRMP now has 16 offices throughout the southeastern United States that offer a broad range of services from their expert staff of engineers, surveyors, planners, scientists, and construction inspectors who work together to make powerful ideas a reality and transform the communities DRMP serve. Projects include:

- Pompano Beach FP&L Substations (Sample Road, Crystal, Ely, and Andrews Subs) Survey and Subsurface Utility Engineering Services for Florida Power and Light, Florida Sample Road Interchange Improvements at I-95 (436958-1-52-01), FDOT District 4, Pompano Beach, Florida
- Coral Ridge Drive, FDOT District 4, Broward County, Florida
- Right-of-Way Mapping and Survey Staking for Canal Rehabilitation Projects, Lake Worth Drainage District, Palm Beach County, Florida
- Carol Avenue Stormwater Improvements, Village of Palm Springs, Palm Beach County, Florida
- Continuing Engineering Services (Contract No. 2018-21) for the City of Parkland, Broward County, Florida

Derek Zeman, PSM, RPLS will support AECOM on this contract.

Surveying

provides Land Surveying Services on a continuing basis for large facilities such as City of Miami, Florida International University, Miami-Dade County, and Turkey Point. J. Bonfill is experienced with the requirements associated with Land Surveying services for Parks, Recreation, and Open Spaces Department projects and has provided surveying services for major, mid-sized, and small pocket park projects throughout Miami-Dade County, The City of Miami, and City of Miami Beach.

J. Bonfill is technically certified and experienced in the four Miami-Dade County Technical Surveying Categories. Their field personnel are experienced in the location of existing utilities in conflict with the alignment of pipelines; documenting right of way improvements that will be temporarily or permanently relocated by the project, such as utilities, pavement, sidewalk, curb and gutter, valley gutter, trees, landscaping, sod, pavement markings, driveways, and mailboxes; and documentation of vehicle and pedestrian traffic control measures. Our personnel are experienced in construction layout re-establishing and maintaining the alignment centerline as defined by the project drawings; locating and identifying obstructions; supporting construction activities in accordance with the specifications; and providing survey for progress measurements and final as-built survey.

Eugene Collings-Bonfill, PE, PSM and Oria Jannet Suarez, PSM will be supporting AECOM on this contract.

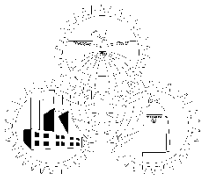
Resiliency/Sustainability/Climate Change

Established in 2006 and headquartered in the City of Miami, 300 Engineering Group P.A., is an SBE/DBE and Envision Certified firm that was built on the principle of delivering the highest quality of work, on time, under budget, and cost effectively. Relevant projects include:

- City of Miami Beach Continuing Engineering Services Contract
- City of North Miami Continuing Engineering Services Contract
- City of North Miami Beach Program & Construction Management Services for the Water Capital Improvement Program
- Broward County Water and Wastewater Services Regional Transmission Master Plan
- Broward County Water and Wastewater Services – Engineering Services for Wastewater and Disposal System

Fernando Miralles, PhD, BCEE, D.WRE, PMP, F.ASCE will support AECOM on this contract.

Remedial Design/Construction Services



Founded in 1994, EESI has been providing environmental engineering, pilot testing services, remedial equipment fabrication, environmental construction, remediation, and storage tank management for the past 25 years. They specialize in environmental engineering, remedial equipment fabrication, pilot testing services, remedial construction, and fuel system services. EESI has performed hundreds of successful DPE, AS, and SVE pilot tests throughout Florida and from them, designed hundreds of remedial action plans. With a fleet of rental trailers/portable remedial systems and hundreds of system components, EESI can customize a remedial trailer to suit a particular remedial design. These systems are available for immediate use on short term, aggressive cleanups, dewatering projects, emergency responses, open-pit sparging projects, pilot studies, and limited scope, alternate procedure remedial actions.

Relevant projects include:

- City of West Palm Beach Kaye Street Water Plant Fuel Tank Removal
- City of Fort Lauderdale Pump Station D37
- City of West Palm Beach Wastewater Treatment Plant Fuel Tank Removals
- City of Hialeah Reverse Osmosis Water Treatment Plant
- City of West Palm Beach East Central Regional Water Reclamation Facility Remedial System Installation
- Miami International Airport Fuel Lines

Joe Ziegler, PE will be supporting AECOM for this contract.

Waste Disposal/Emergency Response

located in Pompano Beach, has become the leading environmental and industrial service provider and largest hazardous waste disposal company in North America. Since 1980, field service centers have been strategically located across North America to provide emergency response services and perform planned work on customer locations. Clean Harbors is a recognized leader in environmental emergency response services, with more than 400 service locations providing waste transportation and disposal, laboratory chemical packing, 24-hour emergency response, parts cleaning, and field, energy, and industrial services. The Company owns and operates more than 100 waste management facilities offering a wide range of disposal options including incineration, wastewater treatment, and landfill, recycling and specialty disposal. Clean Harbors is the largest hazardous waste disposal company and the largest re-refiner of used oil in North America and has been serving the City for many years.

Patrick Etheridge is the South Florida general branch manager and will be supporting AECOM on the contract.

Since 1952, NRC/US Ecology has provided safe and compliant solutions for complex waste management needs and ensured the effective management of the environmental risks our customers face. They lead the industry with expertise spanning across a comprehensive suite of environmental, industrial and emergency response services. NRC/US Ecology provides treatment, recycling, and disposal services including RCRA hazardous waste disposal, solid waste/wastewater treatment; PCB, PFAS and other non-hazardous waste disposal; energy waste disposal; thermal treatment and recycling; aerosol and solvents recycling, and metals recovery, industrial services including vacuum transfer and pumping; decontamination and demolition; asbestos/lead/PCB/mold abatement and disposal, and emergency response services including disaster response, and recovery and Oil Spill Response and Compliance (OSRO). Diego Mejia will support AECOM for this contract.

Waste Disposal

located in Pompano Beach and headquartered in Houston, Texas is North America's premier solid waste services provider. WM is your single source for industrial and hazardous waste disposal. Whether your materials are solid or liquid, whether they are from a single location or several dozen, WM can handle them in a manner that is safe, compliant, and cost-effective. WM's services include waste transportation management, on-site waste services program management, industrial waste sustainability, hazardous waste disposal, residential waste/recycling, and dumpster rentals. WM's clients include engineering and consulting firms, automotive, construction, education, manufacturing, healthcare, municipalities, oil and gas, pharmaceutical, petrochemical, steel, pipelines, transportation, and utilities. WM is strongly committed to the safe and responsible management of waste, working diligently to achieve regulatory compliance and protection of human health and the environment.

Jeff Roccapriore will support AECOM with this contract.

Principal-in-Charge
Vik Kamath, PE (FTL)*

Project Manager
Steve Starke, PG, CHMM, LEP, REPA (FTL)*

Project Support
Health & Safety
Luis Smith, CIH, CIEC, FLAC (FTL)*
QA/QC
Babu Madabhushi, PhD (FTL)*

Assistant Project Manager
Delana Beculhimer, LEP (FTL)*

Phase I, II & III Assessments
Delana Beculhimer, LEP (FTL)*
Kathryn Eisnor, LEP (FTL)*
Matthew Holbrook, PG (FTL)*
Ed Leding, PG (FTL)*
Alec Rizzo (FTL)
Elizabeth Sulivan (FTL)

Resilience/Climate Change
Justin Vandever (OAK)*
Lauren Swan (MIA)*

Engineering Services
Fernando Navarrete, PhD, PE (FTL)
Stormwater
Gino Mora (FTL)*
Jonathan Barbosa, PE (FTL)
Civil Engineering
Daniel Baker, PE (WPB)*
Clecio De Sa, EI (FTL)
Water/Wastewater
Roger Williams, PE (MIA)*

Sediment Dredging
Dan Levy, PG (FTL)*
Chandy John, PhD (JAX)*
Babu Madabhushi, PhD (FTL)*
Mike Giovannozzi, PE (WPB)*

Seawall & Dock Construction
Jose Soler, PE (MIA)*
John Carel, PE (MIA)*

Remedial Design
David Hayman, PE (FTL)*
Babu Madabhushi, PhD (FTL)*
Devansh Shah, PE (MIA)*
Sonia Burkule (FTL)
Josh Gregory (FTL)
David Vargas (FTL)

Grant Writing/Funding Assitance
Jae Park, PhD, CFM (IAD)*
Amy Baker, PE (IAD)*

Remedial Construction
Rich Ulkus, GC (MIA)*
Mike Powell (MIA)*
Mike Scinta (MIA)*
Richard Longhenry (MIA)

Asbestos, Mold, & Lead Based Paint
Luis Smith, CIH, CIEC, FLAC (FTL)
Carlton Gordon, MRSA (FTL)*
DeAndre Scholl (FTL)

Natural Resources
Keith Stannard (FTL)*
Natural Resources
Mike Briener (MIA)*
Kelley Samuels, PWS, CERP (ORL)*
Pete Verbanac (FTL)
Permitting
Karen Brandon, PE (WPB)*
Laura Cherney (MIA)

Subcontractors Support Services

Asbestos, Mold, Lead-based Paint Abatement
Cross Environmental (FTL)
Asbestos, Mold, Lead-based Paint Testing
GLE & Associates (FTL)
Drilling Services
Earth Tech Drilling (PMP)
JAEE Environmental Services (FTL)

Grant Writing/Funding Assistance
Sullivan Regulatory Consultants (TLH)
Laboratory Services
Pace Analytical (PMP)

Subsurface Utility Engineering
DRMP
Surveying
J. Bonfill & Associates

Resiliency/Sustainability/Climate Change
300 Engineering PA
Remedial Design/Construction Services
Engineered Environmental Solutions (WPB)

Waste Disposal/Emergency Response
Clean Harbors (PMP)
US Ecology / SWS (FTL)
Waste Disposal
Waste Management Inc of Florida (PMP)

(FTL) Fort Lauderdale • (PMP) Pompano Beach • (MIA) Miami • (JAX) Jacksonville • (OAK) Oakland, CA • (ORL) Orlando • (WBP) West Palm Beach • (TLH) Tallahassee • (TPA) Tampa • (IAD) Germandtown, MD

* - Resumes provided in Tab 8 Resumes of Key Personnel.

TAB 07

STATEMENT OF SKILLS AND EXPERIENCE OF PROJECT TEAM

The AECOM Team

AECOM launched 30 years ago when a handful of employees from design and engineering companies shared a dream of creating an industry-leading firm dedicated to making the world a better place. AECOM became an independent company formed by the merger of five entities. While our official founding was in 1990, many of our predecessor firms, such as Dames & Moore, Woodward Clyde, ENSR, Metcalf & Eddy, URS, and Radian have distinguished histories. Since 1990, more than 50 companies have joined AECOM and, in 2007, we became a publicly traded company on the New York Stock Exchange. In 2014, we more than doubled our revenue and workforce with the acquisition of URS, which expanded our capabilities and solidified us as a premier, fully integrated infrastructure firm. Today, AECOM has over 56,000 employees operating in 150 countries from which to draw remedial investigation and design expertise. AECOM is the nation's largest and most capable design firm. In addition, our Florida footprint covers the entire state, and we are continuing to partner with our clients to develop innovative solutions to their most complex problems.

Contaminated and other environmentally sensitive sites present significant liabilities to industry and government – in some cases affecting the health, safety, and real estate values of local communities and requiring substantial financial expenditures to remediate. To properly manage these liabilities, the AECOM team will carefully consider site-specific conditions, regulatory requirements, and stakeholder issues. Our team has many success stories working with clients / stakeholders where we have responded to site impacts, eliminated threats to nearby receptors, recovered the value tied up in impaired or stigmatized property, and generated goodwill in the community by creating an asset. Our goal is to provide services to the City of Pompano Beach, such that together we will have many success stories associated with important projects within the City.

There is an inherent value in working with an organization such as AECOM that maintains the required professionals in-house and locally, within the county, to service our clients, supplemented by the expertise of our additional staff, subcontractors including SBE/MBE/DBE firms. Our team is discussed in greater detail in Tab 5 Project Team Form, Tab 6 Organizational Chart, and Tab 8 Resumes.

Our team maintains the full suite of capabilities anticipated under this agreement, including multidisciplinary engineering, environmental, and construction oversight services with the expertise and experience needed to perform virtually any environmental project or challenge the City may have. The anticipated scopes of services enumerated in the Request for Letters of Interest were previously listed in Tab 1 Technical Approach and are discussed below.

Adopted Capital Improvement Plan

AECOM has the resources and expertise to provide professional environmental testing services for each of the projects identified in the City of Pompano Beach's Adopted Capital Improvement Plan (CIP) for FY 2020-2024, including major bridge rehabilitation, roadway resurfacing, sidewalk improvements, park refurbishing and renovations, basketball court resurfacing, lighting improvements, pool lining repairs, golf course repairs, replacement of artificial turf, building refurbishment, seawall rehabilitation, parking lot improvements, signage improvements, canal dredging, tree replacement, grant writing, utility renewal and replacement, water treatment plant upgrades, well maintenance, stormwater system improvements, pavement repair, and others.

Preparation of Phase I, Phase II, and Phase III Assessments

AECOM provides assessment services in conjunction with municipal, county, and state programs and is intimately familiar with the differing objectives of each as defined by ASTM, Florida Administrative Code (FAC), and specific program guidance.

Phase I Site Assessment

In general, site assessment is initiated with a Phase I environmental site assessment (ESA), conducted in accordance with ASTM E-1527-13 (Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process; expected to be revised in 2020) and/or 40 CFR Part 312 (All Appropriate Inquiry - AAI). The AAI is a requirement for federal brownfields grants and represents the level of effort needed to establish an innocent landowner defense under CERCLA in addition to providing Superfund liability limitations for bona fide prospective purchasers and contiguous property owners. The preliminary assessment consists of a detailed site and area inspection and review of environmental, regulatory, and community documents. This assessment substantially aids in the identification of potential on-site and local off-site contaminant sources and minimizes the prioritization of sites or sources that may have no bearing on the specific investigation. This key initial phase has the effect of being able to streamline subsequent environmental investigations. Preliminary assessment tasks that are particularly helpful in focusing on the site assessment include:

- Site and adjacent site ownership and occupants (identified from property records and supplemented with city directories)
- Site and adjacent site history, land use, and past facility operations, as identified by detailed interviews with site personnel and area residents, especially those with long-term ties to the area and specific recollection of development
- Federal, state, local, and tribal agency records (permits, licenses, releases, land use limitations, compliance, and enforcement)
- Solid, petroleum, hazardous, and biohazardous waste management, storage, and disposal practices
- Well inventories (potable/non-potable, irrigation, injection, and monitoring)
- Site utilities, general drainage, and topography
- Geologic and hydrogeologic properties
- Sensitive receptors (augmented by Department of Health data)
- Analysis of Data Gaps

In the City of Pompano Beach, AECOM has used these techniques, combined with site reconnaissance and a preliminary evaluation of area geology, to identify areas of concern. Typically, the areas of concern have resulted from impacts to the soil and/or groundwater from the improper handling of hazardous materials. AECOM significantly utilizes these techniques to baseline the known distribution of contamination, target suspected source areas, and minimize the number of environmental mobilizations and samples needed to complete the investigation. Below are descriptions of sample projects.

Phase I Site Inspection

Dr. Martin Luther King Jr. Boulevard and NW 10th Avenue Parcel, Pompano Beach, FL. AECOM was contracted by the City of Pompano Beach Community Redevelopment Agency (CRA) to perform a Limited Phase I Site Assessment to identify whether current or historical activities on or near the subject property may have resulted in significant contamination by hazardous substances or wastes and/or petroleum products, also known as a Recognized Environmental Condition (REC). The subject property consisted of three adjacent undeveloped land parcels, located on the northeast corner of Dr. Martin Luther King Jr. Blvd and NW 10th Avenue. The property was located within the Pompano Beach Northwest Brownfield Area. One REC was identified.

Phase I Environmental Site Assessment – Asbestos and Lead-Based Paint Survey – Seminole Media Productions, Hollywood, FL. The Seminole Media Productions building is located approximately ¼-mile south of Stirling Road and immediately east of State Road 7 in Hollywood, Broward County, Florida. AECOM completed a Phase I ESA of the Site, as well as additional services, including an asbestos survey and lead-based paint survey. The Phase I ESA and the asbestos and lead-based paint survey were conducted at the request of the Tribe prior to proposed renovations within the building. Thirty-three bulk samples were collected from suspected asbestos-containing materials (ACM). Forty-seven samples were collected using X-ray fluorescence (XRF) technology as part of the lead-based paint survey.

There were no RECs identified that could be reasonably expected to create an area of concern at the Site. Based on the asbestos sampling, mirror mastic located on the southern and eastern walls of the eastern portion of the first floor of the Site contained 20 percent chrysotile asbestos. During the lead-based paint survey on the first floor, 47 samples were analyzed using XRF technology, and there was no lead identified equal to or greater than the 1.0 mg/cm^2 standard using the Department of Housing and Urban Development (HUD) Chapter 7 1997 revised guidelines. AECOM also identified light ballasts labelled as non-polychlorinated biphenyls (PCBs) containing. AECOM also identified mold during the asbestos survey.

Based on the Phase I ESA of the Site, AECOM identified three (3) areas of concern that could be associated with future renovations: ACM (mirror mastic), potential PCBs in the light ballasts, and mold on the southern first floor wall. AECOM recommended that the asbestos-containing material identified should be properly managed if renovations impacted the area, the light ballasts should be properly disposed of if they were removed, and further mold investigations should be conducted prior to renovations.

Phase I Environmental Site Assessment Report – Asbestos Survey– Pompano Beach Pier, Pompano Beach, FL. AECOM completed a Limited Phase I ESA and pre-demolition asbestos and lead based paint survey at the Pompano Beach Pier for the City. Phase I activities were reported in a Limited Phase I ESA and the pre-demolition asbestos survey and lead based paint survey reports were conducted by a subcontractor under AECOM supervision and documented under separate covers.

Phase II Site Assessment

Properties identified as having contamination potential during the Phase I environmental site assessment activities should be further assessed to verify or refute the contamination concerns. This is a Phase II ESA. The general steps that are completed in the performance of a Phase II assessment are discussed below.

A formal Work Plan, detailing the number and type of samples; the type of analyses; the projected labor, equipment, materials, and subcontractor utilization; the assessment schedule; and associated costs is prepared. An environmental project manager coordinates the proposed field activities with the property representative. AECOM strives to accommodate site operational constraints and site personnel requests, without sacrificing assessment quality or jeopardizing schedules of the City.

Prior to the initiation of the actual assessment work, a site-specific Health and Safety Plan (HASP) is prepared. If accessible and intact, existing monitoring wells identified in the area are utilized, as appropriate. Areas that are outside of the subject site that may have a negative impact on the site are also investigated. A local receptor survey is conducted, and the current and adjacent land use is noted. AECOM obtains a utility clearance prior to performing soil borings or monitoring well installations on the property. Available site location maps are reviewed for possible location of underground utilities. Sunshine State One Call, as well as known utility firms, are contacted to identify utilities that could be located at the site. The locations and depths of existing utilities are reviewed to determine impact, if any, on existing contamination. AECOM gathers an appropriate amount of data as needed to verify or refute contamination potential.

The following are the field tasks that may be conducted during implementation of a Phase II assessment:

- Geophysical survey instruments, such as ground-penetrating radar, ground conductivity meters, magnetometer surveys, or metal detectors, may be employed to identify or verify buried tanks, drums, etc. or fill and construction materials.
- Excavation of test pits may be performed to document the presence of septic systems or the depth and type of buried material within the parcel.
- Soil borings are advanced using hand augers, drill rigs, or direct push techniques. The borings are advanced to discrete intervals determined by the Project Manager and Field Scientist. The soil is screened using an OVA-FID to determine the presence of total organic and hydrocarbon vapors.
- Monitoring wells are installed using direct push or standard drilling techniques, depending on the site conditions.
- Groundwater, soil, surface water, and/or sediment samples are collected for on-site mobile lab analysis or are transported to a fixed laboratory for analysis.
- Water table elevation surveys, using known survey elevation benchmarks, are conducted to determine depth to water, groundwater gradient, and groundwater flow direction, which will affect plume migration, dewatering considerations, and subsurface construction.
- Sensitive receptor surveys are conducted to determine the possible impact of contamination to adjacent areas, as well as potable wells that may be located in the area of the site.
- Aquifer testing may be conducted to determine hydraulic characteristics to evaluate groundwater contamination migration rates during dewatering operations.
- Well abandonments are conducted to properly close monitoring, irrigation, and/or potable wells in accordance with FAC Chapter 62-532.500(4) and South Florida Water Management District (SFWMD) guidelines.

Prior to procuring analytical services for Phase II testing, AECOM audits the laboratory facilities and procedures. If the lab does not meet our standards, we do not use it. AECOM has longstanding relationships with the laboratory specified in this submittal, Pace Analytical. Pace is certified by the Florida Department of Health's (DOH's) Environmental Laboratory Certification Program (ELCP) and can achieve the required method detection levels. In addition to their DOH certification, and in accordance with Chapter 62-160 FAC (Quality Assurance), Pace operates quality assurance programs consistent with the NELAC quality systems standards. Laboratory reports are prepared in compliance with NELAC standards. Before submitting final laboratory data, AECOM performs a quality control check to verify the laboratory report is free of errors. This check maintains analytical reliability and reduces liability to the City.

A clear and concise report is prepared upon the receipt, compilation, and review of field and laboratory data. The objectives of the soil and groundwater sampling report are to:

1. Clearly present the assessment data gathered to verify or refute the identified contamination potential
2. Provide a conclusion, based upon the data, as to whether further assessment appears warranted
3. Provide appropriate recommendations and remedial cost estimates.

The soil and/or groundwater sampling report presents the soil and groundwater assessment methodologies; the hydrogeologic setting; the subsurface assessment results; pertinent conclusions; and recommendations for additional work. Copies of regulatory correspondence, historical data, current site photographs, soil boring and lithologic logs, geophysical data, soil and groundwater analytical reports, in addition to well completion and abandonment reports, are included in the report.

Phase II Field Investigation

AECOM has conducted the following Phase II ESAs for the City:

- Limited Phase II ESA for the site location of the proposed library. Site reconnaissance, geophysical surveys, soil and groundwater sampling, and monitoring well installation activities were conducted and documented in a Limited Phase II Environmental Site Assessment Report.
- Soil and Groundwater site assessment for the site location of the proposed library. Petroleum and arsenic impacts were identified during the limited phase II assessment; therefore, a full assessment was requested by Broward County. Two site assessment reports were submitted, one for the petroleum impacts and one for the arsenic impacts.
- Site assessment and monitoring well installation and abandonment activities at the Salley property were conducted and documented in a Site Assessment Report and a Monitoring Well Abandonment Report.
- Groundwater monitoring conducted at the Municipal Golf Course. Groundwater sampling activities were conducted on a quarterly or semi-annual and annual basis and documented in the corresponding monitoring reports.
- Quarterly monitoring sampling activities at the Aquatics Center located in the Community Park.

Additional example projects are detailed below:

Lease Parcel N-11 Palm Beach International Airport Phase I and Phase II ESA. The Lease Parcel N-11 and Pond areas are located in the northeast corner of the Palm Beach International Airport (PBIA) (the Site). AECOM completed a Phase I ESA of the Site and identified a former underground storage tank (UST) area along the west-central portion of the Site and a former landfill on the southeastern portion of the Site. For the Phase II ESA, groundwater samples were collected to evaluate current groundwater quality around the perimeter of the former UST, as well as to evaluate potential groundwater issues if the site was developed in the future. During the Phase II ESA, a series of test trenches were excavated by the Pond in the area of the former landfill.


Phase II ESA Test Trench

Petroleum impacts to the groundwater were not identified above GCTLs in the north and east perimeter areas of the former UST area; therefore, AECOM did not anticipate building restrictions outside of a 50-foot perimeter to the north and east of the former USTs. The test trenches identified domestic garbage and construction debris in three of the seven trench locations. Petroleum or metal impacts to the soils were not identified above the established SCTLs in the trenches that were excavated. AECOM recommended that, at a minimum, the landscape personnel at PBIA be educated on the presence of the buried waste, the types of hazards that may be present, and the appropriate protective clothing to wear to avoid potential risks/hazards from the solid waste in the soils around the perimeter of the Pond. AECOM also recommended that the areas where the solid waste is present be excavated to eliminate the potential risks and hazards.

McClure Village Project. AECOM provided environmental services for the Phase I and Phase II ESAs at McClure Village. The project area consists of a 13-acre parcel multifamily residential area that was historically used for cultivation. The Phase I ESA conducted at McClure Village identified the historical agricultural use at the project area as a REC. AECOM evaluated areas within the project site targeted for construction, including the demolition of three multifamily houses and a storage building. AECOM conducted sampling to evaluate the soil quality with respect to former agrochemicals and arsenic in these areas so that the demolition/new construction could be implemented. The Phase II ESA identified elevated levels of arsenic above State residential standards.

AECOM subsequently conducted a Site Specific Human Health Risk Assessment (HHRA), which indicated that the levels of arsenic were below EPA guidelines. Based on the Phase II ESA and HHRA, AECOM formulated a Soil Management Plan to protect the workers and manage the soils during the demolition and new construction.

Palm Tran Expansion Phase I and Phase II ESA. AECOM conducted a Phase I ESA on two combined parcels 2.7 acres in size and consisting of a building, parking area, and storage lot. The Phase I identified a former UST area and potential asbestos in the warehouse/office structures. AECOM completed a Phase II ESA in the vicinity of the former UST area. Soil borings were advanced, and 84 soil samples were screened for the presence of petroleum vapors.

Two temporary well points were advanced at representative locations at the former UST area to evaluate groundwater quality. AECOM recommended no further assessment with respect to the soil and groundwater quality.

Phase III Site Assessments

AECOM understands that the successful completion of assessment and remediation work can have significant positive implications for Pompano Beach communities. AECOM's Florida operations maintains a full staff of engineers, geologists, scientists, and remedial technicians – many with decades of direct experience in Phase I, Phase II, and Phase III environmental investigations and community redevelopment. A large part of our experience has been investigations and remediation, as well as operation and maintenance of remedial systems in densely populated urban areas from south Miami-Dade County to West Palm Beach.

AECOM conducts sediment assessments and remediation in accordance with the FDEP Sediment Quality Assessment Guidelines. Remediation of contaminated sediments typically associated with wetlands is conducted under an Environmental Resources Permit (ERP) in accordance with the SFWMD and USACE requirements. Remedial Action Plans (RAPs) are prepared and submitted to the appropriate regulatory agencies for approval. AECOM has local in-house personnel experienced in properly planning for and conducting sediment and wetland remediation, as well as preparing ERPs.

AECOM offers inspection services to monitor possible contaminated sites that include imminent threat sites. The inspections are conducted from the discovery of the threat or contamination through the selected corrective actions and cleanup. The inspections include site visits for site reconnaissance, field sampling, monitoring well installation, construction and installation of the remediation system, and operation and maintenance of the remediation system. During the inspections, observations are recorded for record keeping based on applicable standards and regulations. Adjustments are made to protect the public and the environment. Additional inspections are conducted based on the severity of the threat.

Sediment Core Sampling

AECOM's team of in-house registered Professional Engineers is prepared to design remediation systems to treat all levels of hazardous wastes and petroleum hydrocarbons for the City. Our approach to preparing a RAP begins with an evaluation to identify the most cost-efficient and technically sound treatment alternatives for remediation of contaminated media based on the results and findings reported in the site assessment report. The remedial alternatives evaluation takes place during the site assessment. The evaluation of numerous remedial alternatives is based on both cost-effectiveness and efficiency. RAPs are designed in accordance with applicable FAC guidelines. Templates of previous work allow AECOM to provide the City with proven designs while reducing costs. AECOM considers multiple phases and innovative technologies to reach desired cleanup goals and makes appropriate recommendations concerning the correct action to be pursued (e.g. contaminant mass removal at the source and natural attenuation along the fringes of the plume).

AECOM has conducted the following Phase III Site Assessments for the City:

- Vehicle fuel spill and source removal due to a leaking fuel tank from a truck parked along the east shoulder of the NW 24th Avenue, just north of Hammondville Road. Soil excavation, soil screening and sampling, backfill, and disposal activities were conducted and documented in a Source Removal Report.
- Soil assessment and source removal at an electrical transformer that was discharging oil for an unknown period of time. Soil sampling and screening, removal, backfill, and disposal activities were conducted and documented in a Source Removal Report.
- Emergency response activities involving a crane overturned during construction activities at the community park.

University Drive Vehicular Emergency Response Cleanup

Additional example projects are detailed below:

Contamination Assessment and Remedial Action Plan, Former Navy Dump Site, Fort Lauderdale-Hollywood International Airport, Fort Lauderdale, FL. AECOM conducted environmental assessment activities and a remedial action evaluation for the former Navy Dump site located in the northeast area of the Fort Lauderdale-Hollywood International Airport. The location of the former dumpsite is improved with airport-supporting facilities, north of the main airport runway, with a portion of the dumpsite airside. The primary contaminants of concerns at the former Navy Dump site included arsenic impacts to soils and groundwater.

AECOM completed assessment activities and developed a remedial action to mitigate the surficial soil impacts in the immediate area of the former dump site. An excavation plan was developed to remove arsenic-impacted soils that were at concentrations greater than commercial/industrial SCTLs. The remediation efforts were completed, and an Initial Source Removal Report was submitted to FDEP and subsequently approved following two quarters of groundwater monitoring.

In 2013, AECOM developed a Declaration for Restrictive Covenant (DoRC) for Broward County Aviation Department (BCAD) in order to place restrictions on the parcel of land known as the Former Navy Dump. Engineering and administrative controls were used to obtain a No Further Action status from the FDEP. The No Further Action with Conditions was subsequently approved by FDEP.

Memorandum of Agreement for Land Use Controls, Fort Lauderdale-Hollywood International Airport, Fort Lauderdale, FL. AECOM worked with BCAD and the FDEP in negotiating a Memorandum of Agreement (MOA) for Land Use Controls for contaminated sites related to the airport property.

The MOA intent is to restrict exposure to contamination by use of groundwater and surface water restrictions, soil restrictions, and land use restrictions set forth in the MOA. AECOM also negotiated higher GCTLs for the airport campus as part of the MOA. The FDEP approved the MOA, which is currently on file.

Since 2008, AECOM Technical Services, Inc. has provided environmental consulting for BCAD on a work authorization basis through the Broward County Qualified Vendor List for Environmental Consultant Services. Services provided to BCAD include, but are not limited to, Baseline Exit Closures, Phase II ESAs, Site Assessments, Remedial Action Plans, Remedial Actions, Compliance Inspections, Rapid Response, and Peer Reviews.

Roadway, Streetscape, or Parking Lot Projects

AECOM is prequalified by the FDOT in Minor, Major, and Controlled Access Highway Design. Minor Highway Design includes the design for rural resurfacing and pavement rehabilitation and minor widening. These projects include preparation of construction documents for minor drainage, utility relocation, traffic operations improvements, and miscellaneous design, as well as post-design services. Major highway design includes the design for urban highways with new curb and gutter and new or major reconstruction of rural projects to add two or more lanes. These projects include utility relocation plans, drainage design and permitting, maintenance of traffic plans (MOT), traffic engineering applications, and intersection reconstruction.

Roadway plans preparation typically includes plotting of survey data, establishing horizontal and vertical profile grades, analysis of independent geotechnical soil investigation, key map, drainage maps, plan-profile sheets, intersection details, typical section sheets that show the approved pavement design, summary of quantities sheets, summary of drainage structures, drainage structure detail sheets, lateral ditch/outfall sheets, stormwater treatment details, cross section sheets (including earthwork computations), MOT plans, and other detail sheets needed to convey the intent for the planned improvement.

Additional information used in development of the plans can consist of:

- Draft and Final Pavement Design Package
- Draft and Final Typical Section Design Package
- Record Decision Documentation Booklet

Plans and designs are prepared in accordance with the latest standards adopted by Broward County, AASHTO, and the FDOT, including FDOT Roadway Plans Preparation Manual, Pavement Type Selection Manual, Rigid and Flexible Pavement Design Manuals, the Drainage Manual, and the current Standard Road and Bridge Specifications. AECOM has extensive experience preparing pavement designs for resurfacing projects based upon an analysis of the existing pavement structure.

In addition, AECOM has conducted thousands of environmental soil, groundwater, and sediment assessments in Miami-Dade, Broward, and Palm Beach Counties. AECOM routinely conducts sampling in areas designated for roadway improvements, such as:

- Drainage/Stormwater Improvements
- Properties identified for acquisition
- City and State Right of Way (ROW)

The primary objective of this work is to assess whether construction or facility activities will be impacted by contamination or whether redesign can be performed to avoid the contamination. AECOM has conducted over 500 Phase II environmental assessments for FDOT alone.

AECOM has been responsible for the management, recovery, identification, handling, containerization, storage, and transport/disposal of regulated substances, and hazardous and non-hazardous materials and wastes, on many roadway/streetscape projects. Wastes can be encountered during acquisition and assessment activities, during construction, as a result of an emergency response (e.g., tanker spill), or when wastes are illegally disposed. AECOM coordinates the removal of such wastes quickly so that project schedules are not impacted.

Streetlight Installation in Contaminated Area

Gravity Sewer Main, Water Main/ Reuse, and Force Main projects

AECOM has provided planning, design construction phase, and environmental sampling services for numerous collection systems, countless lift stations, and hundreds of miles of wastewater force mains. Collection system projects have included gravity, low pressure, and vacuum sewers. We have extensive experience with evaluation of alternatives to convert areas currently served with septic tanks to central sewers.

Our expertise in gravity sewers includes rehabilitation as an answer to aging and deteriorated pipe sections. AECOM experts have assessed the conditions of hundreds of miles of sewer pipe and, where needed, produced designs for rehabilitation with approaches such as slip lining, pipe-bursting, and cured-in-place “lining.”

In addition to design services, AECOM has completed soil and groundwater assessments at numerous locations where new pipe installations and upgrades were completed. Services have included soil and groundwater sampling to determine if existing lines have created a conduit for contaminated groundwater and dewatering effluent treatment during installation. AECOM has also conducted oversight activities at locations with existing asbestos-containing transite pipe to make sure workers were not exposed during excavation, abatement, or pipe bursting activities.

Sewer Installation in Contaminated Area

Lift Station/Pump Station Rehabilitation Projects

Within Florida, AECOM has a broad base of pump station design experience. Most stations are designed for unattended service, with telemetry systems providing remote alarms in the event of equipment failure or other emergency situations. Typical services include geotechnical studies, hydraulic analyses, mechanical design, electrical and instrumentation design, specifications, architectural plans, cost estimates, construction services, start-up assistance, and operation and maintenance manuals and training.

Environmental assessments and public participation services are also provided for pump station designs. AECOM’s design capabilities for pump stations entail civil, electrical, mechanical, and structural engineering; instrumentation and controls; and architecture. Our designers have completed the design of hundreds of pump stations in Florida and across the nation, both large and small, including wastewater, potable water, and stormwater facilities.

AECOM has provided studies, design, construction, start-up, and operation of more than 300 new and existing pump stations, including working on Collier County’s Wastewater Basin Analyses Program for MPS 306. The Basin 306 Program includes upgrades of three master pump stations and 27 duplex pump stations.

Capacities of the pump stations have ranged from 0.1 mgd to 750 mgd. AECOM completed a 750-mgd Detroit wastewater pump station that won the American Consulting Engineers Council (ACEC) Engineering Excellence Honor Award.

AECOM’s procedures on pump station hydraulics and our in-house design experts are well-known throughout South Florida. Our staff gave a presentation on state-of-the-art pump station design at the Southwest Florida Water & Wastewater Exposition in Fort Myers. Our lift station projects have ranged from the smallest of residential stations to large master stations with capacities up to 50 mgd. The lift stations have used submersible pumps as well as the most complicated wet well/dry well configurations with extended motor/pump shafts. These facilities often employ various ancillary equipment such as variable speed drives, odor control, emergency power, and SCADA.

AECOM is often called upon to modify existing pump stations that have reached the end of their useful life. At these stations, capacities are increased, equipment is replaced, and instrumentation is improved. We also work with clients to address corrosion and other issues that affect pump station service life.

AECOM currently holds a Professional Services Agreement with the City of Hollywood, Florida, which has been in force since 2003. As part of the agreement, AECOM was assigned various task orders. A series of task orders related to a replacement program involved professional services for 18 City-owned lift stations.

Each lift station ranges from 125 gpm to 725 gpm. AECOM worked closely with City staff and their building department to site plan and professionally landscape the site. Most sites are within residential neighborhoods. As part of the lift station program, AECOM also designed water main, force main, and gravity sewer pipelines to tie from new lift stations to the existing underground infrastructure. AECOM's phased program approach has delivered each station within budget and schedule. AECOM is currently providing construction services for four of the 18 lift stations and final design for lift station A-5.

AECOM has completed the following projects for the City of Hollywood.

- **West Hollywood Pump and Storage Facility.** AECOM provided design, bidding, permitting, and construction management services for the $1 million West Hollywood Pumping and Storage Tank Facilities.
- **City Model Conversion.** Providing conversion of city-wide water transmission model from WaterCad to Infoworks.
- **Stormwater Pump Station #6.** AECOM provided design, permitting, bidding, construction, and start-up phase services for what was ultimately a facility housing two 3,750 gpm stainless steel submersible pumps. The building architecture was designed to match the established and historic neighborhood. The construction project was on time and within budget.
- **Lift Station Conversion and Upgrade Program.** Provided design, permitting, bidding, construction, and start-up phase services for the replacement of 11 lift stations ranging from 125 gpm to 725 gpm each.
- **Master Lift Station Conversion and Upgrade Program**. Prepared documents for the structural design rehabilitation of three master lift stations.
- **City-wide Water Main Repair Evaluation.** Prepared a city-wide water main distribution replacement plan for 220 miles of pipe. Replacement was prioritized in utility analysis zones by ranking of importance factors.
- **Johnson Street Water Main Repair.** Prepared contract documents for water main replacements including design, permitting, and construction services.
- **Water Use Permitting for Membrane Softening Plant Expansion.** Prepared the water use permit renewal request for information with the SFWMD permit for requested withdrawals from the Biscayne and Floridian aquifers.
- **Bond Report for Water Treatment Plant Improvements.** Developed a bond report describing the status of the municipal water treatment supply systems.
- **City of Hollywood WTP, Various Water Treatment Plant Improvements.** Provided for the facilities upgrade of a water treatment plant that included spiractor piping modifications, new 9,000-kVA emergency generator facilities, and gravity filter piping and valve replacement, building rehabilitation, and filter operations study. Also managed the structural rehabilitation of steel filters, sodium hypochlorite tank replacement, lime pumps and slakers replacement design report, HVAC upgrades, chlorine facility upgrades, elimination of plant discharges to the pond, spiractor cone repair investigation, and storage tank and repump facilities in the western part of the City. AECOM prepared studies, developed pre-design reports, prepared final design drawings and specifications, provided bidding services, coordinated permitting, and provided construction services and engineering certifications and commissioning services as required.

Parks and Recreational Facilities

AECOM has conducted multiple environmental assessments to identify the presence of potential contamination at State of Florida properties and facilities. These typically include state parks, correctional facilities, and other governmental facilities. Full site assessments have been performed to meet the requirements of Chapter 62-780, FAC (Contaminated Site Cleanup Criteria). However, should a site meet the requirements of an alternative State of Florida cleanup program, the applicable FAC will guide the completed assessment.

We have provided services under a similar Environmental Engineering Services Agreement for the City of Miami ranging from asbestos surveys at Fern Isle Park and Curtis Park in Miami, to annual sampling of the stormwater outfalls after major rain events in accordance with the City of Miami's NPDES permit, to Red Tide surface water sampling in Biscayne Bay. We are currently involved on several park projects that are in various stages of assessment/monitoring/cleanup, as well as our completed environmental work at Curtis Park, Douglas Park, Blanche Park, and Grapeland Park in Miami. AECOM was tasked by the City of Miami to provide services for implementation of a corrective action plan for engineering controls at Bayfront Park. This project is discussed in detail in Tab 4 References.

AECOM was also contracted by Cooper City to conduct a site assessment and prepare a Site Assessment Report (SAR) for the Bill Lips Sports Complex (Complex). Arsenic, exceeding the Chapter 62-777 FAC criteria, was identified in the soil and groundwater of the soccer fields.

Blanche Park Engineering Controls Installation (Artificial Turf and Rubber Mulch)

Blanche Park Engineering Controls Completed

AECOM prepared a Source Removal Plan and then performed the removal and disposal of contaminated soil at the Complex. A Soil Source Removal Report was subsequently prepared.

AECOM then prepared a Natural Attenuation Monitoring Plan (NAMP), which proposed groundwater monitoring for the site. Subsequent to completion of five quarters of NAM, AECOM submitted a No Further Action with Conditions (NFAC) to Broward County, which was approved. AECOM then prepared a Deed of Restrictive Covenant for the site, which was recorded by Broward County. The monitoring wells were then properly abandoned.

In addition, AECOM conducted surface and groundwater monitoring at the Park Ridge Golf Course in Lake Worth and Dyer Park in West Palm Beach for the Solid Waste Authority of Palm Beach County:

Bill Lips Sports Center Contaminated Soil Excavation

Bill Lips Sports Center Restoration

Park Ridge Golf Course, Surface and Groundwater Level Monitoring, Lake Worth, FL. In 2007, AECOM installed a network of miniTROLL® data loggers at the Park Ridge Golf Course, which were later changed to LevelTROLL® units. Currently, three LevelTROLL® units are located at Park Ridge Golf Course. In addition, AECOM assisted Locher Environmental and the Solid Waste Authority (SWA) with the installation of two pressure transducers for surface water monitoring. The groundwater and surface water monitoring activities are conducted in accordance with the Water Use Permit Monitoring Plan for the site.

During quarterly visits, recorded data are downloaded from the LevelTROLL® units. Maintenance is also conducted during the data download events as needed. During field events AECOM records time and depth to water in the well, downloads water level and atmospheric pressure data, and reprograms the LevelTROLL® units to collect data every two hours. Maintenance performed on a quarterly basis includes verifying proper operation, checking the available battery life, checking the available memory, and evaluating the general condition of the LevelTROLL® communication port and cable. Data collected by the pressure transducers are remotely downloaded using Loggernet software via internet access. The pressure transducers collect stage levels within the lake every minute and report the hourly average. During quarterly visits, staff gauged readings, which were recorded for comparison purposes.

The water level data are plotted graphically to illustrate the water level changes during the monitoring period. The surface water and groundwater data collected by the dataloggers is also compared to the manual data recorded in the field to determine whether the datalogger requires re-calibration.

AECOM prepares a quarterly status report detailing LevelTROLL® data logger activities (i.e. site visits, downloading and reprogramming activities, and maintenance). The report also includes the raw surface water and groundwater level data (separated for each month), a summary of the analyzed data, recommendations based on the data and datalogger performance, and a groundwater flow map.

Dyer Park and Site 7, Groundwater Level Monitoring and Data Evaluation – West Palm Beach, FL. In 2010, AECOM installed a network of AquaTROLL® dataloggers at the Dyer Park former landfill. In 2012, AECOM installed a network of Aqua TROLL® dataloggers on the west side of the current North County Resource Recovery facility (Site 7). Twelve AquaTROLL® units and one BaroTROLL® unit are located at the Dyer Park site. Five AquaTROLL® units and one BaroTROLL® unit are located at Site 7. During quarterly visits to each site, recorded data are downloaded from the AquaTROLL® units and the BaroTROLL® unit. Maintenance is also conducted during the data download events as needed. During field events AECOM records time and depth to water in the well, downloads water level and atmospheric pressure data, and reprograms the AquaTROLL® units to collect data ranging from 15-minute to two-hour intervals.

Maintenance performed on a quarterly basis includes verifying proper operation, checking the available battery life, checking the available memory, and evaluating the general condition of the AquaTROLL® unit's communication port and cable.

The data from each site are evaluated for localized groundwater elevation changes, indicative of dewatering activities in the vicinity of the closed landfills. Based on data interpretations, AECOM provides recommendations for further investigation of data anomalies and data validation as warranted.

The groundwater elevation data and conductivity data for each site are graphed alongside the rainfall data to evaluate the effects of seasonal rainfall events. The rainfall data for Dyer Park are obtained from the Solid Waste Authority (SWA) rain gauge located at Site 7. The rainfall data for Site 7 are obtained from the same rain gauge. Subsequent to two quarterly events, AECOM prepares a semi-annual status report detailing the AquaTROLL® data logger activities (i.e. site visits, downloading and reprogramming activities, and maintenance). Additionally, the status reports include the AquaTROLL® data graphed alongside the local rainfall, a summary of the analyzed data, and recommendations based on the data and AquaTROLL® data logger performance.

Former Cross State and Lantana Sanitary Landfills, Groundwater Level Monitoring and Data Evaluation – West Palm Beach and Lake Worth, FL. In 2004, AECOM installed a network of miniTROLL® data loggers at the former Lantana Sanitary Landfill (LSL) and Cross State Landfill (CSL). Six LevelTROLL® units and one BaroTROLL® unit are located at LSL. Four LevelTROLL® units and one BaroTROLL® unit are located at CSL. During quarterly visits to each site, recorded data are downloaded from the LevelTROLL® units and BaroTROLL® unit. Maintenance is also conducted during the data download events as needed.

During field events, AECOM records time and depth to water in the well, downloads water level and atmospheric pressure data, and reprograms the LevelTROLL® units to collect data every two hours. Maintenance performed on a quarterly basis includes verifying proper operation, checking available battery life, checking available memory, and evaluating the general condition of the LevelTROLL® communication port and cable.

The data from each site are evaluated for localized groundwater elevation changes, indicative of dewatering activities in the vicinity of the closed landfills. Based on data interpretations, AECOM provides recommendations for further investigation of data anomalies and data validation as warranted.

The groundwater elevation data for each site are graphed alongside the rainfall data to evaluate the effects of seasonal rainfall events. The rainfall data for the LSL are collected by an on-site rain gauge. The rainfall data for the CSL site are obtained from SFWMD's environmental database, which provides current daily meteorological data.

Subsequent to two quarterly events, AECOM prepares a semi-annual status report detailing LevelTROLL® data logger activities (i.e. site visits, downloading and reprogramming activities, and maintenance). Additionally, the status reports include the LevelTROLL® data graphed alongside the local rainfall, a summary of the analyzed data, and recommendations based on the data and LevelTROLL® data logger performance.

Seawall and Dock Construction and Repair

AECOM's coastal engineering services encompass a number of disciplines, with highly trained teams skilled in the fields of marine biology, aquatic and fisheries ecology, chemistry, toxicology, hydrology, archeology, geology, and hydrography, as well as civil, coastal, environmental, geotechnical, and structural engineering. We have conducted numerous coastal engineering projects involving a spectrum of planning, design, permitting, and construction management. AECOM has been involved in the coastal model updates for the NWFWMD in the Florida Panhandle counties and has completed storm surge modeling, field reconnaissance, overland wave modeling, and coastal flood mapping. We have also completed Storm Surge Advisory Update and Flood Risk Review Meetings with local counties/municipalities and FEMA, as well as developed Enhanced Coastal Risk MAP products to convey coastal flood hazard risks. We have also performed bank stabilization projects in Hillsborough, Manatee, Pinellas, and Levy Counties.

In addition, AECOM provided planning, design, permitting, construction document preparation, construction management, and construction administration services for the reconfiguration of existing Slip 3 at the Port of Palm Beach. The project consisted of the reconstruction of the Port of Palm Beach's Slip #3, including dredging, upland improvements, and a bulk sugar vessel loading system, with coordination of existing tenant operations and Florida Power & Light. At Port Miami, AECOM was contracted to replace the North Bulkhead Wall along the northern extension of Dodge Island to serve cruise operation berths.

An AECOM team was selected by the US Navy to design and build a reconstructed boat basin and upland support facilities, serving special operations forces small craft vessels at the Naval Air Station in Key West, Florida.

AECOM also provided professional engineering services (investigation, design, permitting, and coordination) for the US Coast Guard Station in Marathon, Florida to upgrade the waterfront facilities, which included a benthic survey, permitting, a concrete soldier pile and plank bulkhead, a concrete wharf, a boat ramp, and seawall/bulkhead repairs consisting of stacked bagged concrete and mass gravity concrete wall.

AECOM has conducted multiple asbestos containing material (ACM) abatements during renovations on overwater bridges, including ACM bearing pad removals, where the bridges join the seawalls. We have also provided consultation services to FDOT for sampling and disposal of bridge fender timber pilings contaminated with arsenical wood preservatives.

Tequesta Bridge ACM Abatement

Port of Palm Beach Seawall Installation

Storm Water/Drainage Improvements

The AECOM team has been involved in the various aspects of stormwater management planning and design, from project development studies to complex systems modeling, design and construction of extensive storm sewer systems, pump stations, stormwater treatment areas, and conveyance improvements for federal, state, and local governments, including roadways, airports, and site developments. We have prepared numerous project development studies for documented flooded areas and identified potential alternative solutions. We have developed designs for culvert upgrades, storm sewer system improvements, and channel improvements.

AECOM is experienced in the design and permitting of both online and offline stormwater pond systems on a local and regional scale. These include multi-use stormwater flood control, stormwater treatment, and wetland treatment/mitigation ponds with sizes ranging from 1 to over 60 acres. AECOM has also worked on numerous “innovative” stormwater treatment facility designs and Low Impact Development or “Green Infrastructure” projects that utilize off-line treatment systems, biological treatment, chemical treatment, rain gardens, and stormwater reuse. We have also assisted various cities and counties in the analysis, design, and permitting of baffle boxes, trash collectors at inlets, and sediment control devices.

AECOM has always used advanced technologies to identify and implement innovative, progressive solutions to drainage problems. We keep abreast of water-related rules and regulations at the local, regional, and federal levels. Stormwater is one of the major priorities for communities in Florida, and AECOM can provide expertise in the following areas:

- Preparation of Stormwater Master Plans
- Stormwater and watershed modeling
- Design of stormwater management and treatment structures, pumps, and piping systems
- Design of stormwater collection systems and engineering analyses of drainage basins
- Preparation of permit applications and reports, and agency coordination
- Rate studies to develop impact and user fees
- Surface and groundwater level monitoring, sampling, and analysis
- Stormwater utility consulting
- Municipal NPDES permit compliance and annual reporting

Recent Florida Stormwater Experience includes:

- Martin County Mapp Road
- City of Miami Beach Climate Resiliency and Flood Mitigation Program
- City of Miramar, Historic Miramar Infrastructure Improvements – Phase I, II, and III
- City of Naples, Stormwater Master Plan Update
- South Indian River Water Control District, General Engineering Services
- South Florida Water Management District – GES
- Southwest Florida Water Management District – GES
- Florida Fish and Wildlife Conservation Commission – GES and environmental restoration

In addition to design services, AECOM has performed soil and groundwater assessments at multiple stormwater drainage areas to assess impacts to proposed drainage ponds. If soil contamination is identified in areas of proposed stormwater or drainage improvements, AECOM will work quickly to identify alternatives to disposal. We have successfully worked with local authorities in Broward County, Miami-Dade County, and the FDEP to successfully reuse contaminated soil on projects in order to reduce or eliminate disposal costs. For example, AECOM gained approval to reuse arsenic-contaminated soil along the I-75 corridor in Broward and Miami-Dade Counties. Soil containing contaminants above residential SCTLs, but below commercial/industrial SCTLs, that was not suitable for fill beneath the roadway was tested for leachability. The soil did not present a leaching concern and, with approval from Miami-Dade County DERM, was relocated and used as fill material within a newly constructed pond to raise the bottom elevation.

I-75 Storm Water Pond Soil Reuse

If groundwater contamination is identified within areas proposed for stormwater or drainage improvements, AECOM has performed dewatering services to facilitate subsurface construction. In addition to traditional groundwater remediation techniques, AECOM and its subcontractors have installed pumps, dewatering points, and horizontal wells to facilitate construction in the dry, while also treating contaminated effluent before its eventual outfall. We have also overseen the excavation of pond floors to facilitate installation of PVC liners, which prevent contaminants in stormwater from entering the subsurface and create a hydraulic barrier between the pond to prevent the migration of contaminant plumes.

SR 80 Storm Water Pond Engineering Control (Liner) Installation

Consultation / Inspection Services for Emergency Water/ Wastewater/ Stormwater Repairs

AECOM's Water Group comprises engineers who have designed water and wastewater systems for many local government agencies in South Florida, including the City of Hollywood, Town of Davie, Cooper City, and the Miami-Dade Water and Sewer Authority, to name a few. We are capable of providing emergency services for water, wastewater, or storm water repair. For example, AECOM provided emergency remediation consultation services to FDOT District 4 when a roadway contractor ruptured a 42-inch pressurized sewage pipe on January 4, 2019, which then spilled untreated sewage into the canal system from NW 15 Street to the Intracoastal Waterway in the City of Pompano Beach. AECOM has also provided Construction Engineering Inspection (CEI) services to administer construction contracts and provide inspection services for numerous Florida projects. AECOM can provide complete CEI services to support projects. We can task-organize experienced road, highway, or utility system field inspectors; project administrators; and Senior Project Engineers to administer or oversee the City's construction projects.

Our CEI personnel will adhere to the regulations and proceed as expected by the City's personnel. Our primary function will be to monitor progress of the contractor's work to confirm compliance with the construction contract documents and applicable permits and regulations. We will monitor the contractor's construction progress schedule, perform on-site testing, and maintain adequate records for DBE participation, Davis-Bacon Act reporting, monthly invoice verification, and final project closeout.

AECOM can readily provide construction services to the City, with one of the largest groups of Certified Construction Managers in the industry. AECOM excels at managing the entire construction process, from pre-design through occupancy. We work to streamline the construction process, controlling costs, schedule, and scope of work without compromising quality.

In Florida, AECOM has provided services during construction for many local projects. These services range from office-based activities, including shop drawing reviews and design clarifications to full-scale construction contract administration/management with on-site resident project representative services. As an example, under our contract with Collier County, we have performed CEI services for Bay Villas, Bay Colony Shores, Barron Collier, and the US 41 (Venice Bypass). AECOM provided full CEI services on this contract, including contract administration, field inspection and testing, utility coordination, environmental compliance, and public information.

Canal and Lake Dredging

AECOM understands the desire to restore ecological habitats through restoration to enhance recreational and economical value. AECOM's primary objective is to develop a remediation plan that can be implemented cost-effectively to restore these environments. To accomplish this, we will develop strategies to provide the City with restoration design plans that can be successfully implemented at the lowest cost with the least risk to the City and stakeholders.

Our team has extensive experience working on contaminated sediment projects in tidally influenced estuarine environments with a complex mixture of organic and inorganic contaminants (e.g., polynuclear aromatic hydrocarbons [PAHs], poly-chlorinated biphenyls [PCBs], dioxin, and metals), and understands the importance of these restoration efforts. AECOM's Dredging Team, comprising engineers, geologists, scientists, planners, and construction specialists, will investigate, evaluate, and develop the most practical and cost-effective risk-based remedial strategy to complete the work with consideration for safety, overall project performance (including risk reduction and permanence), minimized cost, constructability, and regulatory acceptability and compliance.

For instance, management of potential constituent release is imperative for compliance with Florida's Surface Water Quality Standards. Our strategy includes a multidisciplinary science/engineering evaluation of a wide variety of sediment remedial technologies designed to eliminate human and ecological exposure pathways. Further, our strategy recognizes the critical importance of engaging stakeholders through effective use of public meetings and other tools. Lastly, our project team recognizes the critical need for sustainable watershed-wide sediment management solutions. A successful design must adopt and implement practices and policies that are sustainable in the long run, provide for a productive and healthy ecosystem in the long term, and enhance societal benefits for the surrounding community.

AECOM provided Design-Build services for the City of Miami Wagner Creek/Seybold Canal contaminated sediment removal project (as a subcontractor to Sevenson Environmental Services [SES]). The sediments in Wagner Creek contained elevated levels of dioxins. Dredging was needed to remove the contaminated sediments and restore this aquatic habitat and manatee refuge area. Refer to Tab 4 References for a detailed discussion of this award-winning project.

Another example of AECOM's cutting-edge technology is our work in removal of harmful algae blooms (HABs) from Florida's lakes and canals. Nutrient pollution and HABs cost the nation an estimated $1 billion each year due to their impacts on tourism, health, commerce, and ecosystems.

In September 2017, AECOM initiated conversations with SWFWMD to identify a municipal government entity in need of support and assistance in mitigating algae blooms that are present in lakes throughout the SWFWMD. The City of Lakeland subsequently indicated an interest and a willingness to participate in a pilot demonstration project by AECOM. AECOM's harvesting technology removes both algae and nutrients (e.g. nitrogen and phosphorus), returns clean clarified water back to the environment, and provides a consolidated algae biomass product that can be transformed into algae biofuel and feedstock for commercial use.

AECOM Algae Harvester


Lee County Algal Blooms Post Harvesting


Lee County Harmful Algal Blooms

The US Army Corps of Engineers was authorized in 2018 by the 115th Congress under Section 139 of the Water Resources Development Act (WRDA) to implement a 5-year HAB technology development demonstration program. AECOM's innovative Algae Harvesting Program was selected for this important research to demonstrate a viable and scalable "No Harm Solution" that can physically remove intact algae cells and the nutrients that fuel algae growth from the water column. In addition, on July 9, 2018, Florida Governor Rick Scott issued Executive Order 18-191, declaring a state of emergency due to the significant areas of HABs in multiple South Florida counties. AECOM provided HAB recovery efforts for multiple communities in Lee and Martin Counties. AECOM's HAB work has provided much needed relief to these communities, improving air quality, reducing effects to sea life, and improving quality of life for residents and tourists.

The Water Resources Development Act of 2018 authorized the Engineer Research and Development Center (ERDC) of USACE to perform research to develop scalable solutions for monitoring, preventing, and managing large harmful algal blooms. In 2019, AECOM began supporting ERDC in the first year of the three-year HABITATS research, which is being conducted at Lake Okeechobee as part of the USACE's Aquatic Nuisance Species Research Program (ANSRP). The objective of the HABITATS research project is to develop and demonstrate the scalable capability of algae and nutrient removal from large water bodies, while recovering the resulting biomass for potential beneficial .

Grant Reimbursement, FAA, and FDOT Support Compliance

AECOM will provide advisory consultation, as requested by the City, related to federal, state, and local grant/loan program funding streams and alternative project formulations that the City could pursue to address community development, hazard mitigation, resilience needs, etc.

AECOM's Grant Writing and Funding Assistance Team is headed up by Jae Park, PhD and Amy Baker. Jae and Amy have many years of experience preparing grant and loan applications for a variety of programs. Please refer to ***Tab 8, Resumes***, for details of Jae's and Amy's experience in securing funding sources for our clients. Jae and Amy will be assisted by Anthony Sullivan, of Sullivan Regulatory Consultants (SRC). Anthony is located in Tallahassee, Florida and has many years of funding assistance experience. Refer to ***Tab 6, Organizational Chart*** for details of Anthony's experience.

The AECOM team is familiar with grant reimbursement and loan support for securing funds from a variety of programs and sources, including State Trust Funds; State Revolving Fund (SRF) Loan Programs; Brownfields Cleanup and Redevelopment; CWA; CERCLA; SARA; RCRA; USDA Rural Development; EPA Various Programs; and other Federal, State and local earmarked appropriations, among others.

One of the newest federal grant funding vehicles is the FEMA Building Resilient Infrastructure and Communities (BRIC) Program. The Notice of Funding Opportunity (NOFO) for BRIC was just published on August 3, 2020. The BRIC program makes federal funds available to states, US territories, Indian tribal governments, and local communities for pre-disaster mitigation activities to reduce the risks they face from disasters and natural hazards. AECOM assisted FEMA with the development of the BRIC program, and we will be able to assist the City in completing the associated grant application documents, Benefit Cost Analysis (BCA), disclosures, etc., for this and many other state and federal loan/grant programs.

AECOM has also assisted numerous private clients, municipalities, and state agencies with Brownfields projects (i.e., projects conducted under EPA or state agency Brownfields programs). Our experience includes developing Geographic Information System (GIS) databases of Brownfields sites; ASTM Phase I ESAs; ASTM Phase II ESAs; complete site investigations, risk assessments, remediation, grant applications, redevelopment; and other activities (e.g., wetlands delineation and emergency response activities).

State Revolving Funds Support and Davis-Bacon Wage Reporting Requirements

As noted above, AECOM's Grant Writing and Funding Assistance Team is well versed and experienced in assisting our clients with technical support to prepare applicable documents associated with State Revolving Fund (SRF) projects. These include projects that are eligible for the Clean Water SRF and the Drinking Water SRF. The Clean Water State Revolving Fund (CWSRF) Program funds infrastructure that protects public health, improves water quality, or promotes alternative water supply projects. The Drinking Water State Revolving Fund (DWSRF) Program funds infrastructure projects that are intended to facilitate compliance with the requirements in the Safe Drinking Water Act. Our team has assisted clients with obtaining SRF loans from EPA programs such as the Water Infrastructure Finance and Innovation Act (WIFIA) program, as well as the State Infrastructure Financing Authority program (SWIFIA). We have also provided services to help obtain HUD Community Development Block Grant (CDBG) grants for property acquisition, rehabilitation, construction, and resiliency.

The Davis-Bacon Act requires that each contract over $2,000 to which the United States or the District of Columbia is a party for the construction, alteration, or repair of public buildings or public works contain a clause setting forth the minimum wages to be paid to various classes of laborers and mechanics employed under the contract. On AECOM Davis-Bacon federal projects, AECOM and our subcontractors are required to pay these employees no less than the local prevailing wage rates (including fringe benefits), as determined by the Department of Labor, according to their type of work being performed on-site. Subcontractors submit their weekly Certified Payroll for their employees working on the project as part of their recordkeeping. Supporting documentation is submitted as part of the monthly invoice to the client. AECOM abides by the Davis-Bacon wage reporting requirements and makes sure that wage determinations are in accordance with the provisions set forth in 29 CFR Part 1, Part 3, and Part 5. AECOM has also contracted with municipalities to review bid documents and required forms to confirm that contractors are in compliance.

Support Services for Remediation

AECOM provides our clients with comprehensive remediation services. This has included providing both in-situ and ex-situ remedial support services for soil and groundwater projects. Our remedial efforts consistently meet the established schedule requirements so that projects are not delayed. Our treatment technologies include air sparging (AS), soil vapor extraction (SVE), solidification/stabilization, chemical oxidation, ion exchange, recirculating well technology, carbon treatment, bioremediation/bioaugmentation, bioventing, thermal treatment, and others.

Installation of liner and clean fill over contaminated soil and buried solid waste at Northwood Rail Connector

In the case of contaminated soil and/or groundwater, soil reuse, as well as engineering and institutional controls, are used wherever possible. These methods have enabled us to more rapidly achieve conditional site closures.

AECOM is fully capable of rapidly deploying the equipment needed to gain plume control and immediately initiate remediation, reducing the impacts of contamination to City schedules. We have previously utilized portable treatment systems on several projects for the Florida Department of Transportation.

AECOM will also use team member, EESI, who has deployed portable remedial systems and heavy equipment on a fast track basis. Clean Harbors and SWS/US Ecology will provide personnel, response vehicles, vacuum trucks, heavy equipment, sorbents, and disposal services to assist discharges associated with emergency response cleanup activities.

AECOM, in partnership with the Air Force Civil Engineer Center (AFCEC), developed the SRT (Sustainable Remediation Tool). SRT provides a systematic iterative approach to evaluate the efficiency of remedial programs, including sustainability metrics in cases of unavoidable contamination. The SRT can be used to determine how best to meet City time constraints.

We have used enhanced reductive dechlorination processes, as well as biostimulation and bioaugmentation processes, bioremediation, chemical oxidation, recirculating well technology, and many other innovative technologies to complete site remediation. We often use a combination of technologies at sites to expedite cleanup and reduce costs.

Due to the widespread use of arsenical compounds, projects can often be faced with arsenic contamination issues. Contaminated soils are typically excavated and properly disposed of; however, remediation of arsenic in groundwater is less common. AECOM implemented an innovative remediation system to treat arsenic-contaminated groundwater at a proposed storm water pond site on SR 7 in Hollywood, Florida. The use of polymers is the traditional arsenic treatment method. The polymers flocculate out all forms of arsenic into particles that then settle out in an equalization tank or can be captured in large


SR 7 Arsenic Remediation and Post Remediation Monitoring

sand filters. This method is quite costly and requires a large operational footprint. Instead, groundwater at the SR 7 project was extracted from the existing open pond excavation and pumped to an 18,000-gallon open-top weir tank. The water was subsequently pumped through four bag filters and two 5,000-pound activated alumina (Al_2O_3) media filters. The treated water was then discharged to a floating screen within the excavation. This method proved to be less costly and easier to implement, given the lack of available space on the parcel.

Remediation must prevent the exacerbation of contamination and the exposure of construction workers to contamination. Emphasis is placed on the use of portable remediation systems (e.g., air sparge/VES trailers, portable strippers/carbon units) that can be put into place quickly, have minimal effect on the local community, and not jeopardize the project schedule. Where drainage features are to be constructed in contaminated areas or dewatering is to be performed, sheet piling or counter-pumping may also be utilized to prevent migration of contaminated groundwater. If needed, AECOM provides a dewatering effluent treatment system to remediate the groundwater before its eventual outfall.

SR 80 Dewatering Contaminated Effluent Treatment System

AECOM currently provides remediation services to the State of Florida under the following programs:

- FDEP Petroleum Restoration Program
- FDEP HazWaste Program
- FDEP State-Owned Lands Program
- FDEP Site Investigation Section Program

In addition, AECOM has provided environmental remediation services for numerous cities in South Florida, including the City of Pompano Beach, City of Miami, City of Miami Beach, City of Coral Gables, City of Hialeah, City of Hollywood, and Cooper City, among others.

Below are two examples where AECOM employed innovative technology to assist with the assessment and remediation of two dry cleaner facilities.

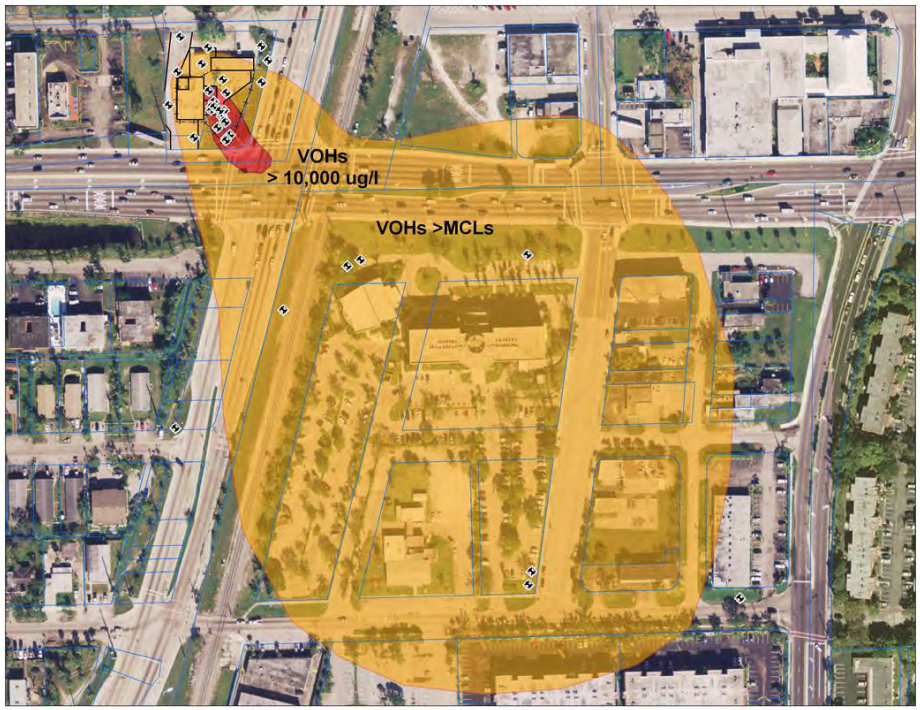
Dry Cleaning Depot Facilities, Pompano Beach and Fort Lauderdale, Broward County, FL: Traditional assessment data (monitoring well and direct push groundwater sampling) at two Dry Cleaning Depot facilities (Pompano Beach and Fort Lauderdale) documented the presence of drainable dense non-aqueous phase liquid (DNAPL). To accurately and efficiently define the extent of DNAPL (drainable and sorbed), a membrane interface probe (MIP) survey was conducted at both of the sites and included borings within each of the buildings. The MIP, a screening tool with semi-quantitative capabilities, is used to identify the presence and distribution of DNAPL and high concentrations of dissolved-phase contaminants. The probe is equipped with a photo-ionization detector (PID) to detect aromatic hydrocarbons, a flame ionization detector (FID) to detect straight chained hydrocarbons, and an electron capture detector (ECD) to detect chlorinated solvents. Results of the surveys were used to accurately depict the distribution of DNAPL at the sites and were used for focused source removal excavation at the Fort Lauderdale site and redesign of the groundwater bio-remediation system at the Pompano Beach site. In both cases, the utilization of MIP technology resulted in the savings of hundreds of thousands of dollars in comprehensive remediation costs.

Hanners Cleaners, Pompano Beach, Broward County, FL. AECOM conducted site assessment and remediation at Hanners Cleaners. The former Hanners Cleaners is an abandoned dry cleaner facility located on the northwest corner of the intersection of Atlantic Boulevard and Dixie Highway in Pompano Beach. Hanners operated from the early 1960s to 1989. As a former Superfund site, Hanners entered the Florida Department of Environmental Protection's Dry Cleaning Solvent Remediation Program in 1996 and was given high priority due to its location within a wellfield protection area.

AECOM conducted a site assessment and delineated the extent of chlorinated solvent impacts to on-site soils and to on-site and off-site groundwater. The soil plume measured approximately 0.2 acres and provided a continuous source of contamination to the groundwater. The groundwater plume measured approximately 32 acres and extended off-site to the southeast, impacting public ROW, public facilities, and private residences. The maximum detected tetrachloroethene (PCE) concentration in groundwater was 42,000 µg/l while the maximum detected concentration of total volatile organic halocarbons (VOHs) in groundwater was 225,589 µg/l. A risk based corrective action (RBCA) evaluation indicated the presence of completed exposure pathways for direct exposure of contamination from soil, leaching of contamination from soil to groundwater, groundwater transport of contamination to sensitive receptors, and volatilization of contamination from groundwater and soil to the atmosphere or indoor air.

Former Hanner's Cleaners Chemical Oxidation Injections Dynamic remedial design (preliminary, intermediate, and final) plans, based on cost and remedial efficiency, were employed to guide the sequential implementation of remedial efforts. The first steps included implementation of soil excavation and contaminant vapor extraction to remediate soils located above the water table (vadose zone). Vadose zone remediation was deemed complete following approximately one year of operation of the vapor extraction system and confirmation by soil sample analyses. Then source area groundwater remediation using chemical oxidation was implemented. Custom-designed (by AECOM) segmented injection wells and a custom- designed injection system were installed to address the critical mass of contaminants within the source area. Three full-scale injection events were performed over a period of approximately two years. Chemical oxidation was able to reduce total VOH concentrations by 98 percent and shrink the plume size from 32 acres down to less than ½ acre. An evaluation was performed after each injection event to determine its remedial and cost effectiveness. It was determined that additional chemical oxidation treatments would not be economically feasible.

Subsequent cost evaluations of remedial technologies indicated that excavation of residual contamination would significantly reduce the saturated source area, resulting in the greatest mass removal per unit cost. In addition, results of microbiological analyses indicated the resurgence of a viable population of de-halo respiring bacteria. Evaluation of bacteria population density and distribution indicated that enhanced bioremediation as a follow-up to saturated zone excavation would provide the most cost-effective alternative for remaining active groundwater remediation.



Former Hanner's Cleaners Solvent Groundwater Plume

Former Hanner's Cleaners Chemical Oxidation Injections

Sheet piling was used to reduce the volume of excavated soils and protect the existing network of monitoring wells and aboveground structures. Prior to initiation of activities, monitoring wells located within the sheet pile area were properly abandoned in accordance with state standards. Excavated soils were contained within dewatering boxes prior to transportation and off-site disposal. While the excavation was open, it was sparged for 48 hours to remove dissolved VOHs from the exposed groundwater. Subsequent to sparging, AECOM added potassium thiosulfate to quickly reduce the dissolved oxygen concentrations to levels that are supportive of reductive dechlorination. Ethyl-lactate (bioremediation enhancement) was then added to the exposed water table, and the excavation was backfilled. Concurrently, ethyl-lactate was injected into selected downgradient injection wells. The first round of post excavation/enhanced bioremediation sampling indicated the combined effects of remedial efforts were effective in reducing dissolved VOH concentrations, such that those analyses indicated attainment of state active remediation standards. Currently, PCE is no longer detected on-site, the plume of contamination is confined to the parcels located on the northwest corner of the intersection of Atlantic Boulevard and Dixie Highway, and the maximum concentration of total VOHs is 24.6 ug/l, which represents a greater than 99.999% reduction in contaminant concentrations.

Demolition Services

AECOM has almost 60 years of proven experience in providing environmental and demolition services for construction projects in Florida. We have successfully completed thousands of these projects, including more than 250 demolition projects for FDOT District 4 in southeast Florida.

Our Florida construction services group consists of individuals with significant experience as construction managers, supervisors, equipment operators, and skilled technicians. Several group members hold licenses and certifications, such as: general contractor, building contractor, mechanical contractor, and pollutant storage system specialty contractor.

As part of our demolition services, AECOM routinely conducts asbestos, metal-based paint (MBP), and mold surveys/abatement within buildings and on bridges, as well as surveys of building materials and contents to identify potential demolition waste disposal problems, such as transformers, light ballasts, and drummed waste. We have performed demolition/abatement services for clients such as the City of Pompano Beach, City of Miami, City of Orlando, and FDOT.

Our abatement services have included total building encapsulation and abatement, as well as wet demolitions. Our abatement services are provided in accordance with the asbestos survey, management respiratory protection plan, and the asbestos standard operating procedures. Our asbestos projects are supervised by certified asbestos inspectors and managers.

Las Olas Bridge Renovation ACM Abatement

SR 7 Building Shop Demolition

In addition to the above services, AECOM and its team members have experience in site preparation; roadway planning; construction progress reviews; clearing and grubbing; storage tank installation and removal; pressure testing of storage tanks; removal of hydraulic lifts; septic tank removals; replacement and installation of asphalt or concrete pavement; removal and relocation of underground utilities (storm drainage systems, water mains, sewer mains, etc.); construction dewatering; and sheet piling. These services have been provided at contaminated or potentially contaminated sites.

AECOM has removed hundreds of aboveground and underground storage tanks (ASTs and USTs) over many years in South Florida, including tank removals at known UST sites, as well as unforeseen removals of tanks that were identified and immediately removed during construction/demolition activities.

We have assisted with services that involved construction activities within areas of known contamination, including review of suitable materials for use in contaminated media, consultation on asbestos piping issues, constructability reviews for sites impacted by Superfund Consent Decrees, building cut and reface projects, sign footer removals, and excavation of contaminated soil and dewatering to facilitate construction and utility installations.

Removal of UST from Former Transmission Shop

AECOM has also responded to numerous emergency response situations relating to the discovery of USTs, buried drums, spills, as well as contaminated soil and groundwater identified during the construction/demolition phase of projects. AECOM's experience with numerous major oil and municipal clients has provided us the ability to work quickly and effectively to address emergency situations.

AECOM also prepares demolition bid documents and provides oversight of demolition activities. Our services include inspection of above ground structures, equipment, and debris to document and provide detail for appropriate disposition of waste materials following demolition.

Field Sampling Statement

AECOM has adopted the State of Florida Department of Environmental Protection (FDEP) Standard Operating Procedures for Field Activities (DEP-SOP-001/01) for field sampling. The official Florida SOPs became effective December 3, 2008, and are cited in the FDEP Quality Assurance Rule, 62-160 FAC. They contain appropriate guidance for the equipment, procedures, documentation, and quality control of environmental assessment work as needed for services we propose to provide to the City of Pompano Beach. AECOM staff is trained to conduct field work in accordance with the FDEP SOPs and copies are routinely carried to the field for reference. If needed, AECOM has the experience to provide the City with site-specific field sampling plans should it be determined and agreed that the FDEP SOPs do not adequately address a given task.

Field and Laboratory Data Validation

Data validation provides procedures, methods, and activities to determine whether data are of the right type, quality, and quantity to support environmental decision-making for the project. AECOM's data validation is conducted to determine how well the data collected on a given project supports the project objectives and decisions to be made. First, during the field effort, an AECOM project manager will verify that proper procedures (as outlined in the proposal and FDEP SOPs) are followed, and soil, groundwater, sediment, and/or surface water data are being generated on an acceptable level. The analytical data will be sent to AECOM for data verification and validation. AECOM will determine the usability of the analytical data and will identify limitations on the use of the data. The usability of data collected during a project will be assessed and any deviations from proposed field activities and sampling and handling procedures will be reviewed, and their effect on

data usability evaluated. Second, the analytical results of the sampling will be compared to laboratory method detection limits (MDLs) and applicable regulatory cleanup levels, and based on the results of this examination, conclusions regarding the validity and usability of data for each analytical group will be drawn.

Preliminary Reports / Alternative Recommendations (Research, Modeling, Testing and Data Analysis

AECOM has extensive experience preparing preliminary reports and offering alternative recommendations. Preliminary reports with alternative recommendations are usually prepared after performing specialized-type assessment activities at a site, such as risk assessments, feasibility studies, and others.

Risk Assessment

AECOM has performed numerous risk assessments either as stand-alone investigations or as part of a variety of different environmental investigations. Risk assessments are generally offered in two service areas: human health evaluations and environmental evaluations. We evaluate the possible risks presented at a site and design and implement the most feasible approach to risk assessment. This work includes the performance of a baseline risk assessment, refinement of the preliminary remediation goals, a detailed risk evaluation of the remedial alternatives, and an evaluation of relevant laws, regulations, and guidance documents.

AECOM has the capability and the flexibility to adapt our risk assessment approaches to meet client-specific needs and evolving federal and state regulatory requirements. The general objective of a risk assessment is to determine the probability, magnitude, and significance of risks that may be posed to human health and ecological components by environmental contamination. The results may be used to develop acceptable contaminant levels and remediation goals for the source medium. Therefore, the risk assessment is an integral part of the overall site investigation and remedial design process as it is essential in evaluating the need for remediation and in selecting the most appropriate remedial action(s).

Evaluation of these factors requires a multi-disciplinary analysis of physicochemical, toxicological, geological, topographical, demographic, ecological, and other characteristics of a site. Accordingly, technical personnel performing risk assessments must use a diversity of scientific knowledge. AECOM staff have more than 20 years of experience preparing human health and environmental risk assessments for our clients using the latest risk assessment guidance and evaluation methods. Our staff is skilled at applying risk-based and conditional closure (i.e. No Further Action with Conditions) techniques provided in Chapters 62-780.650 and 62-780.680, FAC. Most importantly, we have developed the expertise needed to obtain regulatory approval of our risk assessments and conditional closures without protracted negotiation. We have a solid record of negotiating less stringent cleanup standards, based on the level of our risk assessment documentation, while not compromising human or environmental receptors. An example project is provided below.

Gove Elementary Modernization – Human Health Risk Assessment, Belle Glade, Palm Beach County, FL. AECOM completed a Human Health Risk Assessment (HHRA) for the Gove Elementary School Modernization Project. Initially, AECOM collected soil and groundwater samples from the existing Gove Elementary School and the adjacent farmland and analyzed the soil samples for arsenic and the organochlorine pesticide dieldrin. Using the soil and groundwater data, AECOM formulated a site-specific HHRA for the children, teachers, maintenance workers, and visitors to the school. AECOM recommended relocating soils to adjacent farms, which was negotiated with FDEP.

Feasibility Studies

AECOM has nationwide experience conducting feasibility studies in coordination with our remedial investigations. Feasibility studies have included evaluation of potential remedies and the selection of site cleanup alternatives. Close communication with the client and regulatory agencies during evaluation of remedial strategies has led to timely and efficient completion of tasks with the goal of advancing the project forward towards site cleanup.

Remedial Alternatives Evaluation

The results of the site assessment are used to select and evaluate remedial alternatives for site rehabilitation that are consistent with the proposed redevelopment plans. AECOM is fully capable of conducting the research, modeling, or testing needed to properly evaluate field data and provide alternative recommendations. As noted above in our *Support Services for Remediation* discussion, AECOM's Sustainable Remediation Tool can also assist in evaluating various remedial alternatives.

AECOM's experience with brownfields redevelopment, risk assessments, and risk-based corrective action (RBCA), results in proposed remedial alternatives tailored to address site-specific risks while minimizing re-development costs. This can be achieved through the following approaches:

- Defining alternative cleanup levels based on a site-specific risk assessment, while considering the proposed future use.
- Incorporating engineering controls and/or institutional controls in remedial alternatives to reduce exposure while reducing cleanup costs.
- Evaluating the viability of monitored natural attenuation through data analysis, risk assessment, and modeling.
- Utilizing focused remedial alternatives, such as targeted source removal combined with natural attenuation.

Remedial Design

Effective engineering is an essential element in designing the most cost-effective and efficient solutions to site contamination problems. This service can be integrated into our full-service turnkey capabilities or be performed as an individual task. AECOM streamlines the remedial design phase by using standard designs. Items that can be standardized include recovery/injection well, soil vapor extraction systems (SVES), skid-mounted and trailer-mounted portable remediation equipment, and control instrumentation. In cases of extensive or mixed contaminant plumes, it may be necessary to conduct feasibility tests or models to predict remedial effectiveness. Historic chlorinated solvent studies have included bench scale analyses/comparison of innovative bioremediation technologies to cost effectively justify appropriate amendments or augmentations, while site-specific pilot tests have been used to design innovative chemical oxidation strategies. Based upon the successful implementation of these technologies in Pompano Beach and Broward County, AECOM has a sufficient set of data to design and implement these and other innovative technologies in a cost-effective manner. AECOM's final design packages include, but are not limited to, cost estimates, schedules, O&M manuals, HASPs, QA/QC requirements, and construction plans and drawings. To provide accuracy and complete client satisfaction, AECOM employs professional engineers, including civil, electrical, mechanical, and structural, to certify the required drawings and documents.

AECOM designs, fabricates, and operates a variety of mobile soil and groundwater treatment systems

Permitting (federal, state, county, and city)

Environmental permitting and compliance are integral parts of AECOM's consulting practice. Successful project permitting and compliance requires an understanding of the intricacies of environmental regulations, the complexities of the resources affected by development, and solid working relationships with regulators. Drawing on our full range of technical specialists, resource scientists, environmental engineers, planners, and regulatory specialists, AECOM's environmental practice helps clients streamline the approval process and comply with environmental laws. AECOM's professional staff is noted for its permitting and compliance expertise and will negotiate with regulatory agencies to resolve environmental issues, develop favorable permit conditions, and complete the permitting process in a timely manner. Our staff has extensive experience in permitting projects specifically in Florida and specializes in preparing federal and state permits that comply with the requirements of the Clean Water Act, Endangered Species Act, Clean Air Act, Coastal Zone Management Act, National Environmental Policy Act (NEPA), National Historic Preservation Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, and numerous other federal, state, and local regulations.

AECOM routinely prepares stormwater, wastewater, dewatering, coastal, wetlands, water body, and environmental resource permit applications in accordance with Florida Department of Environment Protection, US Army Corps of Engineers, US Environmental Protection Agency, Water Management Districts, and local, County, and municipal agency regulations. We assist our clients by applying our regulatory experience and knowledge on the front end of projects and implementing permitting strategies and schedules and developing mitigation plans, when needed, to expedite the permit acquisition a*nd compliance process.* AECOM has an excellent reputation for developing efficient and innovative solutions to complex regulatory problems. As noted in Tab 6 Organizational Chart, AECOM has chosen Karen Brandon to head up our permitting team and for this contract with the City of Pompano Beach. Refer to Tab 8 Resumes for details of Karen's permitting experience.

AECOM completed permitting for the G.W. Ivey Power Plant in Homestead, Florida, which was submitted to and approved by the FDEP Division of Air Resource Management. Homestead Energy Services (HES) operates G. W. Ivey Power Plant and serves as a control area within the state of Florida to have electricity generation available to respond to disturbances to the electric grid in Florida. The facility operates 10 stationary dual fuel-fired generator engines, which are subjected to the requirements of National Emissions Standards for Hazardous Air Pollutants (NESHAP) as included in 40 CFR 63, Subpart ZZZZ for reciprocating internal combustion engines (RICE). HES retrofitted and equipped the engines with an oxidation catalyst, continuous monitoring systems, and a crankcase ventilation system to reduce carbon monoxide (CO) emissions to meet the requirements of RICE NESHAP in 2013.

A Title V Air Operation Permit Renewal application was due to the FDEP in October 2018. AECOM reviewed facility operation data inclusive of hours of operation, fuel usage, changes since earlier renewal in 2013, and proposed changes. AECOM held a pre-application conference call with FDEP explaining the application strategy. Based on engine capacities and facility operational requirements, the facility's annual potential to emit (PTE) for primary criteria air pollutants was estimated and federal and Florida state rule applicability was determined. Subsequently, AECOM submitted a Title V Air Operation Permit application along with supporting documents using FDEP's Electronic Permit Submittal and Processing System (EPSAP) in October 2018.

On an annual basis, AECOM submits an Annual Operating Report (AOR) to the FDEP. FDEP issued a renewed Title V Air Operation Permit on December 12, 2018. An AOR is submitted by April 1 every year. FDEP issued an AOR acceptance letter.

Project Management Services, including Turbidity Monitoring

AECOM's approach to project management facilitates maximum control, efficiency, and cost effectiveness; minimizes risk and liability; and provides convenient facility locations to address the required services. The proposed project organization for this contract has been designed to provide the City with technical expertise, responsive resources, and accessible communication channels. These three elements have been the hallmarks of our success in performing quick response assessment, design, and remedial services. AECOM has provided project/program management services on numerous projects in Florida and across the United States.

As an environmental safeguard, AECOM has used turbidity curtains and oil booms in canals during dredging, assessment of soil and groundwater in the equipment and sediment staging areas before and after implementation, and canal ecosystem evaluations after completion of dredging. We also conduct

turbidity monitoring to ensure that dewatering effluent meets the standard of 1 NTU or lower to comply with NPDES requirements for effluent discharged into a surface water body.

AECOM conducted turbidity monitoring at SR 80 and I-95 in Palm Beach County for groundwater that was being discharged to a nearby canal. The site was formerly a dry detention pond that was being converted to a lined wet retention pond. During construction and dewatering, the roadway contractor detected fecal odors and visually contaminated soil in the pond area; therefore, work was stopped until the site could be evaluated by AECOM.

AECOM took initial soil samples from the pond perimeter and water samples from the pond and the dewatering discharge point, and tested them for volatiles, semi-volatiles, and fecal coliform. Analytical results indicated that fecal coliform was detected in the surface water within the pond. Following several weeks of aeration, surface water within the pond was resampled for fecal coliform and found to be below regulatory cleanup criteria.

During assessment drilling, a plume of petroleum-contaminated soil and groundwater was defined within the northwest corner of the pond. AECOM commenced soil excavation, removing 80 tons of petroleum-contaminated soil and 3,000 gallons of contaminated groundwater, which were disposed of by a licensed waste hauler.

AECOM coordinated with the FDEP and the SFWMD to obtain permits to allow discharge of the dewatering effluent into a nearby SFWMD canal. Due to the presence of petroleum contamination, AECOM installed a treatment system, capable of handling the required 2,000 gpm flow rate for dewatering, prior to discharge to the canal.

A dewatering system consisting of 60 well points was designed, installed, and piped to the treatment system. In addition, AECOM employed innovative horizontal well trenching technology to create three 100-foot-long trench drains below the pond to increase drawdown.

AECOM oversaw excavation of the pond floor to facilitate installation of the PVC liner, which prevents contaminants in stormwater from entering the subsurface and creates a hydraulic barrier between the pond and the local neighbors' septic systems. Prior to discharge, AECOM installed a turbidity curtain in the canal and conducted turbidity monitoring twice per day to comply with the NPDES requirements issued by SFWMD.

Recommendations and Cost Estimates

AECOM provides a standard scope of services to its clients including recommendations and estimates for engineering and environmental projects. AECOM has provided recommendations and estimates for multiple projects with the City of Pompano Beach under our former City contracts, including remedial alternatives for the Municipal Golf Course and source removal for the proposed replacement library site. Our contracts in place with agencies such as FDEP, FDOT, DERM, and SFWMD require AECOM to provide recommendations for compliance with county codes, Florida Administrative Code, and Federal Code of Regulations, as well as providing rough order of magnitude (ROM) estimates early in the assessment and design phases, along with more detailed estimates during the implementation phases. AECOM's management of cost control on projects has been highly effective with the City of Pompano Beach and with other clients for multi-site and multi-task order contracts. To assist in meeting project requirements and to control costs, a well-defined, negotiated work plan proposal accompanied by effective communication before, during, and after its preparation will be key to satisfying the City's expectations. AECOM will communicate with the City to define the required scope of work and prepare a site-specific/task-specific dynamic work plan proposal. The purpose of the dynamic work plan proposal is to define the scope of work to be performed, the fee, and the period of performance, while still being flexible enough to accommodate changes of scope in the field on a real-time basis. The work plan proposal will clearly define the project tasks and a list of project deliverables to meet the City's expectations. Deliverable objectives will be clearly defined and include milestones, status reports, drawings and specifications, and meetings needed with the City and/or regulators.

During the development of the task fee proposal, an internal review is conducted by the Project Manager and Principal-in-Charge to ensure that the needs of the City have been met in the most cost-effective manner possible. After approval of the cost estimate by the City, and submittal of the Notice to Proceed, budgets are entered into AECOM's Oracle financial system (AECOM Project Information Center – APIC), which enables the Project Manager to monitor financial activities on each project.

The APIC system is specifically formatted for tracking multi-site/multi-task assignment contracts and can accommodate Time and Materials Max structures, as utilized by the City, but can also accommodate fixed price. The specific advantages and benefits of our system include coordinated planning, estimating, and scheduling; real-time cost allocation and tracking; automated cost reporting and invoice development; and the capability to incorporate field

changes and work plan modifications. The electronic data contained in the database provides a baseline cost vs. the time expenditure schedule curve, which is compared against the actual cost vs. time expenditure schedule curve. Comparison of these two curves provides a mechanism for quickly and easily identifying whether a project is over or under budget and ahead or behind schedule. Project Status Reports (PSRs) by tasks and by project are provided to the project managers electronically on a weekly basis. These reports provide the project managers with updated budget, cumulative cost to the project, detail of charges applied to the project, detail of unencumbered commitments, and status of billings and accounts receivable. Other reports provided are weekly labor and non-labor status reports that outline charges for each specific project task. Weekly evaluation of the tasks and project budgets significantly reduces the possibility of project budget overruns and scope of service changes. These early detection mechanisms also allow AECOM to deal with issues before they become (potentially costly) full-scale problems.

Closeout Services

In combination with program management services, AECOM will provide closeout services on behalf of the City. Inclusive with these services are certificates of completion, as-built drawings, and completed punch lists. Similarly, environmental construction/remediation services that might be provided to the City would be subject to the same set of requirements. Some of the services included in a closeout process are described below:

Substantial Completion/Final Acceptance

When the Contractor has submitted a request for substantial completion, key members of AECOM's team will conduct a final inspection of the work with project representatives from the City of Pompano Beach and the Contractor and provide written recommendations in the form of a punch list for acceptance of the work. AECOM will prepare and distribute the punch list. Final acceptance i9s given once each project representative initials by the punch list item, thereby confirming that the item has been completed.

Record Drawings and Certification Submittals

AECOM will prepare and submit required record drawings to the City and County showing changes made during construction. The contractor will provide to AECOM marked-up (red-lines), as required in the contract specifications, depicting significant deviations and changes in the Contract Drawings. AECOM will provide the appropriate documentation for completion certification to the permitting agency. Required testing conducted by the contractor will be documented and results will be provided to AECOM.

Reports for Regulatory Compliance Monitoring and Assessments

In addition to the reporting requirements for site assessments, remediation, air monitoring, asbestos surveys, etc., AECOM is also experienced in preparing various compliance monitoring reports. AECOM scientists regularly review existing ordinances and guidelines during environmental assessments, planning, and permitting. AECOM staff collaborates with environmental and planning staff to modify or amend these ordinances, guidelines, methods, Land Development Codes, and Comprehensive Plan Elements to implement more efficient and sustainable projects. AECOM routinely prepares operation and maintenance reports for sites that are under active remediation, as well as natural attenuation and post-remediation monitoring reports for sites that are either undergoing "monitoring only" or have previously undergone active remediation, respectively.

NPDES Compliance Storm Water Sampling

The EPA has typically required that NPDES permitted facilities, such as publicly owned treatment works (POWs) and industrial dischargers, submit a Discharge Monitoring Report (DMR) at least once a year. In support of these regulations, AECOM has provided both storm water discharge monitoring and industrial and process water discharge monitoring services to its clients. The most significant general permit condition is the requirement that facilities prepare a Storm Water Pollution Prevention Plan (SWPPP). The first step in preparing an SWPPP is to identify potential sources of storm water contamination. The plan then identifies Best Management Practices (BMPs) which the facility will use to avoid such contamination.

Properties identified to be impacted by contaminants at concentrations exceeding regulated soil and groundwater standards are subject to assessment pursuant to applicable Florida Administrative Code.

As an FDEP contractor and consultant for several programs (Statewide Petroleum, Dry Cleaner/Hazardous Waste, State Owned Lands, Site Investigation Section, and CERCLA/Brownfields) regulated by the referenced codes, AECOM has developed a unique set of innovative assessment techniques that provide a time and cost advantage to our clients. AECOM prepares site assessment and interim reports that summarize the activities conducted during the site assessment or interim activities, including the findings of the investigation. At a minimum (or as applicable), AECOM reports include site history and background information, local/regional geology/hydrogeology, a summary of analytical results, description and rationale of field methodologies, a summary of the nature and extent of contamination (including source and potential source areas), any documented or potential public health and environmental impacts, and recommendations for further action. Depending on the magnitude of, or sensitivity of, contamination, the report either includes or recommends a feasibility study/remedial alternatives evaluation. Should the investigation include the analyses of large volumes of data (e.g. historic DOH potable well data), AECOM will obtain the data in raw format, import it into MS Access, and perform detailed queries to identify contaminant trends. These queries are simultaneously imported into GIS for graphic depiction in a clear and concise manner.

To AECOM, reporting refers not only to final signed and sealed documents, but also to documents necessary to convey progress during project tasks. The goal of AECOM reports is to provide a document that meets the highest quality standard possible, both in content and presentation. We have devised a real time system of reporting field data in easily transferred formats. We submit figures in Adobe portable document format (pdf), text in MS Word format, and tabular data in MS Excel format, to facilitate electronic transfer and ease of viewing by the recipient. When preparing work plans, site investigation reports, remedial evaluations, remedial designs, and monitoring reports, we streamline our effort by using standard FDEP and AECOM derived formats and checklists. As another method of streamlining reports, AECOM has developed extensive database and GIS capabilities. Data are imported directly from DOH databases or from the subcontracted laboratories ADaPT electronic data deliverable. We use the database and GIS query utilities to perform quality control checks and quickly project selected data onto our maps. GIS is also used to overlay different datasets to identify trends or conflicts.

Data provided in our tables, figures, and reports in most cases are derived directly from the database to avoid mistakes inherent in transposing from one medium to another. The use of these resources and good communication enables AECOM to avoid significant rework. As required by Chapters 471 and 492 Florida Statutes, applicable portions of required documents, which are submitted to each regulatory agency for public record, are signed and sealed by the appropriate AECOM professional(s) who prepared them. Reports and data submitted to each regulatory agency are typically delivered in physical printed form, on compact disks, and in Adobe portable document format. Reports, tables, figures, etc., will be uploaded into the City's e-Builder Enterprise web-based management tool.

Endangered and Threatened Species

AECOM employs many biologists, ecologists, botanists, and other specialists who are qualified by the US Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), and other regulatory agencies to conduct surveys for various federally and state-listed species. Our qualified protected species surveyors are experienced in coordination with the federal, state, and local agencies and have fluent

knowledge of the survey standards necessary to meet permitting requirements. AECOM employs a wide range of biological experts throughout Florida who also assist in threatened and endangered species surveys and permitting.

The AECOM Team consists of qualified ecologists who are authorized by FWC as authorized gopher tortoise agents and we regularly permit and carry out gopher tortoise relocations. In addition, AECOM has experience in creating habitat management plans for a variety of listed species, including the bald eagle (*Haliaeetus leucocephalus*), Florida sandhill crane (*Grus canadensis pratensis*), gopher tortoise (*Gopherus polyphemus*), burrowing owl (*Athene cunicularia*), Audubon's crested caracara (*Caracara cheriway*), wood stork (*Mycteria americana*), and other listed species. We collaborate with the client to determine the most feasible method of permitting impacts to habitat occupied by protected species.

AECOM's approach to endangered species compliance is to identify potential affected state or federally protected species early in project planning and determine any permitting requirements specific to the identified species. AECOM biologists work with the project team to identify where species impacts can be avoided and propose project modifications to minimize or eliminate survey and permitting restrictions.

- **Data Collection.** Gathering and compiling required data in accordance with selected protocols, during the approved survey period. When required, AECOM biologists will conduct habitat evaluations and species-specific surveys within the designated survey areas and applicable survey seasons.
- **Qualified Species Specialists.** Our wildlife biologists, ecologists, fisheries specialists, and botanists include senior staff qualified with in depth knowledge and experience to conduct surveys for federally and state-listed species. To support a streamlined environmental approval process, our experienced biologists design and conduct surveys in accordance with USFWS and FWC-approved methods and protocols.
- **Agency Coordination and Clearances.** "Early and often" communications with the regulatory agencies is key. Our team continually refreshes their regulatory requirement knowledge to provide the City with a streamlined approach that implements best management practices, thorough management plans, and permitting assistance that meets applicable regulatory requirements.
- **Avoidance and Minimization Strategies.** Biologists will work with the design team to determine if avoidance and/or minimization measures or best management practices (BMPs) can be employed to reduce or eliminate potential impacts.
- **Quality Assurance.** The data collected and the documents developed are reviewed and verified by senior technical experts.

The Endangered Species Act of 1973 (ESA) is designed to protect and recover imperiled species and the ecosystems upon which they depend. The federal law directs federal agencies to work to conserve endangered and threatened species. It is administered by the US Fish and Wildlife Service (USFWS), and NOAA's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales.

Section 7 of the ESA, Interagency Cooperation, requires federal agencies to consult with the USFWS and NMFS, as appropriate, to ensure the actions they take, including those they authorize, fund, or carry out, do not jeopardize the continued existence of any listed species nor result in an adverse modification to any federally designated critical habitat.

The lead federal agency (typically USACE for the City's projects) will consult with the USFWS and NOAA fisheries to determine what information is needed in order to determine whether a federally listed or candidate species may be affected by the City's proposed project. During Interagency consultation, the USFWS (or NMFS) typically considers the species status, historical and current distribution, biological background, endangerment factors, potential presence in the project region, and associated impact evaluation. The process is concluded when the USFWS (or NMFS) issues a project-specific "biological opinion" or concurrence letter addressing the proposed action.

AECOM routinely assists federal agencies with Section 7 consultation for both upland/terrestrial and coastal/nearshore projects. We have the in-house expertise to conduct supporting surveys or studies that will be required. In addition, AECOM personnel have an extensive history of consultation with the USFWS and NOAA, as well as FWC.

Upland/Terrestrial

AECOM understands the process of preserving Florida's and the City's natural resources, including native ecosystems and protected species, and has the experience to balance project development and schedule with meeting requirements regarding protected species and other sensitive resources. AECOM ecologists have proven experience coordinating with federal, state, and local environmental regulatory agencies to permit the protection, relocation, impacts, and mitigation of protected species as a result of development activities.

Coastal/Nearshore

AECOM has been involved in listed offshore species evaluations and protection. Some of AECOM's previous work includes:

- Development of marine species protection plans and marine species spotter plans (e.g., manatees, sea turtles, sawfish, sturgeon)
- Management of surveys for protected seagrass and coral species
- Development of extensive offshore mitigation (including relocation) plans for hard-bottom impacts
- Long-term monitoring of offshore impact areas, as well as mitigation success
- Studies of potential impacts to listed species designated critical habitat

Other Applicable Laws

In addition to the ESA, the following laws may apply to City projects with federal funding or authorizations:

- National Environmental Policy Act (NEPA)
- Bald and Golden Eagle Protection Act
- Migratory Bird Treaty Act

Resilience/Sustainability

AECOM is one of the leaders in resiliency, climate change, and sea level rise practices across North America. The AECOM team recognizes that climate change poses an existential threat to the continued vitality of Broward County's coastal communities and to the health and well-being of those who live, work, and pursue leisure in this vibrant community. We look forward to the opportunity to apply our rooted knowledge and resilience planning in the region. Our local experience is complemented by global expertise in resilience best practices that we bring, including climate resilience knowledge from our 100RC Resilient Cities Resilient305 program management work with the City of Miami.

AECOM is a national leader in climate change adaptation and resilience planning. Combined with our experience in environmental planning, engineering, and design, this makes us an effective partner for the City of Pompano Beach. We are actively working with communities across the US to inform future environmental planning and engineering projects. For the City of Naples Climate Change Adaptation and Mitigation Action Plan, we are developing a framework to incorporate climate change considerations into existing and future projects and policies that will protect public assets from future climate hazards. AECOM is also a Strategy Partner for 100 Resilient Cities, including the Greater Miami & the Beaches Resilient305 Program, with priority actions centered around climate change, affordable housing, transportation, and land use. For the New York Waterfront Code, we are performing facility evaluations, site-specific analysis, and providing environmental and land use recommendations. In the San Francisco Bay Area, we are developing a Mobility Adaptation Strategy in the Islais Creek neighborhood that will protect transportation infrastructure, enhance shoreline access, and nurture community resilience in adjoining neighborhoods. We are also leading the Urban Land Institute Quad County Business Case for Resilience in Southeast Florida to analyze the fiscal impact of critical infrastructure under sea level rise scenarios across a four-county region. On these and similar projects, we work with stakeholders to couple local knowledge with regional and national expertise to develop relevant and effective solutions that provide long-term resilience considerations.

AECOM is an industry leader in partnering with our customers to develop and implement green and sustainable technologies for our remediation and engineering projects. A key feature of our commitment to sustainability is our focus on green and innovative components of remediation projects. This commitment is exemplified by the *#2 Ranking* by *Engineering News Record* (ENR) as one of the *Top 100* green buildings design firms, as well as our inclusion by *Newsweek* in their list of Greenest Large Companies.

The AECOM team will work with the City of Pompano Beach to understand intergovernmental processes, evaluate historical and existing sustainability and resiliency efforts, and establish a baseline understanding of the community as it is today; how it may change in response to climate stressors, including extreme heat, sea level rise, and flooding; and how these factors represent challenges and opportunities for equitable community outcomes. We will also consider the project objectives through a social equity lens to guide prioritization of climate adaptation and sustainability actions that emphasize social co-benefits rather than one-dimensional benefits. These benchmarks will constitute an initial framework and project prioritization for community resiliency, environmental sustainability, social equity, hazard mitigation and adaptation policies, energy assurance, land use, and implementation strategies and projects.

AECOM Employs Sustainable Remediation

Key Personnel Matrix

The key personnel matrix provides the experience, education, and dedication of our key personnel. Additional information about these key personnel and subcontractors is provided in their resumes. This information includes the tasks each will be assigned, their experience level and previous years performing related work, and applicable knowledge for this contract. Resumes for key team members are included in Tab 8 Key Personnel Resumes.

Key Team Matrix

Personnel | Role	Education / Professional Designations	Years of Experience	Preliminary Reports/Alternative Recommendations	Permitting (Federal, State, County and City)	Project Management	Recommendations and Cost Estimates	Closeout Services	Reports for Regulatory Compliance Monitoring and Assessments	Reporting on Endangered Animals	Phase I/II/III Assessments	Roadway, Streetscape or Parking Lot Projects	Water or Reuse Main Projects	Force Main Projects	Lift Station/Pump Station Rehabilitation Projects	Parks and Recreational Facilities	Seawall and Dock Construction Repair	Storm Water/Drainage Improvement Projects	Consultation for Emergency Water/Wastewater/Stormwater Repairs	Inspection Services for Emergency Water/Wastewater/Stormwater Repairs	Canal and Lake Dredging	Grant Reimbursement, FAA and FDOT Support and Compliance	SRF Support and Davis Bacon Wage Reporting Requirements	Support Services for Remediation	Demolition	Gravity Sewer Main Projects
Vik Kamath | Principal-in-Charge	MS, Thermal & Environmental Engineering | BS, Chemical Engineering PE: FL #42618	40	●	●	●	●	●	●		●					●			●		●				●	
Steve Starke | Project Manager	BS, Geology FL: PG #1560; CHMM #9231; LEP #148, REPA #6029	37	●	●	●	●	●	●		●	●	●	●	●	●		●	●		●	●		●	●	●
Delana Beculhimer | Assistant Project Manager / Phase I, II & III Assessments Lead	BS, Geology; BS, Environmental Geography, Natural Hazards LEP #357	17	●	●	●	●	●	●	●	●	●	●	●	●	●		●			●	●		●	●	●
Luis Smith | Health & Safety / Asbestos, Mold & Metals-Based Paint Lead	BS, Environmental Science CIH #8075, FLAC #AX53	14	●	●	●	●	●	●	●	●													●	●	
Babu Madabhushi | QA/QC / Remedial Design Team Member	PhD, Hazardous Waste Management | MS, Wastewater Treatment	23	●		●	●		●		●	●						●			●			●		
Kathryn Eisnor | Phase I, II & III Assessments Team Member	BS, Earth Sciences LEP #370	15	●	●	●	●	●	●	●	●	●	●			●		●				●		●	●	●
Matthew Holbrook | Phase I, II & III Assessments Team Member	MS, Geological Services | BS, Geology PG: FL #2165	26	●	●	●	●	●	●		●	●				●		●						●	●	
Ed Leding | Phase I, II & III Assessments Team Member	MS, Geology | BS, Geology PG: FL #1292	31	●		●	●	●			●													●		
Alec Rizzo | Phase I, II & III Assessments Team Member	BS, Geology	2			●					●	●	●					●						●		
Elizabeth Sullivan | Phase I, II & III Assessments Team Member	BS, Geology	5	●	●		●	●	●		●					●								●	●	
Fernando Navarrete | Engineering Services Lead	PhD, Ocean Engineering | BS, Civil Engineering PE: FL #69999	18	●	●	●	●	●					●	●	●	●	●	●	●	●	●				●	●
Jonathan Barbosa | Stormwater Lead	BS, Civil Engineering PE: FL #81615	10	●				●				●	●	●	●			●	●							
Gino Mora | Stormwater Team Member	MS, Civil Engineering | BS, Civil Engineering FDEP Qualified Stormwater Management Inspector		●				●				●	●	●	●			●	●		●				●	●
Daniel Baker | Civil Engineering Lead	BS, Civil Engineering PE: FL #73196	14	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●		●		●	●
Ciecio De Sa | Civil Engineering Team Member	MS, Civil Engineering | BS, Civil Engineering EI: FL 1100019838	5	●	●		●	●				●	●	●		●		●			●		●		●	●
Roger Williams | Water/Wastewater Lead	MS, Environmental Engineering | BS, Civil Engineering PE: FL #68199	16	●	●	●	●	●	●				●	●	●				●	●						●
Dan Levy | Sediment Dredging Lead	Computer Modeling, Graduate Studies | BS, Geology PG: FL #1230	34	●	●	●	●	●	●	●	●	●				●					●	●		●	●	

Key Team Matrix

Personnel | Role	Education / Professional Designations	Years of Experience	Preliminary Reports/Alternative Recommendations	Permitting (Federal, State, County and City)	Project Management	Recommendations and Cost Estimates	Closeout Services	Reports for Regulatory Compliance Monitoring and Assessments	Reporting on Endangered Animals	Phase I/II/III Assessments	Roadway, Streetscape or Parking Lot Projects	Water or Reuse Main Projects	Force Main Projects	Lift Station/Pump Station Rehabilitation Projects	Parks and Recreational Facilities	Seawall and Dock Construction Repair	Storm Water/Drainage Improvement Projects	Consultation for Emergency Water/Wastewater/Stormwater Repairs	Inspection Services for Emergency Water/Wastewater/Stormwater Repairs	Canal and Lake Dredging	Grant Reimbursement, FAA and FDOT Support and Compliance	SRF Support and Davis Bacon Wage Reporting Requirements	Support Services for Remediation	Demolition	Gravity Sewer Main Projects
Chandy John | Sediment Dredging Team Member	PhD, Environmental Hydraulics | MS, Civil Engineering, PADI	32	●	●	●	●	●	●		●		●				●	●			●	●		●		
Mike Giovannozzi | Sediment Dredging Team	MS, Civil Engineering | BS, Civil Engineering PE: FL #62563	21	●	●	●	●										●				●					
David Hayman | Remedial Design Lead	BS, Ocean Engineering PE: FL #48082	30	●	●	●	●	●	●		●	●						●						●		
Devansh Shah | Remedial Design Team Member	MS, Environmental Engineering | BE, Environmental Engineering PE: FL #88389	5	●		●	●		●		●					●		●		●				●	●	
Sonia Burkule | Remedial Design Team Member	MS, Environmental Engineering; BS, Chemical Engineering	15	●	●	●	●	●	●	●	●													●		
Josh Gregory | Remedial Design Team Member	BS, Environmental Engineering	21	●		●	●	●	●		●													●	●	
David Vargas | Remedial Design Team Member	MS, Environmental Engineering | BS, Environmental Engineering EIT	5		●		●		●		●	●						●			●			●		
Richard Ulkus | Remedial Construction Lead	AS, Civil Engineering Technology GC: FL	45			●	●					●	●	●	●	●	●	●	●	●	●	●	●		●	●
Mike Powell | Remedial Construction Team	Undergraduate Studies	32					●			●	●			●	●					●			●	●	
Mike Scinta | Remedial Construction Team	High School Diploma	43		●	●	●	●			●	●	●	●	●	●	●	●		●	●			●	●	●
Richard Longhenry | Remedial Construction Team	High School Diploma	46								●		●	●	●		●	●						●	●	●
Keith Stannard | Natural Resources Lead	BS, Biological Sciences	26	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	
Kelly Samuels | Natural Resources Team	BA, Environmental Design PWS, CERP; FWC Gopher Tortoise Authorized Agent	25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●
Pete Verbanac | Natural Resources and Phase I/II/III Teams	BS, Natural Science/Zoology	30	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●					●		●
Karen Brandon | Natural Resources – Permitting Lead	BS, Environmental Engineering	38	●	●	●	●	●	●	●						●	●				●	●		●	●	●
Laura Cherney | Natural Resources Team Member	MBA; BS, Environmental Engineering Sciences	20	●	●	●			●	●						●	●				●	●			●	●
Carlton Gordon | Asbestos, Mold & Metals-Based Paint Team	BA, Communication Studies | MRSA: #2163	19			●			●		●	●	●			●						●		●	●	

Key Team Matrix

Personnel | Role	Education / Professional Designations	Years of Experience	Preliminary Reports/Alternative Recommendations	Permitting (Federal, State, County and City)	Project Management	Recommendations and Cost Estimates	Closeout Services	Reports for Regulatory Compliance Monitoring and Assessments	Reporting on Endangered Animals	Phase I/II/III Assessments	Roadway, Streetscape or Parking Lot Projects	Water or Reuse Main Projects	Force Main Projects	Lift Station/Pump Station Rehabilitation Projects	Parks and Recreational Facilities	Seawall and Dock Construction Repair	Storm Water/Drainage Improvement Projects	Consultation for Emergency Water/Wastewater/Stormwater Repairs	Inspection Services for Emergency Water/Wastewater/Stormwater Repairs	Canal and Lake Dredging	Grant Reimbursement, FAA and FDOT Support and Compliance	SRF Support and Davis Bacon Wage Reporting Requirements	Support Services for Remediation	Demolition	Gravity Sewer Main Projects
DeAndre Scholl | Asbestos, Mold & Metals-Based Paint Team	BS, Environmental Science	2						●		●	●				●								●	●	
Justin Vandever | Resilience/Sustainability/ Climate Change Lead	MS, Marine Science | BS, Civil and Environmental Engineering PE: CA #76245	14	●		●						●	●					●								●
Lauren Swan | Resilience/Sustainability/Climate Change Team	MLA, Landscape Architecture | BA, Urban and Regional Planning	14	●	●	●	●					●	●					●								●
Jae Park | Grant Writing/Funding Assistance Lead	PhD, Urban and Regional Science | MS, Community and Regional Planning CFM	28			●			●	●													●	●		
Amy Baker | Grant Writing/Funding Assistance Team	BS, Civil Engineering PE: LA #30484, SC #35074, TX #129148; PMP #1510737; CFM	22	●		●			●			●				●		●	●				●	●		●
José Soler | Ports & Marine Leader	BS, Civil Engineering PE: FL #85451; PR #18272	24	●		●			●			●				●	●	●	●				●	●		●
John Carel | Ports & Marine Team	MS, Civil Engineering | BS, Civil Engineering PE: MA#49086, FL#71844, NJ#57347, NY#57347, SC#11885	47			●											●									
Prabin Tuladhar | Ports & Marine Team	MS, Civil/Structural Engineering | BS, Civil Engineering PE: CA#69427	19			●											●									

Current & Projected Workload

The table below provides the team member's current workload, projected workload, and percentage of availability.

Team Member | Title	Current Workload	Projected Workload	Percent Availability
Vik Kamath | Principal-in-Charge	60%	60%	40%
Steve Starke | Project Manager	20%	30%	70%
Delana Beculhimer | Assistant Project Manager / Phase I, II & III Assessments Lead	30%	20%	80%
Luis Smith | Health & Safety / Lead, Mold & Lead-based Paint Lead	50%	40%	60%
Babu Madabhushi | QA/QC / Remedial Design Team	80%	40%	60%
Kathryn Eisnor | Phase I, II & III Assessments Team	80%	80%	20%
Matthew Holbrook | Phase I, II & III Assessments Team	20%	20%	80%
Ed Leding | Phase I, II & III Assessments Team Member	70%	70%	30%
Alec Rizzo | Phase I, II & III Assessments Team Member	60%	20%	80%
Elizabeth Sullivan | Phase I, II & III Assessments Team Member	50%	40%	60%
Fernando Navarrete | Engineering Services Lead	75%	60%	40%
Jonathan Barbosa | Stormwater Lead	50%	50%	50%
Gino Mora | Stormwater Team Member	40%	60%	40%
Daniel Baker | Civil Engineering Lead	95%	60%	40%
Ciecio De Sa | Civil Engineering Team	80%	60%	40%
Roger Williams | Water/Wastewater Lead	80%	70%	30%
Dan Levy | Sediment Dredging Lead	75%	75%	25%
Chandy John | Sediment Dredging Team	80%	40%	60%
Mike Giovannozzi | Sediment Dredging Team	80%	60%	40%

TAB 08

RESUMES OF KEY PERSONNEL

Team Member | Title	Current Workload	Projected Workload	Percent Availability
David Hayman | Remedial Design Lead	50%	40%	60%
Devansh Shah | Remedial Design Team	60%	30%	70%
Sonia Burkule | Remedial Design Team	50%	30%	70%
Josh Gregory | Remedial Design Team	50%	40%	60%
David Vargas | Remedial Design Team Member	50%	25%	75%
Richard Ulkus | Remedial Construction Lead	60%	60%	40%
Mike Powell | Remedial Construction Team Member	50%	25%	75%
Mike Scinta | Remedial Construction Team	50%	50%	50%
Richard Longhenry | Remedial Construction Team	80%	60%	40%
Keith Stannard | Natural Resources Lead	80%	60%	40%
Kelly Samuels | Natural Resources Team	50%	60%	40%
Pete Verbanac | Natural Resources Team	100%	25%	75%
Karen Brandon | Natural Resources – Permitting Lead	75%	60%	40%
Laura Cherney | Natural Resources – Permitting Team	75%	60%	40%
Carlton Gordon | Asbestos, Mold & Lead Based Paint Team	75%	60%	40%
DeAndre Scholl | Asbestos, Mold & Lead Based Paint Team	60%	60%	70%
Justin Vandever | Resilience/Sustainability/Climate Change Lead	80%	60%	40%
Lauren Swan | Resilience//Sustainability/Climate Change Team	70%	60%	40%
Jae Park | Grant Writing/Funding Assistance Lead	80%	75%	25%
Amy Baker | Grant Writing/Funding Assistance Team	80%	60%	40%
Jose Soler | Ports & Marine Lead	80%	60%	40%

Directly following this section are resumes for Key Personnel for AECOM and our subconsultants. Resumes for the individuals with an asterisk behind their name on the organizational chart are presented at the end of this section.

Steve Starke, PG, CHMM, LEP, REPA

Project Manager

Key expertise
Health and Safety Management
Risk Assessments
Compliance Audits
Safety Training

Education
BS, Geology, James Madison University, 1983

Years of experience
32 with AECOM | 37 Total

Training
40-hour OSHA 1910.120 HAZWOPER
8-hour OSHA 1910.120 HAZWOPER Annual Refresher
10-hour OSHA Construction Industry Outreach Training
OSHA 511 General Industry
Basic Incident Command
DOT Hazardous Materials Shipping (HM172)

Registrations/Certifications
Professional Geologist: FL #1560, NC #1372, TN #3707, VA #2801000993
Registered Environmental Property Assessor #6029
Licensed Environmental Professional #148
Certified Hazardous Materials Manager #9231
AECOM Certified Project Manager

Steve is a senior project manager and hydrogeologist with over 37 years of experience conducting Phase I/Phase II environmental site assessments, contamination assessment investigations, environmental audits, remedial implementation/O&M, storm water, construction management, and emergency response services in Florida.

Professional history

Steve specializes in petroleum and hazardous waste assessments and remedial design and implementation and is highly experienced in the management of multiple-site, indefinite-delivery order contracts and performance-based contracts. His clients have included the City of Pompano Beach (Environmental Engineering and CRA contracts), Miami, City of Miami Beach, City of Opa Locka, City of Hollywood, Cooper City, Miami-Dade County DERM, Miami-Dade Aviation Department (MDAD), Broward County, Palm Beach County, Port of Palm Beach, FDOT (District 4 and Turnpike), FDEP, FEMA, USCG, US Park Service, as well as numerous major oil and private clients. Below are select government contracts/projects that Starke has been responsible for as project manager.

Select project experience

Environmental Professional Engineering and Testing Services, City of Pompano Beach, FL. Managed two environmental testing and consulting services contracts (Engineering and CRA) for the City of Pompano Beach, Florida, as part of two 5-year task order contracts for work at City properties or properties being acquired by the City for redevelopment. Services included, regulatory site assessments, Phase I and Phase II environmental site assessments, monitor well installation and abandonment, acid tank sludge sampling, soil and groundwater sampling and monitoring, emergency response, asbestos surveys and remediation services. Project work included strong interaction with Broward County Environmental Protection and Growth Management Department.

Cooper City, Bill Lips Sports Complex, Cooper City, FL. Managed fieldwork and prepared a Site Assessment Report (SAR) and subsequent SAR Addenda for the Bill Lips Sports Complex (Complex), located adjacent to the Cooper City Water Treatment Plant. Following assessment, AECOM prepared a Source Removal Plan and then performed the removal and disposal of arsenic-contaminated soil at the Complex. A Soil Source Removal Report was subsequently prepared. AECOM then prepared a Natural Attenuation Monitoring Plan (NAMP), which proposed 4 quarters of groundwater monitoring. Upon completion of 4 quarters of NAM monitoring, AECOM prepared a Declaration of Restrictive Covenant (DRC) for the project and obtained a conditional closure from Broward County.

City of Miami Beach, Environmental Services Contract, Miami Beach, FL. Project manager for environmental services contract included environmental assessments, tank removal, remediation, and emergency response at a number of City maintenance and golf course facilities. Most of the assessments were conducted in a phased approach. Each of the sites were evaluated and a scope of services developed. Soil gas surveys, soil sampling and analysis, monitoring well installations, groundwater sampling, groundwater surveys, and aquifer testing were conducted as part of the scope of services for the majority of the sites. The above tasks also include furnishing all necessary licenses, permits, and insurance; installation of safety barriers (for tank installations), tank and line tests; and contaminated soils disposal and excavation.

Port of Palm Beach, Capital Improvement Program Environmental Services, Palm Beach, FL. Managed more than 20 Phase I and Phase II site assessments as well as the contamination assessment and remediation program for the SkyPass/Port expansion program. Interacted with Palm Beach County Department of Environmental Resources Management. Managed petroleum tank closure assessments and soil remediation projects. Administered an air monitoring program for the excavation of arsenic-contaminated soil.

Miscellaneous Environmental Engineering - Capital Improvements and Transportation Program Services, City of Miami, FL. Contract manager on Miscellaneous Environmental Services Contracts RFQ 10-11-045 ($1MM) and RFQ 14-15-027. Responsible for planning and design services, surveying, environmental site assessments, ACM/MBP/mold surveys, remediation and treatment system O&M services, construction management, groundwater sampling and monitoring, engineering control plans, deeds of restrictive covenant, contaminated soil disposal, mitigation and abatement services, as well as site closures. These services were performed for the City Capital Improvements and Transportation Program, The Resilience and Public Works Department, the City Parks Department, and the City of Miami Police Department. Selected projects included Bayfront Park (assessment, groundwater monitoring, construction management/air monitoring, engineering control plan, deed of restrictive covenant (DRC)), Blanche Park (assessment, groundwater monitoring, repairs of engineering controls), Grapeland Park (assessment, groundwater monitoring, irrigation well replacement, construction management, engineering control plan), Regatta Park (assessment, engineering control plan, DRC), Curtis Park (construction management and air monitoring), Citywide Storm Water Outfall Monitoring (storm water monitoring/reporting, bench scale mitigation pilot test), ROW 5520 NE 4th Ave (assessment, soil remediation), and the Police Department (asbestos sampling and abatement).

Districtwide Contamination Assessment and Remediation Services, Florida Department of Transportation, District 4, Districtwide, FL. Contract manager for contract BDY43 (2014-2019), as well as the previous four FDOT District 4 (SE Florida) environmental consulting contracts (1995 to 2014), where he managed environmental services on hundreds of projects across a five-county area. Project scopes included Phase I and Phase II assessments, full site assessments, tank/waste removals, asbestos surveys/abatement, metal-based paint surveys/abatement, mold services, demolition, emergency response, NEPA studies, dewatering treatment, construction management, plans reviews, and site remediation for contaminants including metals, solvents, and hydrocarbons.

Reimbursement/Pre-approval/PRP/SOL Programs, Florida Department of Environmental Protection, Statewide, FL. Managed numerous petroleum assessments, tank removals, remedial system designs/ implementations, and site closures under the FDEP Petroleum Reimbursement, Pre-approval, and Petroleum Restoration programs for multiple major oil companies (BP/Amoco, Shell, Unocal, Tenneco, and Mobil), private clients and municipal clients, including Miami-Dade County. Managed projects under AECOM's Statewide Petroleum Cleanup Contract for over 10 years. Under this contract, managed groundwater and soil assessment and remedial activities at sites located throughout south and central Florida. Employed innovative rapid site assessment methods, including direct push technology, mobile lab services, as well as membrane interface probe (MIP) technology for rapidly mapping free product plumes.

Managed Performance Based Cleanups (PBCs) under this program as well as a master storage tank project that included the closure of 26 USTs.

Also managed multiple FDEP State-Owned Lands (SOL) sites, including state parks, correctional facilities, universities, and other governmental facilities for the FDEP since the inception of the SOL initiative.

Stormwater Pond Assessment, USCG, Air Station Miami, FL. Managed the environmental testing portion of a Design Repair Program for the Stormwater Pond at USCG Air Station Miami. This project consisted of selected surface water and sediment sampling at multiple locations within the storm water pond prior to initiation of repairs. A comprehensive report of findings was also prepared.

NW 142 St. Widening, City of Opa Locka, FL. Project manager responsible for notifying Miami-Dade County DERM and filed a Discharge Notification Form. Subsequently developed a sampling plan and managed the sampling program, including soil screening and sampling, as well as sampling of excavated solid waste material. AECOM then developed a waste disposal plan for the City of Opa Locka to address the contaminated soil and excavated waste material. AECOM workers detected fuel odors during construction work within the right of way along NW 142nd Street, between NW 102nd Avenue and NW 107th Avenue in Opa Locka, Florida.

Delana Beculhimer, LEP

Assistant Project Manager / Phase I, II & III Assessment Lead

Key expertise
Contaminated and Hazardous Materials Management
Environmental Studies

Education
BS, Geology, Austin Peay State University, 2003
BS, Environmental Geography, Natural Hazards, Austin Peay State University, 2003

Years of experience
13 with AECOM | 16 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher
8-hour OSHA Site Supervisor
26-hour FDOT PD&E Manual
CPR / First Aid
CSX Roadway Worker Protection / Contractor Safety Certification
Biohazard Awareness
Hazard Communication
Excavation and Trenching Safety

Registrations/Certifications
Licensed Environmental Professional: FL #357
CPR / First Aid

Delana is a Project Manager with 16 years of experience conducting assessment, remediation, monitoring, and closure of metals and petroleum-contaminated sites for FDOT District 4, FDEP State Owned Lands, petroleum preapproval, site investigation section, and private clients.

Professional history

Delana has conducted groundwater elevation surveys, natural attenuation monitoring, field data collection, supervision of drilling operations for soil borings, installation of groundwater monitoring wells, soil and groundwater sampling, and aquifer slug tests. In addition, she has prepared various types of environmental site assessment reports, contamination assessment reports, source removal reports, tank closure assessment reports, and sediment characterization reports.

Select project experience

Four Contamination, Assessment and Remediation Contracts, FDOT District 4, Districtwide, FL. Managed multiple projects, including construction oversight / management, initial site investigations, soil and groundwater assessments, delineation, soil and groundwater remediation, UST and hydraulic lift removal, coordination with regulatory agencies, and reporting.

- Conducted field reconnaissance, including interviews and photo-documentation; FDOT plan reviews; and research and review of numerous FDOT, state, and municipal databases (e.g., FDOT ETDM database) to address environmental, physical, natural, social / cultural, and biological aspects potentially affecting project, in accordance with NEPA regulations for FDOT District 4.
- Produced aerial site plans using ArcView GIS software to facilitate field reconnaissance and for inclusion into FDOT District 4 Level II
- Contamination Impact Assessment Reports, Contamination Screening Evaluation Report Addenda, Contamination Assessment Management Plans, environmental identification features reports, and initial-phase plan review reports.
- Prepared CSER Updates for FDOT District 4 to identify potential contamination impacts that may affect ROW acquisition or construction efforts, allowing District 4 to mitigate remedial and design efforts and preserve production schedule.
- Participated in valuation engineering studies with multi-disciplinary team to analyze function, process, system, and design of projects to evaluate methods to reduce costs and improve performance and quality.
- Supervised surveying and sampling of numerous FDOT District 4 bridges for asbestos-containing materials and metal-based paint in conformance with the national emission standards for hazardous air pollutants. Conducted numerous bridge survey report reviews for FDOT District 4

Contract BDY43, FDOT District 4, Districtwide, FL. Project manager for the Contamination, Assessment, and Remediation (CAR) contract, which included approximately 87 projects. Services included Level I and Level II Environmental Site Assessments, asbestos and lead surveys/abatement, environmental construction and remediation, dewatering, and emergency response. In addition, she provided on-site technical support at the District 4 office. During this time, she assisted FDOT by completing ROW reviews; construction plans reviews; coordinating with Design, ROW, and Drainage Project Managers; and conducting PD&E document reviews.

Kings Highway, FDOT District 4. FL. Project manager on Kings Highway, which was being widened from a 2-lane roadway to a 4-lane roadway. AECOM performed an assessment of the soil and groundwater at 32 sampling locations. The assessment was completed near a known contaminated gas station, in an agricultural area parallel to a canal that was to be relocated, within proposed drainage ponds, and at proposed subsurface structure locations. Soil and groundwater analytical results indicated petroleum concentrations in excess of State standards along the corridor and with the FDOT ROW. To prevent worker exposure, AECOM was tasked with removing petroleum impacted soil within the construction zone and developing a remediation system to treat potentially contaminated groundwater before its eventual discharge to a surface water body. AECOM developed a dewatering permit package for submittal to SFWMD and FDEP. After approval of the permit package, AECOM developed a treatment system that would accommodate the contractor's anticipated flow rate of 600 gpm. The remediation system was mobilized to the site during the construction phase. The groundwater was successfully treated prior to being discharged.

I 75 Express Lanes – Segment D, FDOT District 4, FL. Project manager on this project. The FDOT constructed two new Express Lanes in the northbound and southbound directions within the I 75 existing medians. AECOM identified arsenic impacted soil within the FDOT ROW during assessment activities conducted in 2012. In 2014, the roadway construction contractor excavated within areas identified with arsenic contamination. AECOM conducted oversight of the excavation activities and collected samples of the stockpiled soil for laboratory analysis. Soils identified with arsenic concentrations between residential and industrial standards were released to the contractor to use beneath the roadway. Soils identified above industrial standards were further analyzed for leachability to determine if it could be deposited into existing FDOT drainage ponds. All soil was identified below leachability standards and AECOM transported and placed the soil into various existing retention ponds on the corridor. Nearing completion of the roadway project in 2018, the roadway construction contractor notified FDOT that there was approximately 70,000 cubic yards of excess material that would not be needed to complete roadway construction. AECOM conducted sampling of the soil pile and identified arsenic above State standards, but below leachability standards. After receiving DERM approval, 45,000 cubic yards of soil was transported and deposited into an existing drainage pond in Miami Gardens. An additional 25,000 cubic yards of soil was approved to be moved for site grading to achieve appropriate elevation and slope at Griffin Rd. Three loads of miscellaneous and construction related debris was subsequently hauled away for disposal.

Vik Kamath, PE
Principal-in-Charge

Key expertise
Environmental Engineering
State/Local/Federal Regulations
Brownfields Program
Risk-Based Closure
Solid Waste Management
Hazardous Wate Management
Methane Gas Mitigation

Education
MS, Thermal & Environmental Engineering, Southern Illinois University, 1980
BS, Chemical Engineering, Indian Institute of Technology/ Bombay, India, 1976

Years of experience
17 with AECOM | 40 Total

Training
Mitigation Benefit Cost Analyses Toolkit, FEMA
Field Construction Safety, OSHA
Community Emergency Response, FEMA
8-Hour Bio-Readiness, Center for Biological Defense, University of South Florida
Vulnerability Assessments for Wastewater Treatment Plants, University of Florida TREEO Center

Registrations/Certifications
Professional Engineeer: FL #42618
AECOM Certified Project Manager
AECOM Lead Verifier - Impact Assessment & Permitting
AECOM Lead Verifier - Waste Services

Vik is a senior project engineer and manages a wide variety of environmental engineering projects ranging from corrective action plans, groundwater remediation, landfill closures, solid and hazardous waste management methane gas mitigation projects, petroleum storage tanks, waste to energy plants, and wastewater treatment and disposal facilities.

Professional history

Prior to joining AECOM, he served as the Program Administrator for Waste Management at the Florida Department of Environmental Protection (FDEP) office in West Palm Beach. During his tenure at AECOM, Vik has managed small as well as large remediation projects for the City of Miami. Having worked for the State of Florida for over 20 years as an engineer and administrator, he has a thorough understanding of state, local and federal regulations and serves as an expert regulatory technical advisor for private and municipal clients in Palm Beach, Broward and Miami-Dade counties.

Select project experience

Former Virginia Key Landfill Closure and Groundwater Remediation, City of Miami, FL. Senior project engineer and project manager leading a team of environmental scientists, geologists and engineers. The work completed includes soil and groundwater assessments, aquifer pump tests, drainage well capacity tests and landfill closure that is currently in the permitting phase. A key component of the landfill closure is incorporating future use of the landfill as a park for the City of Miami. The construction phase is anticipated to start after Miami-Dade County completes the procurement of a contractor.

Former City of Miami Convention Center/Regatta Park, Coconut Grove, FL. Lead environmental engineer for a complete environmental assessment of six different areas on a 15-acre site that was the location of the City's Convention Center. After completion and regulatory approval of the site assessment activities, a Corrective Action Plan was developed for implementation by the contractor procured by the City. Upon completion of the corrective action, a certification of completion of construction with a No Further Action with Conditions was submitted and approved by the regulators, as part of a cost-effective risk-based corrective action approach. The site is now the location of a popular park in the Coconut Grove area. An engineering and institutional control plan is being proposed that will be part of the Restrictive Covenant for the property.

Broward County Landfills – Permitting Compliance and Reporting, Broward County Solid Waste and Recycling Services, Broward County, FL. Engineer/project manager responsible for providing geological services for the review and reporting of groundwater data collected on a semi-annual basis at two landfills as part of FDEP permit requirements. Services include reviewing electronic data deliverables (EDDs) through the FDEP Automated Data Processing Tool (ADAPT) application, generating a Semi-Annual Monitoring Reports in accordance with Section 62-701.510(9)(a) of the Florida Administrative Code (F.A.C.). This report summarizes all hydrogeological water quality parameters and analytical results, sampling and analytical methods.

Ives Estates Park (former Ojus Landfill), Miami Gardens, FL. Lead Environmental Engineer for this redevelopment project that started in 2006. Services provided include soil and groundwater assessment, methane gas assessment and mitigation system design and implementation of the corrective for the Youth Complex. Upon completion of mitigation measures the certification of completion of construction was submitted to and approved by the regulators. The site is currently under Operation and Maintenance with regular site visits by AECOM technicians under the direction of the engineer. AECOM is currently in the process of submitting a proposal to design upgrades to the Youth Center Building.

West End Cargo Area Bldg. 2064, Miami-Dade Aviation Department, Miami-Dade, FL. Lead Environmental Engineer to complete site assessment activities and recommend remediation activities at the location of a former building that was in a group of buildings in the West End Cargo Area at Miami International Airport known as Aerodex Plant 1. The site assessment activities included the installation of groundwater monitoring wells and soil borings to determine the impact of petroleum and hydrocarbons. A series of thirteen groundwater monitoring wells and soil borings were installed at pre-determined locations. Upon the lab reports were reviewed by the team, a site assessment report was submitted to and approved by the regulators. The County has requested AECOM to provide additional services and work with the adjacent property owner.

TIAA 5707 Building, Blue Lagoon Drive, Miami, FL. Lead Environmental Engineer to complete a soil, methane gas and groundwater site assessment report (SAR) for the location of a former unpermitted landfill and waste disposal area. The purpose of the SAR was to redevelop the 8- acre site for 5-story Class A office building and a 4-story parking garage. Upon completion and approval of the SAR by the regulators, a remediation plan consisting of soil removal for the open areas and a methane gas mitigation plan for the office building and the parking garage was prepared for approval from the regulators. The construction of the building and parking garage was completed under the direction of the lead engineer in June 2018. The entire project was approved by DERM in September 2019. AECOM is currently conducting operations, monitoring and maintenance activities for the site.

Luis Smith, CIH, CIEC, FLAC

Health & Safety Manager / Asbestos, Mold & Lead Based Paint Lead

Key expertise
Industrial Hygiene
Health and Safety
EHS Audits
Indoor Air Quality
Mold Assessment & Remediation
Asbestos Sampling & Surveys
Lead Paint Assessment & Control
Radon Sampling & Mitigation

Education
BS, Environmental Science, University of Massachusetts at Amherst, 1988

Years of experience
13 with AECOM | 31 Total

Training
40-hour OSHA 1910.120 HAZWOPER
8-hour OSHA 1910.120 HAZWOPER Annual Refresher
10-hour OSHA Construction Industry Outreach Training
OSHA 511 General Industry
Basic Incident Command
DOT Hazardous Materials Shipping (HM172)

Registrations/Certifications
Professional Geologist: FL #1560, NC #1372, TN #3707, VA #2801000993
Registered Environmental Property Assessor #6029
Licensed Environmental Professional #148
Certified Hazardous Materials Manager #9231
AECOM Certified Project Manager

Luis is a Certified Industrial Hygienist (CIH) with 31 years of experience providing industrial hygiene consulting services to a diverse group of clients including: government, utilities, military, health care, insurance, construction, property developers, property managers, legal, manufacturing, pharmaceuticals, automotive, etc.

Professional history

Luis specializes in the indoor air quality practice and has extensive experience performing microbiological assessment and remediation projects involving fungi, bacteria, arthropods, algae, etc. Luis also provides health and safety consulting services and has completed compliance audits at various types of facilities.

Select project experience

City of Miami, Miami Police Central Station– Miami, FL. Conducted a water damage assessment throughout the 1st floor gymnasium and locker room areas following a sewage backflow caused by a lift station pump failure. Prepared a remediation work plan to identify the extent of damaged materials and provided recommendations for removal and replacement. Limited bulk sampling of asbestos was also performed to assess the potential presence of asbestos in the building materials scheduled for replacement.

City of Miami, Curtis Park Ambient Air Monitoring – Miami, FL. Developed an air monitoring plan to identify and evaluate potential airborne hazards during excavation and removal of heavy-metal impacted topsoil at playground area where toxic ash had been dumped. Directed field staff to collect ambient air samples and field data. Monitoring was performed for particulate matter <10 microns in diameter (PM10) and total suspended particulate matter (TSP) including lead and various other heavy metals. Provided oversight of contractor activities and conducted personal exposure monitoring for contractor employees.

Fern Isle Park Pre-Demolition Asbestos Survey, City of Miami, Miami, FL. Responsible for providing pre-demolition asbestos survey of various park structures scheduled for demolition including visual inspection and bulk sampling for suspect asbestos-containing materials. Prepared survey report to document findings, conclusions, and recommendations of survey submitted to local regulatory agency for approval.

City of Miami, Miami Police Central Station and Special Operations Section, City of Miami, FL. Conducted limited pre-renovation asbestos surveys at both facilities prior to planned renovations involving flooring upgrades. The surveys included visual inspection and bulk sampling for suspect asbestos-containing materials.

Broward County North Regional Courthouse, Deerfield Beach, FL. Investigated a 194,000 square foot courthouse facility in response to employee and occupant complaints. The investigation included inspection of multiple air handler units serving the site including some that were installed in the 1970s.

Indoor environmental testing identified high relative humidity conditions throughout the facility due to uncontrolled amounts of fresh air ventilation being delivered. Mold growth was also identified in some areas due to leaks in the building envelope.

Broward County Risk Management, Indoor Air Quality Investigation at N. Regional Courthouse, Deerfield Beach, FL. Technical lead responsible for conducting a comprehensive assessment of the facility, including the HVAC system, to identify potential sources and pathways of poor air quality. Performed testing and data logging of general air quality parameters, including temperature, relative humidity, carbon dioxide, and carbon monoxide. Provided various recommendations to improve building and air quality conditions.

SR93 / I-75 ITS Hub Building (FM 421707-4) Miramar, FL, FDOT District 4, Districtwide, FL. Oversaw mold remediation activities in Hub Building, including isolating mold impacted area, implementing air filtration equipment, removing impacted material, HEPA vacuuming, and wet wiping. Conducted outdoor air sampling and post-remediation sampling inside the building and recommended adjustments to temperature and humidity controls of air conditioning units to prevent future mold.

Private Chemical Blending Facility – Quincy, FL. Conducted a comprehensive ISO 14001 and ISO 45001 environmental health and safety audit of a chemical blending facility that manufactures various chemicals for use in cleaning and maintenance of HVACR equipment. Performed an initial gap analysis of existing programs and records to establish a high-level regulatory baseline and provide recommendations for future program changes. Later performed a deep-dive review of available EHS program records including employee training matrices.

Asbestos Inspection and Abatement, Orlando Utilities Commission, Orlando, FL. Technical lead responsible for conducting inspection and sampling of electrical breakers and switchgear at various substations for the presence of asbestos-containing materials (ACM). Performed asbestos abatement and disposal through a subcontractor and provided oversight and coordination of the work.

Hazardous Materials Survey, US Air Force, Tampa, FL. Technical Lead. Conducted a survey of Building B58 at MacDill Air Force Base to identify and quantify hazardous materials in the interior and exterior including asbestos, lead in paint, and universal wastes (e.g. fluorescent light bulbs, light ballasts, thermostats) to address special handling and disposal requirements prior to demolition. Also prepared abatement specifications to describe project requirements and obtain competitive bids.

Hazardous Materials Survey, US Navy, Jacksonville, FL. Technical lead responsible for conducting a survey of Building B840 at the Naval Air Station to identify and quantify hazardous materials in the interior and exterior of the building including asbestos, lead in paint, and universal wastes (e.g. fluorescent light bulbs, light ballasts, thermostats) to address special handling and disposal requirements prior to demolition. Also prepared abatement specifications to describe project requirements and obtain competitive bids.

Emergency Asbestos, Mold, and Lead Testing, Naval Facilities Engineering Command, Various Facilities - Key West and Jacksonville, FL. Technical lead responsible for conducting visual assessment and moisture mapping of structures that were damaged by Hurricane Irma to identify the scope of work for mold remediation. Conducted bulk sampling for asbestos and lead in paint to assess their potential presence prior to initiating remediation activities. Conducted post-remediation inspection and spore trap air sampling to assess air quality conditions following remediation.

Babu Madabhushi, PhD

QA/QC / Sediment Dredging & Remedial Design Team

Key expertise
Sediment Dredging
Soil and Sediment Assessment
Contamination Assessment
Remedial Investigation and Feasibility Studies

Education
PhD, Hazardous Waste, Management, West Virginia University, 1997
MS, Wastewater Treatment, Indian Institute of Technology, 1993
BS, Civil Engineering, Kakatiya University, 1988

Years of experience
19 with AECOM | 25 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher

Certifications
AECOM Lead Verifier - In Situ Bioremediation
Certified Project Manager

Babu has 25 years of experience in conducting and managing environmental engineering projects. He served as local quality manager for AECOM's Miami office and he is one of AECOM's quality lead verifiers in the state of Florida.

Professional history

Babu was instrumental in the AECOM Miami office acquiring ISO-9001 certification. His technical expertise is in the areas of sediment dredging, soil and sediment assessment, contamination assessment, remedial investigation and feasibility studies, soil and groundwater remediation, bioremediation, and operation and maintenance of remedial systems. Babu is extremely knowledgeable of FDEP and USACE regulations and standards. He coordinated with FWC during the dredging projects at Flamingo Marina, Everglades Marina, and the Wagner Creek and Seybold Canal dredging projects, where he was involved in obtaining permits and the execution of dredging activities.

Select project experience

Wagner Creek and Seybold Canal Restoration Project, City of Miami, Miami, FL. Deputy project manager responsible for assisting with the design and implementing the mechanical dredging operations to remove contaminated sediments from what has been known as Florida's most contaminated waterway. Also oversaw construction quality to ensure compliance with permit conditions.

Former Homestead Air Force Base Remediation, US Air Force, Homestead, FL. Served as the Deputy Project Manager that executed the assessment and remedial activities for a performance-based remediation contract at the former Homestead AFB. The sites are contaminated with petroleum compounds, chlorinated solvents, and arsenic. Services include remedial investigation, remediation enhancements, contaminated soil removal, and in-situ soil and groundwater remediation.

Secondary Canal Sediment Sampling, South Florida Resource Conservation and Development Council, Inc., Miami-Dade County, FL. Project manager and project engineer responsible for the sampling and characterization of sediment from approximately 50 secondary canals.

Performance-Based Remediation, Homestead Air Force Base, Homestead, FL. Responsible for assisting project manager and serving as QA/QC manager for performance-based remediation contract project to obtain unrestricted closure of four sites at former Air Force Base.

Former Eaker Air Force Base Remediation, US Air Force, Blytheville, Arkansas. Served as the Project Manager that oversaw the assessment and remedial activities for a performance-based remediation contract at the former Homestead AFB. The sites are contaminated with petroleum compounds, chlorinated solvents, and arsenic. Services include remedial investigation, remediation enhancements, contaminated soil removal, and in-situ soil and groundwater remediation.

Marina Dredging, Everglades National Park, FL. QA / QC manager and assisted with design and implementation of mechanical dredging operations to remove very fine sediments from the Everglades City Marina.

Opa Locka General Aviation Airport Building 119, Miami-Dade Aviation Department, Miami, FL. Served as the Project Manager that oversaw source removal activities conducted on an expedited schedule. Michael was also involved in the site assessment comprising soil and groundwater to delineate the extent of petroleum and metals contamination.

Miami-Dade Aviation Department, Opa Locka General Aviation Airport Building 147, Miami, FL. Served as the Project Manager that oversaw source removal activities conducted on an expedited schedule. Michael was also involved in the site assessment comprising soil and groundwater to delineate the extent of cadmium and PAH contamination.

Solid Waste Landfill, Miami-Dade County Solid Waste Landfill, FL. Assistant project manager for the Miami-Dade County Solid Waste Landfill.

Wal-Mart Superstore Brownfields Site Assessment and Cleanup, US EPA/FDEP, Inverness, FL. Project environmental engineer for the Wal-Mart Superstore Brownfields Site Assessment and Cleanup.

Blue Lagoon Post Office Site Assessment, Remediation, and Methane Collection System, US Postal Service, Miami, FL. Served as the Senior Site Superintendent for contamination assessment at a facility constructed over a filled-in canal. Work included soil and groundwater remediation activities and methane gas collection system design and monitoring. Currently, AECOM is performing the methane gas monitoring.

Operation and Maintenance Of Treatment Systems, FAA William J. Hughes Technical Center, Atlantic City, NJ. Remediation engineering task leader for operation and maintenance of treatment systems for CERCLA Superfund site (approximately 5,000 acres) at Areas B, D, 20A, 29, and 41. Also served as QA/QC Manager and Lead Verifier of the data and the reporting.

Other project includes:

- Assistant Project Manager, Miami-Dade County Solid Waste Landfill, FL
- Project Environmental Engineer, Wal-Mart Superstore Brownfields Site Assessment and Cleanup, (USEPA/FDEP), Inverness, FL
- Miami-Dade Aviation Department, Northwest Cargo Area, Miami, FL
- US Postal Service, Blue Lagoon Post Office Site Assessment, Remediation, and Methane Collection System, Miami, FL
- Miami-Dade Aviation Department, Miami International Airport and Opa Locka General Aviation Airport, FL

Kathryn Eisnor, LEP

Phase I, II & III Assessment Team

Key expertise
Contamination Investigations
Phase I and Phase II Environmental Site Assessments
Contamination Assessment Investigations
Soil and Groundwater Remediation
NEPA

Education
Indian Country Environmental Hazard Assessment, United Tribes Technical College, 2012
BS, Earth Sciences, Dalhousie University, 2002

Years of experience
2 with AECOM | 15 Total

Training
40-Hour OSHA HAZWOPER
8-Hour OSHA HAZWOPER Refresher
8-Hour OSHA Site Supervisor
8-Hour Incident Commander
24-Hour Emergency Response Technician
RTA Contractor Safety
FDEP Stormwater Sediment Erosion Control Inspector and Instructor
USACE Jacksonville District, Regulatory Division Federal Wetland Delineation and Jurisdiction
Excavation and Trenching Safety

Registrations/Certifications
Licensed Environmental Professional: FL #370
CPR / First Aid
FEC Roadway Worker Protection Certification

Kathryn is a geologist with 14 years of environmental industry experience.

Professional history

Kathryn has managed and executed a wide variety of multi-faceted environmental projects, including Phases I and II environmental site assessments; emergency response and clean-up of petroleum and other hazardous substances; indoor air quality assessments, safety training, and industrial hygiene evaluations, including noise studies, odor complaint evaluations, site assessment, remediation, and redevelopment of contaminated properties; NEPA evaluations for various federal agencies (US EPA, U.S. Bureau of Indian Affairs (BIA), U.S. Department of Housing and Urban Development (HUD), U.S. Department of Transportation, U.S. Indian Health Services (HIS), U.S. Fish and Wildlife Service (US FWS), and US ACE); management and oversight of mold assessment and remediation in hotels and commercial buildings, and residential mold remediation; and asbestos inspections for due diligence, demolition, and asbestos hazard emergency response act (AHERA) inspections in schools.

Select project experience

Contamination Assessment and Remediation (CAR) Contracts BDY43, District 4, Districtwide FL. Conducted projects under the FDOT District 4 contamination, assessment, and remediation contract, the NPDES contract, and the environmental services contract. Project components included construction oversight / management, initial site investigations, FDOT NEPA compliance services, soil and groundwater assessments, delineation, soil and groundwater remediation, UST and hydraulic lift removal, coordination with regulatory agencies, and reporting. Responsibilities have included:

- Conducted field reconnaissance, including interviews and photo documentation; FDOT plan reviews; and research and review of numerous FDOT, state, and municipal databases (e.g. FDOT ETDM database) to address environmental, physical, natural, social and cultural, and biological aspects potentially affecting projects, in accordance with NEPA regulations for FDOT District 4.
- Prepared ID Features Memo using ETDM / EST database, EIR Checklist, FDEP databases, and other relevant databases, combined with field review.
- Produced and reviewed aerial site plans using ArcView GIS software to facilitate field reconnaissance and for inclusion into FDOT District 4 reports.
- Participated in valuation engineering study with multi-disciplinary team to analyze function, process, system, and design of projects and evaluate methods to reduce costs and improve performance and quality.
- Supervised surveying and sampling of numerous FDOT District 4 bridges for asbestos-containing materials in accordance with national emission standards for hazardous air pollutants. Conducted numerous bridge survey report reviews for FDOT District 4.
- Conducted Phases I and II assessments for three FDOT District 4 hazardous waste cleanup contracts.

- Provided support as environmental consultant for District 4, performing environmental, contamination, permit, and report reviews.
- Conducted NEPA evaluations to support work program, conducting project reevaluations, creating RFP language, and reviewing PD&E documents (contamination screening evaluation reports, cultural resource assessment surveys, endangered species biological assessment reports, wetland evaluation reports, etc.). Supported projects related to developing alternative sea turtle lighting standards, wetland mitigation, and endangered species, and other projects as requested by Planning and Environmental Management Office.
- Conducted NPDES inspections throughout FDOT District 4 to comply with FDOT MS4 Permit requirements and completed reporting requirements for inspections. Assisted with development of database for outfall inventory in FDOT District 4 using previous inspections, GIS, and Google Earth Pro to locate outfalls and provide information where available on each outfall, stormwater facility, pond, and/or french drain in the system.

Environmental Assessment, Fee-To-Trust Application, Seminole Tribe, Nationwide. Project manager for Environmental Assessment to support Tribe decision to place previous fee property into trust under BIA fee-to-trust application process. Environmental Assessment included information from multiple Tribe departments and answers to several rounds of questions asked by BIA from previous submittals of environmental assessment. area is a highly environmentally sensitive area of Florida, a recharge area of the Floridan aquifer, and development in the area is restricted. Area has rich Seminole history and artifacts were found on the property. environmental assessment was accepted by BIA and project is now in Trust and part of the Tribe's Reservation.

Various NEPA Compliance, Various Clients, Statewide, FL. Project manager for more than 400 NEPA compliance documents for residences, businesses, and tribal infrastructure (office buildings, schools, water/wastewater facilities, roads, and a cemetery). Compliance mainly addressed BIA 516 DM chapter 10 and 59 IAM 3-H. Also performed NEPA compliance for US EPA, IHS, FEMA, US FWS, US ACE, and HUD. Responsible for gathering information pertinent to each project and writing and reviewing final document before submission to agency for approval. In addition, conducted government to government assessments and meetings with various state (FDOT, SFWMD, FDEP) and federal agencies (US ACE, IHS, US FWS, US EPA) regarding projects on and off Reservation properties.

Matthew Holbrook, PG

Phase I, II & III Assessments Team

Key expertise
Groundwater and Soil Contamination Remediation
Assessment and Investigations
Tank Closure

Education
MS, Geological Sciences (Hydrology), Ohio University, 1992
BS, Geology, Franklin & Marshall College, 1989

Years of experience
23 with AECOM | 23 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher

Registrations/Certifications
Professional Geologist: Florida #2165

Matthew has 23 years of experience with soil and groundwater assessment and remediation projects. He has prepared initial remedial action, tank closure, contamination assessment, remedial action, monitoring only, and no-further-action reports and compiled data for petroleum-contaminated and nonpetroleum-contaminated sites in accordance with FDEP requirements for various clients He has also performed sampling and evaluation of groundwater and soil remediation systems, including system sampling, calculation of groundwater and air flow rates, and evaluation of system performance.

Professional history

Matthew has performed aquifer pumping tests using direct-reading and remote telemetry-enabled data logging equipment to evaluate local aquifer characteristics, and to assist with design of groundwater pump and treat systems. He has also evaluated influence of tides, regional groundwater table fluctuations, and local geology on raw pump test data. Matthew has participated on projects located in Miami-Dade, Broward, Palm Beach, Martin, St Lucie, Okeechobee, DeSoto, and Indian River counties in Florida.

Select project experience

District Wide Contamination Assessment and Remediation Services Contract BDY43, Florida Department of Transportation District 4, Districtwide, FL. Participated in multiple Level II contamination impact assessments for major FDOT roadways in South Florida, including I-75, I-95, I-595, US 1, and US 441. Work has included: project planning and budgeting, review of regulatory records, field reconnaissance and underground utility locates, oversight of subcontractors and field staff, sampling of groundwater and soil, preparation and review of project deliverables and invoices, and interaction with representatives of FDOT District 4.

Turnpike-Wide Spill Response, Contamination Assessment and Remediation Services Contract BE266, Florida Department of Transportation, Florida's Turnpike Enterprise, Districtwide, FL. Participated in multiple Level II contamination impact assessments and asbestos and metal-based coatings surveys for bridge projects for Florida's Turnpike Enterprise. Work has included: preparing project proposals, project planning and budgeting, review of roadway design documents, oversight of subcontractors and field staff, preparation and review of project deliverables, and interaction with representatives of Florida's Turnpike Enterprise.

Petroleum Restoration Program Contract GC 834 – South Region, Florida Department of Environmental Protection, Region Wide, FL. Prepared cost / scope proposals and change orders for multiple sites in Miami-Dade, Broward, and Palm Beach counties. Oversaw petroleum assessments in soil and groundwater, implementation of groundwater natural-attenuation monitoring plans, and preparation of site closure reports for state-wide petroleum clean-up sites.

Miscellaneous Environmental Engineering Services Contract RFQ No. 14-15-027, City of Miami, FL. Participated in preparing proposals and project budgets, overseeing field staff and subcontractors and preparing and reviewing project deliverables for the City's projects at Blanche Park, Bayfront Park, Grapeland Park and the City's ongoing NPDES Outfall stormwater sampling programs.

Virginia Key Landfill Tidal Influence Survey and Aquifer Pump Tests, Miami-Dade County Department of Environmental Resources Management, Miami-Dade County, FL. Assisted the project management and field staff in the setup, calibration, programming and operation of dataloggers for collection of tidal survey data and step-drawdown and constant flowrate pump test data for a shallow aquifer at the former landfill site. As part of a follow-up pump test, setup remote telemetry dataloggers for continuous real-time monitoring of chlorides and total dissolved solids under steady pumping conditions over several weeks. Assisted the project team in converting raw pump test data into EXCEL and TXT formats ready for use in modeling the design for a proposed groundwater pumping remedial system.

Soil and Groundwater Assessments NW 170th Street Interchange, FDOT Florida's Turnpike Enterprise, Hialeah, FL. Prepared proposals and change orders, project scope and budgets, oversaw field staff and subcontractors for the advancement of 10 soil and groundwater sampling locations adjacent to a closed landfill in NW Hialeah. Reviewed field and laboratory data and prepared Level II Impact to Construction Assessment reports.

Soil and Groundwater Assessment Vineland Road Exit Ramp, FDOT Florida's Turnpike Enterprise, Orlando, FL. Prepared proposal and change orders, project scope and budgets, oversaw field staff and subcontractors for the advancement of 11 soil and groundwater sampling locations in and adjacent to a truck repair facility located adjacent to east side of Turnpike at Vineland Road. Reviewed field and laboratory data and prepared Level II Impact to Construction Assessment report.

Soil and Groundwater Assessment Braddock Road Interchange Improvements, FDOT Florida's Turnpike Enterprise, Auburndale, FL. Prepared proposal and change orders, project scope and budgets, oversaw field staff and subcontractors for the advancement of 9 soil sampling locations and 6 groundwater sampling points along Braddock Road. Reviewed field and laboratory data and prepared Level II Impact to Construction Assessment report.

Ed Leding, PG

Phase I, II & III Assessments Team

Key expertise
Construction/Project Management
Contamination Assessment
Environmental Studies
Environmental Engineering
Environmental Impact Assessment Studies
Environmental Science
Hydrology/Hydrographic Surveying
Municipal Solid Waste
Pollution Consulting/Monitoring
Risk Assessment
Sampling

Education
MS, Geology, Unviversity of Arkansas, 1985
BS, Biology, University of Oklahoma, 1981

Years of experience
21 with AECOM | 31 Total

Training
40 Hour HAZWOPPER with current Annual 8 Hour Refresher

Registrations/Certifications
Professional Geologist: FL #PG1292
AECOM Certified Project Manager

Ed is a Florida Professional Geologist with over 30 years of environmental experience. Ed joined AECOM in February 1999 as a Senior Geologist. His responsibilities include managing projects and providing technical support on environmental audits, site assessments, and remediation projects throughout South Florida.

Professional history

Ed's experience includes providing technical design and support for remedial actions to abate soil and groundwater impacts from petroleum products, pesticides/herbicides, metals and solvents and evaluating current environmental impairment and potential environmental liability of a property prior to purchase. Other project management duties involve the operation and maintenance oversight of soil and groundwater remediation systems, optimizing systems to expedite remediation and site closure, oversight of underground storage tank removals, closures and compliance, cost estimates and oversight of project budgets. Ed has managed environmental contracts for clients such as Broward County Aviation Department, The Seminole Tribe of Florida, Broward County, School District of Palm Beach County (District), for Palm Beach County Facilities Development and Operations, and the South Florida Water Management District.

Select project experience

Hydrological Evaluations, Palm Beach County Solid Waste Authority Palm Beach County, FL. Project manager and technical reviewer for the LevelTROLL® units installed at Park Ridge Golf Course as well as the two pressure transducers installed in the East Lake and West Lake. Provided quality review for the reported data and data interpretation. Provided support for the Aqua TROLL® dataloggers and BaroTROLL® units installed at the Dyer Park site and Site 7 (Renewable Energy Park) site. Technical review for Aqua TROLL® dataloggers and BaroTROLL® data collected from the Lantana Sanitary Landfill site. Historically provided technical review for the former Cross State Landfill which was abandoned in 2015.

Environmental Monitoring/Permitting/ Regulatory Services / Broward County Landfill, Broward County Landfills - Hollywood Yard Trash Landfill –Broward County, Hollywood, FL. Senior project geologist to complete a semi-annual post-closure surface and ground monitoring of this former Class III landfill that was operated by the City. The landfill was originally permitted in 1979 by Broward County and the State of Florida Department of Environmental Regulation and was initially filled with pitrock dredged from a nearby lake before any brush was deposited. In 1992 it was used to dispose of debris generated from Hurricane Andrew and was subsequently closed in 1995 under a State permit. The landfill is currently regulated by Broward County under a post-closure/long-term care permit under the requirements of Chapter 62-701, Florida Administrative Code. AECOM provided permitting services for renewal of the landfill permits issued by the Florida Department of Environmental Protection and Broward County Environmental Protection and Growth

Management Department. The permits were issued in late 2015 and early 2016. AECOM generates a Biennial monitoring report in accordance with Florida Administrative Code Rule 62-701.510(8)(a) and 62-701.510(8)(b) for the Broward County Solid Waste and Recycling Services (SWRS) Class I Broward County Landfill (BCL).

Broward County Aviation Department, Broward County, FL. Project Manager: Since 2008, AECOM Technical Services, Inc., (as URS), has provided environmental consulting for Broward County Aviation Department (BCAD) on a work authorization basis through the Broward County Qualified Vendor List for Environmental Consultant Services. In 2015, working with BCAD and the Florida Department of Environmental Protection (FDEP), AECOM negotiated a Memorandum of Agreement (MOA) for the Fort Lauderdale-Hollywood International Airport. Other services provided to BCAD include but are not limited to Baseline Exit closures, Phase II ESAs, Site Assessments, Remedial Action Plans, Remedial Actions, Compliance Inspections, Rapid Response, and Peer Reviews.

Palm Beach County Facilities Development and Operations – Site Assessment at Fire Rescue Training Facility, West Palm Beach County, FL. Project Manager: Manager for the Site Assessment at the Palm Beach County Fire Rescue Training Facility. Performing an assessment per Florida Administrative Code Chapter 62-780 for Per- and Polyfluoroalkyl Substance (PFAS) impacts to the soil and groundwater at the fire training area. The assessment consists of advancing 25 soil borings, the collection and analysis of 57 soil samples for PFAS. The installation of four groundwater monitor wells and the collection of groundwater samples for analysis of PFAS. Formulation of a Site Assessment Report per FAC Chapter 62-780. The field staff completed inhouse AECOM PFAS training prior to implementing field work. The assessment is ongoing.

Seminole Tribe of Florida, Hollywood, FL. Project Manager: Manager for the removal of five, 4,000-gallon underground storage tanks (USTs) at a site located in Hollywood, Florida. Over 89 tons of petroleum impacted soils were also excavated and transported offsite and disposed.

Implemented Initial Remedial Action (IRA) by installing an air-sparge system and conducting one week of air-sparging activities. Following the UST removals and IRA implementation the site was restored to match the surrounding area. To evaluate the extent of potential impacts, two temporary monitor wells were installed and sampled for petroleum constituents. The groundwater samples did not indicate the presence of petroleum constituents above applicable state standards. The Tank Closure Assessment recommending “: No Further Action” and Initial Remedial Action report was submitted to Broward County for review. As requested by Broward County two quarters of groundwater monitoring were conducted, after which AECOM requested an NFA which was approved.

Fernando Navarrete, PhD, PE

Engineering Service Lead

Key expertise
Water Reources
Water Rehabilitation/Improvements
Construction Mangement Services

Education
PhD, Ocean Engineering, Florida Atlantic University, 2001
BS, Civil Engineering, UNAM-Mexico, 1991

Years of experience
18 with AECOM | 26 Total

Training
CPR / First Aid

Registrations/Certifications
Profesoinal Engineer: Florida #69999
AECOM Certiied Project Manager
AECOM Lead Verifier – Water Resources

Fernando has 26 years of experience in water resources projects design including water and stormwater rehabilitation projects, hydraulic and hydrologic modeling, groundwater modeling and monitoring, stormwater management, and complete design of water resource projects. Some his clients include the SFWMD, FWC, Broward County, FPL, City of Oakland Park, and City of Miramar.

Professional history

Fernando has 26-years of experience in design and project management of complex large water resources projects. His experience includes water resource projects from conceptual design to construction certification. More specifically his experience includes; hydraulic and hydrologic modeling, groundwater modeling and monitoring, design and project management of Stormwater Treatment Area (STAs) including the modeling of the manmade wetlands (STAs) and the design of small and large pump stations, levees canals and water control structures.

In addition to his design experience he has been the engineer or record as well as the project manager for construction management services of water resources restoration projects. The combination of design and field experience allows Fernando to provide input to solve time critical issues that arise during design and construction.

Select project experience

South Florida Water Management District, STA 1W – Expansion #2 Project, FL. Project manager for the design of the project including: Topographic Surveys, Geotechnical exploration, 1D and 2D H&H modeling of the complete system, Geotechnical Analysis, Hazard Potential Classification, and Freeboard Analysis. The AECOM team is currently working on the intermediate and final design of the Stormwater Treatment Area (STA) including the design of a 5.5 connection canal, inflow, spreader, collection and outflow canals, culverts, spillways, gates and weirs. The project also includes the complete design of two Inflow pumps stations (500 cfs and 600 cfs each) one outflow pump station (625 cfs); and a 40 cfs seepage pump station.

Water Main and Storm Drainage Improvements for the Bid Package #11, City of Oakland Park, FL. Lead senior engineer providing, design and construction management services for utility improvements for Bid package # 11. The improvements included watermain replacement and relocation, sanitary sewer installation and the rehabilitation of the storm water management system. The objective of the utility improvements was to abandon old undersized watermains and to improve the storm drainage system to relieve areas of localized flooding without interrupting utility service.

Water Main and Storm Drainage Improvements for the Bid Package #8, City of Oakland Park, FL. Project Manager for the construction management services for utility improvements for Bid package # 8. This ongoing project was given to AECOM due to the good performance on the Bid Pack #11 job. The project includes the watermain replacement and relocation and the rehabilitation of the stormwater management system. The addition of sidewalks and refurbishment of one lift station.

Lakeside Ranch Stormwater Treatment Area (South), SFWMD, FL. Dr. Navarrete is currently the Project manager for the construction management services for the construction of the second phase (south) of the Lakeside Ranch STA which includes five (5) stormwater treatment cells, inflow and outflow control structures, cast-in-place concrete culverts and over 9 miles of interior and exterior levees.

Lake Placid Scrub Unit Hydrologic Assessment, Highlands County, FL. Project manager for the hydrologic and hydraulic analysis of the Lake Placid Scrub Unit (LPS) for the Florida Fish and Wildlife Conservation Commission (FWC). Different potential restoration alternatives were evaluated to determine the potential improvement of impaired depressional wetlands and groundwater seepage communities. The EPA's Storm Water Management Model (SWMM) was used for the analysis A second analysis was conducted to reduce the erosion along two unpaved access roads in the LPS due to stormwater flows. Currently. The AECOM team proceeded with the design and permitting for the hydrological restoration alternative selected.

Bayfront Park Corrective Action Design, city of Miami, FL. Lead civil engineer for the design of soil replacement and mixing for the reduction and elimination of contaminated soils in Bayfront Park, and Engineer of Record for the construction.

Compartment C Buildout Project, SFWMD, FL. Lead civil engineer for the basis of design report and associated preliminary studies including the following: H&H modeling, water availability evaluation, DMSTA analysis, Hazard Potential Classification, and Freeboard Analysis. Subsequently led the design of the Stormwater Treatment Area including the detailed H&H modeling for the complete system; design of canals, culverts, levees, gates, weirs, and all civil aspects; design of a 100-cfs hydration pump station; and coordination of all design disciplines. Also managed the civil design of the G-508 Major Pump Station (2,100-cfs) and a 75-cfs seepage pump station including canals, levees, and all civil aspects.

Deering Estates Flow Way Pump Station, SFWMD, FL. Participated in the design of the Deering Estate project, which included the construction of a ¼ of a mile of extended canal to a new 100-cfs pumping station, installation of a 60-inche discharge pipe with under-road crossing of Old Cutler Road and an outlet spreader structure. The project also included the construction of 2-acres of educational man-made wetland. Fernando also served as the Engineer of Record (EOR) for the Engineering During Construction.

Gino Mora

Engineering Services – Stormwater Lead

Key expertise
Civil Engineering - Infrastructure Design and Drafting
Construction Management and Inspection

Education
BS, Civil Engineering, Florida Atlantic University, 2015
MS, Civil Engineering, Florida Atlantic University, 2018

Years of experience
5 with AECOM | 8 Total

Registrations/Certifications
FDEP Qualified Stormwater Management Inspector, October 2018

Gino's background includes experience working on a variety of large and complex utility and infrastructure improvement projects performing design and construction engineering inspection.

Professional history

Gino's experience includes civil engineering design, technical specification development, regulatory permitting and construction management/inspections for large utility improvement projects for municipalities, encompassing roadway, stormwater drainage, water main and sanitary sewer improvements. The combination of design experience and field experience allows Mr. Mora to provide input to solve issues that arise during construction in a timely manner. Some elements include water and wastewater distribution and collection system, paving grading and drainage plans, levees and water control structures, preparation of construction drawings and details, contract bid documents and technical specifications. His construction experience has been related to municipal infrastructure and surface water management infrastructure.

Select project experience

STA 1W Expansion #2 Project - Pump Stations and Stormwater Treatment Area, South Florida Water Management District (SFWMD), FL. Staff Engineer. This project consists of approximately 1,800 acres of STA expansion to the existing STA-1W located within Palm Beach County. The project includes the construction of three new STA cells, a 6-mile concrete lined connection canal, perimeter and interior levees, canals, structures, culverts, boat ramps, and maintenance ramps. Structures include one fixed divide weir to balance flows among the cells and 11 control structures to regulate flows within the STA treatment cells. Inflow and outflow control structures are double barrel reinforced concrete box culverts with slide gates, control buildings, platform mounted stilling wells, and include electrical and remotely operated telemetric control. Project also includes construction of Florida Power & Light (FPL) tower pads and access ramps at all FPL transmission poles and installation of FPL Distribution. Gino's responsibilities include reviewing and preparing technical specifications as well as design drawings.

Bid Pack #8 Infrastructure Improvements: East Zone South of Park Lane East Project, City of Oakland Park, FL. Design Engineer and Inspector. The objective of this infrastructure improvement included water main replacement, sewer force main replacement, rehabilitation of Lift Station B-1, drainage improvements, sidewalk installation, and asphalt overlay. The proposed drainage improvements included the construction of new stormwater conveyance system piping networks and exfiltration trenches along NE 16th Ave, as well as modifications of the existing conveyance that discharge into the existing interconnected lakes and canals. The water main replacement consisted of replacing 18,429 linear feet of existing two (2) inch diameter, four (4) inch diameter and six (6) inch diameter water mains with six (6) inch diameter or eight (8) inch diameter water mains. Mr. Mora responsibilities included reviewing design documents and drawings, conducting construction engineering inspections, and assisting the Engineer of Record (EOR) with the preparation of the closing documents and drawings.

Historic Miramar Infrastructure Improvements Phase III, City of Miramar, FL. Resident Inspector. The objective of this infrastructure improvement project was to replace undersized water mains that were nearing their expected useful life, provide a higher level of sanitary sewer service, improve the storm drainage system to relieve areas of localized flooding while minimizing interruptions to existing services, as well as milling and resurface of FDOT and city roads. The project includes a new lift station, the installation of 32,555 linear feet of sewer main, 48,597 linear foot of water main, and 7,592 linear feet of storm drainage between solid and exfiltration trench. Mr. Mora responsibilities included performing construction engineering inspections and coordination with the Engineer of Record (EOR) relating to submittals and RFIs, submittal of daily reports, review and approval of the Contractor's monthly pay requests.

Bid Pack #11 Water Main and Drainage Improvements, City of Oakland Park, FL. Design Engineer and Resident Inspector. The objective of this water main and drainage improvement project was to replace/upgrade approximately 10,300 linear feet of existing two (2) inch diameter water main with six (6) inch diameter or eight (8) inch diameter water mains. In addition, approximately 1,064 linear feet of new exfiltration trenches, 2,635 linear feet of HDPE drainage pipes sized between 18- and 24-inch diameter, and 131 linear feet of 24-inch diameter RCP. Gino participated in the design and drafting of the City of Oakland Park utility improvement and drainage project, as well as performing construction engineering inspections and coordination with the Engineer of Record (EOR) relating to submittals and RFIs, submittal of daily reports, review and approval of the Contractor's monthly pay requests, and preparation of project record drawings.

Lakeside Ranch Stormwater Treatment Area South, South Florida Water Management District (SFWMD), FL. Staff Engineer and Inspector. The objective of the project was to treat stormwater in order to reduce phosphorus loading to the Lake Okeechobee and the Everglades. The project and its associated structures included five treatment cells located south of the preservation area, comprised approximately 30,328 linear feet of perimeter levees and 17,442 linear feet of interior levees on a 2,700-acre parcel of land. Gino assisted with the review and preparation of reports and technical specifications, the entry of information into the South Florida Water Management District System Primavera/Expedition, as well as inspector during its construction.

Palm Beach County Solid Waste Authority - Injection Well Pump Station Design, West Palm Beach, FL. Staff Engineer. The objective of the project was to create increased reliability and redundancy for the injection well pump station, which serves the North County Landfill's Leachate, Recycling, Biosolids Palletization, and Industrial Wastewater systems. Gino participated in the analysis, design process and detailing of different structural elements. In addition, Gino contributed with the review of technical specifications of the different structural components of the project.

AAF "All Aboard Florida" from St. Lucie County (D9) to Miami-Dade County (D10), Florida East Coast Railroad, FL. Staff Engineer. This project entails the introduction of a second track along a 120-mile segment of the FEC Railroad corridor, which includes the reconstruction of approximately 260 railroad crossings, extensive utility coordination, signalization and roadway reconstruction. Gino worked with the team in charge of the production of grade crossing design. As part of this team, Gino participated in the structural evaluation, analysis and design of the different structural elements. The analysis and design were performed using finite element computer model RISA 3D software.

Daniel Baker, PE

Engineering Services – Civil Engineering Lead

Key expertise
Construction/Project Management
Design and Permitting of Large Stormwater Management
Utilities
Neighborhood Improvement

Education
BS, Civil Engineering, Florida State University

Years of experience
11 with AECOM | 14 Total

Registrations/Certifications
Professional Engineer: Florida #73169

Daniel has 14 years of engineering experience including engineering design, construction management, and construction engineering inspection. In addition to engineering design and construction management work, permitting services have been provided to support these engineering and construction projects through federal, state, and local regulatory agencies.

Professional history

Daniel's key project experience includes construction management services provided on the South Florida Water Management District's Lakeside Ranch STA South, S-140 Pump Station Refurbishment, and the Compartment C Build-out projects. Related engineering and construction services have been performed on various large- and small-scale projects including wetland and stream restorations, utility services, land development, and roadways. Construction experience includes the successful management of numerous projects simultaneously during all phases of a project with tasks required of the prime consultant from full coordination of the design team to serving as the liaison between the Owner and the Contractor.

Select project experience

Lakeside Ranch Stormwater Treatment Area STA-South, Martin County, FL. Onsite contract construction manager duties include the daily management tasks required for the construction and successful completion of five (5) new flow-ways (STA cells) leading efforts to ensure conformance with the contract drawings, technical specification, budget, schedule, and permit requirements. Responsibilities include serving as the owner's lead correspondent with the prime contractor all project coordination; management of a full service inspection team composed of one (project controls specialist, one lead inspection representative, one geotechnical technician, and various other off-site personnel to provide quality assurance for conformance with the contract documents and permit requirements; coordination with the Engineer During Construction (EDC) relating to submittals, requests for information, field orders, proposals/VEPs, and change orders; and other tasks including leading project meetings, review of change orders, review and approval of the Contractor's monthly pay requests, and preparation of monthly billing. Construction Management Services of the $35M project included quality assurance and oversight of the STA-South components including 788 acres of new flow-way, 9+ miles of levees, 10 miles of canals/ditches, 9 inflow/outflow control structures with instrumentation and control, 6 overflow spillways, 2 culvert structures, 1 discharge structure/highway crossing, 10 flow control weirs, and 7 miles of underground power distribution. A close working relationship with the District's Project Manager (DPM) and other District staff has been maintained throughout the project to provide the best completed project and service possible. A vast understanding of the project and the parties involved was obtained through current and prior related work and a proactive approach to all tasks was beneficial to the position as construction manager.

Compartment C Buildout, SFWMD, Hendry County, FL. Onsite contract construction manager duties include the daily management tasks required for the construction and successful completion of STA's 5-4, 5-5, and 6-4 for conformance with the contract drawings, technical specification, budget, schedule, and permit requirements. Responsibilities include general coordination with the Contractor; management of the inspection team which includes one administrative assistant, four inspection representatives, one engineering technician and various offsite personnel to provide quality assurance for conformance with the contract documents and permit requirements; coordination with the Engineer During Construction relating to submittals, field orders, value engineering proposals, requests for information and proposals; and other tasks including preparation for and participation in project meetings, review of change orders, review and approval of the Contractor's pay requests, and preparation of monthly billing. Construction Management Services of the $47M project included quality assurance and oversight of the Buildout components including 4,850 acres of new flow-way,

18 miles of levees, 23 miles of canals, 1-100 cfs pump station, 20 control structures, 18 miles of underground power distribution, and instrumentation & control at all 22 new structures. A close working relationship with the District's Construction Manager (DCM) and other District staff has been maintained throughout the project to provide the best service possible. Prior to serving as the Contract Construction Manager, work included daily inspection of construction activities required of a staff inspection representative. Specific inspection responsibilities included nearly 18-miles of underground MV electrical distribution system, 20 Flow Control Weirs, 9 Hydration Structures, and Levee construction. A vast understanding of the project and the parties involved was obtained and a proactive approach to all tasks was beneficial to the position as construction manager.

S-140 Pump Station Refurbishment, Collier County, FL. Assistant resident engineer and onsite owner's representative, tasks ranged from daily construction inspections and reporting, to review of shop drawing submittals, product data, requests for information, change orders, and contractor coordination. The project included the replacement of all electrical wiring and equipment including motor control for the station, replacement of three main engines including refurbishment of the associated 435 cfs pumps, and automation of the refurbished units. Daily communications with the client's project manager and field staff were beneficial to the project and improved the quality of work obtained from the contractor's team.

Light Harbor Park, Riviera Beach, FL. Project engineer and construction representative serving as the engineer of record's representative and construction manager with responsibilities including daily project management tasks, construction administration including Client and Contractor coordination, and construction engineering inspections for the first new public boat ramp facility constructed by Palm Beach County in nearly 50-years. Site development included the construction of an upland boat basin with aluminum floating docks and over 500-feet of new seawall accessed by six (6) boat launching ramps, a stormwater management system, onsite utilities including a lift station and public restroom facilities, and a parking lot to accommodate 72 boat trailers. Tasks also included design assistance, preparation of the construction drawings and details, technical specifications, bid documents, and permitting through the US ACE, USCG, FDEP, FWC, FDOT, Palm Beach County Health Department, and the City of Riviera Beach.

Phil Foster Park Multi-Purpose Building, Riviera Beach, FL. Project Engineer and Construction Representative serving as the engineer of record's representative and construction manager responsible for daily project management tasks, construction administration, construction engineering inspections, and the design to relocate existing site utilities to accommodate the addition of a new multi-purpose building to the existing Palm Beach County park. Tasks also included design and preparation of paving, grading, and drainage plans, water and sewer plans, surface water management calculations and modeling, preparation of contract documents, technical specifications, and an engineer's cost estimate, and permitting through the US ACE, USCG, FDEP, FWC, FDOT, Palm Beach County Health Department, and the City of Riviera Beach.

Harbourside Place, Jupiter, FL. Engineer responsible for preparation of hydrologic and hydraulic calculations for an environmental resource permit through the South Florida Water Management District and design assistance for a lift station to serve the 9.5-acre mixed use development. Tasks included calculations required for the preparation of a surface water management report and stormwater modeling with AdICPRv3. The project incorporated the use of a subsurface stormwater management system from StormTech. StormTech SC-740 detention chambers were used for water quality attenuation and storage. Lift station work included as-built review, permit assistance and design computations to accommodate approximately 100,000 gallons of daily sanitary flow from the development with a connection to an existing offsite force main, preparation of a lift station report, and preparation of utility permit applications for submittal to the Palm Beach County Health Department.

N.W. 12th Avenue, Boca Raton, FL. Assistant engineer for design and permit assistance for the widening of approximately 3/4 of a mile of roadway from 2-lanes to 4-lanes including addition of medians, a surface water management system, turn lanes, and bicycle lanes. Tasks also included pipe sizing calculations and modeling using ASAD, and all utility coordination including onsite inspections and meetings with utility representatives.

Ritz Carlton Stormwater Pumps, Manalapan, FL. Engineer responsible for providing design assistance for stormwater pump stations at the Ritz Carlton Hotel to alleviate localized drainage problems. Tasks included review of existing drainage system, design of two stormwater pump stations, pump station report preparation, and construction drawings and details.

Improvements to Rutherford Lane, Town of Haverhill, FL. Engineer responsible for design and construction observation for the widening of 500-feet of residential roadway including a new surface water management system within the Town of Haverhill. Tasks included civil engineering inspections (CEI) throughout construction of the project, preparation of paving, grading, and drainage plans, surface water management calculations and modeling, preparation of contract documents, technical specifications, and an engineer's cost estimate, and permitting and construction coordination through Palm Beach County Land Development Division.

Roger Williams, PE

Engineering Services – Water/Wastewater Lead

Key expertise
Water and Wastewater Conveyance
Pumping System
Tunneling/Trenchless Installations
Permittting
Utilities

Education
MS, Environmental Engineering, Florida International University, 2003
BS, Civil Engineering, Florida International University, 2001

Years of experience
14 with AECOM | 19 Total

Training
Microtunneling and Pilot tubes, Colorado School of Mines
Pressurized TBM Tunneling, Society of Mining Metallurgy and Exploration
Design and Construction of Micro-tunneling Projects, ASCE
Groundwater Flow and Transport Modeling with GMS MODFLOW

Registrations/Certifications
Professional Engineer: FL #68199
AECOM Certified Project Manager

Roger has 16 years of planning, design, permitting, construction and program management experience specializing in water and wastewater utilities, highway drainage systems, and major canal and levee earthwork projects.

Professional history

Roger has analyzed, designed, permitted and managed the construction of small and large diameter pressurized and gravity flow pipelines and tunnels ranging from 6-inches to 12-foot in diameter. His expertise has included numerous installation methods such as the traditional open cut methods and trenchless installations such as Horizontal Directional Drill (HDD), Micro-tunneling (MT) with casings, and Tunnel Boring Machine (TBM) tunnels with precast concrete segmental liners. Roger is versed in the application of various pipe materials including Ductile Iron (DI), High Density Polyethylene (HDPE), Poly Vinyl Chloride (PVC), Pre-stressed Concrete Cylindrical Pipe (PCCP), Reinforced Concrete (RC), and Fiberglass Reinforced Mortar Pipe (FRMP) materials of construction. Roger is proficient in the preparation of detailed design/construction drawings, technical specifications, and procurement documents for projects delivered through Design-Bid-Build and alternative delivery methods such as Design-Build. Roger is a member of the AWWA Technical Standards Committee for Concrete Pipe Products and Gasket Materials, and now serves as the Segment Leader for AECOM's Miami Metro Conveyance Practice.

Select project experience

72-inch PCCP Redundant Main at Preston WTP, Miami-Dade Water and Sewer Department, Miami, FL. Project manager for the design and construction of 1200 linear feet of 72-inch PCECP main along West 2nd Avenue, between 11th and 13th Streets, and the associated water, sewer, and drainage relocations. The project entailed four complex (4) interconnections to an existing active Interpace-era pipe with provisions for mitigating risks and contingency plans.

Miami Avenue 48-inch FM, Miami-Dade Water and Sewer Department, Miami, FL. Design build engineering manager for the 13,000 linear of 48-inch PCECP Force Main, 5,000 linear feet of 12-inch Water Main Improvements, 1000 linear feet of 24-inch drainage, and 72-inch Jack and bore crossing along Miami Avenue, NW 2nd Avenue, and NW 1st Avenue, between NE 36th and 8th Street Responsible for all utility design, MOT, permitting, and construction management for the accelerated project involving City of Miami, FDOT, MD-PWD, and the stakeholders of Wynwood, Design District, and MidTown.

48-inch Downtown Water Main Loop, Miami-Dade Water and Sewer Department, Miami, FL. Manager and technical lead for the detailed design, and development of Design Criteria for three Micro tunnel crossings consisting of a 72-inch steel casing and 48-inch DI carrier pipeline along NW 1st Avenue and 7th street, NW 1st Avenue and NW 12th Street, and Biscayne Blvd and NE 5th Street. Lead the efforts including alignment studies, staging plans, establishing contract work areas, and development of the Geotechnical Baseline Report.

Collier County Master Pump Station 306, Collier County, FL. Task manager and EOR for the design of 185 linear feet of 42-inch Microtunnel with steel casing containing a 24-inch PVC a carrier main under US-41, and in the vicinity of Entrance Street. Elements included: trenchless design; 20 ft. deep shafts; instrumentation and monitoring plan; and ancillary venting systems for O&M.

Design Build Criteria and Construction Management Services for the Installation of 54-inch Redundant Force Main on Washington and Euclid Streets, City of Miami Beach, Miami Beach, FL. Project manager/ construction manager for the development of design criteria, technical specifications, 30% design drawings and overall construction management for the installation of 4600 linear feet of 54-inch Redundant Force Main by micro tunneling (pipe jacking) using a minimum of three shafts, and 700 linear feet of 54-inch open cut installation. The projects were subsequently value engineered to a 3300 linear foot 54-inch outside diameter HDD which is a record drilling effort in the SE United States.

Design Build Criteria Package for the Replacement of the 54-inch Force Main and 20-inch Water Main Crossing the Government Cut and Norris Cut Channels, Miami-Dade Water and Sewer Department, Miami, FL. Project manager and design criteria engineer of record for developing the design-build criteria package for the replacement of the 54-inch-diameter force main that extends from Miami Beach to the Central District wastewater treatment plant, and the 20-inch-diameter water main between Port Island and Fisher Island. Project entails development of design criteria, technical requirements, specifications, geotechnical baseline report, engineering drawings, environmental resource permits, and acquiring the land rights to support the replacement of the water and sewer utilities via: 5300 linear ft of 9-foot diameter tunnel with pre-cast concrete segmental liners, under Norris Cut; and 900 linear feet of 60-inch Micro-tunnel with steel casing, under Fisherman's Channel; and 1200 linear feet of 72-inch micro-tunnel with casing, under Government Cut Channel; 1000 linear feet of 8-inch HDD on Fisher Island, and 2700 linear feet of 60-inch open cut installation on Virginia Key.

Corrosion Evaluation and Cathodic Protection of a 60-inch PCCP FM, Miami-Dade Water and Sewer Department, Miami-Dade County, FL. Project manager for the design of a cathodic protection system to assure 60-year service life a 60-inch PCCP main in Miami Beach that transmits raw sewerage. Project included soil analysis, stray current measurements, and design protection system, complete with specifications that consisted of bonding straps, sacrificial zinc anodes, with access for long term maintenance and operation.

NE 79th Causeway HDD Water Main Installation, Miami-Dade Water and Sewer Department, Miami, FL. Engineer of record for the acquisition of ERPs including FDEP, USACE, and DRER Class 1 to support the installation of 1100 linear feet of 30-inch HDD water main under Biscayne Bay, and the excavation and removal of 14 linear feet of existing submerged DI pipe. Led the effort that entailed performance of benthic surveys, and development of method statements, pollution prevention plans, monitoring procedures, and contingency methods, technical specifications, cost estimates associated with the project that was orchestrated in close proximity to the bay, and adjacent to wetland habitats.

Evaluation HDD Alternatives to Replace the Existing 54-inch Force Main Traversing the Government Cut Channel, Miami-Dade Water and Sewer Department, Miami-Dade County, FL. Project manager/lead engineer for the evaluation of a 9000 linear foot dual bore 42-inch diameter HDD alternative for replacing the existing 54-inch sanitary sewage force main between Miami Beach and Virginia Key, and 3300 linear foot of 36-inch HDD between Fisher Island and Miami Beach. Evaluation entailed a detailed literature review; HDD technology assessment; hydraulic analysis; installation load and geometric analysis; easement assessment; risk analysis; pricing of the scheme/methodology; and conclusively developing a final recommendation report.

South District Wastewater Treatment Plant High Level Disinfection Upgrade to 285-mgd Yard Piping, Miami-Dade Water and Sewer Department, Miami, FL. Provided construction management/oversight, inspection, acceptance testing, RFI coordination, and claims analysis services for the installation of 1144 linear feet of 120-inch Pre-Stressed Concrete Cylinder Pipe (PCCP), 642 linear feet of 108-inch PCCP, 1000 linear feet of 84-inch PCCP, and 3000 linear ft of 48-inch Ductile Iron Pipe (DIP). Other pipe materials included Poly Vinyl Chloride (PVC), High Density Polyethylene (HDPE), and steel. Oversaw the installation of ancillary pipe structures including tapings valves, relief outlets, saddles, thrust restraints, temporary bypasses, and coordinated the testing and restoration work in compliance with MDWASD specifications.

Update of Technical Specifications and Standards, Miami-Dade Water and Sewer Department, Miami, FL. Task manager for the review and update of MDWASD's existing technical specifications, design details, and construction standards, and preparation the Pre-approved Material List for various pipe materials and fittings to be utilized on developer (donation) related projects and large diameter capital improvement pipeline projects.

Dan Levy, PG

Sediment Dredging Lead

Key expertise
Sediment Dredging
Dredged Material Management
Innovative Technologies
Coastal & Freshwater Wetland Mitigation Design and Monitoring
NEPA Studies
Ecosystems Management
Program Management

Education
Graduate Studies, Computer Modeling, Florida State University, 1988
BS, Geology, Florida State University, 1984

Years of experience
17 with AECOM | 35 Total

Training
40-Hour OSHA Health and Safety
8-Hour OSHA Annual Health and Safety
8-Hour OSHA Site Supervisor Health and Safety

Registrations/Certifications
Professional Geologist: Florida #1230
Certified Hazardous Materials Manager / Master Level: #5446
AECOM Certified Project Manager

Dan is a Vice President with the AECOM Environmental Business Line and has 35 years of experience in the environmental industry. Dan's experience includes research and development of innovative treatment technologies for the prevention of Harmful Algal Blooms (HABs) and the implementation of innovative algae harvesting technology to remediate toxic algal blooms. In cooperation with the FDEP.

Professional history

Dan specializes in sediment dredging and management technologies. Dan is a Professional Geologist with first-hand experience developing innovative dredging solutions. He manages AECOM's sediment dredging operations in the SE region and has served as the Project Manager for numerous high-profile dredging projects, including Lake Okeechobee, the largest Dredging Demonstration project conducted in Florida; NSB Kings Bay; and development of innovative dredge plans to reduce the shoaling problems within entrance channel and Wagner Creek, deemed one of the most polluted waterways in Florida. Dan is also the co-inventor of the patented SEDCUT Dredge Technology for selective and strategic removal of sediments.

Select project experience

Wagner Creek/Seybold Canal, FL. Developed Alternative Dredge Plans to minimize ecological and residential impacts. Obtained permit approval from FDEP and FWC in less than 90-days.

City of Miami, Wagner Creek Seybold Dioxin Contaminated Sediment Dredging, FL. Project Manager for the $18.4M Design/Build contract to remove hazardous waste sediments to restore what has been considered the most polluted waterway in Florida. Developed three separate innovative dredge plans utilizing customized dredge equipment to minimize draft depth and use of unique water quality protection procedures, including aqua barriers, air curtains, and moon pools to prevent impacts to the downstream Outstanding Florida Waters of the Miami River and to manatees that reside in these water bodies. The existing field conditions for both Wagner Creek and Seybold Canal are unique and posed several significant logistical constraints that required extensive regulatory consultation with FDEP, FWC, USACE, and DERM to obtain approval for the innovative dredge approaches. Both waterways are tidally influence, provide refuge to manatees and are located in high-density mixed-use urban areas with failing revetments and bulkheads. Permits were received in less than 90 days.

Lake Marion Dredge Feasibility Study FL. Developed innovative dredge plan to remove over 16.5-million CY of nutrient-rich sediments from the lake. Work was performed directly for FWC.

Pilot Dredging, Lake Okeechobee, FL. Pilot Dredging ($1M / two-year project). Developed innovative dredging design to remove over 20- million-CY of sediment from the lake. Obtained approval from FDEP and FWC to conduct pilot demonstration project.

Lake Marion/Dredge Feasibility Study, FWC, FL. Technical manager for providing services that included bathymetric survey using both dual frequency and ground penetrating radar (GPR), sediment characterization, bench scale testing (column settling and jar testing), conceptual dredge plans, and development of an innovative dredge approach using in-lake capping and re-

contouring to restore the lake's water quality. Lake Marion is a 2,995-acre lake located on the Lake Wales Ridge (Central Florida). The lake has over 16.5-million CY of organic sediments that are responsible for declining water quality and transitioning the lake to a eutrophic status. The innovative dredge plan was shown to provide over $50M in cost savings over conventional dredging and was accepted by the FWC as the preferred alternative.

NSB Kings Bay Alternative Dredge Design, NAVFAC-Southeast, GA. Project director for the development of an alternate Dredging Plan to minimize the frequency of maintenance dredging activities in the waterfront and inner-channel areas at NSB Kings Bay. Excessive shoaling in these areas requires annual dredging to maintain draft depths. Dredging volumes can reach 2-million CY annually. Several dredging alternatives were developed to minimize dredging costs and sediment accumulation in the Water Restricted Areas (WRAs). Hydrodynamic and sediment transport modeling was conducted to evaluate the sediment transport impacts for each scenario and to identify potential alternatives that could potentially be carried forward for further consideration.

Lake Okeechobee Pilot Dredging Project, ERDC, Okeechobee, FL. Served as Project manager for a two-year $1M research and design pilot dredging project to demonstrate a new dredge technology (SEDCUT) that could selectively remove a thin 30-cm layer of contaminated surface sediments from a slightly denser mud substrate. Test results were successful and demonstrated that a 30-cm thick sediment layer of fluid mud (<5% solids) could be removed with little or no re-suspension of the underlying mud substrate. Key features of the technology included: 1) buoyancy compensation chambers to control the unit's contact pressure with the underlying substrate to allow the dredge head to ski along a density plane, 2) load indicators to activate the dredge pump, 3) a water manifold system to regulate solids content of the dredge slurry, and 4) adjustable intake shield to minimize dilution water in the dredge pump.

Cape Sable Canal Restoration, Everglades National Park, FL. Project manager for the $6.9M Coastal Restoration project that included hydraulic dredge design, permitting, and construction administration to transport sediments over some of the Park's most sensitive habitat. Because of the remote location of the project (over 20-miles from the closest upland area) and the sensitive natural environment, environmental permitting and logistics played a key role in engineering a workable solution. Project constraints included: 1) marine transportation for 5,000 CY of limestone sand and heavy equipment to remote wilderness areas, 2) site access limited to October 1 through March 31 to avoid the crocodile nesting season (crocodile nests were identified in the work areas and could not be impacted), 3) shallow marine access channel (limited to 2-ft maximum draft), and 4) closest staging area over 60 miles via open water transport from the project site (Key West). To work around these constraints and obtain regulatory and Park approval, an innovative hydraulic dredge system was designed to hydraulically transport sediments over 1.5 miles to the construction site. The project was successfully completed and solved one of the biggest ecological problems in the Park.

Marina Dredging, Everglades National Park, FL. Project manager for design and implementation of hydraulic dredging operations to remove calcium carbonate silt and marl sediments from the Everglades City Marina. The project consisted of obtaining permits and performing hydraulic dredging operations to remove approximately 1,125-CY of silt sediments from the marina boat basin. Worked with the Florida Department of Environmental Protection (FDEP) to allow the dredged sediment to remain on-site and avoid the significant cost of off-site disposal for the client. Due to the limited space within the marina, dredging was performed using an un-manned hydraulic-powered Mudloader® dredge, equipped with a rotating cutterhead and high suction pump stationed on pontoons.

North Lake/Dredge Feasibility Study, City of Hollywood, FL. Project manager for providing the full spectrum of dredge design and engineering services necessary to restore the navigational channel and environmental quality of the lake. The lake is an 84-acre manmade tidal lake that serves as the center of the City's public boating area. Services provided included surveying, geotechnical bearing tests, water quality analysis, dredge plan design, cost estimating, and regulatory permit negotiations.

Canal Dredging, Miami International Airport (MIA), Miami, FL. Project manager for the $8M design/build remediation for the Former Eastern Airlines Main Base Hangar 22 site at MIA. Project involved remediation of over 600,000 square feet (14-acres) of critical airside airport property and removal of contaminated sediment from the stormwater collection/ conveyance canal. Because of the logistical issues of maintaining a drainage canal on an active airport, dredging operations were designed and developed to allow use of an innovative truck-mounted dredge unit. The dredge head was designed to remove a 1-foot layer of contaminated canal bottom sediments while allowing the drainage canal to maintain its required flow discharge volume. More than 1,200-tons of contaminated sediments were removed and dewatered on-site. Filtrate water was treated through a series of settling tanks, oil/water separators, sand filtration, granular activated carbon, and ion exchange units, prior to discharge back to the surface water canal.

Chandy John, PhD

Sediment Dredging - Modeling

Key expertise
Hydrodynamics
Hydrological Modeling
Water Quality and Sediment Transport Modeling
Feasibility Analysis
Design Analysis

Education
PhD, Civil (Environmental Hydraulics) Engineering, 1997
MS, Civil (Water) Engineering, 1985

Years of experience
2 with AECOM | 32 Total

Training
40-Hour OSHA HAZWOPER
ESRI ARCGIS
Geo-statistics
SPSS
SAS

Registrations/Certifications
Certified Scuba Diver:, PADI

Chandy has 32 years of expert level experience in H&H, hydrodynamic modeling, STA and Marsh Conservation Area modeling, sediment fate & transport, scour analysis, circulation, mixing processes and nutrient analysis and HABs interception and treatment.

Professional history

Chandy has worked on various modeling and restoration projects while employed by SJRWMD Engineering Division's Modeling Group from 1997 to 2005. He is very familiar with Lake Jesup's environmental issues and also served in Lake Jesup Modeling Review Committee. He has over 20 publications in Journal of Coastal Research, Oceanologica Acta, Canadian Journal of Civil Engineering, and Coastal Engineering, Netherlands. He was a member of Northern Coastal Basin Monitoring and Research Work Group, Florida from 1999 to 2003 and Member of Technical Work Group, Indian River Lagoon, Florida advising on hydrodynamic, water quality, & sediment fate & transport modeling from 1997 to 1998. He was also member of American Society of Civil Engineers (ASCE), American Water Resources Association (AWRA), American Shore and Beach Preservation Association (ASBPA), and Association of State Floodplain Managers (ASFPM). He won the 2nd place award for "Best Content" for 2-D hydrodynamic and contaminant fate and transport modeling results during the SJRWMD 2nd Annual Poster Competition, Palatka, Florida, USA, 1997.

Chandy is trained to run surface water models (EFDC, WASP, MIKE models, Delft3D, RMA2, RMA4, FESWMS, SMS, GMS, ADCIRC, and MODFLOW. Chandy successfully completed short courses in: EFDC, ICPR 2-D, HEC-RAS 2-D, Coastal Engineering, Harbor Planning, and Design, Project Management, and Microsoft Project.

Select project experience

Benning Road Facility RI/FS Sediment Transport Analysis and Impact of Site Contaminants on Background Locations due to River Flows and Tides, DC. Senior oceanographer/hydraulic engineer responsible for evaluating tthe distribution of sediments (silt & clay, sand, and gravel) within the area of interest from the confluence of Beaverdam Creek and Anacostia River to E. Capitol Street Bridge. Assessed the potential for silt & clay sized sediments in the Pepco Waterside Investigation Area (WIA), that potentially carry sediment contaminants (PCBs, PAHs, etc.), to be transported to areas north of background reference sites during normal or extreme conditions (storm events and storm surge conditions). The potential for sediments within the WIA to be eroded during normal events (2-year return period) and extreme storm events (50- year, 100- year return period) was evaluated including assessment of how far these eroded sediments may be carried away and in what direction.

Wagner Creek Seybold Canal Restoration - Sediment Dredging and Remediation, City of Miami, FL. Hydraulic modeler for design/build dredging program to remove contaminated sediments containing dioxin from what has been considered one of the most polluted waterways in Florida. Innovative dredge plans using customized dredge equipment to minimize draft depth and use of unique water quality protection procedures, including aqua barriers, air curtains, and moon pools to prevent impacts to the downstream Outstanding Florida Waters and to protect the manatees that reside in these water bodies.

Hydroperiod and Design Storms Modeling - Comprehensive Everglades Restoration Plan, SFWMD, West Palm Beach, FL. Project manager for responsible for coordinating the hydroperiod and design storms modeling for existing and proposed operational structures and supervised the application of hydrology and hydraulic models to assess G-161 water control structure and the NLB culverts impacts, essential to implement Comprehensive Everglades

Restoration Plan. Assisted in STA-3/4 of the Everglades Construction Project that receives stormwater runoff from the S-2/7, S-3/8, S-236 and C-139 Basins in the Everglades Agricultural Area by application of Federal highway's FESWMS 2-D hydraulic model.

Hydroelectric FERC Licensing. Modeler/hydraulic engineer responsible for applying a calibrated 3-D MIKE3 FM model for evaluating currents, shear stress, Froude and Reynolds numbers to Assess Potential Sediment Transport. MIKE3FM model produced acceptable model results for 16 scenarios and was used to evaluate Froude and Reynolds #s, and sheer stress and critical sheer stress values in the tailwaters below the proposed Project and showed the potential effects on the mussel population.

Sediment Fate and Transport Modeling and Permitting, Sebastian Inlet and Indian River Lagoon Melbourne, FL. Oceanographer/hydraulic engineer responsible for applying a calibrated 3D hydrodynamic, water quality, and sediment transport model to demonstrate the effect of the proposed channel on seagrass beds, shoals, and Intracoastal Waterway. Calibrated 3-D for evaluating currents, shear stress, Froude and Reynolds numbers to Assess Potential Sediment Transport. Conducted multiple potential scenarios to evaluate potential effects on the seagrass population and infilling of the navigational channel and sediment trap. Successfully obtained environmental permits that resulted in navigational channel extensional and safe boat passage and seagrass protection and mitigation.

Restoration Cedar & Ortega Rivers Contaminated Sediment Remediation, St Johns River Water Management District, FL. Project manager responsible for developing and evaluating remedial alternatives for Cedar and Ortega Rivers, developed engineering design plans for cleanup and conceptual models, utilized upland CDF for cleanup, evaluated navigable capacity of the channel, evaluation of remedial action including placement of a cap either with or without preliminary dredging. Applied 3-D Sediment Transport Model to assess effectiveness of sediment traps using the Cedar/Ortega/St. Johns River EFDC hydrodynamic and sediment transport model. Addressed investigation and restoration of contaminated sediment sites addressing upland CSF and contaminated sediment dredging, sediment fate and transport modeling and monitoring, capping and natural recovery components of sediment management.

Bridge Hydraulics, Scour Analysis, and Floodplain Modeling and Mapping, Baltimore, MD. Conducted bridge hydraulics, scour analysis and floodplain modeling/mapping. Used HEC-RAS hydraulic and 2-D RMA2/FESWMS hydrodynamic model for floodplain evaluation, assisted in the development of joint permit application to support the proposed replacement of bridges Baltimore, MD. As Sr. Oceanographer/Hydraulic Engineer, Chandy issues with the proposed pier locations and site hydraulics and to determine flood stage. Used scenarios with different pier locations to update the hydraulic/flood model and investigate the effect of the pier locations on the flood elevations, velocity, shear stress, and Froude Number changes. Evaluated site hydraulics changes and FEMA floodplain regulations.

Tampa Bay Canal Dredging and Env. Enhancement, City of Tampa, FL. Hydrodynamic and sediment transport modeler and water quality data analyst responsible for the hydrodynamic modeling to evaluate the water level, currents and circulation, sediment erosion and deposition, and sediment dredging scenarios for Currituck Tidal Canal and the box culvert that exchanges water between the canal and Hillsborough Bay waters, Florida.

Tampa Bay West Shore and Davis Island Canal projects, Tampa, FL. Tampa Bay West Shore and Davis Island Canal projects that included dredging and dredge material disposal assessment, bathymetric and structure surveys, physical and RCRA chemical sediment analyses, and provided technical advice to obtain ERP permit. Chandy was hydrodynamic and Sediment Transport Modeler and Water Quality Data Analyst.

Brookeville Floodplain Modeling And Mapping, Wetland Mitigation And Stream Restoration, Maryland State Highway Administration, MD. Conducted H&H study to assess floodplain modeling and mapping, wetland mitigation and stream restoration for mitigation site located east of Main Street in Brookeville, MD. Assessed existing and proposed condition hydraulics (water level, shear stress, Froude #, and stream velocity) using HEC-RAS model.

Mike Giovannozzi, PE

Sediment Dredging - Marine and Coastal Engineering Lead

Key expertise
Dredging / Navigation
Marine and Coastal Engineering
Coastal Structures
Beach Nourishment Design
Wave and Hydrodynamic Modeling
Sediment Transport Modeling

Education
MS, Civil Engineering (Coastal Engineering), University of Delaware, 2001
BS, Civil Engineering, University of Delaware, 1999

Years of experience
4 with AECOM | 24 Total

Registrations/Certifications
Professional Engineer: Florida # 62563

Mike's wide-ranging expertise includes dredging and navigation studies, marina planning and design, wave and hydrodynamic studies, beach nourishments, physical and numerical modeling, feasibility studies, design of traditional and innovative shore protection structures, and coastal floodplain mapping.

Professional history

Mike has considerable experience in the planning and design of coastal and marine structures, ports and harbors, navigable waterways, marinas, and waterfront developments; and he has managed multi-discipline teams in the planning and design of high-profile international waterfront development projects. Mike is highly capable in an array of numerical modeling techniques (including wave, hydrodynamic, and sediment transport) and is well versed in the latest coastal design manuals, such as the U.S. Army Corps of Engineers.

Select project experience

Wagner Creek Seybold Canal Restoration - Sediment Dredging and Remediation, City of Miami, FL. Design Engineer. Design/build contract to remove hazardous waste sediments to restore what has been considered the most polluted waterway in Florida. Developed three innovative dredge plans and used unique water quality protection procedures to prevent impacts to the downstream Outstanding Florida Waters of the Miami River and to manatees. The existing conditions for both Wagner Creek and Seybold Canal are unique and posed significant logistical constraints that required extensive regulatory consultation with multiple agencies. Permits received in less than 90 days.

Cruise Terminal H Dredging Design and Post Design Services, Port Miami, Miami, FL. Senior Project Engineer. Design services for a maintenance dredging program to accommodate the berthing of the Bimini Superfast vessel. Mike's duties included marine resources and seagrass survey, bathymetric survey, preparation of permit sketches suitable for submittal to the regulatory agencies to initiate the environmental permit application, and preparation of opinion of probable construction cost and assistance during the environmental permit phase. He led preparation of contract documents (plans and technical specifications) and definition of dredging limits.

Bayou Caddy Ecosystem Restoration Project, Waveland, MS. Independent Technical Reviewer. Analysis and conceptual design of a breakwater for the Bayou Caddy restoration site. The breakwater was designed to protect a wetlands habitat that was created through the beneficial placement of dredge material from a nearby navigation project. The review focused on the coastal engineering analysis and design, specifically on the historical shoreline change analysis, geotechnical data collection, dredging history, wave modeling, breakwater performance, and breakwater structural stability.

Kings Bay Navigation Channel, Camden County, GA. The Kings Bay Entrance channel provides ocean access for the US Navy's Trident nuclear submarines. In recent years, the channel has experienced an increase in shoaling. Removal of sediments in the channel has been costly and dredging operations potentially interfere with navigation. A comprehensive hydrodynamic and sediment transport model was performed to assess potential dredge plan alternatives. Evaluated the dredge alternatives and provided recommendations to improve dredging efficiencies and reduce maintenance dredging intervals. In addition, recommendations were provided to modify the entrance channel to minimize shoaling.

North Atlantic Coast Comprehensive Study, USACE Baltimore District/ North Atlantic Division, Jacksonville, FL. H&H engineer responsible for providing engineering evaluation for development of focus area reports (reconnaissance level analyses) for coastal areas, utilizing the USACE plan formulation process. The reports identified problems, needs, and opportunities, and with stakeholder input, recommended projects for implementation.

FEMA Flood Hazard Analysis and Mapping, USEPA Region V. H&H engineer responsible for performing large-scale (regional) wave model of Lake Superior to support the FEMA Risk Map program for Region V. He also provided technical review and oversight for the coastal flood hazard analysis and mapping for several Region V counties including the assessment of shoreline type, erosion analysis, and wave and storm surge calculations.

H&H Continuing Services Contract, St. Johns River Water Management District, Districtwide, FL. Worked on the Conceptual Siting Analysis of Phase I for the Indian River Lagoon. Data (i.e., simulated water level and 50% renewal time) identified in the Literature Review was used to score the 39 potential projects to improve water quality in the Indian River Lagoon and Banana River Lagoon. The resultant scoring is being used to scope Phase II of the project, which will include hydrodynamic modeling of conceptual options developed in Phase I.

Environmental Restoration at Ibis Isle, Palm Beach, FL. Coastal engineer. dredging responsible for environmental restoration project for an island community located on the Intracoastal Waterway.

Devansh Shah, PE

Remedial Design Team

Key expertise
Assessment and Remediation of Contaminated Soil and Groundwater
Design of Innovative Remedial Systems and Strategies
Contamination Review and Phase II planning for Contaminated Sites
Construction Quality Control and Management

Education
MS, Environmental Engineering, University of Florida, 2016
BE, Environmental Engineering, Gujarat Technological University, 2014

Years of experience
2.5 with AECOM | 5 Total

Training
OSHA 40-hour HAZWOPER Training (29 CFR 1910.120) and yearly Refresher Courses
CETCO certified Vapor Barrier Inspector
LEED v 4.0 Green Associate

Registrations/Certifications
Professional Engineer: Florida #88389

Devansh works as a Deputy Project Manager with AECOM. He has over five years of experience working on environmental engineering, regulatory compliance and remediation projects.

Professional history

Devansh has been closely working with Project Managers in managing projects and taking on responsibilities including but not limited to Proposal Preparation, coordination with clients and subcontractors, report reviews and invoicing. His experience includes groundwater remediation system design, conducting contamination reviews for roadways and transit projects, Level I and Level II environmental site assessment, liner/vapor barrier installation inspections, source removal design, hydrogeological investigations, and regulatory compliance report preparation.

Select project experience

NEPA Evaluations, Florida Department of Transportation District 4, FL. Deputy Project Manager responsible for labor support for the Planning and Environmental Management section of FDOT District 4 conducting NEPA evaluations to support the work program, conducting project re-evaluations, creating Request for Proposal language, and reviewing project development and environment documents (Contamination Screening Evaluation Reports). Also, assisted FDOT by performing constructability reviews, equipment specification reviews, pond site evaluations, and other related duties as requested, as well as performing overall environmental project management on a number of projects. Services included plans review/ERC comments, Project Suite/Environmental Tracking System (ETS) updates, review of environmental documents for the District Four ROW.

Site Development, Miami Dade County Transit, Miami, FL. Worked as a Deputy Project Manager and assisted with contamination review and phase II planning for upcoming planned transit network in Miami Dade County. Work included coordinating with various government agencies for file reviews, drafting contamination review report, preparation of Phase II plans, coordination with sub-contractors and coordination with field staff, working with transit and drainage teams to determine the assessment design, evaluation of laboratory analytical data, and reporting of findings..

Virginia Key Landfill Closure, Miami Dade County, Miami, FL. Worked as a Project Engineer and assisted in design of remediation system and monitoring plan for closure of Virginia Key Landfill. Additionally, assisted in design of drainage test wells, design of drawdown test conducted at the site and design of Class V injection well and extraction well system.

Contamination Review, Florida Department of Transportation District 6, FL. Deputy project manager and assisted with contamination review and phase II planning for various projects for FDOT. Work included coordinating with various government agencies for file reviews, drafting contamination review report as well as preparing contingency plans.

Site Development, Florida Gas Transmission, Miami, FL. Deputy project manager and assisted with contamination review and preparation of Phase I and Phase II assessment plans for upcoming projects. Phase II plans included review and evaluation of various site-specific soil and groundwater assessment plans. Developed the emergency plans for hydrotesting which included developing radius of influence (ROI) calculations for dewatering to be conducted as part of the project.

Site Development, Miami Dade Aviation Department, Miami, FL. Project engineer and assisted in various source removal projects. Tasks ranged from development of site assessment plans, cost proposal preparation and drafting, project setup, field coordination, coordination with various regulatory agencies, evaluation of laboratory analytical data for soil and groundwater, and report writing.

Site Development, Private Developer, Doral, FL. Project engineer and assisted with site assessment conducted as a part of development of treatment technique for ongoing dewatering operations on the site. Assisted in designing of sedimentation sizing as well as flow rate determination and coordinated with various entities working on the site.

Site Development, Private Developer, Hialeah, FL. Project engineer and assisted with hydrogeological site study and drafted a Baseline Groundwater Remediation Plan as required by Miami-Dade County Department of Regulatory and Economic Resources, Division of Environmental Restoration and Monitoring (DERM) and in accordance with Rule 62-701.710(1)(d)2 of the Florida Administrative Code for the operation of a Construction and Demolition Materials Recycling Facility. Tasks included regional hydrogeological study, site historical records review, monitoring well and piezometer installation, groundwater sample collection, and data analysis and reporting.

Site Development, Private Developer, North Miami, FL. Lead engineer on vapor barrier system design and inspections. Tasks included designing of vapor barrier system, oversight on liner installation, project task management, coordination with client and report preparation.

Curtis Park Corrective Action Plan, City of Miami, Miami, FL. Owner representative conducting construction observations and field representative for the Engineer of Record during construction and remediation activities which included, but are not limited to, storm water system and roadway construction, engineering control installation, site grading and compaction, regulatory agency inspections, electrical conduit and irrigation line installation, and contaminated soil excavation, sorting and handling. Tasks included daily reporting and documentation of work progress, inspections for adherence to design drawings, communication of site status and potential issues to Engineer of Record, addressing contractor questions concerning design drawings and identification of potential Health and Safety issues.

Remediation System Reporting and Management, Private Utility Provider, Miami-Dade County, FL. Assisted in drafting Quarterly Status Reports for submittal to DERM and supported the project manager in coordinating the fieldwork, sampling, operations and maintenance activities of multiple groundwater remediation systems in Miami-Dade County in accordance with site Remedial Action Plans. Project responsibilities included coordination of the production of figures, tables and attachments by multiple project team members, data validation of laboratory reports.

Phase II Environmental Site Assessment, Various Locations. Performed oversight of soil boring/monitoring well installations and conducted field sampling required for Phase II Environmental Site Assessments in Broward and Miami-Dade Counties, Florida for private and public entities. Oversaw various soil boring and monitoring well installations, groundwater and surface water sampling, methane gas monitoring, data recording, monitoring well top of casing surveying, analytical data processing, and report preparation.

Douglas Park Corrective Action Plan, City of Miami, Miami, FL. Owner representative conducting construction observations and field representative for the Engineer of Record during construction activities which included, but are not limited to, engineering control installation, site grading and compaction, regulatory agency inspections, electrical conduit installation, and contaminated soil excavation, sorting and handling. Tasks included daily reporting and documentation of work progress, inspections for adherence to design drawings, communication of site status and potential issues to Engineer of Record, addressing contractor questions concerning design drawings and identification of potential Health and Safety issues.

Inashco North America, Beneficial Use Determination, Putnam, CT. Environmental engineer to conduct the life cycle assessment for the company's waste to energy ash recovery plant in Putnam. Conducted analysis to determine the beneficial use for the waste products from the processing plant by running numerous EPA LEAF (analytical) tests at University of Florida.

Rich Ulkus, GC

Remedial Construction Lead

Key expertise
Contaminated and Hazardous Materials Remediation
Remedial Construction
Construction Management
Construction Oversight
QA/QC

Education
AAS, Civil Engineering Technology, Hartford State Technical College, 1973

Years of experience
32 with AECOM | 45 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher
CPR/First Aid

Registrations/Certifications
General Contractor: FL #CGC1523061
AECOM Certified Project Manager

Richard has 45 years of experience in planning, design, and construction management of a wide range of water and wastewater treatment projects. He is also experienced in site decontamination and demolitions, groundwater cleanup, SVE and remediation, underground storage tank removal, and hazardous and regulated waste disposal.

Professional history

Rich brings unrivaled experience in the construction and commissioning of RO WTPs in the State of Florida having constructed nearly 100 mgd of cumulative RO WTP projects in Florida over the past 25 years.

Select project experience

Florida RO Water Treatment Plant and Wastewater Treatment Plant Design-Build, Town of Davie, FL. Senior construction manager for the $106M design-build services for expansion of water and wastewater infrastructure systems. Two plants – water and wastewater – will share a common administration/laboratory building, electrical feed systems and standby generators. AECOM's services include stakeholder outreach, planning, design, subcontractor prequalification, bidding of construction packages, GMP development, construction management, bonding, and construction of the facilities. A GMP was developed for the original portion of the $101M for the two plants and through an open book change order the reuse water pipelines were added and also managed and constructed by AECOM, which was approximately $6M in value. The project consists of a 6 mgd reverse osmosis water treatment facility, Floridan Aquifer wells, and a 3.5 wastewater treatment plant capable of delivering reuse-grade water. As part of the RO plant construction, Managed the construction of 18,000 LF of 4 to 12 inch reuse pipelines, 10,000 LF of well access roads and 3 water storage tanks ranging in size from 750,000 to 3 million gallons. He was involved through –out the GMP development as well as construction whereby he managed 32 subcontractors and 28 equipment vendors on-site during construction. Rich was also responsible for developing the overall delivery P6 schedule and served as a consultant to the commissioning and start-up team.

RO Water Treatment Plant, City of Hialeah, FL. Led the construction of the 10 mgd RO WTP with a future capacity of 17.5 mgd. The project included the construction of the pre and post treatment systems, chemical feed systems including caustic, fluoride, sulfuric acid, corrosion inhibitors, degasifier system, biofilter and scrubber, an 80,000 sf process building, including the RO racks, RO feed pumps, HVAC and plumbing, and all electrical and SCADA systems. The project included the construction of 2- 5 million gallon Finished water storage tanks. Three (3) 2000 KW CAT generators were also installed along with portable generators at each well site. Deep injection well sitework, and well houses, including the portable gen sets were construction by AECOM under the supervision of Rich. Under this design-build construction contract, he managed 26 subcontractors and 28 equipment vendors. All subcontractors and vendors were prequalified by AECOM. AECOM retained overall job-site safety responsibility under Rich and his General Superintendent Warren Howard. He was also on-site during the start-up and commissioning phase to ensure the systems were commissioned smoothly.

Contamination Assessment and Remediation (CAR) Contracts, FDOT District 4, FL. Provided construction management and consulting services on FDOT District 4 CAR contracts. Assisted FDOT by performing constructability reviews and equipment specification reviews for issues related to asbestos piping and suitable materials for use in contaminated media. Manages AECOM construction staff.

Dry Cleaners Solvent Cleanup Site Remediation, FDEP, Various Locations, Statewide, FL. Managing staff providing construction and operations and maintenance services under statewide environmental services contract for assessment and cleanup of contaminated dry cleaning sites throughout the state.

Bayshore Golf Course Material Recovery Facility (MRF), City of Miami Beach, , FL. Managed design and permitting for construction of material recovery facility, including remediation of former MRF site.

Normandy Shores Golf Course Water Reclamation, City of Miami Beach, FL. Managed arsenic remediation projects at Bayshore and Normandy Shores golf courses, including asbestos abatement, demolition of existing facilities, and construction of new site drainage systems.

Ammonia Removal, City of Miami Beach, FL. Project manager and technical specialist for design and permitting of 750-gpm system to remove ammonia from construction dewatering effluent.

Petroleum Pre-Approval Program, FDEP, FL. Managing construction and operations and maintenance services for FDEP petroleum pre-approval program.

Sequencing Batch Reactor System Design-Build, Miami-Dade County, Goulds, FL. Senior construction manager for sequencing batch reactor treatment system for groundwater contaminated with ammonia at Old South Dade landfill.

North County Reverse Osmosis Water Treatment Plant Expansion, Collier County, FL. Managed a design-build project involving the addition of six wells and 15,000 feet of raw water line, as well as various upgrades to a reverse osmosis plant to enable it to treat higher chloride content raw water.

South County Reverse Osmosis Water Treatment Plant Expansion, Collier County, FL. Managed staff that provided services during construction and start-up of an 8-mgd reverse osmosis water treatment plant, ultimately expandable to 20 mgd, which included an addition to the construction of the plant and support facilities; the construction of a 15-well wellfield with transmission mains; 1 2.5 million gallon finished water storage tank and the installation of two deep injection wells for concentrate disposal.

RO WTP, Rich served as the Construction Manager on the 1 mgd RO Membrane WTP, Hollywood, FL. The construction included sitework, and grading, three wells with 3 vertical turbine pump stations, a process building with two (2) 1 mgd nano-filtration units, degasifiers, 1 mgd finished water storage tank, electrical support systems, and a SCADA control system. He also commissioned the RO WTP.

Michael Powell

Remedial Construction – Oversight

Key expertise
Construction Management
Remedial Construction
Soil Excavations
Waterway and Environmental Restoration

Education
St. Thomas University, 1983

Years of experience
15 with AECOM | 25 Total

Training
OSHA 40-Hour HAZWOPER
Asphalt Paving Level 1 and Level 2 Inspection, Earthwork Level 1 and Level 2 Inspection
Heavy Vehicle/Equipment Operation Certification
Nuclear Density Gauge Safety Certified
CDL Class B with Tank and Hazmat Endorsements

Certifications
Sampling & Evaluating Asbestos Dust/Cert. #AA03220158202
Ahera Asbestos Supervisor/Cert #AA040601 CS02
Hands on Electrical Troubleshooting I & II/FL Water & Pollution
Confined Space Certified
Opa-Locka General Aviation Airport – MDAD Security Clearance
Miami International Airport – U.S. Customs Security Clearance

Michael has over 25 years of experience in hazardous waste management, construction oversight, RAP implementations, source removals, and UST/AST removals.

Professional history

Michael is an experienced heavy equipment operator and has been involved in hundreds of remediation projects throughout Florida. Additionally, Michael is experienced with the installation, operation and maintenance of various types of groundwater extraction, pump and treat, in-situ bioremediation product application, dual phase extraction and dewatering systems.

Select project experience

NW Cargo Area – Miami International Airport, FL. Provided the operation and maintenance of the groundwater treatment systems A, B, C, D and E in the Northwest Cargo Area at MIA.

Concourses C, E, F at Miami International Airport – Miami, FL. Field technician for the installation of groundwater treatment and soil vapor extraction systems, underground piping, and equipment stockade compounds. Michael also performed daily O&M activities and quarterly groundwater and air sampling.

Opa-Locka General Aviation – Site 1, Opa-Locka, FL. Provided oversight of source removal activities, confirmatory soil sampling and analysis, and restoration of the remediated area with clean fill and sod. Due to numerous buried utilities in the footprint of the excavation, hand digging was required in most of the area to avoid damage to underground structures. This project was completed incident-free.

West End Cargo Area Building 2064 Assessment, Miami International Airport, Miami, FL. Field Technician supporting ongoing assessment and monitoring activities at Building 2064 in the West End Cargo Area of Miami International Airport.

West End Cargo Area Pond Assessment and Source Removal, Miami International Airport, Miami, FL. Field technician for the assessment and oversight of the source removal and monitoring activities at the West End Cargo Area Pond of Miami International Airport.

Concourse C Source Removal, Miami International Airport, Miami, FL. Field technician oversaw the source removal and monitoring activities at Concourse C at MIA. Michael also acted as County's representative and worked as a liaison between FDEP's consultant and FDEP's contractor that actually performed the field work.

NW 175th Street drainage improvement, City of Miami Gardens, FL. Site inspector for the NW 175th Street drainage improvement. Miami International Airport (MIA) Fire Well Capacity Testing: Field technician for capacity tests of five (5) fire wells at the tank farm located at MIA.

Venevision Studio Limited Site Assessment, Medley, FL Field technician for the delineation of soil contamination at the MDT property adjacent to Venevision Studios in the vicinity of 7500 NW 72 Avenue in Medley.

Central Bus Facility Oil Water Separator Assessment and Closure. Field technician that oversaw the assessment, abandonment and closure of an oil/water separator (OWS). Oversaw the clearing and cleaning of the OWS and cutting and capping of inlet and outlet pipes. Soil samples were collected and analyzed and contaminated soil was removed and disposed.

WASD Distribution Yard Limited Site Assessment, Miami-Dade County, FL. Field technician supporting the limited site assessment as part of a Site Rehabilitation Completion Order (SRCO) Rescission Request for the Distribution Yard. The limited assessment consisted of the installation of sampling of one soil boring and one monitoring well adjacent to the former canopy footer excavation and the preparation and submittal of SRCO request report.

Ives Estate Park / Former Ojus Landfill, City of Miami, FL. Field technician supporting the groundwater and methane gas monitoring at Ives Estate Park. Michael is responsible for providing emergency response to the methane gas monitors and ongoing monitoring of on-site and off-site well where ammonia impacts have been found. Currently, quarterly monitoring of cluster well installed as part of a pilot test is ongoing to determine if active treatment of groundwater is needed. His emergency response is highly critical in successful and uninterrupted operation of the park.

Westwind Lakes Park O&M and Methane Gas Monitoring, Miami-Dade County, FL. Field technician who supported the design, construction oversight, startup, operation and maintenance of a passive methane gas mitigation system for the recreation center building at the Park. Michael is credited with an incident-free record at this site.

Chapman Field Groundwater Sampling and Monitoring Well Rehabilitation/Repair and Installation, City of Coral Gables, FL. Field technician provided the location and integrity testing of 22 existing groundwater monitoring wells located throughout the park; many of which were located within dense vegetation where access was limited. Subsequently, He assisted with the groundwater assessment at the park after the monitoring well rehabilitation. Additionally, Michael supported an ammonia background study that included installation of 10 monitoring wells in the areas not impacted by the site. Currently, he performs the annual groundwater monitoring.

Michael Scinta

Remedial Construction – Environmental

Key expertise
Construction Management
Remedial Construction
Soil Excavations
Waterway and Environmental Restoration

Education
High School Diploma

Years of experience
19 with AECOM | 45 Total

Training
40-hour OSHA HAZWOPER
8-hour OSHA HAZWOPER Annual Refresher
OSHA 29CFR 1910.146 Confined Space
Florida Advance Work Zone Traffic Control

Michael is a Senior Construction Manager with 45 years of experience working in Florida. He has extensive construction knowledge and has provided management and oversight for numerous sediment dredging, contaminated soil and water treatment systems, transportations, infrastructure, soil excavations, seawall restoration, waterway, and environmental restoration projects.

Professional history

Michael specializes in environmental remediation technologies that include sediment excavations (mechanical and hydraulic), sediment dewatering, water treatment systems, and in-situ treatment technologies. He also has extensive experience with constructing marine sediments and ecosystems restoration projects. Michael has also served as the construction manager for the contaminated sediment dredging operations conducted at the Former Eastern Airlines Main Base (EAMB) at Miami International Airport, in which a truck-mounted hydraulic dredge was utilized to remove a 1-foot layer of highly contaminated canal bottom sediments.

Select project experience

Construction Manager/Field Inspector, Flamingo Marina Dredging, Everglades National Park, FL. Dredge operations were needed to remove over 10,000 cubic yards (CY) of sediment that were deposited as a result of Hurricane Wilma. The deposited sediments prevent the Park's Search and Rescue operations and the Park's Law Enforcement Rangers access to patrol out of Flamingo and protect the natural resources in Florida Bay.

WECA Pond Source Removal, Oversight of Hazardous Muck Soils, Miami International Airport, Miami, FL. Senior construction manager/field inspector responsible for overseeing the source removal of hazardous muck soils from historical dumping in a former canal. Provided construction oversight of soil excavation, free floating product removal, and open-hole treatment (air sparging) of contaminated groundwater.

Construction Inspection, Miami-Dade Department of Environmental Resources Management (DERM), Miami, FL. Senior construction manager/field inspector responsible for overseeing inspection of contractor performance and assists in staffing and utilization of inspecting resources; reviews and approves invoices; and reviews and approves as-builts for drainage, street resurfacing and reconstruction, swale restoration, and canal dredging activities being performed DERM.

Stormwater Engineering Design Improvements, City of Doral, FL. Senior construction manager/field inspector responsible for design and construction administration of 14 projects listed in the City of Doral Stormwater Master Plan as critical infrastructure improvements or flooding "hotspots.".

Right-of-Way Expansion, FDOT District 4, Fort Lauderdale, FL. Construction manager responsible for oversight of field staff during remediation activities, new construction, and demolition activities. Also responsible for direct client interaction.

Metro-Dade Transit Authority Facilities Construction, Miami, FL. Construction manager responsible for overseeing the repair and installation of new storm drains at three Metro-Dade Transit Authority facilities. Project included complete site parking (asphalt, concrete) restoration and fueling system upgrade.

Miami-Dade DERM, FEMA/DORM, FL. Construction manager/senior inspector responsible for managing the design and construction of approximately $30M of roadway and drainage infrastructure repairs throughout Miami-Dade County for one of five “Master Consultants” that support Miami-Dade’s DERM. The scope consists of drainage installation, roadway restoration, resurfacing, and reconstruction.

Concourse F, Miami International Airport (MIA), Miami-Dade Aviation Department, Miami, FL. Construction manager responsible for the implementation and operation and maintenance a 500-gpm remedial system to remove free product and treat contaminated groundwater from Concourse F at Miami International Airport.

Miami-Dade DERM, FEMA/DORM, FL. Construction manager/senior inspector responsible for managing the design and construction of approximately $30 M of roadway and drainage infrastructure repairs throughout Miami-Dade County for one of five “Master Consultants” that support Miami-Dade’s DERM. The scope consists of drainage installation, roadway restoration, resurfacing, and reconstruction.

NW Cargo, MIA, Miami, FL. Supervised the Remedial Action Plan Modification and NPDES permitting of a 500 gpm groundwater treatment system in the Northwest Cargo Area. Treatment system effluent was to be redirected to a nearby storm-drain, thus the necessity of the NPDES permit.

Former Eastern Airlines Hangar 22, MIA, Miami-Dade Aviation Department, Miami, FL. Overseeing the installation of a $7.6M remedial system at Hangar 22. Project has included installation of over 900 feet of horizontal extraction wells and over 3,000 feet of horizontal soil vapor extraction well.

Keith Stannard

Natural Resources Lead

Key expertise
Ecology/Biology
Environmental Regulatory Issues
Terrestrial and Marine Habitat Assessment
Natural Community Evaluations
Wetlands Delineations and Assessments
Benthic Resource Assessments
Protected Species Conservation
ESA Section 7 Consultation
Mitigation Design, Construction, and Monitoring
Ecosystems Restoration and Managementt

Education
BS, Biological Sciences, State University of New York, 1991

Years of experience
21 with AECOM | 25 Total

Training
FDEP Uniform Mitigation Assessment Method
TREEO T&E Species of Florida
OSHA 30-hour Construction
OSHA 40-hour HAZWOPER

Certifications
First Aid/CPR
USAA SCUBA Diver
USACE Wetlands Delineation Certification
FDOT WET II
AECOM Certified Project Manager
AECOM Lead Verifier - Oil & Gas Midstream
AECOM Lead Verifier - Wetlands Permitting & Restoration
AECOM Lead Verifier - Impact Assessment and Permitting

Keith has 25 years of experience in conducting and managing environmental programs and ecological investigations for various public and private sector projects, including linear facilities (roadways, railways, pipelines), site development (industrial, residential, mixed-use) and special-purpose projects (offshore facilities, marinas, dams, maintenance dredging, basin studies, etc.).

Professional history

Keith has an in-depth knowledge of federal, state, and local environmental regulatory criteria and associated agency procedures in relation to ecosystem restoration and management. He also has extensive experience with marine and terrestrial habitat ecology; wetland and upland mitigation; threatened and endangered species conservation and ESA Section 7 consultation; and ecosystems restoration and management.

Select project experience

Districtwide Data and Reporting Consultant (NEPA/PD&E), FDOT D6, FL. Senior technical lead managing and leading NEPA related tasks associated with various large and small-scale FDOT roadway improvement, new roadway, bridge replacement/improvement, and other projects throughout Miami-Dade and Monroe Counties in Florida. Tasks include project impact reviews, natural resource assessments, contamination assessments, Section 4(f) and socio-cultural effects documentation, noise and air quality assessments, water quality assessments, inter-agency coordination, mitigation planning, and other activities/assessments for FDOT projects and producing the required documentation to facilitate environmental certification prior to construction. Tasks also include preparation and review of PD&E documents including technical reports, Reevaluations and other studies/evaluations as requested by the FDOT in conformance with NEPA and the PD&E Manual.

Wagner Creek Seybold Canal Dredge, City of Miami, FL. Environmental permitting lead responsible for the for design and implementation of mechanical dredging operations to remove contaminated sediments in Wagner Creek and Seybold Canal, which are open tributaries to the Miami River and Biscayne Bay Aquatic Preserve. Tasks included marine species surveys and developing unique species exclusion barriers and techniques. Worked with Miami-Dade County Department of Environmental Resources Management (DERM), FDEP, USACE, USFWS, and FWC for permitting, manatee protection, and sediment amendment and disposal.

Districtwide Miscellaneous Permitting Services Consultant (Contracts C-7724, C-8I41, C-9155 and C-9L61), FDOT District 6, Miami-Dade and Monroe Counties, FL. Awarded five consecutive five-year contracts to manage federal, state and local agency environmental permitting activities and other environmental-related studies for various large and small-scale FDOT roadway improvement, new roadway, bridge replacement/improvement, boat ramp restoration and tunnel projects throughout Miami-Dade and Monroe Counties in Florida. Tasks include conducting seagrass/benthic resource surveys; marine and freshwater wetland assessments and delineations; upland assessments; protected plant and wildlife surveys and assessments; federal, state, and county agency coordination; environmental resource permitting;

stormwater management permitting; Class V Deep Well permitting; obtaining sovereign submerged lands easements; GIS mapping; wetland and T&E species mitigation planning and design; permit tracking; erosion control; engineering plan reviews; dewatering permitting; water quality assessments; NEPA studies/re- evaluations; in-house technical and administrative assistance and EFH assessments.

Program Manager, Various Integrity Management Projects, Florida Gas Transmission Company, Various Counties, FL. Program includes assisting FGT with its integrity management program for all of its existing pipelines (mainlines and laterals) throughout the State with emphasis in Miami-Dade, Broward Hillsborough and Pinellas Counties in accordance with the Pipeline Safety Act of 2002 [49 Code of Federal Regulations (CFR) 192]. Tasks include environmental assessments, cultural resource assessments, potential contamination assessments, environmental resource impact permitting, FERC compliance documentation, construction dewatering permitting, hydrostatic test water discharge NPDES permitting, subsurface contamination sampling and remedial action design, ROW utility coordination and permitting, MOT plan design, public awareness program design and implementation, public & agency coordination/ workshops, T&E plant & wildlife surveys/permitting/ relocations, agency consultations, construction support and environmental training (for contractors), cost estimations and scheduling, roadway repair design and structural assessments.

Business Unit Lead, City of Lake Worth Electric Utility, Palm Beach County, FL. Business lead for assisting the City with its daily/weekly onsite construction management services for the Lake Worth Energy Efficiency Program Implementation project. Tasks include augmentation of their staff providing construction management services for a new 2 MW solar farm, water conservation and facility lighting, installation of new light poles and light fixtures, Armory Annex LED lighting improvements, installation of new AMI meters, and other energy saving-related elements city-wide.

Cape Sable Canals Dam Restoration Environmental Assessment – Phase II, Monroe County, National Park Service, FL. Project manager responsible for all tasks associated with the preparation of an Environmental Assessment and anticipated Finding of No Significant Impact to provide sustainable solutions to canal-induced saltwater intrusion and degradation of the interior freshwater and brackish marshes in order to reestablish the natural function of the Marl Ridge and restore the Cape Sable region to a more natural state. Phase II includes proposed dam restoration at the Raulerson Canal, East Side Creek, and House and Slagle Ditches.

Big Cypress National Preserve Hunting Management Plan / NEPA Environmental Assessment, National Park Service, Collier/Monroe Counties, FL. Senior scientist for environmental tasks associated with the preparation of a Hunting Management Plan / NEPA Environmental Assessment for the Big Cypress National Preserve. Tasks include data review, internal and public scoping, CBA, and preparation of an EA for submittal to NPS.

I-95/SR 9 PD&E/CE Type II, FDOT District 4, FL. Environmental manager responsible for environmental tasks/studies for a PD&E study for roadway improvements (express lanes) along 13.5-miles of I-95/SR 9 from north of Oakland Park Boulevard (SR 816) to south of Glades Road (SR 808) in Broward and Palm Beach Counties. Project documentation included an AQTM, WER, ESBA, CSER, NSR, SCEE, and CE Type II. Tasks included QA/QC review of all project documents and preparation of the CE Type II in compliance with the FDOT PD&E Manual and NEPA. The CE Type II document was approved and signed by FHWA in August 2013.

Tamiami Trail Modifications, Next Steps, Everglades National Park, National Park Service, FL. Environmental manager for all tasks of an Environmental Impact Statement for modifications of sections of the US 41/Tamiami Trail to allow for restored water flows from the SFWMD Water Conservation Areas north of Tamiami Trail to Everglades National Park south of Tamiami Trail. Tasks include field review, agency coordination, project scoping and public involvement, alternatives development, environmental consequences assessments, and preparation of the Draft and Final EIS/ROD documents for submittal to NPS and the US Congress.

Michael Breiner

Natural Resources Team

Key expertise
Threatened & Endangered (T&E) Species Assessments
Protected Species Relocations Habitat Assessments
Natural Community Mapping
Wildlife Permitting and Relocations Wetland Delineation and Assessment
Freshwater Wetland Mitigation Monitoring
Environmental Resource Permitting Terrestrial and Aquatic Biology and Impact Analyses
NEPA Studies (FERC, EIS, EA, PD&E)
Taxonomic Investigations
Coastal & Freshwater Wetland Mitigation Planning and Design

Education
AA, Fish and Wildlife Management, Haywood Technical Institute, 1978

Years of experience
38 with AECOM | 38 Total

Training
FDEP Uniform Mitigation Assessment Method
TREEO T&E Species of Florida
OSHA 30-hour Construction
OSHA 40-hour HAZWOPER

Certifications
First Aid/CPR
USAA SCUBA Diver
USACE Wetlands Delineation Certification
FDOT WET II
AECOM Certified Project Manager
AECOM Lead Verifier - Oil & Gas Midstream
AECOM Lead Verifier - Wetlands Permitting & Restoration
AECOM Lead Verifier - Impact Assessment and Permitting

Professional history

Michael has 38 years of experience in conducting ecological studies for private and public sector clients, with 14 years in botany.

Michael's technical expertise is focused on environmental issues relating to small- and large-scale developments and linear construction projects (roadways, pipelines, etc.) throughout the eastern US. Technical experience includes wetland delineations and functional analysis, floral and faunal assessments, wildlife surveys and relocations, community inventories, mapping, soil and water quality assessments, NEPA documentation, environmental permitting, and mitigation monitoring.

Select project experience

Cape Sable Canals Dam Restoration Environmental Assessment, Permitting, and Mitigation Monitoring – Phase I, National Park Service (NPS), Monroe County, FL. Senior biologist responsible for all tasks associated with the preparation of an EA and FONSI for the restoration of two failed canal dams in the Cape Sable area of Everglades National Park (Homestead Canal and East Cape Extension Canal). Tasks include field review, agency coordination, internal and public project scoping, and preparation of the EA and FONSI for submittal to the NPS. Second stage of the project included all aspects associated with successful issuance of all local, state, and federal environmental permits for the project. Current tasks include 5 years of mitigation monitoring at the dam sites.

6-inch Miami Beach Lateral Exposed Pipe Cover in Biscayne Bay, Miami-Dade County, FL. Project manager for assessing marine benthic habitats for impacts relating to laying concrete pads on exposed segments of existing submerged natural gas pipeline located in the Biscayne Bay Aquatic Preserve. Tasks included conducting marine benthic resources survey to identify and map (in GIS) submerged resources. Results of the surveys were used to apply for environmental permits and provide suitable mitigation for proposed impacts due to construction activities. Included mitigation planning, design, and implementation.

Krome Avenue South PD&E Study, Florida Department of Transportation (FDOT), District 6, Miami-Dade County, FL. Lead biologist responsible for environmental tasks associated with the performance of a PD&E Study. Tasks include preparation of a Wetland Evaluation Report, Endangered Species Biological Assessment report, a Farmlands Analysis, and detailed coordination with Miami-Dade County Environmentally Endangered Lands (EEL) for proposed impacts to protected rock pineland habitat. Also assisted with preparation of the EIS for FHWA submittal.

Florida Gas Transmission Company, FL. Senior biologist responsible for conducting wetland assessments and delineations, mitigation assessments, wetland and terrestrial vegetation community investigations and mapping, land use mapping, wildlife investigations, surveys for protected plant and animal species of conservation concern (including gopher tortoise, scrub jay, red-cockaded woodpecker, burrowing owl, Audubon's caracara, and American kestrel), stream morphology studies, contamination assessments, environmental resource permitting, and QA/QC for proposed pipeline expansion projects (extensions, looping and laterals).

Flora and Fauna at an Environmentally Endangered Land, FDOT District 6, Miami-Dade County, FL. Lead biologist assisting FDOT with threatened and endangered wildlife surveys and permitting. Tasks included identification and monitoring of two federally-listed planted species; propagation and relocation of a federally-listed plant species from a donor site to 3 recipient sites, and the relocation of Liguus tree snails from proposed tree removal: and detailed coordination with Miami-Dade County Environmentally Endangered Lands (EEL) for impacts to protected rock pineland habitat.

Imperiled Coastal Rockland Habitat, Upper Matecumbe Key, FDOT District 6, Monroe County, FL. Lead biologist assisting FDOT with threatened and endangered plant surveys and permitting, wetland assessments and delineations for mitigation credits, wetland and terrestrial vegetation community investigations and mapping, and habitat assessments for protected plant and animal species of conservation concern. Tasks included restoration of coastal rockland and coastal berm hammock communities overgrown with invasive non-native vegetation and monitoring of several protected plant species prior to land transfer to a Florida State Park. Twelve state-listed plant species, one of which is found in only two other locations in the Florida Keys, were identified at the site.

Airport Expansion Program/Westside Development Program, Broward County Aviation Department., Fort Lauderdale-Hollywood International Airport, Ft. Lauderdale, FL. Principal investigator assisting the Airport Expansion Program team and BCAD with ecological-related tasks including wetland mitigation construction and exotic species control oversight, threatened and endangered wildlife surveys and permitting (including burrowing owl relocations) and wetland mitigation compliance activities. Assisted in wetland mitigation monitoring and maintenance activities to ensure compliance with Federal, State and County environmental permits.

Districtwide Miscellaneous Permitting Services Consultant – Five Contract, FDOT District 6, Miami-Dade and Monroe Counties, FL. Assist FDOT with various environmental permitting activities and other environmental-related studies for various large and small-scale FDOT roadway improvement, new roadway, bridge replacement/improvement, boat ramp restoration and tunnel projects throughout Miami-Dade and Monroe Counties in Florida. Tasks include conducting seagrass/benthic resource surveys, marine and freshwater wetland assessments and delineations, upland assessments, protected plant and wildlife surveys and assessments, Federal/State/County agency coordination, environmental resource permitting, wetland and T&E species mitigation planning and design, NEPA studies/re-evaluations, Essential Fish Habitat assessments, and protected plant and wildlife biological surveys/assessments.

Natural Resources, Confidential Client, OK, KS, MI, and IL. Biologist conducting wetland assessments and delineations, wetland and terrestrial vegetation community investigations and mapping, land use mapping, wildlife investigations, habitat assessments for protected plant and animal species of conservation concern (including Indiana bat, American burying beetle, spotted skunk, and short-eared owl), and stream morphology studies, for proposed dilbit transmission pipeline.

I-75 PD&E Study (15 Mile Corridor) from Miami-Dade County Line to SR 826 (Palmetto Expressway), FDOT District 6, Miami-Dade County, FL. Biologist conducting wetland and protected plant and wildlife species/habitat assessments and mapping. Tasks also include preparation of a Wetland Evaluation Report and Endangered Species Biological Assessment report for submittal to FHWA for proposed roadway improvement and alignment alternatives. Additional tasks included preparation of environmental permit application packages for submittal to Federal, State and local regulatory agencies, which included an in-depth wood stork assessment and wetland mitigation planning.

I-95 PD&E Study (10-mile Corridor) from Oakland Park Blvd. to Glades Road, FDOT District 6, Broward and Palm Beach Counties, FL. Lead biologist for environmental field and assessment tasks associated with the performance of a PD&E Study. Tasks include preparation of a WER, ESBS, CSER, NSR, AQR, SCEE, and a Categorical Exclusion Type II for submittal to FHWA for proposed roadway improvement and alignment alternatives.

Natural Resources, Florida Gas Transmission Company, FL, AL, MS, and LA. Principal investigator conducting wetland assessments and delineations, mitigation assessments, wetland and terrestrial vegetation community investigations and mapping, land use mapping, wildlife investigations, surveys for protected plant and animal species of conservation concern (including gopher tortoise, scrub jay, red-cockaded woodpecker, burrowing owl, Audubon's caracara, and American kestrel), stream morphology studies, contamination assessments, environmental resource permitting, and QA/QC for proposed pipeline expansion projects (extensions, looping and laterals) Also, performed gopher tortoise relocations in support of pipeline construction at various locations in Florida and Alabama.

Florida Panther Prey Survey for the Everglades Agricultural Area (EAA) Conveyance and Regional Treatment (ECART), EAA Compartment B and EAA Compartment C Projects of the CERP, Palm Beach County, FL. Organized and conducted extensive panther prey (deer and feral hog) track surveys and reporting for approx. 16,000-acres in western accordance with US FWC guidelines in connection with the USACE 404 permit application.

Kelley Samuels, PWS, CERP

Natural Resources Team

Key expertise
Biology
Ecology
Wetlands Delineation
Threatened & Endangered Species
NEPA

Education
BA, Environmental Studies, 1997

Years of experience
25 with AECOM | 25 Total

Training
Graduate, Florida Statewide and U.S. Army Corps of Engineers Wetland Delineation Methodology Courses

Registrations/Certifications
Wetland Scientists Professional Wetland Scientist (PWS)
FWC Gopher Tortoise Authorized Agent
Ecological Restoration Certified Ecological Restoration Practitioner (CERP)
AECOM Certified Project Manager
AECOM Lead Verifier - Impact Assessment & Permitting
AECOM Lead Verifier - Oil & Gas Midstream

Kelley is a Senior Ecologist and an AECOM Certified Project Manager, based in the Orlando, Florida office. Kelley has nearly 25-years of experience as an environmental impact assessment and permitting specialist.

Professional history

Kelly's expertise includes ecological assessments of flora and fauna (primarily in the southeast), with a specific focus on wetlands and wildlife as they relate to linear corridor analyses, environmental permitting, due diligence evaluation, and environmental monitoring. This work includes wetland assessment, wetland delineation, and functional assessment of wetland impacts and proposed mitigation utilizing the Uniform Mitigation Assessment Method (UMAM), protected species analyses, and environmental permitting with local, state and federal agencies. She is an authorized agent by the Florida Fish and Wildlife Conservation Commission (FWC) to excavate, transport, and handle the state threatened gopher tortoise (Gopherus polyphemus). Kelley has assisted in the delivery of federally funded projects that meet all aspects of the National Environmental Policy Act (NEPA) requirements including managing interdisciplinary teams from project development through the permitting, implementation and post permit compliance phases. She has prepared environmental documents that meet the National Park Service (NPS), Department of Energy (DOE), Federal Energy Regulatory Commission (FERC), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Study and federal Environmental Assessment (EA)/Finding of No Significant Impact (FONSI) and Environmental Impact Assessment (EIS) requirements for millions of dollars of public investment.

Select project experience

Big Cypress National Preserve Trail Heads and Turn Lanes Environmental Assessment (EA), Collier, Miami-Dade and Monroe Counties, FL. AECOM was hired to assist the National Park Service (NPS) with analyzing impacts that would occur as a result of improvements at eight trail heads and the construction of five turn lanes on US 41. Kelley served as the project manager of a multi-disciplinary team that evaluated overall impacts and led the natural resource impact assessment and documentation through the National Environmental Policy Act (NEPA) process including public scoping. During the NEPA process, Kelley analyzed impacts associated with a series of alternatives to water resources, wetlands, soils, floodplains, special status species, and wildlife. A Wetland Statement of Findings (WSOF) was developed in accordance with NPS policy to quantify the impacts, conduct a functional assessment, and develop a conceptual mitigation plan to compensate for unavoidable wetland impacts. The proposed improvements were found to result in a Finding of No Significant Impact (FONSI)/EA class of action determination in August 2012. Final engineering and permitting at the four trail heads identified as part of the preferred alternative commenced shortly after the environmental document was approved and Kelley continued to manage the permitting process.

NPS requisite documents identifying the approach, methods, and results of wetland investigations were summarized in the following documents: Wetland Delineation Field Plan, Wetland Jurisdictional Delineation Report and a Conceptual Mitigation Plan Report. Site inspections were conducted with agency representatives to gain concurrence on the extent of wetland jurisdiction, the loss of function, and the mitigation required to compensate for wetland impacts and habitat occupied by federally endangered species including the wood stork (*Mycteria americana*) and Florida panther (*Puma*

concolorcoryi) and the state listed Florida sandhill crane (*Antigone canadensis*). A Class IV permit was obtained from the Miami-Dade Department of Regulatory and Economic Resources, an Environmental Resource Permit (ERP) was obtained from the South Florida Water Management District (SFWMD) and an Individual Permit (IP) was obtained from the United States Army Corps of Engineers (USACE) within the schedule necessary to secure funding and enable the NPS to secure a contractor. Improvements recently opened and are being enjoyed by visitors to the Big Cypress National Preserve.

Cape Canaveral National Cemetery Environmental Assessment, US Department of Veterans Affairs Scottsmoor, FL. AECOM assisted in the preparation of a Specific Environmental Assessment (SEA) in compliance with the National Environmental Policy Act (NEPA) to develop and operate a cemetery for US veterans in North Brevard County, Florida. As part of the SEA, AECOM obtained a Jurisdictional Determination (JD) to clarify the extent of federally regulated wetlands and evaluated the potential for listed species to occur on the +/-320-acre site. AECOM ecologists specifically conducted quantitative surveys for the federally listed Florida scrub-jay (Aphelocoma coerulescens) and the state-listed gopher tortoise (Gopherus polyphemus) and Florida sandhill crane (Antigone canadensis). The results of the detailed fieldwork were summarized in the SEA and in individual reports. In addition, AECOM formalized the request for consultation with the United States Fish and Wildlife Service (USFWS) that ultimately resulted in an Endangered Species Act (ESA) determination of “may effect, not likely to adversely affect” several federally listed species. Environmental permits were secured from the St. Johns River Water Management District (SJRWMD) and the Florida Fish and Wildlife Conservation Commission (FWC). Kelley assisted the VA with the relocation of the on-site population of gopher tortoises to a long-term protected recipient site in the spring of 2015 just prior to construction of Phase 1 of the National Cemetery.

Third Party EIS – East Collier Property Owners, United States Fish and Wildlife (USFWS) Service, Collier County, FL. AECOM was hired to assist with the preparation of an Environmental Impact Statement under the direction of the USFWS related to the Eastern Collier Multispecies Habitat Conservation Plan (HCP and Incidental Take Permit (ITP) in compliance with the National Environmental Policy Act (NEPA). Kelley managed an interdisciplinary staff comprised of traffic engineers, biologists, environmental and transportation planners to produce the DEIS that evaluates the potential effects to the natural, physical, and human environments likely to occur as a consequence of the Service issuing ITPs for Covered Activities and Covered Species requested by a group of landowners acting jointly as the Eastern Collier Property Owners, LLC (ECPO) under Section 10 of the federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The ECPO anticipate pursuing various activities on approximately 152,000 acres of private lands in northeastern Collier County, Florida identified as the Rural Land Stewardship Area (RLSA). Of these lands, the ECPO intend to preserve and limit development of approximately 107,000 acres of habitat important to the Florida panther (FP) and other federally listed species (restricted to uses no more intensive than historical uses of these lands) while directing future residential development, commercial development, and earth mining (i.e., “Covered Activities”) to the remaining 45,000 acres minus the acreage of the already permitted Ave Maria project for a total maximum of 39,973 acres of potential new development within the 152,000-acre plan area. These Covered Activities will be implemented in a portion of the RSLA lands considered to be of lesser habitat quality for the FP. The ECMSHCP and ITPs (if issued) would cover the incidental take of 19 Covered Species--eight federally listed species, three species that are being considered for listing but are not currently federally listed, and eight non-federally listed species that are currently listed as threatened by the state of Florida. Any ITPs issued, and the biological analyses performed for our intra-Service consultation, would inform and facilitate future regulatory actions by the Corps of Engineers in the ECMSHCP plan area. The DEIS was published and updated based on the +/-2000 comments received and is currently being reviewed by the FWS.

Big Cypress National Preserve Hydrologic Restoration Master Plan Environmental Assessment, Collier, Miami-Dade and Monroe Counties, FL. AECOM was hired to assist the National Park Service (NPS) with the creation of a shared vision for managing backcountry access and wilderness at the Preserve. Public scoping began in 2014 enabling NPS and the planning team to develop a series of alternatives including management strategies. NPS also conducted a wilderness eligibility assessment to assist with the development of wilderness alternatives. Kelley led an interdisciplinary team and assisted with the Alternatives Workshop held as an open house forum and began leading the AECOM team that is currently assessing feedback in order to develop a National Environmental Policy Act (NEPA) document that analyzes resource impacts that have the potential to occur as a result of the range of alternatives developed. She facilitated the Preferred Alternative Workshop with the NPS Interdisciplinary Team and the draft EIS will be published in the spring of 2020.

Karen Brandon, PE

Natural Resources – Permitting Lead

Key expertise
Permitting
StormwaterDesign/Management
Ports/Marinas

Education
BS, Environmental Engineering, University of Florida, 1988

Years of experience
31 with AECOM | 38 Total

Training
FDEP Certified Erosion and Sediment Control Inspector

Registrations/Certifications
Professional Engineer: FL #38579
FDEP Certified Erosion and Sediment Control Inspector: #095
AECOM Cerytified Project Manager
AECOM Lead Verifier - Water Resources

Karen has over 37 years of regulatory and water resources experience in the design and permitting of large stormwater management, port/marine and utility projects with environmental impacts.

Professional history

Karen has also been involved in complex regional hydrologic modeling studies, general consulting for several 298 water control districts and community development districts, development of municipal stormwater master plans and stormwater utilities, and roadway projects. Karen has been an assistant city engineer and acting city engineer for the city of Palm Beach Gardens and town engineer for the town of Juno Beach, as well as district engineer for three community development districts.

Select project experience

Sediment Dredging, The Port of Palm Beach District Berth 17 Project, FL. Project manager and environmental permitting manager for the design of $10M project including a new slip, dredging, paving, grading, drainage, utility and lighting improvements. Permitting issues include potential impacts to hard corals, sea grasses, sea turtles and manatee habitat. Permitting agencies include FDEP, the US Army Corps of Engineers, the National Marine Fisheries Service and the Florida Wildlife Commission.

Glades Area Expansion Project, Florida City Gas, FL. Project manager for the surveying, preparation of permit plans and FDOT, SFWMD, local water control district, and local government right-of-way permitting of over 30 miles of natural gas pipeline from South Bay to west of Clewiston, Florida. Included environmental resource permitting through the FDEP and U.S. Army Corps of Engineers, as well as Section 408 Permitting through the Corps and railroad permitting through SFCE.

Bulkhead Reconstruction, The Port of Palm Beach District Slip No. 3 Improvements, FL. Project manager and environmental permitting manager for $16.7M in bulkhead reconstruction, rail, dredging, paving, grading, drainage, utility and lighting improvements to Slip 3 which had the potential for impacts to hard corals, sea grasses, sea turtles and manatee habitat. Included a NEPA Environmental Assessment. Permitting agencies included FDEP, the US Army Corps of Engineers, the National Marine Fisheries Services Protected Resource and Habitat Conservation Divisions, and the Florida Wildlife Commission.

SOF Boat Dock Facility, U.S. Navy, Monroe County, FL. Environmental permitting for improvements to an existing boat dock facility including dock demolition and reconstruction, dredging, installation of shoreline revetment, fenders and a wave attenuation structure with flushing culvert. Permitting issues included seagrasses and corals. Permitting agencies included the FDEP, the US Army Corps of Engineers, the NOAA/Florida Keys National Marine Sanctuary and the South Florida Water Management District for minor upland improvements.

Utility Right-of-Way Permitting, Beeline Community Development District, Palm Beach County, FL. Palm Beach County Land Development and Utility Right-of Way permitting for water main replacements, new fire mains and stormwater culvert crossings. Also included was Palm Beach County Health Dept permitting for the water mains.

Water Main Micro tunnel and Force Main Utility Tunnel, Miami-Dade Water and Sewer Department, Miami-Dade, FL. Permitting manager for the environmental regulatory permits from the Miami-Dade County Department of Environmental Resource Management, the FDEP, and the U.S. Army Corps of Engineers. Permitting was the critical path for the $37M project. Challenges included water quality and reduction of impacts to benthic resources in the Biscayne Bay Aquatic Preserve.

Justin Vandever, PE

Resilience/Sustainability/Climate Change Lead

Key expertise
Coastal and Marine Science
Climate Change Adaptation
Risk Assessment

Years of experience
10 with AECOM | 14 Total

Registrations/Certifications
Professional Engineer: CA #76245 (Civil)
AECOM Certified Project Manager
AECOM Lead Verifier – Climate Change & Resilience

Education
MS, Marine Science, College of William and Mary
BS, Civil and Environmental Engineering, Cornell University, 2004

Justin has extensive experience in coastal and marine science, engineering, and climate change adaptation. His project experience includes climate change vulnerability and risk assessments, sea level rise inundation mapping, coastal processes and flooding, design of coastal and estuarine restoration and monitoring projects, and response of coastal and estuarine environments to sea level rise. Justin has served as a quality reviewer and technical advisor on numerous coastal flooding and climate change-related projects.

Professional history

Justin has co-authored technical articles related to climate change vulnerability, including sea level rise impacts in San Francisco Bay, effects of coastal erosion on the California coast, and mitigating climate change through coastal wetland restoration and has presented at regional, nationwide, and international coastal conferences. Justin was selected as one of the American Society of Civil Engineers' "New Faces of Civil Engineering" in 2013.

Select project experience

Miscellaneous. Environmental Engineering Miami Beach, FL. Coastal Engineer on AECOM's project to assist the City of Miami Beach in conducting a sea level rise vulnerability assessment as part of a broader resiliency effort within the City. Justin led the development of sea level rise inundation maps to evaluate exposure of City assets to flooding and sea level rise and provided technical review of a climate science summary memo. Justin also assisted in the development of a citywide asset database and vulnerability assessment tool to support the City's capital planning process.

City of Naples, Stormwater Master Plan update, Naples, FL. Coastal Engineer on AECOM project to complete a Stormwater Master Plan Update for the City of Naples. Justin led completion of the climate adaptation chapter of the master plan, which evaluated the effects of sea level rise (SLR) on stormwater management within the city. The plan documented historical and future SLR projections and evaluated SLR and flooding impacts on stormwater system components such as pump stations, outfalls, and catch basins.

Economic Impacts and Sea Level Rise and Coastal Storms, Dania Beach, FL. Coastal Engineer on an AECOM project to conduct an analysis of the potential economic costs that could occur from failing to take action to protect Dania Beach's business communities from future storm surge and sea level rise impacts, as well as the economic benefits from adaptation actions that mitigate future coastal hazards to the City's commercial core. Justin served as a technical advisor to the economics team to help interpret coastal hazard mapping datasets used in the economic analysis.

Port of Long Beach, Climate Adaptation and Coastal Resiliency Strategy, Long Beach, CA. Provided coastal engineering expertise in support of an evaluation of climate change impacts, assessment of risks to the port, and preparation of a climate resiliency plan. Climate change and coastal hazards are anticipated to cause direct or indirect consequences to the port's infrastructure and operations. A climate adaptation and coastal resiliency plan was prepared for the port to enhance its infrastructure and operations.

Regional Adaptation Strategies Cost Estimating, San Francisco Bay, CA. Coastal Engineer, assisting MTC with sea level rise adaptation strategy costing for the Horizon initiative. AECOM is developing unit cost estimates for a number of physical adaptation strategies to adapt the Bay Area's shorelines to 2050 sea level rise of 1, 2, and 3 feet.

Federal Emergency Management Agency (FEMA) – Region IX, Risk Map Program - Coastal Hazard Analysis, Pacific Coast, CA. Technical lead on a team conducting tide frequency analysis, nearshore wave modeling, wave runup and overtopping, and coastal flood mapping for central California. FEMA performed a detailed coastal engineering study of the Pacific coast of California. Results from this study will be used to remap the coastal flood risk and wave hazards for the California coast.

Lauren Swan, ESP

Resilience/Sustainability/Climate Change Team

Key expertise
Master Planning
Resilience Solutions
Landscape Architecture Planning
Landscape Architecture Design

Education
MBA, Landscape Architecture, State University of New York, 2010
BA, Urban and Regional Planning, Florida Atlantic University, 2007

Years of experience
6 with AECOM | 14 Total

Certifications
Envision Sustainability Professional
AECOM Certified Project Manager

Lauren has experience in landscape architecture design, planning and project management for a variety of cross-disciplinary projects. From submittals to reviews and oversight, Lauren has worked in both public and private sectors with expertise in facilitation, design and strategic planning. Lauren oversees local community-based projects as well as large military projects requiring metric evaluation of Department of Defense compliance.

Professional history

Lauren's background combined with her understanding of Comprehensive Code and the Unified Facilities Criteria enables her to develop creative and resilient solutions to technical problems. Lauren led AECOM's work with 100RC resulting in the Resilient305 program and continues to actively work with communities to strengthen their climate and community resilience.

Select project experience

Resilience Services, FDOT District 6, Miami, FL. Project manager and lead contributor evaluating climate resilience projections, measures, and effects on transportation infrastructure.

Greater Miami and the Beaches Resilient305, Miami-Dade County, FL. Project Manager responsible for guiding extensive stakeholder engagement and research resulting in the development of a three-government Resilient305 Strategy to address issues of climate change, social equity, and infrastructure-based needs.

Resilient Reefs, Great Barrier Reef Foundation, Belize. Project manager and lead contributor evaluating Belize's Barrier Reef Reserve System to assess reef health and vulnerabilities. This information will be used to inform the government's reef protection policies and ensure the longevity of a healthy reef system.

Miami Beach Flood Mitigation & Resilience Study, Miami Beach, FL. Contributor to the climate change focused workshops and interviews under a vulnerability assessment documenting the climate stressors and shocks affecting Miami Beach. This assessment was used to inform city-wise strategies to mitigate flooding of public and private property. Strategies include policy changes for new construction and major renovations, specifically in the minimum building first floor elevations requirements.

Logistics Command 21st Century Plan, Naval Facilities Engineering Command (NAVFAC). Key contributor in the development of a Marine Corps Organic Industrial Base Facilities Plan for that evaluates asset condition and capacity against mission requirements and environmental vulnerabilities. The process included extensive stakeholder engagement combined with quantitative data analysis. The plan provides a prioritized project list of facilities for demolition, repair, consolidation, remediation, and construction.

Camp Lejeune US Marine Corps Asset Evaluations, NAVFAC, Camp Lejeune, NC. Key contributor working with stakeholders and conducting evaluation of critical assets to verify asset age and size and determine asset condition and capacity. Tasks included interior and exterior evaluation of key assets types: base facilities, stormwater infrastructure, electric equipment, transportation routes, and public use areas.

MCAS Beaufort US Marine Corps Installation Master Plan, NAVFAC, Beaufort, SC. Key contributor in leading stakeholder workshops to determine short-range and long-range needs based on site conditions and DoD planning guidance. Content includes planning and adaptation strategies for the following key asset types: base facilities, stormwater infrastructure, transportation routes, and public use areas.

MCLB Albany US Marine Corps Installation Master Plan, NAVFAC, Albany, GA. Key contributor in leading stakeholder workshops to determine short-range and long-range needs based on site conditions and DoD planning guidance. Content includes planning and adaptation strategies for the following key asset types: base facilities, stormwater infrastructure, transportation routes, and public use areas.

US Air Force Installation Development Plan, U.S. Air Force Civil Engineer Center (AFCEC), Multiple AFB Installations. Lead contributor to development of four Installation Development Plans for Cape Canaveral Air Force Station / Patrick AFB, Tinker AFB, Seymour Johnson AFB, and Joint Base Charleston. The plan process includes stakeholder interviews and workshops as well as analysis of quantitative data. Content includes planning and adaptation strategies for the following key asset types: base facilities, stormwater infrastructure, transportation routes, and public use areas.

Alhambra and Maggiore Parks, Coral Gables, FL. Contributor for landscape, hardscape, lighting, master planning, design, community workshops and construction services for a community park with onsite stormwater, native materials, inclusive play areas, civic scale trellis and seating area.

Tamarac Park Master Plan, Tamarac, FL. Contributor for a parks, recreation and open space masterplan that identifies existing conditions, needs assessments, planning framework and recommendations based on input from city staff and civic engagement.

Kings Bay Community Park, Coral Gables, FL. Lead contributor for the landscape, hardscape, lighting, site planning design, public outreach, and construction administration services for a linear park and pedestrian plaza with onsite stormwater retention located along the water’s edge.

Altos Del Mar Park, Miami Beach, FL. Contributor for landscape, hardscape, lighting, master planning, design, and community workshop services for the last oceanfront, undeveloped 2.5-acre park with proposed pedestrian paths, botanical garden like features, bocce court, and sand volleyball courts to create a park that is in keeping with the natural and urban landscape.

José Soler, PE

Seawall & Dock Construction Lead

Key expertise
Port & Marine Planning, Design and Construction
Dredging and Navigation Channels
Shoreline Protection & Upgrades
Waterfront & Berthing Structures
Container Terminal Development
Precast Structures

Education
BE, Civil Engineering, University of Puerto Rico, 1996

Years of experience
1 with AECOM | 24 Total

Registrations
Professional Engineer: FL #85451; PR #18272

José is a Director with AECOMs Americas Ports & Marine Group. He has 24 years of experience performing and managing numerous waterfront and maritime projects involving planning, coordination of design from conceptual through final and construction.

Professional history

José's project experience includes construction management of bulkheads, piers, dolphin structures, container terminals, waterside and landside improvements, cargo yard development, rail systems, as well as bridges. He has managed projects in the Caribbean and in the U.S.

Select project experience

Program Management Consultant Contract , PortMiami, FL. Integral member of AECOM PMC management team to the Port's Capital Improvement Program. Serving as Port's Technical and Management Advisor for major cruise terminal projects, including Terminals B, F and H. Other ongoing development projects include replacement of the North Bulkhead, Cargo Yard densification, development for an ERTG container yard, reefer racks, entry/exit gates, multi-story parking garage structures, flyover bridge structure, and bulkhead repairs.

North Bulkhead Wall Replacement Program, PortMiami, FL. Project manager for the North Bulkhead Wall system that will be replaced with a new wall along the northern extension of Dodge Island to serve all cruise operations berths. This complex wall reconstruction will require extensive construction phasing in order to minimize impacts to port operations. Currently in the earl stage of development, the program may include widening of the north apron, extensive waterside improvements, PBB and runway modifications, and relocation of bollards, fenders, and water stations.

Cruise Terminal B Design-Build, PortMiami, FL. Program manager responsible for providing Owner's Representative services for a new cruise terminal in a public-private partnership between Miami-Dade County and Norwegian Cruise Lines. Project includes upgrade of the seawall for flood and sea level rise protection.

Cruise Terminal V Design-Build, PortMiami, FL, Program manager responsible for providing Owner's Representative services for a new cruise terminal to accommodate the Virgin Voyages Scarlet Lady. Project includes dredging of the berth and portions of the Intra Coastal Waterway, a new bulkhead wall system, a mooring dolphin extension to accommodate the new vessel, and flood and sea level rise protection.

Cruise Terminal F Expansion and Berthing Re-Alignment Design-Build, PortMiami, FL. Program manager responsible for providing Owner's Representative services for the expansion and renovation of Cruise Terminal F. Project includes waterside improvements to accommodate berthing of Carnival's newest 6,000 passenger ships and provide improved flood and sea level rise protection.

Capital Improvement Budgeting, Port of Palm Beach, Riviera Beach, FL. Project engineer responsible for the evaluation and development of budget for the new Capital Improvement projects. Led the development and overseeing of the planning, design and construction of the Port's Capital Improvement and Replacement Program including construction of new berth capable of handling for 300' barge for RO/RO operation, including secant wall and concrete bulkhead structure, navigational and dolphin structures and dredging. Site conversion of existing high-rise building structure and parking into a soil improved heavy load Reefer Container Yard operation. Replacement of existing bulkhead structures with new steel sheet pile and construction of concrete cap, installation of mooring bollard, fenders and shore power stations. Managed the planning and construction of the Improvements projects to the In-Port rail system to meet Federal Rail Administration codes and regulation including the replacement of existing rail tracks, switches and signaling systems. Retrofit and improvement of existing berth, with the installation of

new sheet pile bulkhead wall, new soil anchors and tiebacks system, construction of new utilities, new prop wash wall, restoration of pavement and upland appurtenances. Led the coordination with Federal and States agencies such as the US ACE and the FDEP. [Prior to joining AECOM]

Crowley Maritime Isla Grande Terminal Improvements, San Juan, PR. Project director/project construction manager responsible for construction team in the Upland Redevelopment and Improvements of the existing Container over Chassis Storage Yard into a Heavy Load Five-High Storage Container Yard Handling Operation. The upland improvements included to increase the ground load capacity through a Cement Treated Base soil mixing process. Construction of new 38kV electrical substation, electrical power and communication ductbanks for new refrigerated container receptacles (Reefer Plugs). New entrance and exit gate structures with kiosks and cameras for automated driver, truck and container identification, weight scales and cargo delivery system. [Prior to joining AECOM]

Port of the Américas Phase III-A.2 & A.2.1, Ponce, PR. Project director/project construction manager responsible for the construction team in the construction of third and final government phase bid for the new world-class marine port terminal. The new phase developed 45 acres of waterfront property providing additional transshipment area with capability of 250,000 TEU's for a portwide total of 500,000 TEU's. The project included the realignment of an existing 2,500 linear meter storm channel with steel sheet pile and concrete cap side walls, installation of 260,000 linear feet of geopiers for soil capacity improvement, installation of new water and sanitary systems, harbor dredging, installation of a 750,000 cubic meters surcharge with 1,900,000 lf wick drains system for underground soil improvements, RTG's runways and tie downs, 13 structural steel reefers platforms and a 38kV electrical substation. Incorporated value-engineering process to the original project design for project construction efficiency, modifying the required clamshell dredge and scout ocean dump material disposition to a hydraulic dredge system with landside geotubes for material collection and upland disposition. [Prior to joining AECOM]

Port of the Américas Phase II, Ports Authority, Ponce, PR. Project director/project construction manager responsible for the construction team in the construction of second phase of a high priority government project design to increase economic activity to the island with the first world-class deep draft public marine port terminal in the Caribbean. The construction area for the new terminal was developed in a 35 acres waterfront property. The new terminal will provide a transshipment area with capability of 250,000 TEU's. Construction activities included demolition of existing structures, earthwork and surcharge installation and monitoring with accelerated settlement thought wick drains system installation. One of the most critical activity involved the construction of a new storm sewer system, with an 84-inch concrete outfall pipe at a 25 feet installation depth. The project included the installation of a 650,000 cubic meters surcharge with 1,063,000 of wick drains system for underground soil improvements, RTG's runways and tie downs, storm system and storm water treatment units, potable and fire distribution system. [Prior to joining AECOM]

John Carel, PE

Seawall & Dock Construction Team

Key expertise
Port & Marine Planning, Design and Construction
Dredging and Navigation Channels
Shoreline Protection & Upgrades
Waterfront & Berthing Structures
Container Terminal Development
Precast Structures

Education
MS, Civil Engineering, Michigan State University, 1972
BS, Civil Engineering, Michigan State University, 1971

Years of experience
27 with AECOM | 47Total

Training
FHWA Bridge Management
FHWA Safety Inspection of Highway Bridges Refresher

Registrations/Certificatoins
Professional Engineer: MA #49086; FL #71844; NJ #24804; NY #57347; SC #11885
AECOM Lead Verifier - Coastal & Marine

John has extensive marine, coastal, and structural engineering experience. His expertise includes project management, contract negotiations, design, construction, and rehabilitation of structures with a specialization in waterfront and maritime projects, including piers, jetties, wharves, bulkheads, shoreline revetments, dolphin structures, navigation aid structures and moorings, marine terminals, as well as bridges.

Professional history

hundreds of facilities including condition inspection surveys and evaluation of sites and facilities, structural design of new facilities and repairs to existing, preparation of contract and bidding documents both traditional design-bid-build and design build, environmental permitting, cost estimating, consultation during bidding and construction, due diligence studies, bid evaluation, and construction inspection services. He is familiar and accustomed to working for both public and private clients on commercial ports and public use facilities including ferry and passenger terminals, waterfront parks, bulkheads, seawalls and revetments.

Select project experience

SOF Key West, NAVFAC Southeast, Naval Air Station, Key West FL. Lead marine engineer for reconstruction of a small craft facility for joint special op forces. Work includes replacement of small craft basin timber wave fence with 144 LF concrete wave attenuator using concrete piles and precast planks, replacing fixed timber docks with 6 new concrete piers approx. 2,200 SF, relocating a floating jet ski dock, bulkhead repairs, bulkhead extension, replacing a boat ramp, and repairs and upgrade to revetments. The project work also included a pipe for basin flushing, boat wash facility, new Latrine/Shower building, site lighting and related site utilities including sewer force main.

Berth Engineering, Port Manatee, Palmetto FL. Lead engineer for Reconstruction of Berth 9 and Berths 4, 5, 12 and 14 Cathodic Protection including new steel combi-wall oversheeting to address deteriorated steel cellular cofferdam wharf. The new wall will also allow for the future deepening of the slip when the main channel is deepened. The wall will be anchored by using tie rods, secured to a transfer beam supported on the back wall of the cofferdams and held laterally with soil anchors. The project includes new fendering, mooring fittings, ship's utility stations, concrete and asphalt pavement to support mobile harbor cranes, forklifts and dockside equipment) and a drainage system. Lead Contract documents preparation efforts (plans, bid and technical specifications and cost estimates).

Waterfront Structures Design Improvements, USCG Station Marathon, Marathon FL. Project engineer for Concept through final design for improvements to Waterfront Structures. Project Work includes repairs to wharf, bulkheads and seawalls and replacement of boat ramp. Prepared drawings, specifications, cost estimates and environmental permit applications.

Port Miami Program Management, Miami FL. Assisted in development of standard marine specifications, design guidelines and Standards Manual. Also assisted various small task orders review of construction proposals.

Port Everglades Master Plan, Fort Lauderdale, Hollywood and Dania, FL. Marine Engineer assisted planners in developing feasible alternatives for port improvement projects, schedules and construction cost estimates for multiple projects over a 2 year horizon. **Former Kerr McGee Site, Jacksonville, FL.** Prepared conceptual environmental bulkhead sketches estimates of probable costs with provision for future conversion to marginal wharf.

Hurricane Irma Repairs, Refit Wharves and TPS Docks C&D, NAVFAC Southeast, Naval Submarine Base, Kings Bay, Georgia and Naval Air

Station Jacksonville FL. Lead design engineer of Design Build Team for two new submarine camels, new oil booms and repairs to wharves including refurbishing mooring fittings, cable tray and new ladders, and structural repairs to floating pier guide pile frames. Work includes preparation of construction plans and technical specifications. For Jacksonville Project reviewed plans for shoreline stone armor revetment, replacement of small timber pier, new timber bulkhead and stabilization of existing stone and concrete seawall. Prepared project specifications for all work.

Port Canaveral Berths 5 & 6, Canaveral Port Authority, Cape Canaveral FL. Marine Engineer responsible for Peer Review of construction change including addition of crane beams to allow use of rail mounded container cranes for an under construction berth designed for mobile harbor crane use. Review found potential for cost savings of approx. one million dollars.

Bush Terminal Park Improvements, Piers 2, and 4 to 5, NYC Economic Development Corporation, Brooklyn NY. Lead designer and prepared contract documents for new stabilizing sheet pile cutoff wall and replacement of promenade walkways.

Waterfront Building Code, New York City Department of Small Business Services, New York NY. Advisor and quality control reviews for development of a new waterfront building code for the City of New York.

Reconstruction of Fender Systems, NYCDOT Slip 1, St. George, Staten Island NY. Quality control on basis of design and construction documents and assisted with preparation of Contract Documents for catwalk and gangway systems.

Bayport Container Terminal, Houston Port Authority, Houston TX. Concept study for evaluation of existing wharf to support new larger Ship-to-Shore Cranes including proposed concepts and costs for upgrades. Subsequently, provided QC reviews of construction documents for strengthening including new drilled shafts and subcaps to strengthen crane beams and tiedowns.

Carney Point Township Terminal Planning Study, Chemours, Chambers Works, NJ. Prepared concept study for proposed marine terminal at site of former DuPont Chemical Plant.

Springmaid Pier Reconstruction, Myrtle Beach SC. Performed QC reviews of drawing design submissions for replacement of pier destroyed during hurricane.

Long Slip Canal Fill and Rail Enhancements, NJ Transit, , Hoboken NJ. Prepared contract specifications for structural work including Concrete Combined Sewer Outfall, and related sheeting and sheet piling.

South Carolina State Ports Authority, Hugh L. Leatherman Sr. Container Terminal, Charleston SC. Project engineer marine lead in charge of the design and preparation of Plans and Technical Specifications for the preliminary design of a 3,500 foot, 3 berth marginal wharf container berth and final design allowing for construction of up to 2,700 feet of wharf including 2 of the 3 berths as budget allows. The work includes construction of a 122 feet wide concrete wharf supported on precast prestressed concrete piles with steel stingers. The wharf consists of cast-in-place pile caps and crane beams, precast/pre-stressed deck planks with cast-in-place concrete topping, cone fenders with UHMWPE faced steel panels for berthing, crane rails and appurtenances, bollards for mooring, ships' water service stations and water piping, electrical power cable horn vaults and conduits, removal and replacement of existing stone revetment stone, extension of placement of new armored revetment and stone toe, dredging with upland disposal of dredged material, and other ancillary work. Currently responsible for review and approval of construction submittals.

Station Little Creek, United States Coast Guard, Virginia Beach VA. Project engineer for evaluation of structural adequacy of existing sheet pile bulkhead under proposed dredging.

Hammels Wye Flood Mitigation, New York City Transit Authority, Rockaway, Queens NY. Developed alternative conceptual designs for wave fences and hardening of subway infrastructure.

Whitestone and Throgs Neck Bridges, Triboro Bridge and Tunnel Authority, Queens and the Bronx, NY. Provided QC reviews of design-build plans and specifications for new fender systems protecting the main suspension bridge towers.

Limetree Bay Terminals LLC (former Hovensa Marine Terminal, Saint Croix, U.S. Virgin Islands. Project engineer for inspection and report on condition of Dock 4 prior to its recommissioning.

Indian Navy, Project Seabird, Marine Works Consultancy Package I, Naval Base Karwar, India Technical advisor/quality control reviewer providing technical guidance on pier and wharf design concepts and performed QC reviews on proposed construction types and basis of design.

Jae Park, PhD, CFM

Grant Writing/Funding Assistance Lead

Key expertise
Grant Management and Policies
Hazard Mitigation
Resiliency and Disaster Reovery

Education
PhD, Urban and Regional Science, Texas A&M University, 1998
MS, Community and Regional Planning, Iowa State University, Ames, 1992

Years of experience
14 with AECOM | 28 Total

Certifications
Certified Flood Plain Manager
AECOM Lead Verifier - Coastal & Marine

Dr. Park has 28 years of experience and expertise in the areas of hazard mitigation, resilience and disaster recovery, grants management, and policies.

Professional history

Dr. Park has assisted many local, state, and federal governments rebuild resilient communities after major disasters such as Hurricanes Fran, Floyd, Isabel, Katrina, Sandy, Matthew, and Maria. Currently Dr. Park is a FEMA Hazard Mitigation Assistance contract program manager for AECOM. Prior to joining AECOM, he served as a policy advisor and chief policy analyst for the Mississippi Governor Office of Recovery and Renewal in coordinating Hurricane Katrina. He was an Assistant Director for Mitigation, Division of Emergency Management, State of North Carolina. During his tenure, he was instrumental in development of an overall long-term vision for the Hazard Mitigation and oversaw managing $800 million mitigation funds for implementing various hazard mitigation planning and projects.

Select project experience

FEMA Hazard Mitigation Assistance (HMA) Program Service. Program manager for to enhance quality and speed of HMA grant awards, refine delivery, and expand national outreach for all types of mitigation. AECOM is developing a program strategy to ensure that best practices, new ideas, and lessons learned are incorporated. AECOM has been providing technical support to facilitate the development of new Building Resilient Infrastructure and Community grant program under Disaster Recovery Reform Act of 2018. AECOM also is responsible for maintenance of HMA program guidance, policies, regulations, job aids, and online outreach communications.

Carolina Hurricane Matthew Disaster Resilience and Redevelopment Plan, NC. Technical advisor for development of Resilient Redevelopment Plans for the counties and municipalities impacted by Hurricane Matthew in State of North Carolina. The plan development includes activities including but not limited to public meeting, identify and verify the actual damages, risk assessments and then identify actionable strategies that will help advance recovery and promote resilience in the impacted communities. The resilient recovery strategies will be targeted to housing, infrastructure, economic development and ecosystem protection. Additional duty includes working with NC Governor's office and various state agencies in preparing Congressional Recovery funding request.

Multidisciplinary Planning Services - Hampton Roads Region, Norfolk VA and Virginia Beach. Resilience funding strategy lead for developing a joint land use study with impacted local governments and Navy installations in Norfolk and Virginia Beach to carry out resilience measures to reduce the impacts of flooding, erosion, and extreme coastal storm events on critical infrastructure that supports Navy operations in Hampton Roads. Leads development of Implementation Strategy, with responsible parties, timelines, and multiple prospective program funding sources identified for each strategy.

FEMA Unified Hazard Mitigation Assistance Grant Program Guidance Development and Updates. Task lead to develop Unified Hazard Mitigation Assistance Program guidance for five hazard mitigation funding programs: PDM, FMA, RFC, SRL, and HMGP. The intent of this alignment is to enhance the quality and speed of grant awards on an allocation and competitive basis to State, local, and Tribal entities for worthwhile, cost-beneficial activities designed to reduce the risks of future damage in hazard-prone areas. Supported updating the HMA Guidance for FY 2015, which is a comprehensive document that details the specific eligibility, implementation and close out criteria of the HMA grant programs.

HUD National Disaster Resilience Competition (NDRC) Support for State of MA, MS and NM. Task lead for HUD set aside $1 billion available to the communities that have been struck by natural disasters in recent years. The NDRC is designed to promote risk assessment and planning and will fund the implementation of innovative resilience projects to better prepare communities for future storms and other extreme events. Dr. Park supported developing HUD NDRC Phase II grant applications for MA, MS and NM and the assistances ranged from resilience project scoping, program compliance check, data collection, and benefit cost analyses for various projects, such as wildfire mitigation, dam restoration, coastal protection, storm water management and green infrastructure, and renewable energy.

Mississippi Disaster Recovery and Renewal (Mississippi Office of the Governor). Policy advisor and chief analyst for the Mississippi Governor Office of Recovery and Renewal in coordinating Hurricane Katrina recovery efforts over $10 billion. Services provided include disaster recovery policy guidance and counsel; support implementation of the recovery recommendations of the Governor's Commission; and provide training, education, and outreach programs to government officials, organizations, and individuals to help them make more informed decisions regarding disaster recovery. He also coordinated community long-term recovery planning efforts with FEMA and impacted community leaders.

Division of Emergency Management, NC. Assistant director for mitigation for eleven presidentially declared disasters and worked with FEMA in setting hazard mitigation and recovery policies after the Hurricane Floyd. Primary task of the position centered on the development and implementation of a comprehensive mitigation program involved with grants management, hazard mitigation planning, NFIP and legal supports. He oversaw managing $800 million federal and state funds for implementing various hazard mitigation projects, including buyout of 5,000 flood damaged structures, residential elevations and storm water management.

Amy Baker, PE, PMP, CFM

Grant Writing/Funding Assistance Team

Key expertise
Grant Management and Policies
Hazard Mitigation
FEMA Hazard Mitigation and Public Assistance
Technical Assistance Contracts
HUD CDBG-DR

Education
BSE, Civil Engineering, Tulane University, 1998

Years of experience
17 with AECOM | 22 Total

Registrations/Certifications
Professional Engineer: LA #30484; SC #35074; TX #129148
Project Management Institute: PMP #1510737
Certified Flood Plain Manager

Amy has 22 years of experience as an engineer and manager and is an Associate Vice President at AECOM and provides subject matter expertise for recovery, mitigation and resiliency efforts.

Professional history

Amy has provided program management leadership for some of the largest infrastructure recovery programs nationwide. During this time, she has provided extensive support assistance to local jurisdictions involved in the post-disaster recovery directly, and through USACE and FEMA. She focuses the management of projects (ranging from tens of thousands to multimillions of dollars in contract value and a billion of dollars in grant value) that support the long-term resilience of the built environment. Amy has designed and led multidisciplinary teams consisting of direct staff and subconsultants, which at times exceeded more than 1,000 professionals. She brings more than 15 years of experience supporting other disaster grant programs, including FEMA Hazard Mitigation and Public Assistance-Technical Assistance Contracts, Housing and Urban Development (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR), and DOT New Starts.

Select project experience

Community Resilience Support Services IDIQ, National Institute of Standards and Technology (NIST). Program manager / project executive for the AECOM team of national resilience experts providing technical support for its research program, and meeting/conference planning and support. The research support activities include stakeholder outreach, technology transfer, and research and development tasks that lead to tools to assess resilience and support decision making in communities. Responsible for overall management of the $9M IDIQ contract, with multiple task orders.

Environmental Planning and Historic Preservation Technical Assistance to State and Locals for Hazard Mitigation Assistance Grants, Federal Emergency Management Agency, Nationwide. Project manager and subject matter expert under Booz Allen Hamilton's HMTAP Non-AE Nationwide EHP task orders. Provided subject matter expertise in execution of technical assistance and EHP delivery for FEMA grants. Responsible all components of her teams' task order execution leading to the successful delivery of technical assistance, including financial, subcontracting, technical, and staffing responsibilities. Served as the main point of contact with the BAH project manager for these efforts.

Management and Design of the Community Development Block Grant Disaster Relief Projects, City of Norman, OK. Grants lead for the City of Norman HUD CDBG-DR funding from a series of declared storms (tornadoes, wildfires and rain). Working with the State of Oklahoma, ODOC, under the Action Plan, the City has moved forward with a roadway repair program of at least 7 major roads. The City of Norman contracted program management, design, construction management and grants support. Responsible for management portion of this job, coordinating such issues as Section 3 compliance and reporting, WDBE efforts, monthly progress reporting, and general CDBG-DR policy issues with the City. Supporting compliance with HUD CDBG-DR requirements, including reporting.

Environmental Planning and Historic Preservation Technical Assistance to State and Locals for Hazard Mitigation Assistance Grants, Federal Emergency Management Agency, Nationwide. Task order manager for three HMTAP nationwide task orders. Provided technical assistance and programmatic support related to National Environmental Policy Act and other applicable EHP laws, executive orders, regulations, and guidance to applicants and subapplicants throughout the United States. Responsible for coordinating nationwide cadre of EHP staff delivering technical assistance. Managed all components of task order execution leading to the successful delivery of technical assistance, including financial, subcontracting, technical, and staffing responsibilities. Served as the main point of contact with the FEMA project manager for these efforts.

Hazard Mitigation Assistance Contract, Federal Emergency Management Agency, Nationwide. Deputy project manager/ subject matter expert for on-site coordination lead and program support lead for the contract support of this program. FEMA's HMA portfolio of pre and post-disaster grants on average exceeds $1 Billion per year over the last decade. The HMA Contract provided grants management, policy and project management support to the FEMA Branch tasked with this portfolio management. Throughout her duration supporting the contract, responsible for administration of the day-to-day on-site support of HMA contract staff; strategy and policy support for the pre-disaster mitigation program, hazard mitigation grant program and flood management assistance programs; grant management activities; data management; and reporting associated with the PDM-Joint Explanatory Statement (JES) program.

Hazard Mitigation Technical Assistance Program Task Order 50 – Pre-Disaster Mitigation-Joint Explanatory Statement, Federal Emergency Management Agency, Nationwide. Task order coordinator / project manager for a $2 million HMTAP task order to provide technical assistance and training to FEMA Headquarters, Regions, applicants, and subapplicants for congressionally earmarked funds under the Pre-Disaster Mitigation Grant Program. Worked with congressional mandates, shaped policy and statutes, and tracked rules and regulations that were under active interpretation by legislators. Focal points of this support were the development of strategy to address congressional allocations through PDM-JES; delivery of cost-effective engineering and EHP technical assistance; and detailed data management of all technical assistance efforts. Efforts included supporting Regional trainings, local workshops, development of program communication and educational tools, and data management and analysis of hundreds of applications. Efforts also included coordinating staff resources from across the country to meet individual technical assistance needs of JES applicants.

Carlton Gordon, MRSA

Asbestos, Mold & Lead Based Paint Team

Key expertise
Industrial Hygiene
Asbestos Sampling, Surveys, & Abatement
Lead Sampling & Abatement
Indoor Air Quality
Radon Sampling & Mitigation
Mold Investigations & Remediation

Education
BA, Communications Studies/ Speech Communcation and Rhetoric, State University of New York, 2000

Years of experience
15 with AECOM | 15 Total

Training
40-hour OSHA HAZWOPER
8-Hour OSHA HAZWOPER Annual Refresher

Registrations/Certifications
Floriad Certified Mold Assessor: # MRSA #2163
Florida EPA/AHERA Certified Asbestos Inspector
Florida EPA/AHERA Certified Asbestos Supervisor

Carlton is skilled in environmental fields as environmental health and safety, indoor air quality, asbestos, mold, lead, radon, corrosive drywall and Phase I and II investigations.

Professional history

Carlton has conducted various project oversights to ensure compliance with applicable federal, state, and local requirements for safe work practices in Florida for 14 years.

Select project experience

Asbestos Survey Reports, City of Miami Police Department Central Station HQ, Miami, FL. Prepared asbestos survey reports and assisted with abatement specifications to describe the scope of work and define the minimum health and safety requirements.

Mold Assessments, FDOT Miramar Hub, Miramar, FL. Performed mold assessment inside a newly constructed hub structure adjacent to interstate I-75 that experienced water intrusion and high humidity conditions. Provided mold remediation oversight and air sampling following removal of mold-impacted building material.

Ambient Air Monitoring, City of Miami Parks and Recreation, Miami, FL. Performed ambient air monitoring during excavation and removal of topsoil at park playground where toxic ash had been dumped at Curtis and Bayfront Parks. Provided oversight of contractor activities and personal monitoring for contractor. Conducted asbestos and lead paint surveys prior to demolition / renovation activities at park facilities including Fern Isle and Curtis parks.

Asbestos and Lead Paint Assessments, City of Titusville, Water Resources Department, Titusville, FL. Performed asbestos and lead paint assessments for two decommissioned water tanks scheduled for demolition.

Mold Assessments and Air Monitoring, Naval Support Activity, Panama City, FL. Performed mold assessments and air monitoring following hurricane damage. Conducted pre-renovation asbestos and lead paint surveys in several buildings base wide that were impacted by Hurricane Michael in 2018.

Pre-renovation Asbestos and Lead Paint Surveys, Miami-Dade County Pre-Trial Detention Center, Miami, FL. Performed pre-renovation asbestos and lead paint surveys throughout the kitchen and former dormitory areas, including the roofs. Prepared project deliverables.

Pre-demolition Asbestos and Lead Paint Surveys, Joint Base Charleston, Charleston, SC. Performed pre-demolition asbestos and lead paint surveys in secured building that was scheduled for demolition.

Pre-renovation Asbestos and Lead Paint Surveys, NAVFAC, Naval Air Station Jacksonville, Jacksonville, FL. Performed pre-renovation asbestos and lead paint surveys in several buildings scheduled for upgrade by NAVFAC.

Asbestos and Lead Paint Surveys, Private Aerospace Manufacturer – Jupiter, FL. Performed asbestos and lead paint surveys throughout the multiple manufacturing and test buildings.

Asbestos Inspection and Abatement, Orlando Utilities Commission Orlando, FL. Conducted inspection of multiple exterior electrical cabinets and an underground tunnel vault for the presence of asbestos-containing materials (ACM). Performed oversight during abatement and disposal work performed by subcontractor and performed final inspections.

Scott Millard

Asbestos, Mold, Lead-based Paint Abatement

Key expertise
Health and Safety Management
Risk Assessments
Compliance Audits
Safety Training
Project Estimating
Project Management

Education
AA, Broward Community College

Years of experience
7 with CES | 28 Total

Training
40-hour OSHA 1910.120 HAZWOPER
8-hour OSHA 1910.120 HAZWOPER Annual Refresher
30-hour OSHA Construction Industry Outreach
OSHA 511 General Industry
Basic Incident Command
DOT Hazardous Materials Shipping (HM172)
SSPC C-1 Basic Coatings Inspection
SSPC C-5 De-leading Industrial Structure

Certifications
Mold Remediator, FL #MRSR1954

Scott's experience includes over 27 years in the construction industry with a concentration in demolition and remediation contracting.

Professional history

Scott is a licensed mold remediation contractor with extensive asbestos abatement, mold remediation and demolition project experience. In addition, he has estimated, designed and managed many large-scale asbestos projects, including the abatement on several bridge projects.

Select experience

CSX Bascule RR Bridge, Handex Consulting and Remediation, LLC. Project manager overseeing the abatement of 21,682 SF of asbestos containing paint & lead.

Broward County Courthouse, Alpha Wrecking Group, Broward County, FL. Project manager for the removal of asbestos containing material; 12,000 SF duct insulation with mastic, 10,000 SF flooring with mastic, 2,000 SF TSI.

Lead Abatement - Miami Beach Convention Center-, Alpha Wrecking Group, Miami Beach, FL. Project manager for lead abatement.

Asbestos Abatement - Terminal Air Handler – PBIA Ph 2, Hill York Air Conditioning Services and Energy Solutions. Project manager for asbestos abatement; 675 SF fire putty.

Seminole Trailer Park Abatement of Trailers and underground piping, Alpha Wrecking. Project estimator and project manager for abatement of 55 trailers and 15,000 linear feet of underground water pipe with asbestos.

Sears and Auto Center Asbestos Abatement, Sterling Organization, Pompano, FL. Project estimator and project manager abatement of asbestos containing materials throughout the two buildings and selective interior demolition.

Mold Remediation, FDOT Broward Operations Center, FL. Project estimator and project manager for remediation and restoration of water damaged and microbial impacted building materials in three buildings.

Residential Sound Insulation, Broward County Aviation Department project, DEC Contracting, Broward County, FL. Project estimator and project manager for removal of asbestos and lead paint coated building materials for the coordinated replacement of windows, doors and HVAC components to reduce outside noise from airport activities such as outgoing and incoming flights.

Terminal 3 Renovation Asbestos and Lead Abatement, Ft Lauderdale/Hollywood International Airport, FL. Project estimator and project manager for removal of building components with asbestos and lead in coordination with other trades and airport staff for the renovation of two active terminals.

The Standard At Coral Gables Abatement And Remediation, FL. Project estimator and project manager for abatement of asbestos containing materials, remediation of PCB containing light ballasts and window caulking as well as clean up and disposal of miscellaneous hazardous material items such as mercury thermostats and light bulbs.

John Tostanoski

Asbestos, Mold, Lead-based Paint Abatement

Key expertise
Management
Risk Assessments
Compliance Audits
Health & Safety

Education
BS, Environmental Sciences, Florida International University, 1975

Years of experience
16 with CES | 46 Total

Training
40-hour OSHA HAZWOPER
Certified Miners Safet & Health Administration (MSHA)

Certifications
Mold Remediator FL MRSR2306
Certified CPR and First-Aid

John has 46 of experience in the environmental contracting and consulting industry, including project management, analytical testing, contamination assessment and remediation, asbestos and lead assessment and remediation, indoor air quality, expert testimony and regulatory intervention.

Professional history

John's previous experience as President of both public and private environmental firms has included the management and responsibility of all aspects of administrative, financial, marketing, personnel, and quality oversight disciplines.

Select experience

Right of Way Asbestos Abatement and Demolition Contracts, Department of Transportation District 4, Districtwide, FL. Project Manager overseeing asbestos abatement and demolition of several locations for the DOT throughout five south east Florida counties.

Right of Way Asbestos Abatement and Demolition Contracts, Department of Transportation District 6, Districtwide, FL. Project Manager overseeing asbestos abatement and demolition of several locations for the DOT throughout Miami-Dade & Monroe counties.

John Simmons, Jr.

Asbestos, Mold, Lead-based Paint Testing

Key expertise
Environmental Remediation
Environmetnal Compliance
Mold, Lead, Asbestos Consulting
Project Management

Years of experience
29 with GLE | 35 Total

Training
EPA Model Lead-Based Paint Risk Assessor
RMD's LPA-1/XRF Lead Paint Inspection System
AHERA Asbestos Contractor/Supervisor
AHERA Asbestos Inspector
AHERA Asbestos Management Planner
NIOSH 582: Sampling & Evaluating Airborne Asbestos Dust

Registrations
EPA Lead-Based Paint Assessor: FL
Radon Measurement Technician: FL

John as 35 years of experience and serves as the Director of South Florida Operations. He manages the daily operations, business development, client relations, and contract negotiations for the area. His experience in the environmental consulting services field includes a diverse background in facilities consulting, contracting, general construction, environmental remediation, and environmental compliance.

Professional history

John has a proven ability to manage regional and national contracts for a variety of clients that include public sector, private and industrial clients. He has also served as an instructor for EPA-approved Asbestos Worker and Supervisor courses at the University of Florida.

Selected project experience

Lead Based Paint Surveys - Annie Coleman, Miami-Dade Public Housing Community Development, (MDPHCD. Project Manager. Lead-based paint inspections were conducted utilizing an XRF instrument to determine lead content in general compliance with methodologies established by HUD at 27 units in the Annie Coleman community.

Environmental Consulting Contract, BrowardHealth, Broward County, FL. Contract Manager. GLE recently acquired an Industrial Hygiene term contract with Broward Health. Projects thus far have included preliminary mold assessments, visual mold assessments, pre-renovation asbestos surveys, and emergency bacterial water samplings. Mr. Simmons acts as Contract Manager and oversees all efforts for BrowardHealth.

Environmental Consulting Contract, Miami-Dade Aviation Department, Miami-Dade, FL Contract manager for miscellaneous hazardous engineering services. Completed hundreds of projects totaling over $1.75 million in fees. Work has included facilities consulting, including mold, lead, asbestos, and radon assessments and remedial.

Environmental Consulting Services, Jackson Memorial Hospital, Miami, FL. Performed over 463 projects related to indoor air quality, mold, asbestos consulting, preparation of contamination assessment plans, performance of contamination assessments, and risk assessments.

Environmental Term Contract, The School Board of Broward County, Broward County, FL. Completed over 1,500 projects for SBBC under this contract, included in the scope are asbestos, lead, mold and related IAQ consulting services and remedial actions. GLE performed IAQ and mold evaluations of over 30 school campuses. After each project was completed, GLE's architectural division designed remedial and replacement activities which were performed under the supervision of GLE.

Environmental Consulting Services, Florida Atlantic University, Boca Raton, FL . Contract Manager for asbestos, lead-based paint mold and indoor air quality consulting for Florida Atlantic University. In this capacity, GLE performs asbestos renovation and demolition surveys, IAQ and mold assessments and air testing, designs abatement and remediation plans, and provides air-monitoring services for facilities throughout the Boca Raton, Davie, and Harbor Branch Campuses.

Edward Marks, PG, WWC

Drilling Services

Key expertise
Florida Geology & Hydrology
Well Design and Installation
Aquifers
Contaminant Migration
Chemical Injections
Insitu Remediation

Education
BS, Geology and Geography, Florida State University
2001

Years of experience
3 with Earth Tech | 19 Total

Training
40-Hour OSHA HAZWOPER
8-Hour OSHA HAZWOPER
Corporate & Jobsite Safety
Confined Space Resuce Manager
Stormwater Management Inspector
Marine and Land Emergency Spill Containment and Cleanup
FDEP Sampling SOPs

Registrations/Certifications
Professional Geologist: FL #2553
Water Well Contractor: FL #11368
First Aid and CPR Certified

Ed is a Professional Geologist, Licensed Well Driller and Project Manager at Earth Tech Drilling 19 years of experience in the environmental/ geotechnical industry.

Professional history

Edward began his career at the Florida Geological Survey at the FDEP, then transitioning to a Fortune 500 engineering and environmental consulting corporation in 2001 where he specialized in environmental assessments and remediation projects for both public and private sectors. Ed also specializes in Corporate and Jobsite Safety.

Select project experience

Herbert Hoover Dike, FL. Tasked with collecting core samples from the Herbert Hoover Dike System surrounding Lake Okeechobee using the 4”x6” over-cased sonic drilling method. The recovered core samples were contained and organized into core boxes for the client. The project was completed successfully, on time and within budget with no technical issues.

American Creosote Works, FL. Tasked with collecting a total of 593 linear feet of core samples and installing four MWs using the 4”x6” over-cased sonic drilling method. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

Petroleum Products Corp, FL. Tasked with collecting a total of 314 linear feet of core samples and using the 4”x6” over-cased sonic drilling method and subsequent borehole abandonment of 314 linear beet. Seven MWs total were also installed. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

G-Bar Service, FL. Tasked with installing 15 Deep Wells totaling 1,355 linear feet with 1,050 linear feet of 8” temporary over-ride casing. collecting a total of 6”x8” over-cased sonic drilling method. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget.

Former Northrop Grumman, FL. Tasked with installing six MWs and collecting a total of 275 linear feet of core samples using sonic drilling method. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

County Line Project, FL. Tasked with installing five MWs and collecting a total of 467 linear feet of core samples using sonic drilling methods. The recovered core samples were contained and organized into plastic core bags for the client. The project was completed successfully, on time and within budget with no technical issues.

Dania Pointe South Parking Garage, FL. Tasked with collecting a total of 1,500 linear feet of core samples using sonic drilling to assess for the presence of C&D landfill material. The recovered core samples were contained in plastic core bags and organized for the client at each boring location. The ETD crew subsequently abandoned each of the borings, totaling 1,500 linear feet. The project was completed successfully, on time and within budget with no technical issues.

Willie Smitherman, WWC, CPS, CPI

Drilling Services

Key expertise
Contaminated and Hazardous Materials Investigations
Environmental Studies
Drilling

Education
BS, Business Administration, Florida State University, 1981

Years of experience
28 with JAEE | 38Total

Training
Hazardous Materials / Waste Manager
National Hazardous Waste Site Investigation
Revised Hazardous Ranking System
Hazardous Ranking System
Professional Development Programs
Quality Assurance Certificate (Auditor / Technical Expert)

Registrations/Certifications
Water Well Contractor: FL #11212
Certified Environmental Specialist
Certified Environmental Inspector

Willie has 38 years of experience conducting drilling services for Phase I and Phase II environmental site assessments, contamination assessment investigations, and environmental audits.

Professional history

Willie provides onsite analyses of volatile organic compounds using a portable gas chromatograph to delineate contamination plumes and remedial system startups. In addition, conducts site assessments and investigations, soil and groundwater sampling using Geoprobe system, oxygen release compounds into formation, provide conductivity reading for lithology, installing permanent and temporary monitoring wells, and verifying onsite start-ups for remediation systems.

NUS Corporation's Superfund Division. Responsible for controlling activities related to the procurement of supplies, equipment and services for field investigations in US EPA Region 4 including:

- Prepared source lists for contract actions.
- Prepared solicitations for contracted services.
- Conducted prebid conferences held prior to submittal of bids.
- Coordinated the evaluation of bids and the selection of the successful offeror
- Coordinated the negotiation of technical issues and/or price with successful offeror
- Coordinated closeout of subcontract agreements
- Prepare evaluations on completed contracts

Conducted site investigations and site assessments for hazardous waste sites in US EPA Region 4 including:

- Provided guidance and training in the application of US EPA Environmental Services Division (ESD) sampling protocol to make sure proper compliance and documentation
- Proficient with CERCLA/SARA and RCRA government regulations.
- Supervised and manage all aspects of work plans, study plans, safety plans, equipment lists and assemblage of sampling personnel.
- Interpreted chemical analyses and prepare responses for submission to US EPA.
- RI/FS and Site Investigation Overviews
- Extensive site work coordination with federal, state and local.
- Performed over 150 site investigations.

Developed and completed investigations of hazardous waste sites to be placed on the National Priorities List (NPL) including:

- Proposed and placed 5 sites in the Federal Register for inclusion on the National Priorities List.
- Cognizant of objectives, application and concepts of HRS as presented in the National Contingency Plan (NCP).
- Proficient with the latest HRS Model proposed in the Federal Register.
- Monitor activities affecting quality performed by the Field Investigation Team including developing, implementing and maintaining quality assurance program
- Monitored project activities to verify compliance
- Audited internal files
- Provided expertise for project management

Anthony Sullivan

Grant Writing / Funding Assistance

Key expertise
Grant Writing
Funding Assistance
Federal Reimbursements

Education
BS, Chemistry/Biology, Mississippi Valley State University, 1986

Years of experience
15 with SRC | 29Total

Anthony is President and Director of Environmental Affairs/Funding Sources with 29 years of environmental cost recovery experience. SRC coordinates the preparation of various local, state and federal reimbursement and low interest applications to private and governmental agencies.

Professional history

Anthony has worked with Miami-Dade Aviation Department (MDAD) since 1994 to secure reimbursement of petroleum cleanup at Miami International Airport (MIA). He served as the focal point consultant for MIA petroleum reimbursement and eligibility issues associated with the Florida Department of Environmental Protection (FDEP). He reviewed technical and financial documentation before submittal to Dade Environmental Resource Management (DERM) and the FDEP regarding Inland Protection Trust Fund (IPTF) issues. To date, MIA has been reimbursed $29.2 million dollars from the IPTF. Anthony recommended language to MIA and its legal representatives that have benefited all airports in the state under the Preapproval Advance Cleanup, Florida Statute 376.30713(4). He also was the Director of Environmental Affairs/Funding Sources for AECOM (formerly Metcalf & Eddy) cost recovering more than $142 million for clients.

Selected project experience

Trust Fund Management, FDEP, Statewide, FL. Senior project manager for Petroleum Leaking Underground Storage Tank (LUST Program), Inland Petroleum Trust Fund (IPTF)-Florida, Oil Spill Liability Trust Fund (OSLTF), Airport and Airways Trust Fund (AATF), State Revolving Fund Loan Program (SRF)-Florida, Brownfields Cleanup, USDA Rural Development, EPA Various Programs and Federal, State and Local Earmarked Appropriations etc.

Cost Recovery, Miami Dade County Aviation Department, Miami-Dade County, FL. Contracted directly with the Office of the County Attorney-Aviation Division (Miami-Dade County) to provide legal “work product” in pursuing supplemental payments of denial costs by Florida Department of Protection resulting in an additional $5.2 million reimbursement. Provided legal deposition behalf of MDAD in collection of unpaid claims by airport environmental liability insurers.

Focal Reimbursement Management, Miami Dade County Aviation Department (MDAD), Miami-Dade County, FL. Assisted MDAD with providing supporting documentation to Federal Aviation Administration (FAA) associated with the Airport and Airways Trust Fund (AATF) grant application process.

Funding Resource Management, City of Hollywood, FL. Prepared and provided documentation in the initial City of Hollywood, Florida request for inclusion (RFI) form to receive loans from the State Revolving Fund (SRF) program.

Environmental Cleanup Costs, Miami International Airport, Miami, FL. Managed Miami International Airport (MIA) nearly $40 million submittal of environmental cleanup costs. To date, MIA has been reimbursed $29.2 million. In addition, recovered $5.6 million for Miami-Dade Transit (MDT). Provided oversight and auditing expertise to MIA to ensure compliance with local and state programs governed by the Bureau of Petroleum Storage Systems (BPSS).

Trust Fund Management, Florida Inland Protection Trust Fund, FDEP, Statewide, FL. Served as senior project manager overseeing the annual budget of $160 million Florida Inland Protection Trust Fund. Prepared, reviewed or supervised the technical reviews of nearly 7,400 reimbursement applications under the IPTF program. Presented lectures and training presentations to major oil companies, such as Shell Oil, Mobil Oil, Amoco Corporation; and environmental consulting firms throughout Florida.

Christina Raschke

Analytical Laboratory Services

Key expertise
Field Testing
Client Services
Project Management

Education
Master of Physical Therapy, Nova Southeastern University
BS, Biology, Nova Southeastern University

Years of experience
13 with Pace | 13 Total

Christina has been in the Environmental Laboratory field since April of 2006 and brings hands-on experience including supervisory position in the laboratory and over 10 years of Client Services/Project Manager experience with her.

Professional history

Christina is responsible for the coordination and tracking of tasks, schedules, and deliverables for projects related to environmental analysis, compliance, permitting and remediation. She generates and reviews reports, invoices and deliverables prepared by team before submitting to client. In addition, she is responsible for preparation and submittal of specified reporting formats, such as EDDs, ADaPT, Drinking Water Forms. Minimizes risks on projects by ensuring project documents are complete, current, and stored appropriately. She also manage day-to-day client interaction. Interacts with laboratory personnel and works with Sales/Marketing personnel to help meet customer's needs.

Select project experience

City of Miami Outfall, AECOM, Florida, 2013-Present, $35K Annually.
Providing analytical testing to several surface water locations within the City of Miami. Scope of work includes water quality parameters such as metals, phosphorus, bacteriological, nitrogen, solids and more. Frequency 3 events, QA/QC included in triplicate.

Laboratory Testing Services, City of Plantation, Florida, 2014-2018, $40K.
Manage and coordinate with City personnel in order to provide Field and Analytical Testing Services to various locations within City of Plantation limits. At the water plant, scope included full drinking waters standards, primary and secondary. In addition, to perform the municipal wastewater indicator parameters for ground water samples as regulated. Ms. Raschke will review and finalize analytical report and provide required state regulated reported format as applicable.

Derek Zeman, PSM, RPLS

Subsurface Utility Engineering

Key expertise
Subsurface Utility Engineering
Water Resources
LiDAR

Education
High School Diploma

Years of experience
2 with DRMP | 33 Total

Registrations
Professional Surveyor and Mapper: FL #5655,
Registered Professional Land Surveyor: TX #6305

Derek is DRMP's South Florida Survey and Subsurface Utility Engineering Manager for DRMP's Surveying and Mapping/Geomatics Division.

Professional history

Derek is a Senior Project Manager for both public and private sector clients specializing in transportation, land development, design surveys and laser scanning. He is currently responsible for servicing municipal continuing survey service clients, overseeing field operations and production staff, coordinating with the civil engineering group and providing overall QA/QC deliverables. His experience also includes several large-scale water resources projects over the past 12 years while serving as primary point of contact and project manager on projects for the South Florida Water Management District (SFWMD).

Derek's experience ranges from LiDAR laser scanning surveys performed for Tesla, platting reviewer for municipalities, above- and below-ground design surveys and boundary/ topographic surveys for several resorts in the Bahamas. In addition to his day-to-day responsibilities, he also serves as a board member on the Palm Beach County Land Development Review Advisory Board (LDRAB) as well as the Florida Atlantic University Geomatics Student Advisory Board.

Selected project experience

SR 7/US 441 3R Milling and Resurfacing from Atlantic Boulevard to Sample Road, FDOT District 4, Broward County, FL. Project surveyor for the survey of the design/construction documents for this milling and resurfacing project, approximately 2.75-miles. Project included the pavement design for the milling and resurfacing of the 6-lane divided principal urban arterial. The project also required widening the roadway to provide dual left turn lanes at select signalized intersections. The scope of work also included addressing ADA deficiencies (curb ramps, sidewalk pedestrian clearance, concrete bus pads and pedestrian push buttons), upgrading existing strain pole signals with mast arm assemblies and upgrading the signing and pavement markings. Other responsibilities included directing the subconsultant to design and incorporate into the plans the landscape improvements within the existing and upgraded medians, and the development of a maintenance agreement between the FDOT and the Town of Margate, Florida as the maintaining agency.

Coral Ridge Drive, FDOT District 4, Broward County, FL. Survey and subsurface utility engineering manager for design survey of the widening, milling and resurfacing the existing off-system 4-lane divided highway from Southgate Boulevard to Holmberg Road, approximately 5.5 miles within the City of Coral Springs. The project consists of widening the road to add buffered bike lanes, adding sidewalk at gap locations, performing drainage upgrades, providing signing and pavement markings and improving substandard ADA elements. In addition, this project will upgrade existing intersection signals to mast arms at West Atlantic Boulevard, Royal Palm Boulevard, W Sample Road, Wiles Road, Westview Drive and Sawgrass Expressway. Coral Ridge Drive between Southgate Boulevard and Holmberg Road is a heavily residential area with large pockets of commercial properties and will require a significant public involvement effort. This project includes utility coordination, permitting, survey and geotechnical exploration.

University Drive, FDOT District 4, Broward County, FL. Subsurface utility engineering leader and project surveyor responsible for the design survey of the reconstructing/widening/milling and resurfacing of the existing suburban 4-lane divided highway to a 6-lane divided urban highway from just south of Cardinal Road/NW 40th Street to the Sawgrass Expressway/SR 869, approximately 1.6-miles within the City of Coral Springs. Project includes roadway design, lighting design, signing and pavement marking, signalization, ITS, miscellaneous structures, utilities, surveying and right-of-way mapping, permitting, landscaping and public involvement.

Miscellaneous Surveying Services, FDOT District 4, FL. Project surveyor responsible for providing quality control assistance for miscellaneous engineering design surveys consisting of GPS control, bench levels, aerial targets for fixed wing and LAMP, bridge, channel, drainage and lake surveys, right-of-way maps and locating all underground utilities with subsurface utility engineering.

Southbound I-95 Weigh-in-Motion (WIM) Station, FDOT District 4, Martin County, FL. Project Surveyor responsible for the survey coordination phase of this design-build project. This project was a multidiscipline effort involving roadway, architectural, drainage, environmental permitting, signing and pavement markings, signalization, roadway lighting, electrical, mechanical, structural and landscape architecture design. The project also consisted of site civil providing for potable water, self-supportive septic treatment, a package water treatment plant and an emergency power generator. The WIM/static scale system is designed to sort potential overweight and over-height trucks by requiring potential violators to travel through the station. The southbound I-95 WIM station in Martin County is the first of its kind in Florida to weigh trucks in-motion with sensors embedded in the outside at-speed travel lane of I-95.

Dixie Highway Reconstruction Design-Build, FDOT District 4, Broward County, FL. Survey project manager for this design-build project involving the realignment of Dixie Highway from south of Hillsboro Boulevard in Broward County to north of the Hillsboro Canal in Palm Beach County, approximately 0.75-miles. The project included the realignment of Dixie Highway, a 4-lane divided urban arterial, to ultimately bridge the Hillsboro Canal, NE 2nd Avenue, Florida East Coast Railway (FEC), North River Avenue, NE 1st Avenue and NE 2nd Street. A pedestrian pathway structure and an off-ramp structure from Dixie Highway to NE 2nd Avenue will also be constructed. A bathymetric survey was performed on the Hillsboro Canal to provide information regarding the conditions beneath both the FEC and the Dixie Highway bridge. Conventional survey methods were used to extend the digital terrain model (DTM) above the high water line.

Continuing Survey Services Contract, South Florida Water Management District, FL. Project and client manager for two consecutive 5-year contracts. Projects varied from simple sketch and legal descriptions to boundary and topographic surveys over thousands of acres.

Continuing Survey Services Contract, Port of Palm Beach, Riviera Beach, FL. Project manager for more than five years on more than 60 task assignments. Assignments included routine hydrographic surveys of the inlet and channel around Peanut Island into the port slip areas, sketch and legal descriptions of numerous lease parcels and an overall boundary survey/plat.

Kissimmee River Boundary and Topographic Surveys, South Florida Water Management District, FL. Project manager responsible for the overall delivery of this project. Responsible for preparing boundary and topographic surveys for tracts 19-103-1818 and 19-103-184, respectively. The parcels are located in Sections 10, 28 and 29 of Township 36 South, Range 33 East, Highlands County. Three parcels were located along the Kissimmee River and had been purchased from Lykes Brothers, Inc. The survey established the property corners for fencing and land management purposes. The survey effort included research, recovery of existing sectional control in the area, establishment of state plane coordinates, preparation of SFWMD benchmark description sheets and completing certified corner records for all found or set sectional breakdown corners and filed with the FDEP. The project was completed within the timeframe and budget approved by the SFWMD.

Surveying and Mapping Services, Town of Lake Park, Palm Beach County, FL. Project manager responsible for reviewing plats for compliance with Florida Statute Chapter 177 and Town ordinances.

George Bush Boulevard Bridge Rehabilitation Project, Palm Beach County Roadway Division, Palm Beach County, FL. Project manager responsible for high definition laser scanning on the top deck of the bridge and under bridge support structures. Special attention was given to detailing the piling spacing, decking widths, spans and areas of erosion. After the fieldwork was completed, a 3D image (or point cloud) was created using Leica Geosystems Cyclone Version 7.0.3 to create an accurate 3D plan. This work was integral to the preparation of detailed structural engineering plans for the design and construction of the rehabilitation improvements.

Eugene Collings-Bonfill, PE, PSM

Surveying & Mapping

Key expertise
Civil Engineering
Land Surveying & Mapping

Education
MS, Civil Engineering University of Miami
BS, Civil Engineering, University of Miami

Years of experience
10 with JBONFILL | 21 Total

Training
30-hour OSHA

Registrations/Certifications
Professional Engineer: FL #77583
Professional Surveyor & Mapper: FL #PSM7037
Certified Floodplain Manager
Designated Design-Build Professional
Advanced Method of Transportation
FDEP SWPPP

As Vice President and Director of Engineering Services Eugene is responsible for overseeing the surveying efforts included in Civil Engineering projects.

Professional history

Eugene's project management experience allows him to allocate the needed resources to expedite project schedules and meet budget requirements. As Land Surveying Project Manager, he manages project priorities, work schedules and coordination with consultants to deliver the land surveying program ensuring quality control of survey products and data integrity are met.

Select project experience

Topographic Right of Way (ROW) Survey of Campbell Drive, City of Homestead Maintenance & Construction Department, Homestead, FL. Land surveyor and mapper for Topographic ROW Survey of Campbell Drive from SW 312 Street/Campbell Drive from SR 997/Krome Avenue to SR 5/US 1 Homestead, FL. Description: Approximately 5,000 LF of ROW Survey for roadway reconstruction project.

Topographic ROW Survey of NW South River Drive, Miami-Dade County Department of Transportation & Public Works, Miami, FL. Land surveyor and mapper for Topographic ROW Survey of NW South River Drive between NW 28th Avenue and NW 32nd Avenue Miami, FL. Approximately 5,400 LF of ROW Surveys for design and construction.

Sketch & Legal Descriptions for Storm Water Management Conservation Areas, City of Hialeah Public Works, Roadway, WASD, 2015-2015, $8,380. Land surveyor and mapper for Sketch & Legal Descriptions of 6 individual parcels along NW 154th Street and 1 parcel including all 6 parcels along NW 154 Street plus area along NW 102nd Avenue, Hialeah FL. Sketch & Legal Description of complete ROW for 6 parcels located along NW 154th Street from NW 97th Avenue to NW 105th Avenue. Approximately 5.23 Acres/ 1,500 LF ROW. Sketch and Legal Description of above parcels plus the complete ROW of NW 102nd Avenue from NW 154 Street to NW 166 Street. Approximately 15.79 Acres / 5,400 LF of ROW.

Vizcaya Museum and Gardens, Miami-Dade County Parks Recreation and Open Spaces, Miami, FL. Land surveyor and mapper for Boundary and Topographic Survey including Underground Utility Location, Tree Survey, Legal Description, ROW Topographic Surveys.

Wagner Creek Canal and Seybold Canal Dredging, City of Miami Capital Improvements, Miami, FL. Land surveyor and mapper for Marine Structure Survey for an independent condition assessment of the marine structures in Wagner Creek and Seybold Canal in support of the Wagner Creek/Seybold Canal Restoration Project. Marine structures included sea walls, bulkheads, sheet piling, docks and timber pilings, pipelines, concrete debris, bridges, trees. Plan & Profile Views. Survey Baseline including adjacent lots. Canal Centerline, Water Level Delineation, Canal Utility Crossings & Outfalls. Survey of all general obstructions within canal ROW and easement limits. Canal Cross Sections at 100' intervals. GPS for each property. Folio Numbers, address for Seybold Canal &Wagner Canal. Tabular report of field findings, condition of the structures, digital pictures & video of the structures.

Topographic ROW Survey of Main Highway, Coconut Grove Business Improvement District (BID), Miami, FL. Land surveyor in charge for Topographic ROW Survey of Main Highway from Franklin Avenue to Grand Avenue Miami, FL. Description: Approximately 1,910 LF of ROW for road restoration project including sidewalk replacement.

Topographic ROW Survey of Palm Grove, City of Miami Capital Improvements and Transportation Program, Miami, FL. Land surveyor in charge for NE 71st Street and 4th Court to Biscayne Boulevard and NE 5th Avenue between 70th Street and 72nd Street Miami, FL. Description: Approximately 2,848 LF of ROW for Design and construction of street reconstruction project including sidewalk replacement.

Oria Jannet Suarez, PSM

Land Surveying and Mapping

Key expertise
Land Surveying and Mapping

Education
BA, Architecture, Central University, Caracas Venezuela
Bachelor Degree, Equivalency Silny and Associates, Miami FL

Years of experience
20 with JBONFILL | 35 Total

Registrations
Professional Surveyor and Mapper: FL. #6781

Oria is the Vice President/Surveyor of Record/Surveyor in Charge for all Land Surveying efforts.

Professional history

Oria has provided project management and supervision as well as the direction of field and office work. She is well versed in Civil3D software and is familiar with all aspects of surveying and mapping work. All field and office land surveying work is performed under her direct supervision and technical direction.

Select project experience

Main Highway Topographic ROW Survey, Coconut Grove Business Improvement District, Miami, FL. Land surveyor in charge for Topographic ROW Survey of Main Highway from Franklin Avenue to Grand Avenue for approximately 1,910 LF of ROW for road restoration project including sidewalk replacement.

Topographic ROW Survey of Palm Grove, City of Miami Capital Improvements and Transportation Program (CITP), Miami, FL. Land surveyor in charge for NE 71st Street and 4th Court to Biscayne Boulevard and NE 5th Avenue between 70th Street and 72nd Street. Description: Approximately 2,848 LF of ROW for Design and construction of street reconstruction project including sidewalk replacement.

Topographic ROW Survey of SW 1st Avenue, City of Miami CITP, Miami, FL. Land surveyor in charge for Topographic ROW Survey of SW 1st Avenue between SW 7th Street to SW 15th Road for approximately 2,923 LF of ROW surveys for road milling and resurfacing projects.

FIU Mixed Use Field 24 Acres and Preserve, FIU Facilities Management/ Facilities Development Department, 2016, $24,275. Land Surveyor in Charge of Topographic Survey of +/- 26 acres for design and construction including: Location of all above ground improvements relative to Florida State Plane Coordinates System Grid. Location of all walls, fences. Location of all above ground known/visible utility services, poles, wires, hydrants, catch basins, manholes, inverts, curbs, street alleys, sidewalks, curb grades, adjacent grade, description of materials, walkways, parking, curbs, asphalt areas. Complete ROW survey of a portion of East Campus Circle and SW 17th Street, conduct underground utility location by GPR, prepare tree survey with table, conduct bathymetric survey of lake for approximately 0.81 Acres (grid no greater than 25' spacing).

Topographic ROW Surveys of Intersections throughout Miami-Dade County, Miami-Dade County Department of Transportation and Public Works, Various Locations. Land Surveyor in Charge for 23 separate street intersections for design and construction projects**:**

- NE 6 Avenue and NE 171 Street, North Miami Beach FL
- Mowry Drive and SW 182 Avenue, Homestead FL
- NE 6 Avenue and NE 149 Street, Miami FL
- NW 10 Avenue and NW 62 Street, Miami FL
- I95 SB and NW 62 Street, Miami FL
- I95 NB and NW 62 Street, Miami FL
- Ludlam Rd and W 53 Street, Hialeah FL
- Ludlam Rd and W 60 Street, Hialeah FL
- N Miami Avenue and N 62 Street, Miami FL
- N Miami Avenue and N75 Street, Miami FL
- N Miami Avenue and N 95 Street, Miami Shores FL
- SW 172 Avenue and SW 328 Street, Homestead FL
- Miller Drive and SW 93 Avenue, Miami FL
- SW 92 Avenue and SW 32 Street, Miami FL
- SW 92 Avenue and SW 48 Street, Miami FL
- SW 102 Avenue and SW 48 Street, Miami FL
- NW 2 Avenue and NW 62 Street, Miami FL
- Miller Drive and SW 102 Avenue, Miami FL
- W 10 Avenue and West 29 Street, Hialeah FL
- West 8 Avenue and West 29 Street, Hialeah FL
- West 8 Avenue and West 33 Street, Hialeah FL
- SW 72 Avenue and SW 82 Street, Miami FL
- NE 2 Avenue and NE 199 Street, Miami Gardens FL

Fernando Miralles, PhD, BCEE, D.WRE, PMP, F.ASCE

Resiliency/Climate Change

Key expertise
Climate Change
Environmental Management

Education
PhD, Water Resources, Massachusetts Institute of Technology, 1992
MS, University of California, 1989
BS, Mechanical Engineering, Universidad Simon Bolivar, Caracas, 1987

Years of experience
3 with 300 Engineering | 23 Total

Registrations/Certifications
Board Certified Environmental Engineer (BCEE)
Diplomate, Water Resources Engineer (DWRE)
Project Management Professional (PMP)

Dr. Miralles is an environmental and water resources engineer with over 25 years of experience in water resources, water supply and sanitation systems.

Professional history

Dr. Miralles expertise includes hydrologic and water quality modeling for stormwater management and flood prevention; integrated urban water master planning; development of numeric models for basin management; climate-hydrology-vegetation interactions in wetlands ecohydrological modeling of agricultural and urban runoff; analysis of the impact of climate change on water resources management; debris flow modeling; evaluation of numerical models for aquifer storage and recovery; development of simulation models of sea driven coastal flooding; development of integrated energy-water nexus modeling tools, analysis and QA/QC of hydrologic modeling results.

Dr. Miralles is the Executive Director of the NOAA Cooperative Institute for Climate and Satellites (CICS), serves as Principal Investigator of NASA's Cooperative Agreement for Earth System Science, and is member of the National Academies Committee on Independent Scientific Review of the Everglades Restoration Program (CISRERP). Over his career, he has consulted internationally with USAID, IDB, CAF and the World Bank on topics dealing with climate change, sustainability and water. He has also been a member of the faculty at the Massachusetts Institute of Technology, Northeastern University, the University of Miami, Florida International University and the University of Maryland. He has been a Principal Investigator in over $160M in projects funded by US and international agencies. He has conducted and directed climate change and water resources projects in over thirty countries.

Selected project experience

Extreme Precipitation Events Analytical Study - Superstorm Sandy, NOAA. This climatological study of precipitation data was focused on forecast errors in order to provide the basis for analysis to understand, and ultimately improve quantitative precipitation forecasting. Analysis of events in which precipitation forecasts were poorly predicted informed both observational needs, reveal areas of required numerical model improvement using ICPR, and offer forecasters guidance regarding predictability (or lack thereof) during specific extreme weather regimes.

Cooperative Agreement, NASA Earth System Science, NASA. Monitoring and analyzing variations in the terrestrial water cycle using appropriate NASA (and other) remote sensing and modeling tools. Services Performed: Produce quantitative estimates over of lake levels, river discharge, soil moisture, and groundwater and the variations in these water resources variables. This study involved the use of ICPR numerical modeling and data assimilation from around the globe to demonstrate the results of NASA earth sciences products.

NOAA Cooperative Institute for Climate and Satellites. Executive director of the NOAA Cooperative Institute for CICS, a national consortium of 20 institutions spanning academia, non-profit, public and private sector organizations focused on research, education and outreach/engagement in the use of satellite observations and Earth System models to advance the national climate mission, including monitoring, understanding, predicting and communicating information on climate variability, climate change and sea level rise. CICS is based at the University of Maryland, College Park, where Dr. Miralles holds an appointment as Professor in the Dept. of Atmospheric and Oceanic Science. At CICS, Dr. Miralles leads a group of 150 between academic faculty, research scientists and technical support staff. In these positions, Dr. Miralles has led the development of strategic plans, budget formulation and execution, fundraising and annual reporting to shareholders.

Diego Mejia

Waste Disposal / Emergency Response

Key expertise
Environmental Projects
Decontamination
Emergency Response
Remediation

Years of experience
9 with NRC / US Ecology | 11Total

Training
OSHA HAZWOPER 40-Hour Initial Course
OSHA HAZWOPER 8-Hour Annual Refresher
Confined Space Entry and Rescue
First Aid/AED/CPR Training
Respiratory Protection Fit Test and Training
Supervisory Responsibilities
Identifying and Handling Hazardous Materials

Diego has 9 years of experience in the environmental industry dealing with a wide variety of environmental projects including decontamination, emergency response, remediation, and industrial services projects and contracts. He is well versed in the evaluation of scopes, training of personnel, and resource management.

Select Experience

NRC/ US Ecology, Inc., Fort Lauderdale, Florida, 2010 – Present.
Project Supervisor. Experience includes:

- Confined space Supervisor
- Oversees the transportation of liquid and solid waste
- Required to understand and comply with all DOT and HAZMAT REGS
- Overall site management including planning, scheduling, budget analysis
- Management of subcontracts and vendors
- Conducting Phase I & II Environmental Site Assessments
- Implementing health and safety procedures, spill prevention and permit conditions
- Geotechnical and environmental support

Overland Contracting, Inc., Overland, Kansas, 2008-July 2010. Insert role and project description.

Experience includes Upgrading and decommissioning cellphone towers

Jeff Roccapriore

Waste Disposal

Key expertise
Waste Disposal
Safety
Environmental Compliance

Education
BS, Ocean Engineering, Florida Atlantic University, 1991

Years of experience
13 with WM | 29 Total

Certifications
24 hr Landfill Operator: Class I, Class III and C&D

Jeff has 29 years of experience in the environmental industry dealing with a wide variety of waste disposal projects.

Select project experience

Monarch Hill, Waste Management, Inc. of Florida. District Manager of 382-acre Class I Municipal Solid Waste landfill receiving 1.2-1.5 million tons/year of waste with key accomplishments in profitability while keeping near zero incident rates in Environmental Compliance and Safety. Jeff's responsibilities include:

- Managing over $20 million per year of operating expenses;
- Capital spending over $5 million per year
- Reviewing and evaluating the business unit performance over market area goals and adjust performance to meet key objectives
- Counseling over 30 direct reports as to execution of programs
- Implementing and maintaining programs to improve safety, productivity, environmental compliance; landfill development and operations, waste approvals and acceptance, and efficiency, cost-effective construction
- Organizing and scheduling resources required to accomplish objectives
- Interacting with Engineer, Environmental Protection Manager, Gas Operation Manager, Heavy Equipment Manager, Renewable Energy Manager and other Market Area personnel to drive programs and acquire resources as needed
- Mentoring District/Operations Manager Trainees placed in and currently employed with Waste Management

Waste Management, Inc. of Florida. Market area engineer was responsible for:

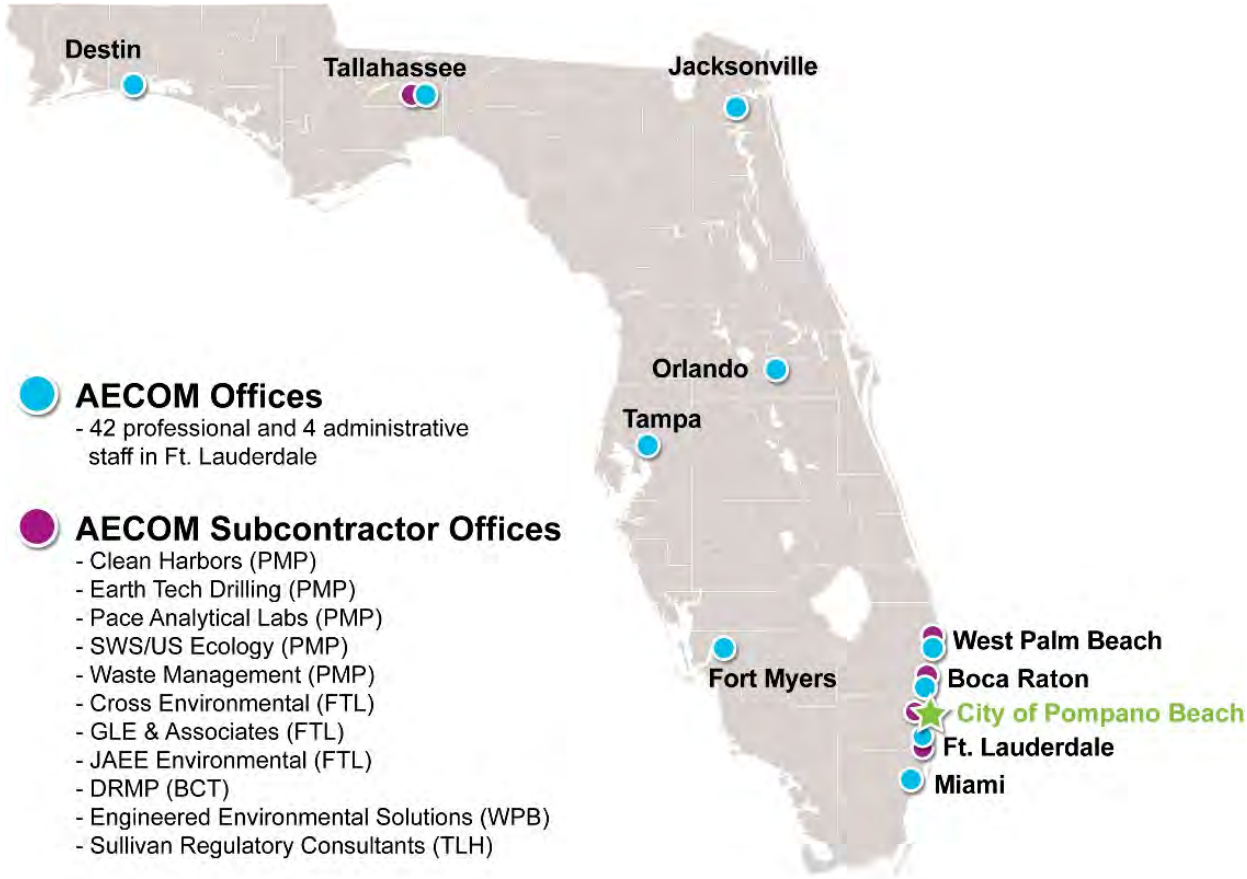
- Preparing specific budgets forecasted to 5 years and general development budgets for the life of the site;
- Capital spending for over $5,000,000 per year
- Coordinating with engineering consultants to prepare construction drawings, specifications, bid packages and other engineering requirements.
- Managing capital construction projects related to landfill gas collection, leachate collection, cell and cap construction, surface water management, and general site development
- Coordinating and meet with local and state regulators regarding the compliance requirements associated with air, groundwater, surface water, and other environmental compliance
- Coordinating with consultants in preparing permit applications and/or modifications associated with aspects of landfill expansion and development

TAB 09

OFFICE LOCATIONS

AECOM has several Florida offices with staff that can be made readily available to serve this contract. Our Southeastern Regional Headquarters are based at 3201 West Commercial Boulevard, Fort Lauderdale, less than 10 minutes from Pompano Beach. This office is centrally located within Broward County, with easy access to either I-95 or Florida's Turnpike. The Fort Lauderdale office has 42 professional staff and 4 administrative staff. This office is staffed by Environment, Water, Buildings + Places, and Transportation Business Line professionals.

AECOM also has offices located in Miami, Boca Raton, West Palm Beach, Fort Myers, Orlando, Tampa, Jacksonville, Tallahassee, and Destin, Florida that can support this contract. Our Florida offices are staffed by over 1,400 employees. Refer to the AECOM Team Offices Map for the locations of our offices and those of our subcontractor team members.



TAB 10

LOCAL BUSINESSES

Local Business Exhibit “B” Letter of Intent to perform as a local subcontractor forms have been completed, signed, and uploaded electronically through the City’s eBid System and have been uploaded to the Response Attachment tab, titled “AECOM_ Tab 10 Local Business_LOI E-22-20.pdf.” The following subcontractors meet the local requirements:

Analytical Services

- Pace Analytical Services, LLC
  2254, 3610 Park Central Boulevard North
  Pompano Beach, FL 33065

Drilling Services

- Earth Tech Drilling, Inc.
  2703 NW 19th Street
  Pompano Beach, FL 33069

Waste Disposal / Emergency Response

- Clean Harbors Environmental Services, Inc.
  1400 Northwest 13th Avenue
  Pompano Beach, FL 33069

Waste Disposal

- Waste Management Inc of Florida
  2700 Wiles Road
  Pompano Beach, FL 33073

TAB 11

LITIGATION

AECOM is a large professional services company that executes thousands of projects annually. As with any large service company, from time to time, AECOM is involved in claims and litigation. However, we strive to avoid litigation and have a risk management program in place that includes early recognition of situations that might give rise to a claim, open lines of communication, and proactive dispute resolution.

None of our current litigation could reasonably be expected to have a material adverse effect on AECOM or its ability to perform under the contract contemplated by the solicitation. If you require additional information, please contact Lusanna Ro, Southeast Region Chief Counsel, at 804-515-8567 or Lusanna.ro@aecom.com.

TAB 12

CITY FORMS

AECOM has completed, signed, and submitted the Information Page Form and the other required forms which were all electronically submitted through the City's eBid System in the Response Attachment tab.

A copy of AECOM's latest financial statement has been uploaded to the Response Attachment tab in the City's eBid System as a separate file titled "AECOM_Financial Statements_LOI E-22-20.pdf" and is marked "Confidential." For more detailed information regarding AECOM's financial stability, please visit investors.aecom.com, where a full financial report can be downloaded.

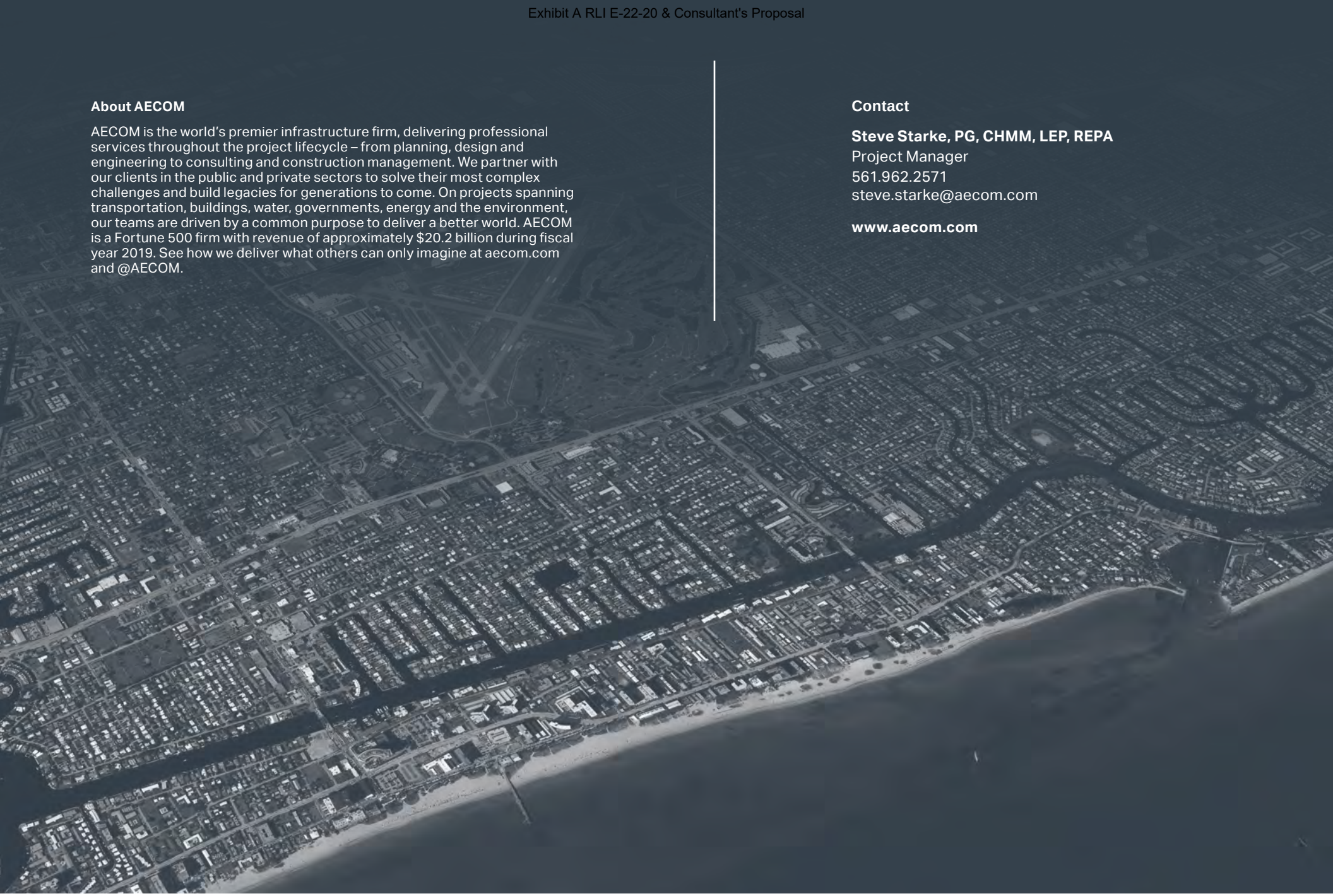
About AECOM

AECOM is the world's premier infrastructure firm, delivering professional services throughout the project lifecycle – from planning, design and engineering to consulting and construction management. We partner with our clients in the public and private sectors to solve their most complex challenges and build legacies for generations to come. On projects spanning transportation, buildings, water, governments, energy and the environment, our teams are driven by a common purpose to deliver a better world. AECOM is a Fortune 500 firm with revenue of approximately $20.2 billion during fiscal year 2019. See how we deliver what others can only imagine at aecom.com and @AECOM.

Contact

Steve Starke, PG, CHMM, LEP, REPA
Project Manager
561.962.2571
steve.starke@aecom.com

www.aecom.com



AECOM Imagine it Delivered

RLI NO. E-22-20
ENVIRONMENTAL TESTING SERVICES
EXHIBIT B – FEE/RATE SCHEDULE

JOB CLASSIFICATION	PROPOSED HOURLY BILLING RATE
Principal-in-Charge	$120.00
Project Manager	$210.00
Assistant Project Manager	$168.00
Senior Engineer	$196.00
Engineer	$126.00
Senior Geologist	$154.00
Senior Scientist	$168.00
Geologist/Scientist	$98.00
Resilience/Climate Change Specialist	$168.00
Senior Ecologist/Biologist	$154.00
Certified Industrial Hygienist	$182.00
Technical Advisor/Quality Assurance/Quality Control	$182.00
Senior Planner	$168.00
Planner	$112.00
Senior Architect	$182.00
Architect	$126.00
Senior GIS Specialist	$154.00
GIS Specialist	$98.00
Senior Technician	$98.00
Technician	$70.00
CADD Technician	$84.00
Adm. Support	$70.00

Notes:
1. Other Job Classifications maybe added based on specific Task Assignments after City's approval
2. All Subconsultant charges will be billed with 5% markup

EXHIBIT C

INSURANCE REQUIREMENTS

CONSULTANT shall not commence services under the terms of this Agreement until certification or proof of insurance detailing terms and provisions has been received and approved in writing by the CITY's Risk Manager. If you are responding to a bid and have questions regarding the insurance requirements hereunder, please contact the City's Purchasing Department at (954) 786-4098. If the contract has already been awarded, please direct any queries and proof of the requisite insurance coverage to City staff responsible for oversight of the subject project/contract.

CONSULTANT is responsible to deliver to the CITY for timely review and written approval/disapproval Certificates of Insurance which evidence that all insurance required hereunder is in full force and effect and which name on a primary basis, the CITY as an additional insured on all such coverage.

Throughout the term of this Agreement, CITY, by and through its Risk Manager, reserve the right to review, modify, reject or accept any insurance policies required by this Agreement, including limits, coverages or endorsements. CITY reserves the right, but not the obligation, to review and reject any insurer providing coverage because of poor financial condition or failure to operate legally.

Failure to maintain the required insurance shall be considered an event of default. The requirements herein, as well as CITY's review or acceptance of insurance maintained by CONSULTANT, are not intended to and shall not in any way limit or qualify the liabilities and obligations assumed by CONSULTANT under this Agreement.

Throughout the term of this Agreement, CONSULTANT and all subcontractors or other agents hereunder, shall, at their sole expense, maintain in full force and effect, the following insurance coverages and limits described herein, including endorsements.

A. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440. CONSULTANT 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 as CITY's interests may appear, on General Liability Insurance only, relative to claims which arise from CONSULTANT's negligent acts or omissions in connection with CONSULTANT's performance under this Agreement.

(2) Such Liability insurance shall include the following <u>checked types of insurance</u> and indicated minimum policy limits.

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

(3) If Professional Liability insurance is required, CONSULTANT agrees the indemnification and hold harmless provisions set forth in the Agreement shall survive the termination or expiration of the Agreement for a period of three (3) years unless terminated sooner by the applicable statute of limitations.

C. Employer's Liability. If required by law, CONSULTANT and all subcontractors shall, for the benefit of their employees, provide, carry, maintain and pay for Employer's Liability

Insurance in the minimum amount of One Hundred Thousand Dollars ($100,000.00) per employee, Five Hundred Thousand Dollars ($500,000) per aggregate.

D. Policies: Whenever, under the provisions of this Agreement, insurance is required of the CONSULTANT, the CONSULTANT shall promptly provide the following:

(1) Certificates of Insurance evidencing the required coverage;

(2) Names and addresses of companies providing coverage;

(3) Effective and expiration dates of policies; and

(4) A provision in all policies affording CITY thirty (30) days written notice by a carrier of any cancellation or material change in any policy.

E. Insurance Cancellation or Modification. Should any of the required insurance policies be canceled before the expiration date, or modified or substantially modified, the issuing company shall provide thirty (30) days written notice to the CITY.

F. Waiver of Subrogation. CONSULTANT hereby waives any and all right of subrogation against the CITY, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then CONSULTANT shall notify the insurer and request the policy be endorsed with a Waiver of Transfer of Rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy which includes a condition to the policy not specifically prohibiting such an endorsement, or voids coverage should CONSULTANT enter into such an agreement on a pre-loss basis.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/30/2021

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
Marsh Risk & Insurance Services
CA License #0437153
633 W. Fifth Street, Suite 1200
Los Angeles, CA 90071
Attn: LosAngeles.CertRequest@Marsh.Com
CN101348564-STND-GAUE-21-22 03 2026

CONTACT NAME: James Vogel
PHONE (A/C, No, Ext): 213-346-5098 **FAX (A/C, No):** 212-948-0533
E-MAIL ADDRESS: James.l.vogel@marsh.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : ACE American Insurance Company	22667
INSURER B : N/A	N/A
INSURER C : Illinois Union Insurance Co	27960
INSURER D : SEE ACORD 101	
INSURER E :	
INSURER F :	

INSURED
AECOM
AECOM Technical Services, Inc
110 East Broward Blvd, Suite 700
Fort Lauderdale, FL 33301

COVERAGES **CERTIFICATE NUMBER:** LOS-002539900-02 **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 CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			HDO G72486304	04/01/2021	04/01/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 3,000,000 $ 3,000,000 $ 5,000 $ 3,000,000 $ 4,000,000 $ 4,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			ISA H25549211	04/01/2021	04/01/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 3,000,000 $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		SEE ACORD 101	04/01/2021	04/01/2022	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 3,000,000 $ 3,000,000 $ 3,000,000
C	ARCHITECTS & ENG. PROFESSIONAL LIAB.			EON G21654693 005 "CLAIMS MADE"	04/01/2021	04/01/2022	Per Claim/Agg Defense Included	2,000,000

APPROVED
By Danielle Thorpe at 9:09 pm, Apr 04, 2021

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: Contract: RLI E-20-20 Continuing Contract for Professional Environmental Testing
For RFP/RFQ Purposes.

City of Pompano Beach is named as additional insured for GL coverage, but only as respects work performed by or on behalf of the named insured and where required by written contract. This insurance is primary and non-contributory over any existing insurance and limited to liability arising out of the operations of the named insured and where required by written contract with respect to the GL & AL coverages. Waiver of Subrogation is applicable where required by written contract with respect to GL, AL and WC. Contractual Liability is included in the General Liability coverage.

CERTIFICATE HOLDER
City of Pompano Beach
Attn: Matthew Kudma, PMP/Engineering Project Manager II
1201 NE 5th Avenue
Pompano Beach, FL 33060

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
of Marsh Risk & Insurance Services
James L. Vogel