Hazen

CITY OF
Cooper City
Someplace Special

Continuing Professional Consulting Services (CCNA)

RFQ 2024-1-PW | January 21, 2025

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Letter of Interest

Hazen and Sawyer
4000 Hollywood Boulevard, Suite 750N
Hollywood, FL 33021 • 954-987-0066

January 21, 2025

City of Cooper City
9090 SW 50th Place
Cooper City, FL 33328

Re: RFQ No. 2024-1-PW: Continuing Professional Consulting Services (CCNA)

Dear Evaluation Committee Members:

The City of Cooper City (City) is committed to protecting public health and providing its residents with a safe and dependable drinking water supply while properly treating and disposing of the City's wastewater. The City also has a long history of cost-effectively developing its utility infrastructure, continuously seeking strategies that are environmentally sound and being fiscally responsible to its utility customers. Hazen and Sawyer (Hazen) is excited for the opportunity to continue providing continuing professional services in the "Water, Wastewater, Stormwater" and "Other" disciplines to support the City in executing the projects in its Capital Improvement Program. **Hazen values our 15-year history of working with Cooper City and are committed to providing continuing engineering services to the City.**

As a firm, Hazen has made a commitment to focus on the water sector of engineering, and as a result we have attracted excellent and long-tenured staff (specializing in those areas), had the opportunity to work on some of the most interesting and important water-, wastewater-, reclaimed water- and stormwater-related projects, and provided longstanding service to the communities in which we live and work. This is certainly the case in South Florida, where we have continuously provided planning, design, permitting, bidding, and construction administration/management services related to water, wastewater, stormwater, conveyance, and reuse for over half a century. **We have served many municipalities in Broward County, including Cooper City for over 15 years, and thus have an excellent understanding of local conditions, regulations, suppliers, contractors, and stakeholder issues and concerns.**

The Hazen team understands the importance of responding promptly to each work assignment under continuing services contracts, developing concise scopes, successfully executing work assignments, and effectively

A. SIZE OF THE FIRM: More than 2,000 staff firmwide, with 200 staff in Florida. This includes 191 support staff, 75 management staff, 1,800+ technical staff.

B. RANGE OF ACTIVITIES: Hazen's exclusive focus is water related engineering. We provide comprehensive capabilities in areas including, but not limited to, evaluation, planning, design, and permitting; hydraulic modeling; regulatory compliance; grant funding; construction management and administration; and startup, training, and operations assistance.

C. FIRM'S STRENGTH AND STABILITY: Hazen has served utilities with complete in-house engineering services from our Southeast regional headquarters/design center in Hollywood, Florida, since 1968 During our 74 years of existence, we have consistently operated profitably.

D. LOCATION OF FIRM: Our local Hollywood office will be lead projects for Cooper City and is located at 4000 Hollywood Blvd., #750N, Hollywood, FL. The Hollywood office is approximately 9.1 miles away from the City.

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managing our resources. Our team, with multiple leaders and strong depth of resources, is ready to respond and successfully manage multiple assignments simultaneously. We commit to performing the work within the required time period.

We present four characteristics which make Hazen the right team to serve the City for this contract:

Trusted. Our demonstrated expertise and experience and strong proactive leadership on projects with our clients throughout the tri-county area and nationwide, help you achieve your goals and results in quality deliverables. This is evidenced by our decades of repeat clients in South Florida.

Local. Hazen, with an established regional design center in Broward County for over 55 years, is one of Florida's leading engineering consulting firms and one of the few consultants totally focused exclusively in the areas of water, wastewater, stormwater, and reclaimed water engineering services. With Hazen, the City has the benefit of a local firm with dedicated personnel knowledgeable about the sensitivities of Florida, backed by a national company with the resources to solve a multitude of challenges.

Responsive. The Hazen team understands the importance of responding promptly to each work assignment under continuing services contracts, developing concise scopes, successfully executing work assignments, and effectively managing our resources. Our team, with multiple leaders and strong depth of resources, is ready to respond and successfully manage multiple assignments simultaneously.

Proven. Our proven approach to planning, management, design, permitting, bidding, and construction are all targeted at managing and reducing risk and keeping project costs efficient and predictable.

E. SUMMARY OF PAST PERFORMANCE ON SIMILAR PROJECTS: Hazen has served as general consultant for more than 80 utilities in Florida, including City of Cooper City since 2009. Many of these utilities have retained us for multiple continuing contracts and are long-standing, repeat assignments. Examples of past performance are included in Section F of the SF330 and in Tab 6 of this submittal.

F. SUMMARY OF ABILITIES AND EXPERIENCE OF THE FIRM'S PERSONNEL: We have assembled a qualified team to serve the City. Our proposed key team members are primarily local South Florida staff, which is a significant benefit to the City and that access to a range of experienced engineers and construction management and inspection staff are just a short drive away. The most experienced individuals lead our projects, ensuring clients are provided with effective and efficient project development, implementation, and completion. Experience on the proposed individuals can be found in Section E of the SF330 in Tab 3 of this submittal.

Our Florida staff of over 200 professionals has been involved in the implementation of more than $8 billion in water-related projects in Florida over the past ten years. These Florida projects include planning, design, value engineering and facility optimization, permitting, and construction management of water, wastewater, storm water, and reclaimed water treatment, storage, conveyance, and control systems.

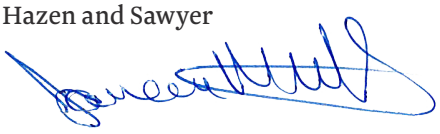
As a Vice President and proposed Project Manager I am an authorized agent of the firm and have full authority to commit the resources necessary for the completion of each assignment. The name of the contracting agent and primary contact person for this RFQ is as follows:

Hazen and Sawyer
Janeen Wietgrefe, PE, PMP, Vice President
4000 Hollywood Boulevard, Suite 750 North, Hollywood, FL 33021
(954) 987-0066 (phone)
jwietgrefe@hazenandsawyer.com

Please feel free to contact us should you have any questions or would like to discuss our qualifications at (954) 987-0066 or jwietgrefe@hazenandsawyer.com.

Sincerely,

Hazen and Sawyer



Janeen Wietgrefe, PE, PMP
Project Manager and Vice President

G. NUMBER OF YEARS IN PROVIDING PROFESSIONAL SERVICES AND BUSINESS STRUCTURE: Hazen and Sawyer, an employee-owned corporation, has been providing engineering services for over 73 years. The firm was incorporated on June 16, 1977 in the State of New York. The Certificate of Status from the FL Dept. of Corporations is included in Tab 4.

H. WORKLOAD AND AVAILABILITY: Should we be re-selected for this contract, we commit that the individuals identified on our organizational chart will be available to the City. We foresee adequate staff availability to work on these projects, and we are confident that all projects will be completed on schedule.

I. IDENTIFICATION OF FIRM'S SINGLE LICENSED POINT OF CONTACT: Project Manager, Janeen Wietgrefe, PE, PMP, is an authorized agent of the firm and will be the point of contact for the City. Her contact information is provided at the end of this letter.

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Tab

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Standard Form 330

ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*
Continuing Professional Consulting Services (CCNA), Cooper City, FL

2. PUBLIC NOTICE DATE	3. SOLICITATION OR PROJECT NUMBER
10/31/2024	RFQ#2024-1-PW

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE
Janeen Wietgrefe, PE, PMP, Vice President

5. NAME OF FIRM
Hazen and Sawyer

6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
(954) 987-0066	N/A	jwietgrefe@hazenandsawyer.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(Check) PRIME	(Check) J-V PARTNER	(Check) SUBCON-RACTOR	9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
a.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	4000 Hollywood Boulevard Suite 750N Hollywood, FL 33021	**Prime Contractor**
b.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	2101 NW Corporate Boulevard Suite 301 Boca Raton, FL 33431	**Prime Contractor**
c.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	999 Ponce de Leon Boulevard Suite 1150 Coral Gables, FL 33143	**Prime Contractor**
d.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	1000 N Ashley Drive Suite 1000 Tampa, FL 33602	**Prime Contractor**
e.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	2420 S. Lakemont Ave. Suite 325 Orlando, FL 32814	**Prime Contractor**
f.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	6675 Corporate Center Parkway Suite 330 Jacksonville, FL 32216	**Prime Contractor**
g.	☒	☐	☐	**Hazen and Sawyer** ☒ CHECK IF BRANCH OFFICE	4500 Main Street Suite 500 Virginia Beach, VA 23462	**Prime Contractor**
h.	☒	☐	☐	**Hazen and Sawyer** ☐ CHECK IF BRANCH OFFICE	498 Fashion Avenue Suite 11 New York, NY 10018	**Prime Contractor**

D. ORGANIZATIONAL CHART OF PROPOSED TEAM ☒ *(Attached)*

Pertinent information for each team member (such as company address, phone number, E-Mail address, web site, contact person(s), etc.) is included in Section H.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Janeen Wietgrefe, PE, PMP **Vice President**	**Project Manager**	**28**	**23**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Environmental Engineering BS, Environmental Engineering	PE / Florida – Civil Engineering (FL 57632)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Wietgrefe has participated on most all of Hazen's membrane projects in Broward County and is currently involved in multiple PFAS compliance projects throughout South Florida, including the Cities of Cooper City, North Lauderdale, Hollywood, Plantation, Fort Lauderdale, and Delray Beach. Ms. Wietgrefe has managed and/or participated in a variety of water resource projects including water supply planning and evaluation, water treatment design, water distribution, and wastewater planning and treatment. Her experience ranges from planning for future water infrastructure for clients to providing design, permitting, budgeting, construction management, and operational assistance for water and wastewater projects. She has experience serving as Project Manager for numerous projects completed under general consulting services contract for South Florida clients including Cooper City since 2009. **Professional Organizations**: American Water Works Association; Southeast Desalting Association; Water Environment Federation; American Society of

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Cooper City Continuing Professional Services**
Cooper City, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Wietgrefe serves as Project Manager for several water and wastewater projects completed under the Cooper City Continuing Professional Services agreement since 2009. Projects include the Pine Island Road Pump Station, Lift Station 2 and 49 Improvements, Master Plan Update of the Feasibility Review of Infrastructure Improvements for Wastewater, and the Effluent Reuse and Disposal Master Plan. **Cost:** $2.2 million (fee-to-date). **Specific Role:** Project Manager and Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **Water and Wastewater Continuing Engineering Services**
City of Plantation, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has been providing general consulting engineering services to the City of Plantation since the 2000s. As Project Manager, Ms. Wietgrefe provides multiple engineers to the City to assist with operational assistance at the East and Central membrane plants and at the Regional WWTP as well as completes design through construction management services for various facility projects. Recent projects include the Gulfstream Pump Station, pilot study/present worth evaluation for replacing membranes at East WTP, pilot study for optimal antiscalant addition, and fine bubble aeration conversion at the Regional WWTP. Other projects included design of the expansion of Plantation's existing 6-mgd membrane facility to the build out capacity of 12 mgd. **Status:** Ongoing. **Cost:** $8.3 million. **Specific Role:** Project Manager and Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Water and Wastewater General Engineering Consultant**
City of Margate, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has served as one of the City of Margate's general consultants for Water and Wastewater General Engineering Services since 2007. In this capacity, we have undertaken multiple assignments for the City. Projects have ranged from small, specialized studies to large, complex designs, and have addressed numerous aspects of the City's operations including the treatment and distribution of potable water as well as the treatment, reuse, and disposal of wastewater. Assignments under the contract have included water supply plan update; West WWTP Design Criteria Package (DCP); design and permitting of a 1.5-mgd reclaimed water facility at the West WWTP; water use permit; WWTP Operation Permit Renewal; structural analysis of East WWTP Aerobic Digester and Aeration Tank; Risk and Resilience Assessment and Emergency Response Plan under AWIA; DCP for pipeline crossing by horizontal directional drilling; and injection well permit renewal and mechanical integrity testing. **Cost:** $2.1 million (est. fee to date). **Specific Role:** Project Director (multiple projects).

d.

(1) TITLE AND LOCATION *(City and State)*: **14.5-mgd Nanofiltration Facility, Town of Jupiter, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2010; CONSTRUCTION (If applicable): 2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The Town of Jupiter currently operates a water treatment plant with four independent treatment processes: lime softening, ion exchange, and reverse osmosis (RO) and NF. The Town added a nanofiltration (NF) facility to produce potable water from the surficial aquifer. The NF treatment will continue ongoing product water quality improvement and ultimately allow retirement of a portion of the lime softening treatment plant. **Cost:** $37 million. **Specific Role:** Process Mechanical Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater and Water Engineering Services**
Broward County, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has provided general professional consulting services to Broward County Water and Wastewater Services under the 2002 and 2008 General Consulting agreements (reselected in 2024 for Wastewater) in the following areas: water and wastewater treatment plants, water collection and wastewater distribution, hydraulic modeling, pumping stations, water wells and effluent disposal wells, water reclamation, ocean science and marine engineering, financial studies and regulatory assistance. Hazen completed over 100 projects under the two agreements. Projects include studies and design through construction administration services for multiple water and wastewater plant facilities including: NRWWTP Headworks, Screens, and Force Main Redirects; Generator 4; Digester 3 Improvements; SCADA Improvements; and Chlorination and Disinfection Improvements at the WTPs and pump stations. **Cost:** $17.4 million (estimated fee-to-date). **Specific Role:** Project Manager and Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Patrick Davis, PE **Vice President**	**Principal-in-Charge**	**45**	**43**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Civil Engineering	PE / FL – Civil Engineering (FL 37167), NY, VA, MA, NC

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Davis has 45 years of experience directing or participating in the master planning, permitting, design, and construction of over $2.5 billion of constructed public works projects, with a long and successful track record of completing complex assignments in South Florida. He has been involved with projects in Broward County projects since the 1980s, and he has served as Project Director/Officer-in-Charge on multiple general services contracts. **Professional Organizations:** American Society of Civil Engineers; American Water Works Association, National Dual Distribution Committee, Water Environment Federation; American Society of Heating, Refrigerating and Air Conditioning Engineers; National Society of Professional Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Town of Jupiter 14.5-mgd Nanofiltration Facility, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2010; CONSTRUCTION (If applicable) 2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided design, permitting, and pilot testing oversight services for the 14.5-mgd Nanofiltration Facility (expandable to 17 mgd). The design included preparation of contract documents for construction of a new nanofiltration facility and ancillary facilities. The Town operated a water treatment plant with three independent treatment processes: lime softening, ion exchange, and reverse osmosis (RO). The Town added a nanofiltration facility (NF) to produce potable water from the surficial aquifer. The NF treatment continues ongoing product water quality improvement and ultimately allowed retirement of the lime softening treatment plant. The design included preparation of contract documents for construction of the new nanofiltration facility and ancillary facilities. The bid package included detailed design drawings and technical specifications. **Cost:** $2 million (fee); $37 million (project cost). **Specific Role:** Project Director.

b.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater and Water Engineering Services**
Broward County, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION (If applicable) 2005

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has provided general professional consulting services to Broward County Water and Wastewater Services under the 2002 and 2008 General Consulting agreements (reselected in 2024 for Wastewater) in the following areas: water and wastewater treatment plants, water collection and wastewater distribution, hydraulic modeling, pumping stations, water wells and effluent disposal wells, water reclamation, ocean science and marine engineering, financial studies and regulatory assistance. Hazen completed over 100 projects under the two agreements. Projects include studies and design through construction administration services for multiple water and wastewater plant facilities including: NRWWTP Headworks, Screens, and Force Main Redirects; Generator 4; Digester 3 Improvements; SCADA Improvements; and Chlorination and Disinfection Improvements at the WTPs and pump stations. **Cost:** $17.4 million (estimated fee-to-date). **Specific Role:** Project Director

c.

(1) TITLE AND LOCATION *(City and State)*: **Dixie Wellfield Improvements, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2008; CONSTRUCTION (If applicable) 2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The City replaced their existing lime softening facilities at the Peele-Dixie Water Treatment Plant with a 12 mgd finished water capacity nanofiltration water treatment plant. The City retained the services of Hazen to evaluate, permit, and design wellfield improvements for the Dixie Wellfield. **Cost:** $9.2 million. **Specific Role:** Project Director.

d.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater Engineering Services**
City of Miramar, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION (If applicable) Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

In 1993, Hazen was selected to provide professional engineering wastewater services to the City of Miramar. The contract has routinely been re-approved at approximate 5-year intervals, with the most recent occurring in 2015. Hazen has completed or is currently working on projects in the following areas: wastewater treatment plants, collection systems, lift stations, hydraulic modeling, effluent disposal wells, water reclamation, treatment plant operations and regulatory assistance. **Status:** This contract is ongoing. **Cost:** Estimated $13 million+ fees (from 1993 to date). **Specific Role:** Project Director.

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach 6-mgd Nanofiltration**
Membrane Treatment Facility, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2008; CONSTRUCTION (If applicable) 2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided design, bidding, permitting, and construction management services and oversight, pilot testing, start-up coordination, and first-year operational assistance for a 6-mgd membrane facility to replace an equivalent volume of existing lime softening capacity at the City of Hallandale Beach's (City's) water treatment plant. Mr. Davis assisted the City with multiple facets of the project including negotiations with the South Florida Water Management District, testifying in court regarding technical issues related to the site acquisition of land for the concentrate disposal well, and managing the design and construction services for the membrane facility. **Cost:** $20 million (inclusive of membrane facility, concentrate disposal well, and engineering and administration fees). **Specific Role:** Project Director.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Robert Taylor, Jr., PE **Senior Vice President**	**Technical Advisor**	**39**	**32**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Agricultural Engineering / BS, Agricultural Engineering	PE / FL, NY – Civil Engineering (FL 44165)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Taylor's entire career has been dedicated to stormwater management, water resources, and climate resilience. Having served as Hazen's long-time Corporate Practice Leader for Stormwater Management, he is deeply entrenched in stormwater, green infrastructure, and resiliency projects/programs in Florida and elsewhere throughout the nation. Mr. Taylor currently serves or has served as Project Manager/Director for general consulting assignments for several local governments. As a life-long resident of South Florida, Mr. Taylor has a solid understanding of South Florida's social, economic, and regulatory issues. He has a track record of successful project delivery and service as a trusted advisor that spans over three decades. **Professional Organizations:** NSPE, FES (including Leadership Institute), ASCE, AMTA, FICE, SESWA, FSA, and WEF.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Stormwater Master Plan Modeling and Design Implementation Services (since 2016), Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(if applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Taylor serves as Program Manager for the City's Comprehensive Stormwater Management Program, which includes delivery of a new stormwater master plan model, a prioritized stormwater/resiliency capital improvements plan, and implementation of designs to address chronic flooding and other stormwater management issues in the City. The first wave of resilient infrastructure investments from this program are in construction at an expected total cost of just over $200 million. **Cost:** This is a task order-based contract. Task orders authorized to date amount to approximately $17.4 million. The City expects to authorize funding for approximately $200 million in improvements in 2022 and another $200 million in 2026. **Specific Role:** Program Manager

b.

(1) TITLE AND LOCATION *(City and State)*: **General Services, City of Coral Gables, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(if applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The City of Coral Gables selected Hazen to be its general engineering consultant for stormwater and sanitary sewer projects in the early 1990s. Since that time, the firm has assisted the City in executing numerous stormwater capital projects and maintaining regulatory compliance. Representative projects include: North Gables Stormwater Improvement Project, NPDES MS4 Pollutant Load Modeling and Annual Reporting, Cocoplum Stormwater Improvement Project, and Stormwater Telemetry System. Mr. Taylor participated as Project Manager in mapping and pollutant load modeling for the City, required as a special condition of the most recent NPDES MS4 permit issued by FDEP for Miami-Dade County and its co-permittees. He is also currently serving as Project Director for the City's Assessment of Sea Level Rise and Preliminary Adaptation Plan. **Cost:** $13 million (construction) **Specific Role:** Various roles including Project Director

c.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater Consulting Services**
City of Sunrise, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(if applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen has served as the professional engineering consultant for wastewater infrastructure projects for the City of Sunrise since 2004. The City owns and operates three wastewater treatment plants that are interconnected via force mains and about 210 lift stations. Assignments under this contract have included dewatering and digestion improvements at two WWTPs, Southwest WWTP High-Level Disinfection, hydraulic modeling, development of standard specifications, lift station upgrades and force main design, wastewater master plan, and injection well pumping system improvements. **Cost:** $12 million (fees to date). **Specific Role:** Client Service Manager/Quality Control

d.

(1) TITLE AND LOCATION *(City and State)*: **Professional General Engineering Services for Water and Stormwater Capital Improvements (since 2000), Town of Jupiter, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(if applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen has served as General Water and Stormwater Consultant for the Town of Jupiter for over 20 years. In this capacity, the firm has provided services related to stormwater planning, design, permitting, plan review, and construction oversight, among many others. During this time, the firm has become an extension to Town staff and has helped ensure the proper and efficient management of the municipal water and stormwater systems. Water system improvements have included high service pump stations, ground storage tanks, and various transmission/distribution system improvements. Mr. Taylor served as Project Manager for West Indiantown Road Transmission Main, North Jupiter Service Area Water System (Phases 1 and 2), Riverbend/Little Club Water System, Alternate A1A Aerial Bridge Crossing (20-inch DIP). **Cost:** $5.8 million (fees). **Specific Role:** Project Director/Project Manager

e.

(1) TITLE AND LOCATION *(City and State)*: **14.5-mgd Nanofiltration Facility**
Town of Jupiter, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2010; CONSTRUCTION *(if applicable)*: 2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The Town of Jupiter previously operated a water treatment plant with four independent treatment processes: lime softening, ion exchange, reverse osmosis, and nanofiltration (NF). The Town added an NF facility to produce potable water from the surficial aquifer. The NF treatment ultimately allowed retirement of the lime softening treatment plant. **Cost:** $37 million (construction). **Specific Role:** Project Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Patricia Carney, PE, BCEE, DBIA **Vice President**	**Technical Advisor**	**34**	**17**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
ME, Environmental Engineering BE, Civil Engineering	PE / FL – Environmental/Civil Engineering (FL 50175), NY Board Certified Environmental Engineer (BCEE) Design-Build Institute of America (DBIA)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Carney has more than 34 years of experience in the analysis, planning, design, permitting, and construction management of water, wastewater, and stormwater conveyance and treatment systems in the U.S. and the Caribbean. She has managed many large programs including projects in south Florida and provides quality control on projects in the Southeast region. **Professional Organizations:** American Academy of Environmental Engineers – Diplomat; American Water Works Association; Water Environment Federation; Florida Water Environment Association; American Society of Civil Engineers; DBIA South Florida Chapter – Steering Committee Co-Chair.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater Consulting Services, City of Sunrise, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has served as the professional engineering consultant for wastewater infrastructure projects for the City of Sunrise since 2004. The City owns and operates three wastewater treatment plants that are interconnected via force mains and about 210 lift stations. Assignments under this contract have included dewatering and digestion improvements at two WWTPs, Southwest WWTP High-Level Disinfection, hydraulic modeling, development of standard specifications, lift station upgrades and force main design, wastewater master plan, and injection well pumping system improvements. Service areas include Sunrise, Weston, and portions of Davie and Southwest Ranches. **Status:** Numerous assignments currently ongoing. **Cost:** $14.9 million (est. fees to date). **Specific Role:** Project Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **City of Fort Lauderdale Intracoastal Waterway Horizontal Directional Drill (HDD) Crossing Design Criteria Package, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2017; CONSTRUCTION (If applicable): 2017

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Carney served as QC Reviewer and provided permitting assistance for development of a design criteria package for two 1,250-foot-long HDDs; and a 20-inch diameter water pipeline and a 16-inch diameter sewer force main crossing the Intracoastal Waterway at the Las Olas Boulevard bridge via HDD. The project won Best Overall in the Water/Wastewater Category for the 2017 Florida Region DBIA Design-Build Awards. **Cost:** $171,000 (fee), $3.1 million (construction) **Specific Role:** QC Reviewer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Government Cut Utilities Relocation Project, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2013; CONSTRUCTION (If applicable): 2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project consisted of relocation of a 20-inch water main and a 54-inch sanitary force main crossing underneath Government Cut. The relocation of the water main involved a 1,600-foot horizontal directional drill for a 30-inch high-density polyethylene pipe and the installation of 500 feet of 24-inch ductile iron pipe. The relocation of the sanitary force main involved 1,900 feet of micro-tunnel along with 1,900 feet of 60-inch fiberglass reinforced pipe and 650 feet of 60-inch pre-stressed concrete cylinder pipe. **Cost:** $57 million (construction), $10 million (fees) **Specific Role:** Design Manager.

d.

(1) TITLE AND LOCATION *(City and State)*: **NRWWTP Facility Improvements – Phase IIA Asset Condition Assessment, Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2016; CONSTRUCTION (If applicable): 2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was selected by the Broward County Water and Wastewater Services Division (BCWWS) to provide Engineering Services for facility improvements for the North Regional Wastewater Treatment Plant (NRWWTP). A key aspect of this multiphase project included development of prioritized ranking of infrastructure renewal and replacement (R&R) projects under Phase IIA. Under this phase, Hazen developed the Facilities Asset Management & Decision Support (AMDS) tool to perform facilities (vertical assets) condition assessments, consequence of failure analysis and risk analysis. This tool was used by our engineers to perform onsite condition assessments using tablets/Wi-Fi and upload photos and videos in real time to a central database. The tool also enables viewing of documents such as specifications, drawings, etc. for any asset in the field, thus eliminating the need to carry paper documents. Engineers used the discipline-specific (electrical, mechanical, structural, HVAC, etc.) online forms to assess the condition of the assets on a scale of 1 (excellent condition) to 5 (unserviceable). The findings were used to prioritize asset R&R projects. The R&R projects are currently being incorporated into the County's long-term capital improvements program (CIP). Ms. Carney led Hazen's Quality Control team to review the tool development, risk scoring methodology development and report findings. **Cost:** $2.5 million. **Specific Role:** Quality Control.

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Fort Lauderdale Prospect Lake Clean Water Center, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was selected to provide Owner's Representative Services for design and construction of the proposed 50-mgd (finished water capacity) water treatment plant. The City's existing Fiveash WTP was constructed in the 1950s and is at the end of its useful life. That study recommended replacing the Fiveash WTP with a new state-of-the-art WTP using a combination of nanofiltration and ion-exchange treatment technology. The new plant is designated as the Prospect Lake Clean Water Center. The Fiveash WTP treatment facilities will be decommissioned and used only for finished water storage and pumping. The City is procuring this project through a Public-Private-Partnership agreement. Our services also include coordination with permitting agencies and City departments. Hazen will provide multiple inspectors and Resident Project Representatives for the construction, as well as process specialists for the startup phase of the project. **Status:** The project completion is estimated to be in 2026. **Cost:** $4.7 million (est. fee); $700 million (est. construction). **Specific Role:** Client Service Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
John Burke, PE **Senior Associate**	**Technical Advisor**	**58**	**20**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Jacksonville, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Electrical Engineering	PE / FL – Electrical Engineering (FL 17301)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Burke has 58 years of experience in the planning, design, and project management of power, control and instrumentation systems associated with new and upgraded water and wastewater facilities. His capabilities range from concept through final design and extend to construction management and power systems analysis. Mr. Burke has provided electrical design quality assurance/quality control review for many Hazen projects including the award-winning Broward County Water Treatment Plant 3C Potable Water Ground Storage Tank and Pump Station project, which included a 4.7-mgd high service pump station, 1.5-mg prestressed concrete tank, sodium hypochlorite and ammonia chemical disinfection facilities, and standby power generator. **Professional Organizations:** National Society of Professional Engineers, Florida Engineering Society.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater and Water Engineering Services, Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has provided general professional consulting services to Broward County Water and Wastewater Services under the 2002 and 2008 General Consulting agreements (reselected in 2024 for Wastewater) in the following areas: water and wastewater treatment plants, water collection and wastewater distribution, hydraulic modeling, pumping stations, water wells and effluent disposal wells, water reclamation, ocean science and marine engineering, financial studies and regulatory assistance. Hazen completed over 100 projects under the two agreements. Projects include studies and design through construction administration services for multiple water and wastewater plant facilities including: NRWWTP Headworks, Screens, and Force Main Redirects; Generator 4; Digester 3 Improvements; SCADA Improvements; and Chlorination and Disinfection Improvements at the WTPs and pump stations. **Cost:** $17.4 million (estimated fee-to-date). **Specific Role:** Electrical Engineer-of-Record.

b.

(1) TITLE AND LOCATION *(City and State)*: **High Service Pump Replacement, City of Hallandale Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION (If applicable): 2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was responsible for replacement of all high service pumps at the City's Water Treatment Plant. Hazen provided detailed design, permitting, bidding, and services during construction. The design included four new horizontal split-case pumps designed for 4,500 gpm at 175 feet total dynamic head. With three pumps operating, the pump station capacity will be able to meet the peak hour demand through the year 2045 and beyond. The pumps will be equipped with totally-enclosed fan-cooled motors and operated with variable frequency drives. Hazen located the proposed pump station electrical equipment in an unutilized FPL room, which will significantly reduce the complexity of the construction sequencing resulting in a $200,000 cost-savings. **Cost:** $4.68 million. **Specific Role:** Electrical Engineer-of-Record.

c.

(1) TITLE AND LOCATION *(City and State)*: **Cocoplum 1 Pump Station and Force Main Improvements, Coral Gables, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2019; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen performed mechanical, electrical and structural upgrades to the Cocoplum 1 Pump Station to accommodate peak flows and increase system reliability and integrity. The City owns and operates a wastewater collection and transmission system comprised of 340,000 LF of gravity main, 35 pump stations, and approximately 100,300 LF of force main. **Cost:** $2.25 million. **Specific Role**: Electrical Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Town of Jupiter 14.5-mgd Nanofiltration Facility, Jupiter, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2010; CONSTRUCTION (If applicable): 2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided design, permitting, and pilot testing oversight services for the 14.5-mgd Nanofiltration Facility (expandable to 17 mgd). The design included preparation of contract documents for construction of a new nanofiltration facility and ancillary facilities. The Town operated a water treatment plant with three independent treatment processes: lime softening, ion exchange, and reverse osmosis (RO). The Town added a nanofiltration facility (NF) to produce potable water from the surficial aquifer. The NF treatment continues ongoing product water quality improvement and ultimately allowed retirement of the lime softening treatment plant. The design included preparation of contract documents for construction of the new nanofiltration facility and ancillary facilities. The bid package included detailed design drawings and technical specifications. **Cost:** $2 million (fee); $37 million (Bid); $37 million (project cost). **Specific Role:** Electrical QC.

e.

(1) TITLE AND LOCATION *(City and State)*: **Pine Island Road Pump Station and Storage Tank, City of Cooper City, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2013; CONSTRUCTION *(If applicable)*: 2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

This $1.8 million project included design of a new pumping station to convey water from an existing 2-mg water storage tank into the City's transmission system at a pressure of 60 PSI. The pump station design included three horizontal split case pumps equipped with variable frequency drives. Pump 1 was a lower flow (700 gpm at 152 feet TDH) "jockey" pump. Pumps 2 and 3 were higher flow pumps (1,400 gpm at 160 feet TDH). Electrical design included new primary power, variable frequency drives, and a diesel engine emergency generator. **Cost:** $1.8 million **Specific Role**: Electrical Engineer-of-Record

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
George Brown, PE **Associate Vice President**	**Water Lead; Water Treatment Systems and Conveyance and Storage; Pump Stations; Project Management/Owner's Rep/Cost Estimating**	**29**	**28**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Environmental Engineering	PE / FL – Environmental Engineering (FL 56076)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Brown has 29 years of experience in the design and construction of water and wastewater infrastructure along with managing multidisciplinary teams from master planning, conceptual planning, detailed design, and permitting through construction and startup. His experience includes numerous designs related to water supply, water treatment, pipelines, pumping stations, storage tanks, and reclaimed water. **Professional Organizations:** American Water Works Association, Florida Section Risk Management/Safety Committee.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Dixie Wellfield Improvements, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2008; CONSTRUCTION *(If applicable)* 2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

In 2002, the City decided to design and construct a new membrane nanofiltration WTP and associated wellfield. Mr. Brown served as Project Manager and Civil, Mechanical and Plumbing Engineer-of-Record to plan, design, permit, and provide services during the construction of the Dixie Wellfield. This project included: 1) eight new water supply wells; 2) equipping of the wells with submersible turbine pumps with a capacity of 1,750 gpm at 170 feet TDH each; 3) 11,000 feet of raw water piping that ranged from 16 to 30-inch diameter; 4) 1,000-kW diesel engine emergency generator; and 5) 3,300-square-foot generator building. Mr. Brown also served as Project Manager during design, permitting, construction, and testing of two Floridan Aquifer wells to collect water quality data to assess the efficacy of expanding the Dixie WTP using reverse osmosis technology. **Cost:** $9.2 million. **Specific Role:** Project Manager and Engineer-of-Record.

b.

(1) TITLE AND LOCATION *(City and State)*: **Fiveash Water Treatment Plant Reliability Upgrades, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2019; CONSTRUCTION *(If applicable)* N/A (Construction cancelled).

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The Fiveash WTP is a 70-mgd lime softening plant that was originally constructed in the 1950s. Many of the plant processes are at the end of their useful life. This project included the design of improvements to numerous plant processes and structures, including: a new backup power generation building (with two 1,250 kilowatt generators), renovation of the primary control room, automation of plant processes, storm hardening of key facilities, and roofing and roof drainage replacement. Additionally, the project included replacement of the 90-ton chlorine railcar system with a bulk (12%) sodium hypochlorite facility (capable of feeding 6,000 pounds per day of equivalent chlorine). Status. The Reliability Upgrades and Disinfection System project bid at $48 million in 2019, the City canceled the bids to reduce scope given its decision to construct a replacement WTP. **Cost:** $48 million (Contractor's Bid Amount). **Specific Role:** Project Manager and Engineer-of- Record.

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach High Service Pump Replacement, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION *(If applicable)* 2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Detailed design, permitting, bidding, and services during construction for replacement of the high-service pumps. Design included four new horizontal split-case pumps designed for 4,500 gpm at 175 feet total dynamic head. With three pumps operating, the pump station capacity will be able to meet the peak hour demand through the year 2045 and beyond. The pumps will be equipped with totally enclosed fan-cooled motors and operated with VFDs. **Cost:** $4.68 million (construction). **Specific Role:** Project Manager the Engineer-of Record.

d.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach Membrane Softening Facility, Hallandale Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2008; CONSTRUCTION *(If applicable)* 2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen provided pilot testing, design, bidding, permitting and construction management services for a new 6-mgd membrane facility to replace an equivalent volume of existing lime softening capacity at its water treatment plant. Total buildout capacity of the new membrane facility will be 13 mgd, which includes up to 4 mgd of brackish water reverse osmosis treatment capacity. Hazen completed design, permitting, and construction oversight of the membrane facility. **Cost:** $20 million (est.). **Specific Role:** Project Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Stuart Alternative Water Supply Plan, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION *(If applicable)* N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen provided the City of Stuart with a recommendation for a sustainable alternative water supply that will allow the City to meet the future finished water goals through the year 2040. Groundwater modeling and evaluation of water quality from adjacent utilities was performed for three different alternative water supplies within the Floridan aquifer: Upper Permeable Zone (UPZ), Avon Park Permeable Zone (APPZ), and Lower Floridan Aquifer (LFA). Hazen prepared a conceptual plan including the following components: Raw water supply: number of wells, location, construction, and components; Reverse osmosis water treatment facility: location, capacity, design criteria for main system components including pre-treatment, RO treatment, and post-treatment; Concentrate disposal alternatives: concentrate pipeline routing, evaluation of alternatives for disposal including use and modifications of existing deep injection well, surface water disposal, wastewater treatment plan blending. The City plans to implement the project in phases. The initial phase includes installation of a 1-mgd finished water RO facility expandable to 3 mgd. The conceptual plan incorporates elements that provide flexibility for plant expansion. **Cost:** $225,150 (fee); $16.5 million (construction estimate). **Specific Role:** Project Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Alonso Griborio, PhD, PE **Associate Vice President**	**Wastewater Lead; Wastewater Treatment Plant Process Engineering**	**29**	**18**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
PhD, Engineering and Applied Sciences MS, Environmental Engineering BS, Civil Engineering	PE / FL (#82815), LA, NY – Civil Engineering

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Dr. Griborio is an internationally recognized expert in wastewater treatment plant assessment and optimization. He provides expertise in the evaluation, analysis, and design of wastewater facilities with a particular focus on process engineering, plant optimization, and operations assistance. He specializes in the planning, analysis, and design of municipal and industrial wastewater facilities. He has extensive experience on computer applications such as 2Dc, Computational Fluid Dynamics (CFD), InfoWorks, and BioWin. Dr. Griborio has been a speaker at numerous workshops about wastewater treatment plant optimization and has authored more than 40 conference and peer-reviewed publications.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **General Wastewater and Water Engineering Services, Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2023; CONSTRUCTION *(If applicable)*: Complete 2023

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen has provided general professional consulting services to Broward County Water and Wastewater Services under the 2002 and 2008 General Consulting agreements (reselected in 2024 for Wastewater) in the following areas: water and wastewater treatment plants, water collection and wastewater distribution, hydraulic modeling, pumping stations, water wells and effluent disposal wells, water reclamation, ocean science and marine engineering, financial studies and regulatory assistance. Hazen completed over 100 projects under the two agreements. Projects include studies and design through construction administration services for multiple water and wastewater plant facilities including: NRWWTP Headworks, Screens, and Force Main Redirects; Generator 4; Digester 3 Improvements; SCADA Improvements; and Chlorination and Disinfection Improvements at the WTPs and pump stations. **Cost:** $17.4 million (estimated fee-to-date). **Specific Role:** Mechanical Design and Process Engineer

b.

(1) TITLE AND LOCATION *(City and State)*: **Southwest WWTP Repair and Replacement Upgrades and High-Level Disinfection/Reuse Facilities, City of Sunrise, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2017; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided design, permitting, and full construction phase services for the Southwest WWTP repair and replacement upgrades and reuse facility improvements. This project includes rehabilitation of two oxidation ditches, two secondary clarifiers, new RAS pump station, new headworks structures, and new filtration and chlorination facilities for the upgrade of this 0.99-mgd plant to high-level disinfection. Dr. Griborio participated as Process Engineer during the start-up of the facility, helping the City's staff to get into compliance with effluent requirements and providing training for O&M-related activities. **Cost:** $760,204 (fee). **Specific Role:** Lead Process Engineer / Plant Start-up.

c.

(1) TITLE AND LOCATION *(City and State)*: **Regional Wastewater Treatment Plant Diffused Aeration Upgrades, Plantation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2018; CONSTRUCTION *(If applicable)*: 2018

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Various wastewater treatment plant upgrades that included conversion of mechanical surface aerated basins to fine-bubble diffused aeration. The project includes installation of four multi-state centrifugal blowers, process air piping, fine bubble membrane disc diffusers, and automatic dissolved oxygen control. The implementation of this project resulted in electrical and chemical cost savings of approximately $200,000 per year. **Cost:** $543,000 (fee); $8.6 million (construction). **Specific Role:** Project Manager and Process/Mechanical Design Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Design Criteria Package for the West WWTP Upgrades, City of Margate, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: 12/2027 (est.)

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was retained by the City of Margate to serve as design criteria professional and assist with the preparation and submittal of a Design Criteria Package (DCP) for the West WWTP upgrades, which includes rehabilitation of the existing headworks and replacement of the rotating biological contactors (RBC) with a fine-bubble activated sludge system. The project includes sizing of the fine-bubble activated sludge system, preparing a description of the proposed infrastructure and modification to existing infrastructure, and preparing design criteria for the project components assuming a design flow for the West WWTP equal to 7.9-mgd three-month annual average daily flow (TMADF) and provisions for the future expansion to 10.1-mgd TMADF. **Cost:** $349,180 (fee-to-date). **Specific Role:** Project Manager and Process/Mechanical Design Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*: **Ocean Outfall Legislation Program, Miami-Dade Water and Sewer Department, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2019 - 2022; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Lead Process Engineer for evaluation of the different improvements required at the three Miami-Dade pure oxygen plants (SDWWTP, CDWWTP, and NDWWTP) to comply with the Ocean Outfall Legislation Rule and with projected peak flows. Among others, the expected plant expansions include the following additions to the unit processes: headworks, oxygenation trains, secondary clarifiers, RAS pumping stations, chlorine contact tanks, filtration, effluent pump stations, and injection wells. Led a team that developed process models for the three treatment plants using BioWin and computational fluid dynamics models for the plant clarifiers. **Status:** Project is ongoing. **Cost:** $2.2 billion. **Specific Role:** Process Engineer and Modeler; QC Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Lucia Medina, PE Associate	**Stormwater Lead; Stormwater Collection and Conveyance; GIS**	**10**	**9**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
ME, Civil Engineering and Project Management BE, Civil Engineering	PE / FL - Civil Engineering (FL 83664)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Medina's 10 years of experience includes hydrologic and hydraulic modeling, stormwater management, civil, stormwater and process design, as well as project coordination and management. She is also proficient in several platforms including AutoCAD, Civil3D, ArcGIS, and Interconnected Channel and Pond Routing (ICPR4) modeling.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Stormwater Master Plan Update and Flood Vulnerability Assessment, City of Oakland Park, FL**

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2022	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Medina is managing the development of a stormwater master plan and a city-wide flood vulnerability assessment for the City. The analysis is based on both a hydrologic & hydraulic model and a geospatial model. The models utilize various data sources and provide a comprehensive stormwater flooding assessment for both current and future projected climatological conditions. She is coordinating with the City to understand the City's composition, known vulnerabilities and to identify critical and important assets. Modeling results have facilitated the identification and prioritization of specific vulnerabilities throughout the City, which directed recommendations for adaptation strategies and effective solutions to increase resiliency to climate change. Ms. Medina is currently finalizing the stormwater master plan portion of this project due to inform the City in the development of future capital improvement projects. **Cost:** $292,000. **Specific Role:** Modeling/Project Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **Stormwater Master Plan Modeling and Design Implementation Services, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The Fort Lauderdale program consists of the delivery of a new stormwater master plan and design implementation to address chronic flooding and other stormwater management issues in the city. The program focuses on resilient adaptation to climate change and inclusion of innovative and regional solutions. Ms. Medina is coordinating with the modeling team to develop the hydraulic, hydrologic, and groundwater modeling used to inform the design teams. She has hands-on experience with ICPR4, the modeling software selected by the City as well as various ArcGIS applications used to dovetail raw data into modeling inputs and parameters. Her role includes collecting and organizing supporting data from agencies, developing detailed modeling workflows to streamline coordination and consistency amongst project partners, and providing modeling support for the design teams by providing models that showcase both existing and future scenarios with variable time horizons. **Cost:** $22.1 million (fee to date) $200 million (est. construction for initial 7 neighborhoods). The City expects to authorize funding another $200 million in 2026. **Specific Role:** Modeling/Project Supervisor.

c.

(1) TITLE AND LOCATION *(City and State)*: **Village of North Palm Beach Stormwater Master Plan Modeling and Design Implementation, FL**

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2020	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Medina served as Project Manager for the development of the Stormwater Master Plan Modeling and Design Implementation for the Village of North Palm Beach. Ms. Medina led the team to gather data pertaining to the City's stormwater management system, develop a hydrologic and hydraulic model to inform and vet capital improvement recommendations that include detailed cost and duration estimates as well as implementation considerations. **Cost:** $187,980 (fee). **Specific Role:** Project Manager.

d.

(1) TITLE AND LOCATION *(City and State)*: **City of Coral Gables Assessment of Sea Level Rise (SLR) Impacts on Existing Infrastructure and Adaptation Plan, FL**

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2017	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Medina assisted in evaluating the potential impacts of SLR on specific existing City infrastructure. Critical infrastructure was identified, and a risk assessment conducted under various scenarios. Adaptation strategies, consisting of physical improvements, policy changes, and emergency response were developed. Her role included the development of the ICPR4 model used to gauge the effects of storm surge and king tide on critical infrastructure within the City of Coral Gables. Ms. Medina used data provided by various agencies and sources to carve out a hydraulic and hydrologic model that would inform the City of its stormwater vulnerabilities. **Cost:** $30,000. **Specific Role:** Modeling.

e.

(1) TITLE AND LOCATION *(City and State)*: **Town of Jupiter Seminole Basin Improvements – Phase I, FL**

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2018	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen assisted the Town in improving the Seminole Basin drainage system by determining the benefits associated with proposing a second pump station and outfall. The need for additional attenuation, water quality improvements, and/or conveyance improvements within the basin were also evaluated. Ms. Medina updated the existing ICPR model of the Seminole Avenue Basin to incorporate the proposed pump station and proposed connections into the existing drainage system. Modifications to existing components of the conveyance system were also considered to ensure the most effective use of the proposed pump station. **Cost**: $33,735. **Specific Role:** Modeling.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Monique Durand, PE **Senior Associate**	**Water Treatment Systems and Conveyance and Storage; Permitting/Regulatory**	**21**	**18**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Environmental Engineering BSE, Environmental Science	PE / FL – Civil Engineering (FL 71393)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Durand has 21 years of experience managing multi-disciplinary teams in the planning, design, permitting, bidding/award, and construction management of water treatment facilities, including Lead and Copper Rule compliance, groundwater rule compliance, master planning, water supply planning and evaluation. She has served as Project Manager/Lead Engineer on multiple water and wastewater projects, including projects for the Cities of North Lauderdale, Plantation, Deerfield Beach, Hallandale Beach; and Broward County to name a few and is currently involved in multiple PFAS projects including Cities of Plantation and Hollywood. **Professional Organizations:** American Water Works Association; Water Environment Federation, National Forum for Black Public Administrators, Taste and Odor Committee; Florida Section Utility Council; Caribbean Water and Wastewater Association.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **City of North Lauderdale Lead and Copper Rule Revision (LCRR) Compliance Project, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen is providing the City of North Lauderdale a holistic strategy to be in compliance with the LCRR that includes development of a lead service line (LSL) Inventory, detailed LSL Replacement Plan, and updated sample plans that reflect revised sample location criteria with inclusion of schools and daycares. Hazen will also assist the City with a public relations campaign and explore all viable funding sources for the City's LCCR compliance program. **Cost:** $254,000 (est. fee) **Specific Role:** Project Manager

b.

(1) TITLE AND LOCATION *(City and State)*: **City of Deerfield Beach West Water Treatment Plant Chemical Systems Replacement, Deerfield Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Durand serves as Project Manager and Lead Mechanical Engineer for the design of upgrades to chemical systems at the Deerfield Beach West WTP, including nanofiltration and reverse osmosis chemical facilities. Project responsibilities include preparation of preliminary Basis of Design Report, detailed design of associated improvements to chemical systems, preparation of detailed design/bid drawings and technical specifications, preparation of permitting submittals, participation in meetings with regulatory agencies and response to requests for additional information submitted by regulatory agencies. Ms. Durand is also responsible for the overall project management and multidisciplinary design coordination. **Cost:** $500,000 (fee); $5.5 million (est. construction). **Status:** Design is estimated for completion by July 2024, and permitting by October 2024. The City does not intend to bid until 2025. **Specific Role:** Project Manager and Lead Mechanical Engineer

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Plantation East Water Treatment Plant Chemical Storage Facilities, Plantation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Durand served as Project Manager for design of improvements to six chemical storage facilities at the East WTP. She was also responsible for overall project management and multidisciplinary design coordination. Her project responsibilities also included preparation of preliminary basis of design report, detailed design of associated improvements to chemical systems, engineering services during construction of Phase I, preparation of detailed design/bid drawings and technical specifications, preparation of permitting submittals, participation in meetings with regulatory agencies, and responding to requests for additional information submitted by regulatory agencies. Phase I construction is completed. Phase II construction is ongoing, and Ms. Durand is responsible for providing project management and engineering services during construction. **Cost:** $1.1 million (est. fee for Phases I and II) **Specific Role:** Project Manager and Mechanical Engineer

d.

(1) TITLE AND LOCATION *(City and State)*: **City of Plantation Water Master Plan Plantation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2019; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Durand served as Project Manager and Lead Project Engineer for preparation of the Water Master Plan for the City of Plantation service area. The Water Master Plan provides a comprehensive evaluation of the water supply, treatment, storage, and distribution systems. Project responsibilities included development and use of a distribution system hydraulic model, review of historical water quality data, and identification of capital improvement needs relative to maintaining the reliability of the water system components through the year 2040. **Cost:** $243,008 (fees) **Specific Role:** Project Manager and Lead Project Engineer

e.

(1) TITLE AND LOCATION *(City and State)*: **Water and Wastewater Services Master Pump Station 440 Upgrades, Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2008; CONSTRUCTION *(If applicable)*: 2015

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Durand served as Project Engineer for the design of improvements/upgrades to the in-line booster Master Pump Station 440 facility, including primary and jockey pumping system, seal water system, bypass pumping system, on-site lift station, HVAC system and diesel engine generator. Project responsibilities included mechanical design of pump station improvements, preparation of detailed design drawings and technical specifications, and preparation of permitting submittals. Ms. Durand also assisted with the overall project management and multidisciplinary design coordination. **Cost:** $866,723 (fee) **Specific Role:** Project Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Isuru Abeysiriwardana, PhD, EI Assistant Engineer I	**Wastewater Treatment Plant Process Engineering**	**7**	**1.5**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Orlando, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
PhD, Civil Engineering MS, Environmental Engineering BS, Civil Engineering	

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Dr. Abeysiriwardana has hands-on preliminary and detailed design experience in water and wastewater treatment facilities, experience in wastewater process modeling (BioWin®) and experience in Wastewater Treatment Facility Master Plan capacity assessment, hydraulic calculations, master plan development, aeration calculations, and Opinion of Probable Construction Cost (OPCC) calculations. **Professional Organizations:** FSAWWA, FSEA

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **20-Year Master Plan Update Project City of Cooper City, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Dr. Abeysiriwardana was responsible for the collection system and WWTP solids and liquid treatment chapters of the 20-year master plan. He Conducted data assessment, including calculating flow and load peaking factors, flow projection, preliminary I&I assessment; Conducted condition and capacity assessment of the existing facility; Developed a conceptual conventional activated sludge-based facility that included headworks (screening and grit removal), process basins, and clarifiers; Modeled the conceptual wastewater treatment facility in Biowin® and assessed the capacity of proposed clarifiers using state point analysis; Developed preliminary design criteria for the headworks (screening and grit removal), fine bubble aeration conversion, and blowers (based on multistage centrifugal blowers); and Spearheaded the OPCC calculations for the Capital Improvement Projects (CIPs) and developed a spreadsheet utilizing Excel Macros to update cashflow distributions automatically for over 100 CIPs. **Specific Role:** Assistant Engineer

b.

(1) TITLE AND LOCATION *(City and State)*: **South Bermuda Water Reclamation Facility Upgrade and Expansion, Toho Water Authority, Kissimmee, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen is providing design services to increase the WRF capacity from 14 MGD to approximately 18 MGD. The improvements need to address potential regulatory changes that could require additional treatment to achieve lower nitrogen and phosphorous levels in the effluent. Dr. Abeysiriwardana Conducted hydraulic calculations and selected RAS (dry pit submersible) and WAS (dry pit submersible) transfer pumps, designed the RAS and WAS pump stations, and developed 50%, 90%, and 100% design drawings and specifications. **Cost:** $2.1 million (fees); $36 million (CMAR) **Specific Role:** Assistant Engineer

c.

(1) TITLE AND LOCATION *(City and State)*: **Bethune Point and Westside Regional WRFs BNR Optimization and WRWRF Rerating Study, Daytona Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen is providing assistance to optimize the biological nutrient removal (BNR) at both facilities to reduce (or eliminate) the need for supplemental carbon. Dr. Abeysiriwardana prepared ACEE Class 5 OPCCs, estimated the supplemental aeration requirements for two oxidation ditch basins to increase capacity and achieve AWT and developed preliminary design criteria for a fine bubble aeration system and blowers (based on PD blowers) **Cost:** $425,000 (approx. fee) **Specific Role:** Assistant Engineer

d.

(1) TITLE AND LOCATION *(City and State)*: **Sandhill Water Reclamation Facility Advanced Wastewater Treatment Project, Toho Water Authority, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The Sandhill WRF has a permitted capacity of 7.5 MGD AADF. In Advance of the anticipated Lake Okeechobee BMAP deadline requirement, Toho requires that the WRF be upgraded to produce advanced wastewater treatment quality effluent concentrations. Hazen is providing engineering services to make the upgrades that are required to meet these goals prior to the BMAP deadline. Tasks include reviewing available data pertaining to the project, development of a plant-wide hydraulic model, develop the BioWin biological process model, field sampling, modeling workshops and review of plant-wide electrical systems. Dr. Abeysiriwardana conducted field sampling and assisted in developing and calibrating the Biowin model and developed preliminary OPCC calculations. **Status:** The project is ongoing. **Cost:** $1.5 million (fees), **Specific Role:** Assistant Engineer

e.

(1) TITLE AND LOCATION *(City and State)*: **Shingle Creek Surface Water Treatment Facility Study, Toho Water Authority, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2023; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

Dr. Abeysiriwardana analyzed the data from the bench-scale study validating the process performance and drafted a technical memorandum, developed the control narrative for the proposed treatment train, which was based on Coagulation/flocculation (ACTIFLO ® system), ceramic ultrafiltration, and ion exchange, operated and conducted experiments on a pilot-scale surface water treatment train entailing an ACTIFLO® system (107 GPM), ceramic ultrafiltration unit (20 GPM), and ion exchange (0.4 GPM), and analyzed data **Specific Role:** Assistant Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Christopher Kish, PE, ENV SP **Vice President**	**Wastewater Conveyance Systems; Gravity Sewer Systems**	**30**	**30**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Coral Gables, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Civil Engineering	PE / FL – Civil Engineering Envision Sustainability Professional (ENV SP)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Kish participates in the design, permitting, bidding/award, and construction management of various water, wastewater, and stormwater projects throughout South Florida. He has designed approximately 100 pump stations ranging in size from 5 Hp to 385 Hp. He has modeled these improvements and provided the necessary calculations to obtain permit approval from DERM, FDOT, DOH and SFWMD. He has developed cost opinions and has assisted municipalities with bid/award services and has provided construction phase services necessary to implement/certify the improvements through various regulatory agencies. Additionally, Mr. Kish has designed over 90,000 linear feet of force mains within the tri-county area over his career. **Professional Organizations:** American Water Works Association.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Sewer Design and Implementation Program, Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen serves as Program Manager for this effort and is responsible for implementation and coordination of projects to satisfy 40 Consent Order deadlines. The project includes conducting a risk-based prioritization and condition assessment of the City's wastewater force mains. The work includes prioritization of force mains based on probability and consequence of failure, evaluation and recommendation of alternatives for collection of additional condition assessment data where needed, and development of recommendations for repair or replacement through short- and long-term planning periods. **Cost:** $174.6 million (est.). **Specific Role:** Project Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **Plan of Compliance Services (POC), Various Municipalities, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Kish is providing POC services for the cities of Coral Gables, Hialeah, Homestead, Miami-Dade Aviation Department (MDAD), North Miami and North Miami Beach. The documents defined procedures, programs, staffing requirements, and associated costs necessary to implement and maintain a Capacity Maintenance Operation and Management (CMOM) program based on County/EPA requirements. As part of this process, Mr. Kish oversaw/developed the standard operating procedures for wastewater overflows, gravity sewer, force main and pump station maintenance and operation. The documents were submitted to the regulatory agency in March 2016 as required. **Cost:** $185,000 (fee for Coral Gables POC). **Specific Role:** Plan of Compliance Services.

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Hialeah PSIP and Engineering Services During Construction, Hialeah, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2015; CONSTRUCTION (If applicable): 2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was responsible for designing and permitting all of the station improvements for PSIP Phase I, PS 4, 5, 56, 100, 101, 126, PSIP Phase II, PS 131, 133, 140, 141 and PS 106 and 150 as well the Phase I and II Force Main Improvements on a fast-track basis to obtain approval from DERM. Proposed improvements replaced mechanical, electrical, structural and instrumentation components in 12 pump stations. PS 106, the largest of the facilities upgraded, was converted from a wet/ dry well station with booster pumps to a submersible pump station with four 385 HP submersible units. Of the 12 stations upgraded, three were converted to triplex stations to better address varying inflows/ force main pressures. Horsepower in the 12 stations ranged from 20 to 385 HP. Hazen provided CM Services as well. **Cost:** $15.7 million (construction); $1.3 million (design/CMS fee). **Specific Role:** Project Manager.

d.

(1) TITLE AND LOCATION *(City and State)*: **Cocoplum 1 Pump Station and Force Main Improvements, Coral Gables, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2017; CONSTRUCTION (If applicable): 2021

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project involved improvements to the Cocoplum 1 Pump Station and discharge force main that required modifications to the station's mechanical, structural, electrical, and instrumentation systems. Improvements included installation of a new HDPE wet well and valve/meter box, associated piping, and a diesel-powered generator. Hazen also provided construction oversight services. The new 12-inch PVC force main from the station to the City's existing transmission main in Old Cutler Road eliminated the need for PS D to re-pump Cocoplum 1, as it currently did, thus freeing up capacity at station D. The project earned an Envision Bronze award, recognizing stakeholder involvement and delivery of community benefits, climate resilience, and protection of the surrounding lands. The Cocoplum 1 Pump Station and Force Main Improvements project is also the recipient of the "Resilient Project of the Year" in the Green Utility Category by the Resilient Utility Coalition (awarded in January 2018) and has been featured in the Florida Water Resources Journal as it relates to sustainability. **Cost:** $2.25 million (anticipated construction cost); $285,000 (fee). **Specific Role:** Project Manager.

e.

(1) TITLE AND LOCATION *(City and State)*: **Corona del Mar Phase II – Pump Station and Collection System, North Miami Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2021; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided design services for a new wastewater collection system, pump station and discharge force main for the City. The project will provide central sanitary sewer service to a select portion of the Corona del Mar neighborhood that currently uses septic tanks. **Cost:** $221,600 (design); $90,650 (limited construction). **Specific Role:** Project Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jennifer McMahon, PE **Vice President**	**Wastewater Conveyance Systems (Force Mains); Pump Stations; Mechanical; Engineering Plan Review**	**27**	**20**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Environmental Engineering BS, Civil Engineering	PE / FL – Civil Engineering (FL 56800)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. McMahon has over 27 years of experience in the water and wastewater industry including project management and civil, mechanical, and process design including design of potable water treatment and distribution systems. Her expertise as a process/mechanical membrane expert is of great value to this team. For example, she served as the Mechanical and Process Design Engineer for the Town of Jupiter 14.5-mgd Nanofiltration Facility and Lead Design Engineer for the Reverse Osmosis Skid Addition for the City of Hallandale Beach. She is skilled in detailed design, construction management, and project management, and provides quality control reviews for numerous design projects. She also has a proven history of delivering projects on budget and on schedule, as demonstrated on numerous projects for multiple clients. **Professional Organizations**: American Society of Professional Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach Reverse Osmosis Skid Addition, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

This project includes a 2-mgd reverse osmosis skid addition at the City of Hallandale Beach WTP. The project also included a 350-Hp membrane feed pump, reverse osmosis membrane softening skid, chemical metering pumps, and other ancillary improvements. This innovative design includes a skid that can accommodate a range of raw water salinity. Project responsibilities included development of detailed design drawings, development of technical specifications, and multidisciplinary design coordination. **Cost:** $5 million (est. construction) **Specific Role:** Project Manager, Lead Design Engineer

b.

(1) TITLE AND LOCATION *(City and State)*: **Town of Jupiter 14.5-mgd Nanofiltration Facility, Jupiter, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2010; CONSTRUCTION (If applicable): 2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. McMahon's responsibilities included development of detailed design drawings, development of technical specifications, and multidisciplinary design coordination. New facilities included nanofiltration membrane skids, membrane feed pumps, cartridge filters, degasifiers, chemical feed systems, odor control, chemical blend chamber, high-service pumps, and new fuel storage tanks for the existing emergency generator. This facility also incorporates pretreatment pressure filters and associated booster pumps, air scour system, and filter flushing system. Four new horizontal split case booster pumps sized at 4,800 gpm and 200-HP each were housed within a pump station building that included an electrical room and a small room for a polymer feed system. **Cost:** $37 million **Specific Role:** Mechanical and Process Design Engineer

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach Transfer Pump Replacement, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2021; CONSTRUCTION (If applicable): 2021

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The City of Hallandale Beach's three transfer pumps and electrical equipment, originally constructed in 1967, were at the end of their useful life. The City retained Hazen to provide design, permitting, bidding and services during construction for replacement of the high service pumps in 2017. The design included four new horizontal split-case pumps designed for 5,600 gpm at 50 feet total dynamic head equipped with variable frequency drives. Maintaining continuous water plant operation during construction required design of a complex sequence of construction to ensure no disruption to treatment during short (less than six hours) interruptions to transfer pumping. The design included new pumps, piping, electrical feed, and control systems. **Cost:** $1.7 million (bid) **Specific Role:** Mechanical and Process Design Engineer

d.

(1) TITLE AND LOCATION *(City and State)*: **SW 130th Avenue Force Main and Lift Station 309 Improvements, Sunrise, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2019; CONSTRUCTION (If applicable): 2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. McMahon served as Project Manager and Lead Design Engineer for an 8-inch diameter force main along the SW 130th Avenue corridor in the Town of Davie for the City of Sunrise. This multi-jurisdictional project includes hydraulic modeling to confirm the force main length and diameter and installation of approximately 6,300 linear feet of pipeline within the congested right-of-way of SW 130th Avenue. In addition, this project includes an upgrade in capacity for Lift Station 309, including an increase in electrical capacity. Status: The design is anticipated to be complete by Summer 2019, with construction and startup commencing late 2019. **Cost:** $1.3 Million **Specific Role:** Lead Design Engineer, Project Manager, Construction Administrator

e.

(1) TITLE AND LOCATION *(City and State)*: **Design Criteria Package for Las Olas Boulevard Force Main, Fort Lauderdale, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2020; CONSTRUCTION (If applicable): 2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. McMahon served as Project Manager and Lead Engineer for the development of a Design Criteria Package for the City of Fort Lauderdale's Phase II 16-Inch Force Main along Las Olas Boulevard. This 3,100 linear foot force main is required to improve sanitary service along the Las Olas Boulevard corridor and connects Pump Station D-37 and Pump Station D-38 to an existing force main under the Intracoastal Waterway. **Value:** $2 Million. **Status**: Project is complete.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Rachel Loffing, EI **Assistant Engineer**	**Stormwater Collection and Convey-ance; NPDES/MS4 Permitting**	**5**	**5**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Civil Engineering	

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Loffing has 5 years of experience providing design, permitting, master planning, modeling (including ArcGIS and ICPR4), and construction management services, which includes assisting in the development of multiple stormwater models. **Professional Organizations:** American Water Works Association; American Society of Civil Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **City of Fort Lauderdale Edgewood Neighborhood Stormwater Improvements, Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The Stormwater Improvements of Edgewood Neighborhood are a part of a larger project for the City of Fort Lauderdale to update the master plan and improve design to address chronic flooding and stormwater management issues throughout the City. Recently, Ms. Loffing has assisted with civil designs and permitting necessary for construction purposes. She has also assisted with bid schedules and cost estimates. Currently, Ms. Loffing is assisting with construction management activities including shop drawing review among other general construction management services. **Status:** To be completed by 2024. Cost: $14.5 million (est. construction) **Specific Role:** Assistant Engineer

b.

(1) TITLE AND LOCATION *(City and State)*: **Broward County Water and Wastewater Services County-wide Risk Assessment and Resilience Plan, Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was selected by Broward County to develop an actionable, resilience plan inclusive of infrastructure improvements and redevelopment strategies consisting of a visualization platform to aid regional planning and project tracking; and to provide the foundation for collective mitigation of future flooding, inclusive of water management infrastructure, and land use planning based on a comprehensive county-wide risk assessment. The plan will serve as the basis for a multi-decade, coordinated and phased infrastructure improvement plan with ample detail to support refined outreach, design, and financing needed for implementation. Ms. Loffing assisted with program planning, including the development of a County-wide heat island analysis. **Status:** Estimated for completion in March of 2025. Cost: $4.5 million (estimated fee-to-date) **Specific Role:** Engineering Assistant

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Oakland Park Stormwater Master Plan Update and Flood Vulnerability Assessment, Oakland Park, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Loffing assisted in the development of a stormwater master plan and a city-wide flood vulnerability assessment for the City. The analysis is based on both a hydrologic & hydraulic model and a geospatial model. The models utilize various data sources and provide a comprehensive stormwater flooding assessment for both current and future projected climatological conditions. Modeling results have facilitated the identification and prioritization of specific vulnerabilities throughout the City, which directed recommendations for adaptation strategies and effective solutions to increase resiliency to climate change. **Cost:** $292,000 (fee) **Specific Role:** Assistant Engineer/Modeling

d.

(1) TITLE AND LOCATION *(City and State)*: **Village of North Palm Beach Stormwater Master Plan Modeling and Design Implementation, North Palm Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2023; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Loffing served as Deputy Project Manager of the development of the Stormwater Master Plan Modeling and Design Implementation for the Village of North Palm Beach. Ms. Loffing assisted the team to gather data pertaining to the City's stormwater management system, develop a hydrologic and hydraulic model to inform and vet capital improvement recommendations that included detailed cost and duration estimates as well as implementation considerations. **Cost:** $187,980 (fee) **Specific Role:** Deputy Project Manager

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Perrysburg Stormwater Master Plan, Perrysburg, OH**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The City of Perrysburg was assisted in creating a stormwater master plan for the first time to address the flooding issues within the City and along Grassy Creek. Ms. Loffing reviewed public feedback and summarized results including creating a map book in ArcGIS of reported localized flooding issues. Regarding modeling, she assisted in the stormwater system model utilizing ArcGIS and PCSWMM software. **Cost:** $250,000 (estimated) **Specific Role:** Modeling/Technician

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
David Bannett, PE, LEED AP **Senior Associate**	**Gravity Sewer Systems**	**32**	**4**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Civil Engineering BS, Architectural Engineering	PE / FL – Civil Engineering (FL 51865) LEED Accredited Professional (LEED AP) FDEP Certified Storm Water Management Inspector

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Bannett has over 32 years of experience serving municipal and private-sector clients. He provides expertise in project management, including leading the design, permitting, and construction of water, wastewater, stormwater, sewer, and roadway projects. **Professional Organization:** American Water Works Association, American Society of Civil Engineers, Florida Engineering Society, Florida Engineering Leadership Institute, Class of 2007.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Edgewood Neighborhood Stormwater Improvements, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

This project involves installation of stormwater catch basins, manholes, conflict structures, piping and outfalls, inline check valves, exfiltration trenches and gravity drainage wells as well as replacement of select water mains and force mains within the project area. Professional services include stormwater analysis, design, permitting, coordination with utility providers, preparing quantity calculations, and engineers estimates of probable costs. Construction services will include observation, responding to RFIs, review of shop drawings, as-builts and testing for the site. **Status:** To be completed by 2024. **Cost:** $14.5 million (construction). **Specific Role:** Senior Project Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **City of Sunrise Southwest Wastewater Treatment Plant Water Main Replacement Hydraulic Evaluation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2021; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

This project involved evaluation of multiple impact scenarios that would involve abandoning of an existing 12-inch water main located at the Southwest WWTP and neighboring residential community and replacing with one of three water main improvement scenarios. The work included analyzing peak hour water $_{\text{pressures}}$, water velocity, available fire flows and identification of areas of stagnation. The work involved using the City's water system model and GIS database as a guide. Deliverables for the project included providing conceptual pipe size layouts on aerials and preparing class 5 cost estimates for each scenario. This information was summarized and presented in a detailed technical memorandum to the City complete with recommendations for implementing the improvements. **Cost:** $21,300 (fee). **Specific Role:** Senior Project Manager.

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Sunrise Pine Island Road and N.W. 44th Street Water Transmission Main Improvements, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2017; CONSTRUCTION (If applicable): 2017

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

The project involved preparation of construction documents and associated permits for the replacement of over 3,300 lf of existing prestressed concrete cylinder pipe (PCCP) and welded spiral steel pipe. The replacement pipes consisted of 30 and 36" ductile iron within the N.W. 44th Street right of way from the Springtree Water Treatment Plant (4350 Springtree Drive) to Pine Island Road. Another segment was located within Pine Island Road from the C-13 Canal north to approximately N.W. 35th Court. The work involved a new aerial crossing of the C-13 Canal adjacent Pine Island Road. Services included surveying, geotechnical engineering, civil engineering design, permitting, coordination with utility providers for adjustments and or relocations, preparing quantity calculations, engineer's estimates of probable costs and bidding assistance. Construction Administration and Observation was provided during construction. **Cost:** $3.5 million **Specific Role:** Senior Project Manager and Engineer-of-Record

d.

(1) TITLE AND LOCATION *(City and State)*: **Lighthouse Park Force Main Replacement under US 1, Town of Jupiter, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2021; CONSTRUCTION (If applicable): 2022

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

This project involved the preparation of construction documents and associated permits for the replacement of over 350 LF of existing 2-inch PVC force main piping within the park and right of way of US 1. The work involved a Horizontal Directional Drill under US 1 adjacent Lighthouse Park. Services provided included surveying, civil engineering design, permitting, coordination with utility providers for adjustments and or relocations, preparing quantity calculations, engineers' estimate of probable costs, and bidding assistance. **Cost:** $30,300 (fee) **Specific Role:** Senior Project Manager and Engineer-of-Record

e.

(1) TITLE AND LOCATION *(City and State)*: **Atlantic Sapphire, LLC USA Salmon Farm, Unincorporated Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project involves design and construction of over 85 acres of buildings, 17 acres of roadways and parking facilities and 60 acres of green space to support multiple functions on the site including Administration, Employee Health and Wellness, Process, Feed, SMOLT and Research Buildings, Warehouses and Work Shops, Salt and Fresh Water Treatment Facilities, Oxygen and Chiller Plant, a free-standing Generator Building and FPL Substation. The design will include stormwater catch basins, inlets, piping, manholes, exfiltration trenches and gravity drainage wells as well as water mains and force mains within the project area. The professional services include stormwater analysis, civil engineering design, preparing quantity calculations, and engineers estimates of probable costs. Construction activities will include observing utility tie-ins, pavement, sidewalk and roadway construction, monitoring of erosion and sedimentation controls, the removal and disposal of unsuitable soils, startup and testing of the new facilities, review of operation and maintenance manuals, record documents, as-builts, testing and other miscellaneous responsibilities required for completion of the work. **Status:** Expected completion year is 2028. **Cost:** $13 million (design and CMS fee, est.); $350 million (construction, est.). **Specific Role:** Senior Project Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Evan Curtis, PE **Associate Vice President**	**Instrumentation/SCADA**	**30**	**23**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Boca Raton, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Civil Engineering	PE / FL – Civil Engineering (FL 69657)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Curtis has extensive experience designing and commissioning various water and wastewater utility projects, most significantly in the area of instrumentation and controls. These projects involve existing system evaluations, design of improvements and construction phase services, as well as hands-on design/build services, including equipment procurement, programming, training, and startup. **Professional Organizations:** Instrumentation, Systems and Automation Society; American Water Works Association.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Peele-Dixie Wellfield and Membrane WTP with Concentrate Disposal, Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2008; CONSTRUCTION *(If applicable)* 2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided engineering services for conversion of the Peele-Dixie lime softening plant to a membrane facility. This included testing, predesign, design, and construction oversight services for a 15-mgd raw water wellfield, a 12-mgd finished water membrane plant, and a 5.8-mgd deep injection well for concentrate disposal. Hazen provided membrane start-up specialists, process experts, and key instrumentation personnel to facilitate the contractor's startup of the plant. Hazen also prepared operator training sessions, process guidance, normalized data review, year one instrumentation and controls assistance, and corrosion control testing and analyses. **Cost:** $41.3 million (construction); $6.7 million (fee, Peele-Dixie Membrane Plant and Wellfield); $900,000 (fee, Concentrate Disposal System) **Specific Role:** Instrumentation and Controls Engineer

b.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach Membrane Softening Plant, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2009; CONSTRUCTION *(If applicable)* 2009

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Curtis was responsible for the design of instrumentation and controls related to the expansion of an existing injection well pumping system and replacement of the control systems. The control system design features fully automated wet well level and pump controls including 3 wet wells, 7 constant speed pumps, 5 variable speed pumps, and two discharge headers. The control system design integrates a new GE PLC and local touchscreen HMI into the existing plant control system via fiber optic interface to the plant control room. **Cost**: $20 million ((inclusive of Membrane Facility, Concentrate Disposal Well, and Engineering and Administration fees) **Specific Role:** Instrumentation and Controls Engineer

c.

(1) TITLE AND LOCATION *(City and State)*: **East Water Treatment Plant (EWTP) 12-mgd Membrane Softening Plant Expansion and Remembraning, Plantation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2003; CONSTRUCTION *(If applicable)* 2003

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen provided design, permitting, bid and award services, and construction management services for expansion of the City of Plantation's existing 6-mgd membrane softening facility to 12 mgd, and a new clearwell, new transfer, and high-service pumping facilities sized to meet the higher flow rates provided during this expansion. Services included detailed design, permitting, bid and award services for the addition of three 2-mgd nanofiltration skids (hybrid arrays), a nanofiltration booster pump, and a permeate flushing system within the existing membrane building. **Cost:** $2 million (fee); $37 million (construction) **Specific Role:** Instrumentation and Controls Engineer

d.

(1) TITLE AND LOCATION *(City and State)*: **Regional Wastewater Treatment Plant Aeration and Controls Improvements, City of Plantation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION *(If applicable)* 2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Curtis served as I&C Engineer responsible for design of various treatment plant improvements, including aeration basin fine bubble diffusion, pumping systems, sodium hypochlorite system, control room renovations, and a new plant-wide SCADA system. **Cost:** $8.6 million (construction). **Specific Role:** I&C Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*: **Water and Wastewater Telemetry Reliability Upgrade, City of Boca Raton, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2021; CONSTRUCTION *(If applicable)* 2021

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Curtis was responsible for the design of a 288-site radio telemetry system. The project included design of upgrades to remote telemetry units, 900 MHz licensed radio base station equipment, the addition of cellular communication links, and electrical improvements. The upgraded system replaces the existing serial Modbus protocol with Ethernet DNP3 protocol featuring event logging at each RTU and report-by-exception communications. Cellular communications will be provided to each site and both cellular and licensed 900 MHz radios at critical sites with automatic failover between cellular and radio. **Cost:** $310,370 (fee, design and bidding); $4.38 million (construction) **Specific Role:** Project Manager/ Instrumentation and Controls Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Alfredo Jimenez **Senior Principal Scientist**	**Instrumentation/SCADA**	**14**	**2**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BE, Electrical Engineering	

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Jimenez brings 14 years of experience providing automation and control services for treatment facilities within both the public and private sectors. He is an expert in PLC programming and shop drawing reviews with extensive knowledge of instrumentation and control procedures. Mr. Jimenez's expertise includes instrumentation and control, PLC and HMI programming, SCADA system design, control panel design, telemetry, and networks and start-up of new WTP facilities. **Professional Organizations:** International Society of Automation; Underwriting Laboratories.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

City of Deerfield Beach West Water Treatment Plant
Chemical Line Replacement, Deerfield Beach, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Mr. Jimenez serves as Instrumentation and Controls Engineer for this project that included design of a new chemical system for the City. The design includes a modern control strategy for the chemical system, modifications to the existing network as well as SCADA system improvements. Mr. Jimenez was responsible for designing all P&IDs processes, controls descriptions, and specifications. information submitted by regulatory agencies. **Cost:** $500,000 (fee); $1.7 million (construction, est.). **Status:** Design is estimated for completion by July 2024, and permitting by October 2024. The City does not intend to bid until 2025. **Specific Role:** Instrumentation and Controls Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*

City of Coral Springs Water Treatment
Supply Wells Rehabilitation, Coral Springs, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2018	2018

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Mr. Jimenez provided integration of the newly rehabilitated supply wells with the existing SCADA system. This project required a multi-protocol converter to be able to send data via Modbus RTU through the existing telemetry infrastructure, and HMI graphics modifications to incorporate historical data, reports, and security features. Another key feature of the project included the configuration and integration of the pump's VFD over the network. **Specific Role:** Instrumentation and Controls Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*

Atlantic Sapphire Salmon Farm Phase 1, Homestead, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Mr. Jimenez was responsible for implementing control strategies for supply and injection wells, cooling water wells, saltwater filtration system, odor control, and chemical dosing. These included: DLR Network configuration, which provides means to detect, manage, and recover from single faults in a ring-based network; VFD communication table configurations to provide pump controls over EtherNet/IP™ protocal; and a network-based instrumentation and control system, including flow meters, ultrasonic level transmitters, and salinity analyzers. **Status:** Completion is estimated for 2028. **Cost:** $13 million (design and CMS fee); $350 million (est. construction). **Specific Role:** Lead Instrumentation and Controls Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*

City of Hallandale Beach High-Service
Pump Station Replacement, Hallandale Beach, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2020	2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

This project required the implementation of a modern control strategy for the pump station. The project also involved the design of a new PLC control panel with a state-of-the-art monitoring system; integration of third-party equipment (pressure transmitters, pressure switches, flow meters, VFDs and analytical instrumentation) with the existing SCADA system; development of new graphics for the pump station local HMI; deployment of modified and new graphics to the existing SCADA system; and modification of the existing PLC logic to provide a comprehensive control strategy. **Cost:** $4.68 million (construction). **Specific Role:** Lead Instrumentation and Controls Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*

Town of Manalapan Water Treatment Plant,
Manalapan, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2019	2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☐ Check if project performed with current firm

Mr. Jimenez implemented plant-wide upgrades involving booster station telemetry and instrumentation integration. The project included PLC control strategy, local HMI, and SCADA design as well as redesign of the telemetry system to optimize communications with remote sites. He also integrated remote sites with the existing SCADA system and upgraded the booster station controls and local HMI. **Specific Role:** Project Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jose Cano, PE **Senior Principal Engineer**	**Electrical**	**7**	**2**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Coral Gables, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Electrical Engineering	PE / FL – Electrical Engineering (FL 92167)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Cano specializes in the design of electrical power distribution systems for water and wastewater treatment facilities, and the evaluation of existing electrical systems at operating facilities. His experience also includes lighting design, fire alarm systems, building automation systems, and grounding and lightning protection. Mr. Cano's experience also includes creating LDARS and PDARs and preparing CADD plans using MicroStation 3D software. **Professional Organizations:** American Water Works Association; Florida Water Environment Association; Cuban American Association of Civil Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Miami-Dade Water and Sewer Department North District Wastewater Treatment Plant Electrical Distribution Building No. 3 Design, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Cano is responsible for the design of the new Electrical Distribution Building No. 3, which will replace the existing Electrical Distribution Building No. 1 at the North District WWTP for Miami-Dade Water and Sewer Department. Design includes new medium and low voltage arc resistant switchgears with main-tie-tie-main configurations, nine medium voltage generators, medium voltage transformers and low voltage motor control centers, and other low voltage distribution equipment. **Status:** The project is estimated for completion in 2028. Cost: $10.5 million (design and CMS est. fee); $180 million (est. construction). **Specific Role:** Electrical Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*: **SFWMD S-8 Upgrades, West Palm Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Cano is responsible for the design of all electrical improvement at the South Florida Water Management District's existing pump station. Upgrades include replacement of two existing generators and associated power distribution equipment, power and controls for a new fuel farm facility and new lift station, new layout of site and security lighting, and addition of lightning protection system to the building and other outdoor facilities. **Status:** Construction is estimated for completion in 38 months in July of 2027. **Cost:** $1,460,000 (est. fee). **Specific Role:** Electrical Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **City of West Melbourne New Water Treatment Plant (WTP) Feasibility Analysis and Test/Production Well, West Melbourne, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was selected to conduct piloting, preliminary design, final design and bidding services for a new 5-mgd drinking water plant utilizing membrane treatment. With the design of the WTP currently under way, Hazen was also tasked with an expedited design of the four water supply wells to serve the plant. The project included feasibility analysis to determine the feasibility of developing a new WTP and related infrastructure in lieu of obtaining potable water from an outside entity. Hazen designed and implemented a detailed testing plan to identify aquifer characteristics; and detailed testing to assess production capacity with depth, as well as consumptive use permitting. **Status:** Recommendations for additional production wells include 30 feet of surficial casing, additional casing near sewer lines, a final casing depth of 320 feet, and a 24-inch diameter for maximum surface area with an estimated completion date of 2026. **Cost:** $350,000 (est. fee for wells); $1.9 million (est. fee for WTP design). **Specific Role:** Electrical Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **City of Sunrise Springtree Water Treatment Plant Electrical Improvements, Sunrise, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Cano is responsible for the construction phase services associated with the project. This includes reviewing electrical-related shop drawings and requests for information, construction inspections, progress review meetings, and change management. The project consists of replacement of the plant's 5kV electrical distribution system and replacement/modifications to the paralleling generator equipment. **Status:** Completion of construction is estimated for 2026. **Cost:** $500,000 (fee). **Specific Role:** Electrical Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Sunrise Sawgrass Wastewater Treatment Plant - DAF Thickening Process Improvements Design and Bidding Services, Sunrise, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2023; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Cano is responsible for the design of all electrical improvements at the City's WWTP's existing dissolved air flotation (DAF) thickening building. Improvements include new VFDs for existing pumps, control panels for DAF system, and lighting system for the building. **Statius:** Construction is estimated for completion in 2025 (est.). **Cost:** $284,000 (est. fee). **Specific Role:** Electrical Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
James Broad **Associate**	**Electrical**	**58**	**39**

15. FIRM NAME AND LOCATION *(City and State)*
Hazen and Sawyer, Hollywood, FL

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
N/A	FL – CME

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

For over 58 years, Mr. Broad has participated in the design and implementation of numerous instrumentation and electrical assignments, ranging from major municipal treatment plants to regional pump stations, city-wide telemetry systems, and SCADA systems. He has been instrumental in his involvement during the construction phase of projects by ensuring the proper installation of instrumentation and electrical disciplines. **Professional Organizations**: Instrumentation Society of America

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*
General Wastewater and Water Engineering Services
Broward County, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Complete 2023

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen has provided general professional consulting services to Broward County Water and Wastewater Services under the 2002 and 2008 General Consulting agreements (reselected in 2024 for Wastewater) in the following areas: water and wastewater treatment plants, water collection and wastewater distribution, hydraulic modeling, pumping stations, water wells and effluent disposal wells, water reclamation, ocean science and marine engineering, financial studies and regulatory assistance. Hazen completed over 100 projects under the two agreements. Projects include studies and design through construction administration services for multiple water and wastewater plant facilities including: NRWWTP Headworks, Screens, and Force Main Redirects; Generator 4; Digester 3 Improvements; SCADA Improvements; and Chlorination and Disinfection Improvements at the WTPs and pump stations. **Cost:** $17.4 million (estimated fee-to-date). **Specific Role:** Electrical and I&C

b.

(1) TITLE AND LOCATION *(City and State)*
City of Hallandale Beach Membrane Softening Facility
Hallandale Beach, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2008	2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen provided pilot testing, design, bidding, permitting and construction management services for a new 6-mgd membrane facility to replace an equivalent volume of existing lime softening capacity at its water treatment plant. Total buildout capacity of the new membrane facility will be 13-mgd, which includes up to 4 mgd of brackish water reverse osmosis treatment capacity. Hazen completed the design, permitting, and construction oversight of the membrane facility. **Cost:** Total costs for the facility were approximately $20 million and are inclusive of the membrane facility, concentrate disposal well and engineering and administration fees. **Specific Role:** Electrical Design

c.

(1) TITLE AND LOCATION *(City and State)*
Winson Water Treatment Plant Improvements
North Miami, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2014	Pending

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

In August 2009, the City retained Hazen to design the improvements to the Winson WTP that were described in the Feasibility Study. Subsequently, based upon budget constraints, the City decided to not implement reverse osmosis in favor of rehabilitation of the existing lime softening facilities to ensure continued reliability (at current capacity) through the year 2030. In March 2012, the City authorized Hazen to proceed with the design for the rehabilitation of the Winson WTP lime softening facilities. To aid the City in Drinking Water State Revolving Fund (SRF) Program low-interest loans for project implementation, Hazen recommended that the project be implemented in a series of bid packages along with a basis of design report (BODR). **Cost:** $13.5 million (construction) **Specific Role**: Electrical Design

d.

(1) TITLE AND LOCATION *(City and State)*
Peele-Dixie Wellfield Water Treatment Plant Improvements
Fort Lauderdale, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2007	2007

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The City of Fort Lauderdale replaced their existing lime softening facilities at the Peele-Dixie WTP with a 12 mgd finished water capacity nanofiltration water treatment plant. The City retained the services of Hazen to evaluate, permit, and design wellfield improvements for the Dixie Wellfield. **Cost:** $9,213,000 (construction), $785,031 (design fee), $720,446 (construction management fee) **Specific Role:** Electrical Design

e.

(1) TITLE AND LOCATION *(City and State)*
General Consulting Services
Coral Gables, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Since 1992, Hazen has been reselected and continues to provide day-to-day general consulting services to the City of Coral Gables. Recently completed projects include Pump Station Evaluation, Sewer Rate Study, Telemetry System (Phase II), I/I Flow Reduction Assistance and Pipeline/Pump Station Designs. **Cost:** Fee: $3.2 million (1991-present)) **Specific Role:** Electrical Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Orlando Castro, PE, DBIA **Associate Vice President**	**Structural; Project Management/Owner's Representative/Cost Estimating**	**17**	**17**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Coral Gables, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
ME, Structural Engineering BS, Civil Engineering	PE / FL – Civil Engineering (FL 71491) Design-Build Institute of America (DBIA)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Castro serves as the regional leader for Hazen's Alternative Project Delivery Service Group as well as the Program Management and Construction Management Service Group. He has been involved in a variety of projects ranging from planning, design, and construction administration of water and wastewater infrastructure. His expertise includes structural design, program and construction administration as owner's representative, and site inspection services for new and upgraded facilities and collection/transmission systems using various project delivery methods (Design-Build, Design-Bid-Build, and CMAR). In 2015, he was the recipient of Florida Engineering Society's Young Engineer of the Year Award. **Professional Organizations:** DBIA; American Society of Civil Engineers; Cuban American Association of Civil Engineers; and American Water Works Association

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Owners Representative for the New WTP Progressive Design-Build, City of Delray Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen serves as the City's Owner Representative (OR) to assist with the planning, procurement and execution of an alternative project delivery of their new 22-mgd nanofiltration water treatment plant. As OR, Mr. Castro and the Hazen team provides technical assistance to the City in multiple project phases. Some of the specific tasks include the evaluation/validation of treatment alternatives, evaluation of project delivery methods, development of progressive Design-Build (D-B) procurement documents, assistance in the review of documents provided by the proposers, assistance in the development and technical review of proposed scope of work and fees from the selected D-B team, review of the D-B team's deliverables, prepare and provide project updates to the City Commission, funding assistance, document control, and management. **Cost:** $14 million (Phase 1 D-B contract value), $250 million (est.) (Phase 2 D-B contract value); $800,000 (Owner's Representative services through Phase 1). **Specific Role:** Project Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **Continuing Professional Engineering Services, City of Cooper City, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Castro served as Project Manager and Structural Engineer-of-Record for the replacement of the City's 1-MG Water Storage Tank Replacement work assignment under this ongoing contract. As the result of routine annual inspections, the City determined the existing steel storage tank should be replaced with a new 1-MG prestressed concrete tank. Mr. Castro led the design team to replace the existing tank. Some of the challenges during the design were to locate and evaluate any of the existing yard piping and valves associated with the storage tank. During the construction phase, he oversaw the construction of the project, reviewing shop drawings, answering contractor RFIs, evaluating change orders and pay requests, and providing periodic site inspections and final project certification. **Cost:** $2.2 million (fee-to-date). **Specific Role:** Project Manager and Structural Engineer-of-Record.

c.

(1) TITLE AND LOCATION *(City and State)*: **2nd Avenue Water Tank, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2015; CONSTRUCTION (If applicable): 2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

Hazen provided design, permitting, and construction management services for rehabilitation of a 60-year-old, 1-million-gallon elevated water storage steel tank. The project consisted of blasting away the old lead paint, applying a new coating system to the tank, replacing ladders and guardrails that were unsafe and did not meet OSHA standards, and performing repairs on deteriorated sections of the tank. Design included evaluating other types of water storage options. Services during construction included part-time inspections. Cost: $2.3 million Specific Role: Special Inspector

d.

(1) TITLE AND LOCATION *(City and State)*: **Sawgrass WWTP Emergency Air Header Repair Project, City of Sunrise, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2015; CONSTRUCTION (If applicable): 2015

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Castro was responsible for design of the emergency repairs of the air piping and pipe supports. He worked alongside the contractor selected by the City for this CMAR project to expedite the design and permitting process and place the air piping, with its permanent pipe supports, in service as soon as possible. A temporary pipe was put in place at the same time the new pipe was placed. The plant remained operational during design and construction. The pipe repair was essential to keep the WWTP's aeration basin in service. He also performed specialty inspections and provided final certifications to close out the permit required by the Building Department. **Cost:** $200,000 **Specific Role:** Project Manager/Structural Engineer-of-Record

e.

(1) TITLE AND LOCATION *(City and State)*: **Bear Cut and West Bridge Emergency Water Main Replacement, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2014; CONSTRUCTION (If applicable): 2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

In January 2013, MD-PWWM released a request for proposals to complete the project via Design-Build with a $31 million budget and a tight 300-day construction schedule. Hazen led design of the 16-inch HDPE water main horizontal directional drill (HDD) installation and procured the fast-tracked environmental resource permits required to complete the project on time. Mr. Castro managed the relocation of a 12-inch water main across the Bear Cut and West Bridges. The relocation was accomplished by two subaqueous crossings via a 1,300-foot HDD for West Bridge and 3,000-foot HDD for the Bear Cut Bridge. **Cost:** $3 million (construction); $520,000 (fee) **Specific Role:** Resident Project Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jean Paul Silva, PE **Senior Associate**	**Structural**	**29**	**22**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Boca Raton, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Civil Engineering BS, Structural Engineering	PE / FL – Civil Engineering (FL 66522)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Silva serves as Hazen's Regional Manager for structural engineering in Florida, in charge of coordinating all structural assignments in the region. He has over 29 years of experience in structural design and construction administration of water and wastewater facilities, stormwater collection, storage tanks, and pump stations. Mr. Silva's experience includes design of new facilities, structural condition assessments, design of rehabilitation/upgrade of existing facilities, and structural/special inspections. **Professional Organizations:** American Water Works Association; American Institute of Steel Construction; Florida Engineering Society; American Concrete Institute; American Society of Civil Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

Town of Jupiter 14.5-mgd Nanofiltration Plant Design, Jupiter, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2007	2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Silva played a major role in the structural design and coordination of architectural components of the $37 million nanofiltration plant. Design consisted of a two-level reinforced concrete/masonry building to house cartridge filtration and membrane feed systems, nanofiltration skids, chemical storage, degasifiers and odor control systems, clearwell, and transfer pumps. He provided structural design services. **Cost:** $37 million (construction); $2 million (fee). **Specific Role:** Structural Engineer.

b.

(1) TITLE AND LOCATION *(City and State)*

General Wastewater and Water Engineering Services
Broward County, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
Ongoing	2023

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Hazen has provided general professional consulting services to Broward County Water and Wastewater Services under the 2002 and 2008 General Consulting agreements (reselected in 2024 for Wastewater) in the following areas: water and wastewater treatment plants, water collection and wastewater distribution, hydraulic modeling, pumping stations, water wells and effluent disposal wells, water reclamation, ocean science and marine engineering, financial studies and regulatory assistance. Hazen completed over 100 projects under the two agreements. Projects include studies and design through construction administration services for multiple water and wastewater plant facilities including: NRWWTP Headworks, Screens, and Force Main Redirects; Generator 4; Digester 3 Improvements; SCADA Improvements; and Chlorination and Disinfection Improvements at the WTPs and pump stations. **Cost:** $17.4 million (estimated fee-to-date). **Specific Role:** Structural Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*

City of Fort Lauderdale Dixie Wellfield Improvements,
Fort Lauderdale, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2008	2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

This project involved a reverse osmosis water treatment system. The City replaced their existing lime softening facilities at the Peele-Dixie WTP with a 12-mgd finished water capacity nanofiltration water treatment plant. The City retained the services of Hazen to evaluate, permit, and design wellfield improvements for the Dixie Wellfield. **Cost:** $9.2 million (construction), $785,031 (design fee), $720,446 (construction management fee). **Specific Role:** Structural Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*

Regional Wastewater Treatment Plant Diffused Aeration,
City of Plantation, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2019	2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

This project included an upgrade to the 20-mgd RWWTP for conversion of existing aeration basins from mechanical surface aeration to fine bubble diffused aeration, related air piping and blower installation, construction of a new laboratory/office building, new site lift station, and SCADA system upgrades. **Cost:** $1.5 million (fee). **Specific Role:** Structural Engineer; Specialty Inspections.

e.

(1) TITLE AND LOCATION *(City and State)*

Seminole Tribe of Florida (STOF) Hollywood Reservation
Membrane WTP, Hollywood, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
2016	2016

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Silva provided quality control for the design of miscellaneous improvements for a 3-mgd membrane softening facility. The project included the replacement of the sulfuric acid storage, feed and injection facilities, mechanical and instrumentation improvements to two raw water wells and the installation of a new engine-driven high service pump and associated fuel storage and feed system. In addition, Mr. Silva served as Structural Engineer of Record for the Hollywood reservation's electrical reliability upgrades in addition to reviewing shop drawings. **Cost:** $670,000 (fee); $1.3 million (construction). **Specific Role:** Structural Engineer of Record.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
David Witte, PE, CEM **Associate**	**Mechanical**	**16**	**7**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, New York, New York

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
ME, Civil Engineering BS, Mechanical Engineering	PE / FL – Mechanical Engineering (FL 96150), MA, NH, NM, NY, UT Certified Energy Manager (CEM)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Witte's experience includes mechanical system design and analysis for water/wastewater facilities, as well as serving as owner's representative for capital project design and construction at a U.S. Navy training facility. His design experience includes schematic design and planning for HVAC and plumbing systems, life-cycle cost analyses, calculating heating and cooling loads for spaces, pressure drop calculations for air and hydronic systems, sizing and selecting equipment, developing bid documents, and construction cost estimating. He has provided design services during construction for HVAC systems, which include review of shop drawing submittals, RFI responses, and writing change orders. **Professional Organizations:** American Society of Mechanical Engineers; Association of Energy Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*

Toho Water Authority (TWA) Sunbridge New Nanofiltration Water Treatment Plant Improvements and Expansion Project, Kissimmee, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Mr. Witte oversaw staff in development of HVAC and Plumbing construction documents for a new nanofiltration facility. The scope includes ventilation and plumbing for nanofiltration room, ventilation and air conditioning for control room, and air conditioning for electrical room. Scope includes HVAC and plumbing for an administrative building, ventilation for water treatment process areas, and air conditioning for process building electrical room. **Status:** The design phase is estimated to be completed in the Fall of 2024. The completion of construction is scheduled for October of 2024. **Cost:** $2.9M (fees, est.); $46.6 million (construction, est.). **Specific Role:** Engineer-of-Record.

b.

(1) TITLE AND LOCATION *(City and State)*

City of Sarasota Water Treatment Plant Water Quality Improvements - Phase 2A, Sarasota, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
2018	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Mr. Witte managed the development of plumbing and HVAC construction documents for minor interior renovation of operations building, including updated restrooms and locker rooms. **Status:** Bidding is expected to occur in 2024. **Cost:** $145,000 (fee, est.); $2.5M (construction. est.). **Specific Role:** Project Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*

Springfield Water and Sewer Commission West Parish Water Treatment Facility, Springfield MA

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Mr. Witte led the design effort for HVAC, plumbing, and fire protection systems at a 65-mdg treatment plant. He developed a life-cycle cost analysis and technical memo for evaluation of implementing heat pumps for facility heating, as an alternative to propane boilers. His study included greenhouse gas emissions estimate, as well as incentives available for sustainable design features. The ultimate design includes VRF heat pumps for heating and cooling for administrative spaces, air-source heat pumps for heating process areas, and a free-cooling hydronic system that utilizes water from the treatment process as a heat sink for process cooling loads. **Status:** Design was completed in January of 2024. We are currently in the bid phase and award should occur this summer. We will have a DSDC contract for when construction starts after award. Construction is estimated to end by September of 2028. **Cost:** $24 million (fee, est.); $265 million (construction, est.). **Specific Role:** Lead Project Design Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*

Village of Ossining Indian Brook Water Treatment Plant, Ossining, NY

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Mr. Witte oversaw staff in development of plumbing construction documents for a new 5-mgd water filtration facility. Scope includes fire protection, cold water distribution system with backflow prevention, hot water distribution and recirculation system, safety shower systems for chemical storage areas, sanitary drainage and lift station systems, and roof drainage systems. **Status:** Design was completed in 2023. Construction is currently underway, and we do have a DSDC contract to provide engineering services during construction. **Cost:** $2.7 million (fee, est.). **Specific Role:** Engineer-of-Record.

e.

(1) TITLE AND LOCATION *(City and State)*

City of Miami Beach Pump Station 28 and Force Main Improvements, Miami Beach, FL

(2) YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Ongoing	Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

☒ Check if project performed with current firm

Mr. Witte oversaw staff in development of HVAC and plumbing construction documents for renovation of an existing wastewater pump station and a new generator building. Scope includes ventilation and cooling for wastewater pump station drywell per NFPA 820, ventilation and cooling for generator room, plumbing for a new restroom, and air conditioning for electrical room. **Status:** Construction has not begun, once the permit is issued we will then go out to bid and award later in 2024. The estimated completion date is in December of 2026. **Cost:** $817,000 (fee), we are currently seeking an amendment for another $255 000; $1.1 million (total fee, est.); $32 million (construction, est.). **Specific Role:** Engineer of Record.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Elie Andary, PhD, PE **Senior Associate**	**Construction Management/Administration/CEI**	**22**	**21**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
PhD and ME, Civil Engineering – Construction Management MS, Construction Management BE, Civil Engineering	PE / FL – Civil Engineering (FL 67503)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Dr. Andary has over 21 years of experience in construction management, water treatment process, and wastewater collection and treatment. He is qualified and resourceful with the ability to manage complex projects, resolve conflicts/issues, define project requirements, coordinate construction project life cycles (Initiation, Planning, Execution, Performance and Monitoring, and Closure, for example) and maintain quality control. **Professional Organizations**: American Society of Civil Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **City of Hallandale Beach Water Treatment Plant, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2015; CONSTRUCTION (If applicable) 2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Dr. Andary prepared design documents to complete stucco repair and painting of the existing water treatment plant facilities. Work included development of specifications and site drawings and preparation of bid forms. He provided additional assistance during the bidding and construction phases, including 1) stucco repairs; 2) coating exterior surfaces of concrete and masonry structures; 3) coating exterior surfaces of metal tanks, walkways and handrails, and 4) coating all above ground exterior piping, valves, fittings and supports. **Cost:** $1.1 million (fee). **Specific Role:** Project Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **Atlantic Sapphire Miami Blue House Phase 2, Homestead, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION (If applicable) Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Dr. Andary serves as Construction Manager for construction of the fish farm facility located in Homestead FL which is built under a CMAR type delivery method. Work consists of a wastewater treatment plant, chiller plant, electrical distribution building (including but not limited to back-up power), and oxygen storage and interconnection with Phase 1 for fish movement and grading, fish harvesting, personnel movement, wastewater conveyance, processing, finished water from the water treatment systems. **Status:** The project is estimated for completion in 2028. **Cost:** $13 million (design and CMS est. fee); $350 million (est. construction). **Specific Role:** Construction Manager.

c.

1) TITLE AND LOCATION (City and State): **South Florida Water Management District (SFWMD)**
S-140 Pump Station Improvements Project, Broward County, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION (If applicable) 2020

3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Dr. Andary was responsible for overseeing Hazen's field representatives for the S-140 Pump Station Improvements project. Hazen provided construction management services for the pump station improvements including construction of new access bridge, replacing pump backflow gates. replace spillway gates, installing new automated Hydro Components trash removal system, replacing existing fuel tanks and piping, abandoning existing groundwater monitoring wells, constructing generator/storage building and all associated equipment, including new generators and emergency fuel supply. **Cost:** $543,000 (fee); $8.57 million (construction). **Specific Role:** Project Engineer.

d.

1) TITLE AND LOCATION (City and State): **City of Cooper City Lift Stations No. 2 and No. 49,** FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION (If applicable) 2018

3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Dr. Andary served as Project Manager for the design-build project of Lift Stations No. 2 and No. 49. Work included upgrades to both lift stations. The project included installation of necessary connections and startup of bypass pipes and pumping equipment; demolition of existing structures, pumps, and piping; applying special coating to wet well; installing discharge piping and submersible pumps; and testing and startup of lift stations. Duties included coordination and resolution of adjacent neighboring residents' concerns and complaints during critical work periods that affect their day-to-day operation. He also prepared and submitted a detailed schedule of work and provided support associated with public awareness services, including attending meetings with HOAs, distributing flyers, etc. He also coordinated all testing, including concrete, densities, hydrostatic for wet wells, pipelines, and pump field tests. **Cost:** $967,706 (Design-Build construction cost.) **Specific Role:** Project Manager.

e.

(1) TITLE AND LOCATION *(City and State)*: **Broward County Water and Wastewater Services**
North Regional Wastewater Treatment Plant
Septage Receiving Facility, Broward County, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION (If applicable) 2018

3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Dr. Andary served as Construction Manager for the construction of Septage Receiving Facility. Dr. Andary performed inspections of the new facilities, issued punch lists that identified deficient items that must be corrected, conducted progress meetings and meetings with utilities; prepared and issued meeting minutes, performed project quality control, issued RFPs and negotiated cost proposals, coordinated startup, performance testing and manufacturer training of County personnel for the new facilities. **Cost:** $3.07 million. **Specific Role:** Construction Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Leonardo Galvan **Construction Manager**	**Construction Management/ Administration/CEI**	**33**	**26**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Associate Graduate Technical Certificate	ASI – American Stormwater Institute, LLC – Qualified Florida Construction Stormwater Inspector; Qualified Stormwater Management Inspector; PACP – Pipeline Assessment Certification Program / MACP – Manhole Assessment Certification Program

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Galvan has 33 years of experience in providing resident inspection / construction management services for a variety of wastewater and water projects, including construction supervision and management and program management. He has provided construction supervision, inspection, and coordination for various wastewater treatment plant upgrades. His construction inspection services include structural, mechanical, civil, and electrical inspections. Mr. Galvan's additional areas of expertise include contract management and water resource management. **Professional Organizations:** National Utility Contractors Association

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Hollywood Reservation WTP Improvements**, **Seminole Tribe of Florida**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2015; CONSTRUCTION (If applicable) 2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

As the Construction Inspector, Mr. Galvan provided construction supervision, inspection, and coordination of the contractor for plant upgrades. Contract includes sulfuric acid bulk storage enclosure facility upgrade, three wells, and yard piping improvements. **Cost:** $670,000 (fee); $1.3 million (construction) **Specific Role:** Construction Inspector

b.

(1) TITLE AND LOCATION *(City and State)*: **Hollywood WWTP Improvements**, **Seminole Tribe of Florida**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2017; CONSTRUCTION (If applicable) 2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Galvan provided construction supervision, inspection, and coordination. Work at the Hollywood Reservation WWTP consisted of construction of a 3-mgd annual average daily flowrate wastewater treatment facility, which includes the following: sequencing batch reactors, aerobic digesters, electrical distribution system, emergency power supply, effluent well pump station, plant site pump station, operations building, and civil/sitework including stormwater management. **Cost:** $1.9 million (fee); $54.2 million (construction) **Specific Role:** Construction Inspector

c.

(1) TITLE AND LOCATION *(City and State)*: **North Regional WWTP Updating**, **Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2014; CONSTRUCTION (If applicable) 2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Galvan served as a Senior Field Inspector for the following Bid Packages related to the Regional Wastewater Treatment Plant Upgrade: BP-K (Clarifier upgrade, aeration basin upgrade, injection well pump station building upgrade, and ocean outfall building upgrade); BP-C (aeration basin upgrade/blower installation). Services included structural, mechanical, civil, and electrical inspections. **Cost:** $543,000 (fee); $8.6 million (construction) **Specific Role:** Senior Field Inspector

d.

(1) TITLE AND LOCATION *(City and State)*: **Immokalee WWTP**, **Seminole Tribe of Florida**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2015; CONSTRUCTION (If applicable) 2017

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

As the Construction Inspector, he provided construction supervision, inspection, and coordination of the contractor for the plant upgrades. Contract includes replacement of the existing WWTP with a new 250,000-GPD annual average flow rate wastewater treatment facility. **Cost:** $550,309 (fee); $10.2 million (construction) **Specific Role:** Construction Inspector

e.

(1) TITLE AND LOCATION *(City and State)*: **Chemical Storage Facility Construction**, **City of Plantation, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION (If applicable) 2024

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Galvan is currently working on the Chemical Storage Facility's project at the City's East WTP. Project includes new construction of Chemical Storage Facility's (Fluoride, Sequestrant, Antiscalant, Corrosion inhibitor, Sodium Hypochlorite, Sodium Hydroxide rooms and components, which include chemical transfer pumps and piping, chemical transfer pump skids and piping, chemical bulk storage and day tanks installation, chemical fill stations, and all related piping, mechanical, structural, electrical, and instrumentation equipment. **Cost:** $4 million **Specific Role:** Construction Manager/ Inspections

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Sharon Simington **Senior Principal Funding Specialist**	**Grant Management**	a. TOTAL **20**	b. WITH CURRENT FIRM **2**

15. FIRM NAME AND LOCATION *(City and State)*
Hazen and Sawyer, Tampa, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Applied Science *(currently enrolled, expected summer 2027; AS degree achieved in summer 2024)*	

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Simington has extensive experience working with local governments to fund infrastructure projects that better communities. As the Southeast Regional Funding Program Leader for Hazen, Ms. Simington focuses her experience on water, wastewater, and stormwater utilities projects and provides the planning, application, and administration for capital improvement projects. She has relationships with many funding agencies, community members and leaders, and consulting engineers. Ms. Simington helps clients in various industries and disciplines to identify potential funding sources. She leads efforts to secure alternative funding for a variety of clients and projects, acting as the liaison between agency and community, providing a smooth funding experience and cohesive working environment.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
City of DeLand Fairgrounds Water Supply Wells and Water Treatment Plant, DeLand, FL	2021	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☐ Check if project performed with current firm

Ms. Simington led the planning effort and production of the Facility Plan. The Blue Spring minimum flow regime (MFR) is the driving factor for development of new water supplies outside of the Blue Spring Springshed. It is estimated that approximately 6.0 – 8.0 MGD of new groundwater outside the Springshed will need to be developed by 2035. The City has identified a new wellfield and water treatment plant (WTP) site in the vicinity of the Volusia County Fairgrounds. The City's current CUP already includes three wells on the Fairground property. In addition to the Fairground wells, an additional three wells are proposed in the vicinity of Bicentennial Park to help supplement the needed flow outside the Springshed. **Cost:** $31.7 million (construction**) Funding Programs:** Drinking Water State Revolving Fund **Specific Role:** Senior Program Administrator

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
City of Tavares Downtown Community Redevelopment Agency (CRA) Water and Wastewater Improvements, Tavares, FL	2019	2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☐ Check if project performed with current firm

This project includes approximately 8-inch, 10-inch, 12-inch and 15-inch-diameter PVC and ductile iron gravity collection mains, relining of 8-inch, 10-inch and 12-inch diameter VCP gravity collection mains, rehabilitation and coating of 145 manholes, removal and replacement of 40 manholes, of 4-inch and 6-inch diameter PVC force main pipe, installation of 4-inch, 6-inch, 8-inch, 10-inch, 12-inch and 16-inch diameter of PVC and ductile iron potable water distribution main within the City, County, Florida Department of Transportation (FDOT) rights-of-way. The installation methods included open cut and jack and bore. The project work also includes as-built survey, utility locates, maintenance of traffic, shop drawing and manufacturer operational and maintenance submittals, erosion control, startup, testing and all necessary ancillary activities to complete the work. **Cost:** $11.9 million (construction**) Funding Programs:** Clean Water State Revolving Fund, Drinking Water State Revolving Fund **Specific Role:** Senior Program Administrator

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
DeSoto County Funding Analysis, Recommendation and Funding Management Hull Road Water System, DeSoto County, FL	2020	2021

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☐ Check if project performed with current firm

Ms. Simington provided funding strategy, grant application, grant agreement coordination, grant administration, project closeout. The 8-inch water main will be extended on West Hull Avenue down to SW Prairie Avenue and then through SW Collins Street, where it will tie into the existing 16-inch main. A new flow control valve will be installed on the 16-inch main at this connection to divert a portion of the water coming from the Peace River Water Supplier through the Hull portion of the Digital Control Unit (DCU) system. The project also includes modifications at the remaining two dead ends on Hill and Oak Creek Roads. The 4-inch line that currently dead-ends on Oak Creek Road will be looped back to the main 8-inch line on SW Hull Avenue. The 8-inch line that currently dead-ends on Hill Street will be looped back on itself with a new 8-inch line and isolation valve to route the water through the new Hill Street loop. The new piping and flow control valve will be used to fully loop the dead-end pipes within the Hull. These improvements on the DCU distribution line will net a savings of about 46 million gallons of flush water annually **Cost:** $2.5 million (construction) **Funding Programs:** South Florida Water Management District **Specific Role:** Senior Program Administrator

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
Manatee County Funding Analysis and Strategic Plan, Manatee County, FL	2024	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Manatee County utilizes a 5-year Capital Improvement Plan (CIP) for planned project organization and budgeting purposes. As part of the CIP planning process and project inclusion, a budget element is included that delineates where project funding will be assessed. The purpose of the Funding Analysis and Strategic Plan was to provide the County with an analysis of funding options that will assist in the decision-making process with respect to funding sources. The plan provided programmatic background details of available programs, requirements, deadlines, project eligibility, and funding capacity. **Cost:** $50,000 (fee) **Funding Program:** Various funding programs **Specific Role:** Southeast Regional Funding Program Leader

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
City of Tampa Funding Evaluation for the Howard F. Curren AWTP Biogas Use and Digestion System Improvements (Amendment No. 2), Tampa, FL	2023	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Simington provided a funding report regarding opportunities available to the City for this project. This portion of a larger scope of work included the review of available funding sources and identification of potential funding opportunities for the construction of the projects designed under Amendment 2. An evaluation of key contingencies associated with each funding source, such as impacts on direct project costs regarding funding procurement and meeting funding requirements (e.g., Davis Bacon Wages, Buy American) were included. General timeframes and implications regarding the project schedule were also identified. Results of the review and evaluation were summarized in a report and presented at a meeting with the City. **Cost:** $3.98 million (final design fee) $3,980,695 (final design fee) **Funding Programs:** Various CHP funding programs, Tax Credits, Bonds, and Lease Agreements **Specific Role:** Southeast Regional Funding Program Leader

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Marta Alonso, PE, ENV SP **Senior Associate**	**Grant Management; Permitting/ Regulatory**	**21**	**17**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Environmental Engineering BS, Civil Engineering	PE / FL - Civil Engineering (FL 69745), MD Envision Sustainability Professional (ENV SP)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Alonso has over 21 years of permitting and regulatory experience, including environmental resources, potable water, wastewater, stormwater, air, hazardous material, tree removal, and municipal permits including building/zoning in Florida. She has provided assistance in obtaining State Revolving Funds (SRF) for various water and wastewater pipeline replacement projects, including for the City of North Miami, FL (2018-Present), City of Hallandale Beach (2014-2016), and City of Plantation (2010-2011). She also served as in-house consultant for permitting at the City of Miami Beach and as technical expert on permitting and regulatory compliance on the Miami-Dade WASD Ocean Outfall Legislation (OOL) Program. **Professional Organizations:** American Society of Civil Engineers, Florida Section Membership Chair.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Miami-Dade Water and Sewer Department (WASD) Ocean Outfall Legislation (OOL) Program, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Alonso provided assistance in the successful funding request to the US EPA's WIFIA program for the Miami-Dade Water and Sewer Department's (WASD) $2B OOL Program (the WIFIA program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally & nationally significant projects, and is highly competitive on a federal level). She was responsible for preparing the draft letter of interest packages to request funding as well as the loan application packages. **Status:** To be completed by 2026 (est.). **Cost:** $30 million (est., includes 6-year extension to 2026); $2 billion (est. construction). **Specific Role:** Environmental Compliance Senior Technical Consultant/Permitting Lead/Project Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **Seminole Tribe of Florida (STOF) Deep Injection Well Permitting, Hollywood Reservation, Hollywood, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2014; CONSTRUCTION (If applicable): 2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project for the Seminole Tribe of Florida's Hollywood Reservation consisted of the permitting and design of a deep injection well system for effluent and concentration disposal from the Hollywood Reservation WTP. Since the project location is within Tribal Lands, the project required permitting through the US EPA and coordination with the SFWMD. **Cost:** $230,000 (DIW permitting fee); $1.73 million (design, permitting, and construction). **Specific Role**: Permitting Engineer.

c.

(1) TITLE AND LOCATION *(City and State)*: **Bear Cut Bridge and West Bridge Rehabilitation / HDD Water Main Replacement Project, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2014; CONSTRUCTION (If applicable): 2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The design-build project consisted of the rehabilitation of the Bear Cut Bridge and of the West Bridge, which connect Miami and Key Biscayne, a community with over 10,000 residents. The bridge rehabilitation was coupled with a water main replacement, which was originally attached to the bridge decks. The project required expedited permitting with the South Florida Water Management District, the United States Army Corps of Engineers (ACOE), Florida Department of Environmental Protection (FDEP), and Miami-Dade County Department of Regulatory and Economic Resources (DRER) to meet the project deadlines. **Cost:** $31 million (construction). **Specific Role:** Permitting Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **City of North Miami State Revolving Fund Project Assistance, North Miami, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Alonso is assisting the City of North Miami in the preparation of facilities planning documents as required by the Clean Water State Revolving Fund and Drinking Water State Revolving Fund for three projects: the Winson Water Treatment Plant Upgrades, Sanitary Sewer System Repairs, and Water Meter Replacements. Ms. Alonso previously aided in obtaining and securing State Revolving Funds (SRF) for water treatment plant improvements. **Status:** Services have been provided from 2018-Present. **Specific Role:** SRF Funding Expert.

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Miami Beach In-House Consulting Services, Miami Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Alonso served as in-house consultant at the City of Miami Beach Public Works Department (City), providing environmental support services to help achieve and maintain regulatory compliance on City projects. To ensure regulatory compliance on future City projects, Ms. Alonso was part of a team that developed a permit control tool that City project managers can utilize to identify potential permits required on their projects, as well as to obtain permit application guidance, and to track the project's regulatory compliance status. She was also involved in coordination with the Miami-Dade Regulatory and Economic Resources Department, providing environmental support services to achieve compliance on the City's Class II stormwater permits. Ms. Alonso monitored and provided guidance on environmental permitting, particularly for key City projects such as the Indian Creek flood mitigation project. Ms. Alonso also prepared permitting and regulatory compliance progress updates for the Public Works Department and updated the City's permit tracking database. Ms. Alonso also assisted the City in being selected to receive WIFIA funding. **Cost:** $100,000 (fee). **Specific Role:** In-House Consultant, Environmental/Regulatory Compliance.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Alexandra Kelly, PE, ENV SP **Senior Principal Engineer**	**Asset Management; I/I**	**9**	**9**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Coral Gables, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
ME, Environmental Engineering Services BS, Environmental Engineering	PE / FL (#90533) Envision Sustainability Professional (ENV SP) NASSCO PACP, MACP, and LACP Certification

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Kelly has over nine years of experience in the water/wastewater industry. She has been involved in conveyance, construction projects, and project management. **Professional Organization:** Florida Water Environment Association, American Water Works Association, Water Environment Federation, American Society of Civil Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Wastewater Pump Station Asset Inventory, Condition Assessment, and Asset Management Plan, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

As part of the City's wastewater Asset Management and Capacity, Management, Maintenance, and Operations Program (AM-CMOM Program), Hazen assisted in developing an asset inventory and condition assessment for all of the City's 185 wastewater pump stations. Ms. Kelly served as Deputy Project Manager and participated in field inspections as the lead for a team of four inspectors. She is also leading the development of a Wastewater Pump Station Asset Management Plan (WWPSAMP), which will include the determination of risks, identification of remaining useful life and urgent needs, projecting R&R costs, and building an asset management dashboard for the City. **Cost:** $1.5M (fee). **Specific Role:** Deputy Project Manager

b.

(1) TITLE AND LOCATION *(City and State)*: **Miami-Dade Ocean Outfall Legislation (OOL) Program, Miami-Dade Water and Sewer Department, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The OOL Program is Miami-Dade County's approach to comply with the Ocean Outfall Legislation. Ms. Kelly has assisted with various technical and project management related tasks under the program, including preparation of permitting documents related to the proposed upgrades at the North District Wastewater Treatment Plant and presentation of the permitting documents to the permitting agencies; assistance with preparation of the wastewater treatment plant Conceptual Design Reports (CDRs) for Miami Dade County's three wastewater treatment plants; preparation of a report to summarize a hydraulic modeling exercise to evaluate the impact of completion of three force main projects on upstream pump stations; and other report preparation and research. **Cost:** $2.55B (est. construction) **Specific Role:** Project Engineer

c.

(1) TITLE AND LOCATION *(City and State)*: **Inflow and Infiltration (I/I) Reduction, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2022; CONSTRUCTION (If applicable): 2022

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

As part of the City's Consent Order Number 16-1487, the City was required to perform inflow and rehabilitation reduction projects in six pre-defined pump station basins. The inspection approach to address I/I defects is television of the gravity mains and laterals, smoke testing, and manhole inspections. The rehabilitation approach to address I/I defects is cured in place pipe lining for active mainlines and laterals, and rehabilitation of manholes. During the program, Hazen completed 35 task orders for sanitary sewer television and rehabilitation projects. Ms. Kelly's role was to provide project management services, including coordination with Contractors and City personnel in various departments, management of a team of inspectors, preparation of bid documents for new rehabilitation work, and preparation of updates on the project for the City's upper management. Ms. Kelly also provided technical services, such as updating GIS maps and preparing flow analysis data. **Cost:** $30 million (est. construction) **Specific Role:** Project Manager.

d.

(1) TITLE AND LOCATION *(City and State)*: **Asset Management and Capacity, Management, Operations, and Maintenance (AM-CMOM) Program, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

As part of the City of Fort Lauderdale's Consent Order Number 16-1487, the City is required to submit an AM-CMOM Program. As part of the report, Hazen developed a risk assessment for the City's gravity mains and pump stations and a valuation of the collection system assets, along with documenting and providing recommendations on day-to-day operation and maintenance procedures. Ms. Kelly assisted with gathering information from City personnel, GIS work associated with the risk assessment, database organization, and report preparation. She is currently assisting City staff with implementation of this Program, which is a three-year process. **Cost:** $1 million (fee). **Specific Role:** Deputy Project Manager

e.

(1) TITLE AND LOCATION *(City and State)*: **Sanitary Sewer Overflow Response Plan, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2019; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Ms. Kelly served as one of the primary authors of the City of Fort Lauderdale's updated Sanitary Sewer Overflow Response Plan. Her responsibilities included review of existing documentation related to overflow response, research of requirements for reporting overflows to various agencies, and coordination with City staff on internal processes for responding to overflows. **Cost:** $20 K (fee) **Specific Role:** Project Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Ryan Nagel, PE, PMP, ENV SP **Vice President**	**Asset Management**	**28**	**9**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Virginia Beach, Virginia

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MBA, Finance / MS, Environmental Engineering / BS, Civil Engineering	PE / KS, NY – Environmental Engineering; Lean Six Sigma Certified

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Nagel serves as Hazen's National Utility Management Solutions Group Leader and has over 27 years of asset and utility management consulting experience. He has successfully led asset and utility management and optimization projects for major utilities across the country, which gives him a national perspective on how to deliver strategic and innovative utility management solutions for the City of Cooper City. He has helped clients enhance the efficiency and reliability of their portfolio of physical assets by providing key utility management services, including strategic planning, development and implementation of asset management programs, business process optimization, training, performance management programs and executive dashboard systems, workforce development initiatives, financial services, and workgroup facilitation. **Professional Organizations:** American Water Works Association (Management and Leadership Division Board of Trustees Chair); Society of Professional Engineers; Virginia Water Environment Association - Strategic Planning Committee Chair and Utility Management Committee Past Chair; Water Environment Federation - Utility Management Committee, Strategic Organizational Planning Subcom-

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Strategic Watershed Asset Management Program Development City of Fort Lauderdale, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2019 — CONSTRUCTION *(if applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Engaged by the City of Fort Lauderdale Public Works Department to develop the City's first Strategic Watershed Asset Management Plan (WAMP) with a defined implementation roadmap for the future. In order to achieve this cost-effectively, Mr. Nagel led the performance of an official endorsed assessment of its current related program activities against sound industry standard practice, as defined by the Institute of Asset Management (IAM). First, a series of structured interviews of Public Works staff was conducted, along with a review of existing documentation to assess the Public Works existing approach, policies, procedures, and methodologies to asset management and identify gaps based upon the IAM Anatomy framework. The results of the IAM Anatomy Endorsed Maturity Assessment identified a total of 59 potential improvement opportunities across the six IAM subject groups and established the framework upon which the City's first Strategic WAMP was subsequently developed. Following the Maturity Assessment findings, Mr. Nagel presented the corresponding recommendations and implementation roadmap to delineate the activities, processes, and documentation needed for Public Works to close the gaps identified and to implement a strategic asset management plan over the next three fiscal years. **Cost:** $509,000. **Specific Role:** Technical Lead.

b.

(1) TITLE AND LOCATION *(City and State)*: **Asset Management Program Development and Implementation Support, Laurel, MD**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION *(if applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Nagel serves as Program Manager, responsible for providing comprehensive asset management services on a multifaceted program, including asset registry data collection, asset condition assessment, risk determination (consequence of failure), level of service (includes assignment to asset level, where applicable), operations and maintenance analysis, asset management modeling, asset management plan report preparation, economic analysis, optimization analyses, asset management network and enterprise analysis, and business logic development for WSSC Water. **Status:** Ongoing. **Cost:** $4 million. **Specific Role:** Program Manager.

c.

(1) TITLE AND LOCATION *(City and State)*: **Professional Engineering and Water Utility Management Services, Newport News, VA**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION *(if applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Nagel assisted with the development and implementation of integrated, multi-phased utility and asset management programs for Newport News Waterworks, enabling cohesive maintenance and management of infrastructure assets and resources, meeting customer service goals, and ensuring regulatory compliance. Key program services included development of integrated asset management program strategy, design and implementation of business intelligence and performance reporting framework, providing organizational efficiency assessment, facilitating program adoption, and organizational change management. **Cost:** $1.2 million. **Specific Role:** Project Director and Technical Lead.

d.

(1) TITLE AND LOCATION *(City and State)*: **Asset Evaluation, Norfolk, VA**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2016 — CONSTRUCTION *(if applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Nagel provided engineering and asset management services for the City of Norfolk related to the evaluation of the assets at the Moore's Bridges WTP (to establish preliminary short- and long-term renewal and replacement (R&R) needs for the plant). Scope included conducting an asset inventory analysis, reviewing historical operating reports, and conducting site visits to develop a full inventory of all major/priority plant assets; evaluating physical and performance conditions of plant assets to identify any known process, hydraulic, or condition issues that impact cost, efficiency, or operations and identifying overall plant asset criticality (consequence of failure); reviewing asset initial cost information, verifying useful life and remaining useful life of plant assets, and determining overall replacement costs of plant assets. **Cost:** $315,000. **Specific Role:** Project Manager.

e.

(1) TITLE AND LOCATION *(City and State)*: **Business Performance Plan Update, Fort Worth, TX**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2017 — CONSTRUCTION *(if applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

The goal of this project was to develop a near-term strategy for the City of Fort Worth based on industry-leading practices and continuous improvement. Mr. Nagel was responsible for assisting with updating the Business Performance Plan. He conducted an organizational cultural scan with internal and external stakeholders, facilitated the annual executive management retreats, conducted an Effective Utility Management assessment, led development and implementation of work plans for FY 2017 priority initiatives and prioritized FY 2018 initiatives for implementation **Cost:** $83,000. **Specific Role:** Project Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Guillermo Regalado, PE **Associate Vice President**	**Hydraulic Modeling; Climate Change/Sustainability/Resilience**	**36**	**7**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Irrigation Engineering BS, Civil Engineering	PE / FL – Civil Engineering (FL 64905), NY, Columbia, Puerto Rico

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Regalado is experienced in a wide range of municipal and water resource engineering topics, including the application of hydraulic, hydrologic, and water quality engineering models, sea level rise and climate change, and complex operations of conveyance systems, to both large and small-scale projects. His technical responsibilities have included hydrologic and hydraulic analysis and modeling of canals, control structures, and flood control systems; evaluation of flood countermeasures, reservoir operations, and flood map amendments; analysis and design of urban drainage systems; groundwater and surface water interaction; evaluation of sea level rise effects on flooding conditions; and vulnerability assessments, to name a few. **Professional Organizations:** American Water Works Association; American Water Resources Association; South Florida Hydrologic Society; American Association of Colombian Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **City of Plantation Water Master Plan, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2019; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project included development of a Water Master Plan to define both short-term and long-range planning goals through the year 2040 including goals that serve to optimize operation and management of the City's entire water system. A key task for this project included development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. The model was used to identify capacity issues within the distribution network to evaluate recommended improvements and address possible water quality concerns. Mr. Regalado led the modeling team in the development of the InfoWater model. **Cost:** $243,008 (fees). **Specific Role:** Modeling Technical Lead.

b.

(1) TITLE AND LOCATION *(City and State)*: **City of Fort Lauderdale Stormwater Master Plan Modeling and Design Implementation Services, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project included the development of a 1D and 2D integrated groundwater – surface water model (ICPR4) for the study area. ICPR4 relies heavily on GIS information during the model development phase. The project includes the development of several models for each watershed within the City. Models were prepared to simulate the existing and proposed conditions under a variety of scenarios including multiple sea level rise conditions. Proposed conditions included pump stations and detention storage (ponds). **Status:** Original duration was from 04/2016-04/2021; the first of two 5-year extensions was exercised in April 2021 (runs through April 2026; potentially to 2031. **Cost:** $200 million (est. construction). **Cost:** $30 million (estimated fee-to-date). **Specific Role:** Lead Modeler.

c.

(1) TITLE AND LOCATION *(City and State)*: **City of Sunrise 2020 Water & Wastewater Master Plan Update, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project included development of updated Water and Sewer Master Plans that will reflect and evaluate the current land use development, water demands, asset conditions, treatment plant capacities, and wastewater flows. The project involved update and calibration of the WaterGEMS Hydraulic Model to analyze the existing water distribution. The project also included the application of the City's water hydraulic model for general network performance evaluation, fire flow availability assessment, water age mapping, finished water storage availability evaluation, and definition of methods to reduce water age. The project also included update and calibration of the sewer force main model to include flows and boundary conditions imposed by the connection with an adjacent municipality. **Cost:** $768,000 (overall master plan). **Specific Role:** Technical Lead.

d.

(1) TITLE AND LOCATION *(City and State)*: **Broward County Water and Wastewater Services County-wide Risk Assessment and Resilience Plan, Broward County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was selected by Broward County to develop an actionable, resilience plan inclusive of infrastructure improvements and redevelopment strategies consisting of a visualization platform to aid regional planning and project tracking; and to provide the foundation for collective mitigation of future flooding, inclusive of water management infrastructure, and land use planning based on a comprehensive county-wide risk assessment. The plan will serve as the basis for a multi-decade, coordinated and phased infrastructure improvement plan with ample detail to support refined outreach, design, and financing needed for implementation. **Status:** Estimated for completion in March of 2025. Cost: $4.5 million (estimated fee-to-date) **Specific Role:** Lead Modeler

e.

(1) TITLE AND LOCATION *(City and State)*: **Citywide Vulnerability Assessment and Adaptation Plan, City of Hollywood, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES: 2020; CONSTRUCTION *(If applicable)*: N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project included an evaluation that consisted of analysis of projected flood caused by sea level rise (SLR) and/or by the storm surge caused by a hurricane. It considered City-owned and other critical infrastructure and assets within the City that may be vulnerable to climate change conditions, including select assets not owned by the City. The project identified affected systems using GIS and LiDAR data for assessing SLR and storm surge inundation to calculate vulnerability scores for the City's critical infrastructure. Vulnerability and criticality were used to prioritize risks and begin development of a systematic plan of action to be taken in the future. **Cost:** $109,327 (study.) **Specific Role:** Lead QA/QC and Technical Engineer.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Nandita Ahuja, PE **Associate**	**Hydraulic Modeling**	**10**	**9**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

Hazen

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Civil Engineering BE, Environmental Engineering	PE / FL– Civil Engineering (FL 86687)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Ahuja has over 10 years of experience in water and wastewater infrastructure related projects including hydraulic modeling for master planning and design of water distribution systems and wastewater conveyance systems. **Professional Organizations:** Water Environment Federation; American Water Works Association; Society of Women Engineers.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Water Master Plan - General Utilities Engineering Services**
City of Plantation, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2018; CONSTRUCTION *(If applicable)* N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The project includes development of a Water Master Plan to define both short-term and long-term planning goals through the year 2040 including goals that serve to optimize operation and management of the City's entire water system. A key task for this project includes development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. The model is used to identify capacity issues within the distribution network, evaluate recommended improvements, and address possible water quality concerns. Ms. Ahuja's role in the project involved development of the InfoWater model and using the calibrated model to evaluate short-term and long-term distribution system projects for the City. **Cost:** $592,610 **Specific Role:** Hydraulic Modeler

b.

(1) TITLE AND LOCATION *(City and State)*: **Water Hydraulic Model Development**
City of Miami Beach, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2019; CONSTRUCTION *(If applicable)* N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The project includes the development of updated Water and Wastewater Master Plans which will reflect and evaluate the current land use development, water demands, asset conditions, treatment plant capacities, and wastewater flows. The project includes the update and calibration of the WaterCAD Water Hydraulic Model to analyze the existing water distribution. The water hydraulic model application includes general network performance evaluation, fire flow availability assessment, water age mapping, storage availability evaluation, and definition of methods to reduce water age. The project also includes the update and calibration of the wastewater force main model to include flows and boundary conditions imposed by the connection with an adjacent municipality**. Cost:** $768,000 (overall master plan) **Specific Role**: Project Engineer

c.

(1) TITLE AND LOCATION *(City and State)*: **Sewer Design and Implementation Program, Citywide Water Distribution System Hydraulic Modeling and Evaluation, Fort Lauderdale Public Works Department, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2022; CONSTRUCTION *(If applicable)* N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The project included development of a calibrated water distribution system hydraulic model for the 780 miles of water mains serving a population of ~231,000 people. The calibrated model was used to evaluate system deficiencies and propose improvements needed to serve the City for a 20-year planning horizon. The model will also used for developing a unidirectional flushing plan for the water mains in the distribution system. Ms. Ahuja was responsible for development and calibration of the hydraulic model. **Cost:** $1,553,000 (approx. fee) **Specific Role:** Hydraulic Modeler

d.

(1) TITLE AND LOCATION *(City and State)*: **Ocean Outfall Legislation Program**
Miami-Dade Water and Sewer Department, Miami-Dade County, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION *(If applicable)* Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

This $2.3 billion, 11-year program includes upgrades to the three existing wastewater treatment plants, including the addition of injection wells for effluent disposal. The scope of work consists of the delivery of a comprehensive, technically sound, long-term program that encompasses the planning, design, procurement, construction, and commissioning of over 20 capital projects. As a part of the project, process and hydraulic models were developed for WASD's three existing wastewater treatment plants to serve as fundamental tools for the assessment of current infrastructure and analysis of future improvements. Ms. Ahuja is serving as the Project Engineer for evaluating process alternatives for expansion of the three facilities to meet the projected loads for the 2035 planning horizon. **Status:** The project is ongoing. **Cost:** $2 billion **Specific Role:** Project Engineer

e.

(1) TITLE AND LOCATION *(City and State)*: **2020 Water and Wastewater Master Plan Update**
City of Sunrise, FL

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2020; CONSTRUCTION *(If applicable)* Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The project includes the development of updated Water and Wastewater Master Plans which will reflect and evaluate the current land use development, water demands, asset conditions, treatment plant capacities, and wastewater flows. The project includes the update and calibration of the WaterCAD Water Hydraulic Model to analyze the existing water distribution. The City of Sunrise's water hydraulic model application includes general network performance evaluation, fire flow availability assessment, water age mapping, storage availability evaluation, and definition of methods to reduce water age. The project also includes the update and calibration of the wastewater force main model to include flows and boundary conditions imposed by the connection with an adjacent municipality. Ms. Ahuja serves as the Project Engineer to assist in data collection, demand pattern development and the water hydraulic model development tasks. **Cost:** $768,000 (overall master plan) **Specific Role:** Project Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Enrique Vadiveloo, PE, ENV SP **Associate Vice President**	**Climate Change/Sustainability/ Resilience**	**19**	**18**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
ME, Environmental Engineering BS, Environmental Engineering	PE / FL (FL 70115) – Environmental Engineering Envision Sustainability Professional (ENV SP): Institute for Sustainable Infrastructure, 2014

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Over the last 19 years, Mr. Vadiveloo has participated in a variety of wastewater treatment, water treatment, reuse, and resilience projects including process design, detailed design, facility planning, pilot testing, and regulatory review. He is the award recipient of the City of Fort Lauderdale Green Your Routine Award for outstanding service as a Member of the City's Sustainability Advisory Board for six years. **Professional Organizations:** WateReuse Association, Water Environment Federation, Florida Water Environment Association, American Water Works Association, Florida Engineering Society, American Society of Civil Engineers, SPICE National Science Foundation Fellowship (2004-05).

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Miami-Dade Water and Sewer Department Ocean Outfall Legislation Program, Miami-Dade County, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

The intent of the program is to cease use of the outfalls by 2025, reduce nutrient discharges by 2018 and reuse 60% of the wastewater flows by 2025. The OOL Program includes upgrading the conveyance system with more than 1100 pump stations to meet future peak flows that will account for changes due to climate change, including sea level rise. The OOL program also includes upgrading three wastewater treatment plants to comply with the new regulations and to harden these facilities for storm surge and sea level rise. The system peak flow will increase from 800 mgd to approximately 1,290 mgd. **Status:** Ongoing. **Cost:** $2.3 billion. **Specific Role:** Wastewater Senior Technical Consultant.

b.

(1) TITLE AND LOCATION *(City and State)*: **Alexander Orr, Jr. WTP Process Optimization Study, Miami-Dade Water and Sewer Department, Miami, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Vadiveloo served as Project Manager for this study to an operating and treatment strategy to improve water quality from the softeners and reduce effluent turbidity so that the settling basins could be bypassed without adversely affecting filter performance or production capacity during construction. Operator training was provided for the Dorr Oliver softening units and lime slakers to improve effluent turbidity. **Cost:** $250,000 **Specific Role:** Project Manager.

c.

(1) TITLE AND LOCATION *(City and State)*: **Regional Reuse Master Plan, Broward County, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2014; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Vadiveloo served as Project Engineer for this regional reuse master plan, which builds upon current municipal and County efforts and coordinates a regional approach to reuse planning, maximizing cost-effective reuse development for 24 utilities in Broward County. This project developed a state-of-the-art tool for future water reuse planning using a Google Earth platform, which enables multiple decision makers to easily analyze the issues and spatially determine cost-effective water reuse opportunities. Water reuse projects evaluated include Biscayne Aquifer recharge, Florida Aquifer re-charge, large user spray irrigation, dual distribution, and industrial reuse. This project also evaluates the impacts of climate change on water resources in Broward County. **Cost:** $500,000. **Specific Role:** Project Engineer.

d.

(1) TITLE AND LOCATION *(City and State)*: **Tampa Bay Water Long-Term Master Water Plan Update Clearwater, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2018; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Vadiveloo served as Project Engineer for the update of Tampa Bay Water's long-term master water plan, which included evaluation of water supply and treatment alternatives including desalination and potable reuse, operational impacts and system integration, water quality and regulatory assessment, vulnerability assessment including climate change impacts, and energy efficiency assessments. Existing treatment facilities include a 120-mgd Actiflo/ozonation SWTP and a 25-mgd desalination plant. Potable reuse projects evaluated include aquifer recharge and wellfield develop-ment; blending before and after the existing desalination; and supplement to the existing surface water supply using both membrane-based and non-membrane-based technologies. Public information/education was also a large component of the master plan process. **Cost:** $3.58 million (fee). **Specific Role:** Project Engineer.

e.

(1) TITLE AND LOCATION *(City and State)*: **Fiveash WTP Disinfection System Replacement, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 01/2019; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Mr. Vadiveloo served as Project Manager for a bulk hypochlorite system design to replace the existing chlorine gas facility for the 60-mgd Fiveash WTP to assist the City of Fort Lauderdale to move away from chlorine gas for disinfection. The design included the flexibility for future implementation of an onsite hypochlorite generation systems. This allowed the City a viable alternative if the bulk hypochlorite cost significantly increased in the near future. The City bid the job, and then canceled the bid in order to build a replacement water treatment plant at Prospect Lake. **Cost:** $ 4.2 million (design); $49 million (bid) **Specific Role:** Project Manager

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Gerrit Bulman, PG **Associate Vice President**	**Hydrogeological/Well Engineering**	**22**	**3**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Geological Sciences BS, Geological Sciences	Professional Geologist / FL (FL 2697)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Bulman is a professional geologist with extensive well planning, design, permitting, bidding, construction management, and water use permitting experience. He has managed wellfield rehabilitation, deep injection well, ASR well, reverse osmosis supply well, shallow and deep monitoring well, and stormwater drainage well permitting, bidding, construction, and testing projects throughout Florida. Mr. Bulman has extensive knowledge of the Florida Department of Environmental Protection (FDEP), the Water Management Districts, and other state/local agencies in Florida. Other general areas of experience include EPA WIFIA and SRF funding, regulatory exemptions, design-build project management, injection well system operation and reporting, and Florida Keys, Bahamas, and Caribbean hydrogeology. **Professional Organizations:** American Water Works Association, Florida Section.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Miami-Dade Water and Sewer Department (WASD) Injection Well Program Management, Miami-Dade County, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

The project is an unprecedented scale injection well implementation project for planning and program management for WASD. The Program is responsible for installing 17 new large, 24-inch-diameter injection wells to depths of 2,500 to 3,000 feet to accommodate over 1 billion gallons per day wastewater. **Status:** The estimated completion includes a six-year extension to 2026 as this project is part of the ongoing Ocean Outfall Program. **Cost:** $30 million (fee to date for program, includes 6-year extension to 2026); $2 billion (est. total program cost). **Specific Role:** Hydrogeologist and Project Manager.

b.

(1) TITLE AND LOCATION *(City and State)*: **City of West Melbourne New WTP Feasibility Analysis and Test/Production Well, Melbourne, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Hazen was selected to conduct piloting, preliminary design, final design, and bidding services for a new 5-mgd drinking water plant utilizing membrane treatment. With the design of the WTP currently under way, Hazen was also tasked with an expedited design of the four water supply wells to serve the plant. The project included feasibility analysis to determine the feasibility of developing a new WTP and related infrastructure in lieu of obtaining potable water from an outside entity. Hazen designed and implemented a detailed testing plan to identify aquifer characteristics; and detailed testing to assess production capacity with depth, as well as consumptive use permitting. **Status:** Recommendations for additional production wells include 30 feet of surficial casing, additional casing near sewer lines, a final casing depth of 320 feet, and a 24-inch diameter for maximum surface area with an estimated completion date of 2026. **Cost:** $350,000 (est. fee for wells); $1.9 million (est. fee for WTP design). **Specific Role:** Geologist.

c.

(1) TITLE AND LOCATION *(City and State)*: **City of North Miami Deep Injection Well System, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2015; CONSTRUCTION (If applicable): 2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

This experimental design-build remediation project used a 3,200-foot-deep injection well for the disposal of ammonia contaminated groundwater at a closed landfill site. Mr. Bulman was responsible for FDEP permitting, subcontracting, hydrogeologic analyses, and reporting. He also developed a groundwater model to simulate the contaminated groundwater extraction system. **Cost:** $14 million (Design-Build). **Specific Role:** Hydrogeologist and Project Manager. He also provided operations and regulatory compliance during the first 118 months of operation.

d.

(1) TITLE AND LOCATION *(City and State)*: **Floridan Aquifer Well Design, Toho Water Authority, Kissimmee, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2023; CONSTRUCTION (If applicable): 2023

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Bulman prepared specifications for bidding on a 600-foot water supply well for the Toho Water Authority. The design included criteria for well drilling, geophysical logging, water quality testing, development, pumping testing, and disinfection. Mr. Bulman also served as technical lead for the design, bidding, construction, testing and reporting for this project. The design included criteria for well drilling, geophysical logging, water quality testing, development, pumping testing and disinfection. **Cost:** $27,000 (fee). **Specific Role:** Technical Lead/Hydrogeologist.

e.

(1) TITLE AND LOCATION *(City and State)*: **City of Deerfield Beach Deep Injection Well System Mechanical Integrity Testing, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2022; CONSTRUCTION (If applicable): 2021

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Bulman prepared planning documents for the mechanical integrity testing of the City's Class I industrial deep injection well at the West WTP. He managed field services and regulatory communication during testing and submitted a certified report to FDEP in 2022 following successful testing of the well. **Cost:** $30,000. **Specific Role:** Hydrogeologist and Project Manager.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Angela Giuliano, PG **Senior Principal Scientist**	**Hydrogeological/Well Engineering**	**12**	**2**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Boca Raton, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Hydrogeology and Environmental Geology BS, Environmental and Engineering Geology	Professional Geologist / FL (FL 3063) OSHA 40-hour HAZWOPER OSHA 10-hour Construction

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Giuliano has extensive project hydrogeologist experience overseeing public and private water production wells, in addition to permitting, design, construction, and testing of municipal injection wells. Her most notable projects have concentrated on the design, construction, rehabilitation, and testing of Class I injection wells and Floridan aquifer production wells. Ms. Giuliano's areas of expertise include injection well mechanical and integrity testing; UIC permitting; hydrogeology; surficial aquifer and Floridan aquifer production wells; water supply well construction, testing, and rehabilitation; project management; and contractor oversight.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **City of Deerfield Beach Injection Well Rehabilitation and Rerate for the West WTP, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2024; CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Giuliano was responsible for a multi-phase project to restore the capacity of the City's Class I injection well. The first phase involved a technical memorandum outlining the history of performance issues, previous works and recommendations, current capacity losses, and preparing a plan for investigating and mitigating additional capacity losses. Ms. Giuliano was responsible for preparation of rehabilitation plan, specifications, contract documents, and assistance with procurement. The second phase included injectivity testing, oversight of contractor rehabilitation activities including geophysical logging, tubing brushing, reverse air development, and acidization. Successful rehabilitation resulted in a 200% increase in injectivity capacity and a minor permit modification to increase the injection rate and volume. **Cost:** $100,086 (est. fee). **Specific Role:** Project Manager and Professional Geologist of Record.

b.

(1) TITLE AND LOCATION *(City and State)*: **West WTP Injection Well Permit Renewal, City of Deerfield Beach, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Giuliano is preparing an application for operation re-permitting, coordinating with FDEP, reviewing operational data, updating the O&M manual, record drawings and preparing a cost estimate for plugging and abandonment on behalf of the City. She continues to provide post-application services and correspondence with FDEP. **Status:** Project started in March 2023. **Cost:** $40,289 (fee). **Specific Role:** Project Manager and Project Hydrogeologist.

c.

(1) TITLE AND LOCATION *(City and State)*: **Upper Floridan Aquifer Supply Well No. 3 Sunbridge WTP, Toho Water Authority, Kissimmee, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2022; CONSTRUCTION (If applicable) 2022

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Ms. Giuliano provided comprehensive engineering and geological services for the design, construction, and testing of Floridan aquifer supply well No. 3, which is part of a water treatment plant expansion project for the Toho Water Authority that encompasses various new facilities and systems. **Cost:** $142,289 (fee); $1.2 million (construction); $579,560 (construction, well drilling only); $691,059 (construction, well pump, discharge & appurtenances). **Specific Role:** Project Hydrogeologist.

d.

(1) TITLE AND LOCATION *(City and State)*: **Miami-Dade Water and Sewer Department Ocean Outfall Legislation (OOL) Program, Miami-Dade County, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES Ongoing; CONSTRUCTION (If applicable) Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm

Support program-level management and oversight of the design consultant and contractor during critical construction activities of 17 municipal injection wells at the SDWWTP, CDWWTP and NDWWTP; manage consultant services during construction task authorizations for two consultants; manage and review consultant invoices, process allowance request, task authorizations, design reviews, schedules, and risk registers; provide robust field quality control and review of FDEP weekly reports for regulatory compliance, regulatory casing seat and testing requests, regulatory final construction reports, permit application, and support WASD with FDEP technical meeting; program-level collaboration and reporting, including coordination for other plant facility designs and scheduling, permitting, procurement, and client communication/reporting; and technical collaboration on WASD including regulatory interpretations and meetings. Ms. Giuliano continues to provide these services for the OOL Program in her current employment at Hazen. **Cost:** $2.55 billion (est. total program cost). **Specific Role:** Project Manager.

e.

(1) TITLE AND LOCATION *(City and State)*: **Town of Jupiter WTP Biannual Wellfield Testing, FL**

(2) YEAR COMPLETED: PROFESSIONAL SERVICES 2016; CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☐ Check if project performed with current firm

Ms. Giuliano was responsible for the biannual testing of fifty (50) Surficial aquifer production well water quality and pump performance to evaluate wellfield trends in production well performance. Responsibilities included coordination with water treatment plant operators, data management, water quality sampling, and evaluation of data to prepare a comprehensive report with recommendations for future rehabilitation. **Cost:** $50,000 (est. fee). **Specific Role:** Project Hydrogeologist.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Ethan Heijn, PE **Senior Associate**	**I/I**	**32**	**21**

15. FIRM NAME AND LOCATION *(City and State)*

Hazen and Sawyer, Hollywood, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MS, Civil and Environmental Engineering; BA, History	PE / GA – Civil/Environmental Engineering

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Heijn has 32 years of experience in infiltration/inflow reduction and sewer rehabilitation programs, buried infrastructure management, and master planning. Additional experience includes evaluation and rehabilitation of storm and sanitary sewers, including sanitary sewer evaluation surveys, infiltration/inflow analysis, sewer peak flow hydraulic modeling, flow monitoring and sampling studies, and sewer rehabilitation programs. He also focuses on condition assessment and asset management projects for buried infrastructure, including gravity piping for wastewater and stormwater as well as pressure piping for potable water, wastewater, and reclaimed water.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: **Water and Wastewater General Engineering Consultant Contract, City of Margate, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Heijn has served as Project Manager for multiple projects under the City of Margate Water and Wastewater General Engineering Consultant contract since 2007. He has completed multiple assignments for the City, including the Alternative Water Supply Evaluation, Wastewater Secondary Treatment Alternatives Evaluation, East WWTP Membrane Bioreactor Feasibility Study, Reclaimed Water Directional Drill Design Criteria Package, Ground Water Rule Assistance, Reclaimed Water Directional Drill Services During Construction, Canal Crossing Pipe Restraint Evaluation, and Large User Delivery Method Hydraulic Modeling and Cost-Benefit Evaluation. **Cost:** $2.1 million (est. fee to date) **Specific Role:** Project Manager for multiple assignments

b.

(1) TITLE AND LOCATION *(City and State)*: **Sewer Design and Implementation Program (Force Main Condition Assessment and Prioritization), City of Fort Lauderdale, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Heijn managed this project to conduct a risk-based prioritization and condition assessment of the City of Fort Lauderdale's wastewater force mains in order to comply with the requirements of a Consent Order with the Florida Department of Environmental Protection. The work included prioritization of force mains based on probability and consequence of failure, evaluation and recommendation of alternatives for collection of additional condition assessment data where needed, and development of recommendations for repair or replacement through short- and long-term planning periods. **Cost:** $108,000 (engineering) **Specific Role:** Project Manager.

c.

(1) TITLE AND LOCATION *(City and State)*: **Phase I Infiltration and Inflow Projects, City of Fort Lauderdale, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

As part of a Consent Order (CO), the City was required to perform inflow and rehabilitation reduction projects in six pre-defined pump station basins. The inspection approach to address I&I defects included television of the gravity mains and laterals, smoke testing, and manhole inspections. The rehabilitation approach to address I&I defects included excavated point repairs, cured-in-place pipe lining for active mainlines and laterals, and rehabilitation of manholes. During the CO sewer rehabilitation program, 35 task orders totaling nearly $30 million were awarded for sanitary sewer inspection and rehabilitation projects. Hazen's team conducted field investigation activities, reviewed inspection data and developed rehabilitation plans, performed construction inspection, prepared bid documents for new rehabilitation work, provided project management services, developed technical memoranda and reports for regulatory compliance submittals, and prepared updates on the project for the City's upper management. **Cost:** $3 million (engineering and construction management); $19 million (construction) **Specific Role:** Project Manager

d.

(1) TITLE AND LOCATION *(City and State)*: **Sewer System Evaluation Survey and Rehabilitation Program, City of Hialeah, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION (If applicable): Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

For over a decade, Mr. Heijn has served as Project Manager to support the City's sewer condition assessment and rehabilitation program to reduce infiltration and inflow into the City's collection system consisting of approximately 6,500 manholes and over 400 miles of gravity mains and laterals. Hazen assisted in identifying I/I sources through activities such as manhole inspections, smoke testing, night flow isolation, video inspection review, and basin prioritization. Based on Hazen's recommendations and construction oversight, and the repair work conducted over the course of the last decade, wastewater transmitted from the City to the Miami-Dade Water and Sewer Dept. dropped from approximately one billion gallons per month to 600 million gallons per month. **Status:** The program is ongoing. **Cost:** $21 million (construction) **Specific Role:** Project Manager/Project Engineer

e.

(1) TITLE AND LOCATION *(City and State)*: **Sewer System Evaluation Survey, Phase 1, City of Sunrise, FL**

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2015; CONSTRUCTION (If applicable): N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Heijn directed Phase 1 of the infiltration and inflow evaluation and rehabilitation program for the City's gravity sewer system. Projects under this assignment included measurement of infiltration and inflow for the overall system and selected pump station collection areas, planning of a sanitary sewer evaluation survey, preparation of bid specifications for sewer rehabilitation with an emphasis on trenchless approaches, provision of bid-phase services for the sewer rehabilitation program, and planning for expansion and integration of City programs to address CMOM. **Cost:** $122,000 (fee) **Specific Role:** Project Engineer

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **1**

21. TITLE AND LOCATION *(City and State)*

Continuing Professional Engineering Services
Cooper City, Florida

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Cooper City, Florida	**Alex Rey** **City Manager**	**(954) 434-4300, ext. 293**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
General water related consulting services on an as-needed basis since 2009.

Status
Ongoing

Cost
$2.2 million (fee-to-date)

Description
Work assignments under this contract encompass a range of disciplines including technical, institutional, and regulatory aspects of water, reclaimed water, wastewater, sanitary sewer, stormwater and water and wastewater treatment facilities.

Projects have included the Pine Island Road Pump Station, Lift Station 2 and 49 Improvements, Master Plan Update of the Feasibility Review of Infrastructure Improvements for Wastewater, and the Effluent Reuse and Disposal Master Plan. Selected projects are highlighted below:

1-MG Water Storage Tank Replacement. As a result of routine annual inspections of Cooper City's existing 500,000-gallon steel water storage tank, the City determined the water storage tank needed to be demolished and replaced with a water storage tank similar to that of the existing 1,000,000 gallon pre-stress concrete water storage tank located at the George A. Haughney water treatment plant. The water storage tank was at the end of its useful life.

Hazen prepared an evaluation of repair/replacement options for the tank. Phase 1 included design, permitting, and bidding services. Phase 2 services included construction management services and project closeout with regulatory agencies.

Pine Island Road Pump Station. Hazen provided design, permitting, bid/award phase, and construction oversight services for a pump station (with three high-service pumps) to convey water from a water storage tank to the distribution system. Hazen served as Engineer-of-Record for civil, mechanical, electrical, structural, architectural, controls, and plumbing. The project was completed on time and on budget. The City's original budget was $2.2 million. The construction cost was $1.8 million with net zero change in contract price. Our team delivered the design and all permits nearly one month ahead of the 370-calendar day schedule.

East WTP Tank Demolition. In 2014, the City decided to demolish the East Plant water storage tanks and pump station. Hazen prepared detailed design drawings and technical specifications, including demolition and surface restoration. In addition, Hazen retained specialists to perform sampling and analysis of structures to determine the need for lead-based paint and asbestos mitigation requirements. The specialists located both asbestos and lead. Hazen incorporated removal requirements into the contract documents. Hazen permitted the project through the Broward County Health Department and assisted the City with bidding services.

Effluent Reuse and Disposal Master Plan. The City owns and operates three package wastewater treatment plants that discharge treated effluent to an onsite injection well and to the City of Hollywood Southern Region Wastewater Treatment Plant (SRWWTP) where it is primarily further treated by filtration and disinfection and utilized for public access reuse. Because the City discharges to Hollywood SRWWTP, and because the City of Hollywood occasionally directs the City's effluent to the ocean outfall, the City Under this project, Hazen calculated the required reclaimed water implementation to be roughly 1 mgd (0.956 mgd) and identified the cost of alternatives for reclaimed water production and distribution (or injection). As a result of this study, which identified significant costs for the production and treatment of such minimal flows, Hazen recommended partnerships with other utilities for the production of reclaimed water.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**
c.	**Hazen and Sawyer**	**Jacksonville, Florida**	**Primary Consultant**
d.	**Hazen and Sawyer**	**Tampa, Florida**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S **QUALIFICATIONS FOR THIS CONTRACT** *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **2**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
General Consulting Services **Hallandale Beach, Florida**	PROFESSIONAL SERVICES **Ongoing**	CONSTRUCTION *(If applicable)* **Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Hallandale Beach, Florida	**Jeff Odoms, MA, FAEM** **Director of Public Works**	**(954) 457-1669**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size

General water related consulting services on an as-needed basis since 2001.

Status

Ongoing

Cost

$4.2 million (estimated fee-to-date)

Description

Since the 1990s, Hazen has been providing general consulting services for water treatment and wastewater transmission system projects to the City of Hallandale Beach. General consulting services are provided on an as-requested basis and consist of engineering services ranging from studies, hydraulic models, and master planning services through detailed design and construction oversight services.

Water Treatment Plant Infrastructure Assessment/Renewal and Replacement Planning. Hazen provided the City with a team of senior mechanical, electrical, controls, and water treatment process engineers to assess the condition of the above-ground assets at its lime softening/membrane water treatment plant. Hazen's expertise in lime softening treatment facilities allowed the team to rapidly assess the remaining useful life of the WTP's major lime softening assets to develop a 20-year plan of capital improvements to sustain the capacity of the existing infrastructure. The City is presently using the recommended improvements and associated budgetary costs for planning CIP projects.

Brackish Water Reverse Osmosis Train Addition. Hazen provided preliminary and detailed design services for the addition of a reverse osmosis skid to the existing membrane plant, including appurtenant pretreatment and chemical facilities. The NF plant was designed with space, piping and

electrical provisions to add two, 2.0-mgd (treated water capacity) brackish water RO (BWRO) trains in the future. The original strategy was to allow the City to treat the Floridan Aquifer, thus, "drought proofing" the City for future limited use of the Biscayne Aquifer. The proposed 2.0-mgd RO train will be installed in one of these allocated spaces. Although it was intended that the water supply for the BWRO trains would come from the Upper Floridan aquifer, the BWRO train was designed with the flexibility to treat any of the following sources individually:

- Existing City wells PW-7 and 8 with water TDS concentration approaching up to 5,000 mg/L (should saltwater intrude)
- Future Biscayne Aquifer City well PW-9
- Existing Biscayne Aquifer supply from BCRWS
- Future supply from upper Floridan aquifer wells with a TDS concentration of up to 5,000 mg/L

Hazen designed the third RO skid with a high level of flexibility since future alternative water supply options are being explored.

Wastewater Master Plan. Under the current GC agreement (2016 Continuing Professional Architectural and Engineering Services Firms), Hazen completed the Wastewater Master plan that defined both short- and long-range planning goals through the year 2035. This plan also identified the operational and maintenance needs for the wastewater system. The City utilized this plan for adjustment of future CIP needs.

Water and Wastewater Model Updates. The wastewater master plan was developed based on the wastewater model that was developed by Hazen under the 2014 Water and Wastewater Model Updates project under the previous GC agreement. The model update involved reforecasting water demand projections and wastewater flow projections, updating the hydraulic

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**
c.	**Hazen and Sawyer**	**Jacksonville, Florida**	**Primary Consultant**
d.	**Hazen and Sawyer**	**Tampa, Florida**	**Primary Consultant**

model configuration to match updated piping throughout the city, calibrating the hydraulic model, running various scenarios through the hydraulic model, and determining what potential improvements are necessary to correct any present and future system deficiencies. The model updates project formulated the basis for the water improvements and wastewater transmission improvements CIP.

Additional Projects. Hazen also completed the following projects under the current GC Agreement (select projects listed)

- Saltwater Wells Services During Construction
- Deep Injection Well Operating Permit
- Injection Well Mechanical Integrity Test
- Biscayne Aquifer Modeling for Regional Water Availability Rule
- Operational Assistance (multiple fiscal years)
- Wastewater Master Plan
- SSES Planning Activities Under SRF Funding

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
a.	(1) FIRM NAME Hazen and Sawyer	(2) FIRM LOCATION *(City and State)* **Hollywood, Florida**	(3) ROLE **Primary Consultant**
b.	(1) FIRM NAME Hazen and Sawyer	(2) FIRM LOCATION *(City and State)* **Boca Raton, Florida**	(3) ROLE **Primary Consultant**
c.	(1) FIRM NAME Hazen and Sawyer	(2) FIRM LOCATION *(City and State)* **Jacksonville, Florida**	(3) ROLE **Primary Consultant**
d.	(1) FIRM NAME Hazen and Sawyer	(2) FIRM LOCATION *(City and State)* **Tampa, Florida**	(3) ROLE **Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **3**

21. TITLE AND LOCATION *(City and State)*

Continuing Consulting Engineering Services (2000-Present)
Plantation, Florida

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Plantation, Florida	**Daniel Pollio** **Utilities Director**	**(954) 797-2209**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
General consulting services related to water and wastewater on an as-needed basis since 2000 (two contracts).

Status
This project is ongoing.

Cost
$11.9 million (estimated fees-to-date)

Description
Hazen has provided services to the City for a wide range of projects including studies, design, permitting and construction management services in both the water and wastewater fields including facilities at water and wastewater treatment plants, collection systems, distribution systems and neighborhood improvement projects. A representative sampling of assignments awarded under the general consulting contract are highlighted below.

East WTP Chemical Storage Facility
Hazen provided services for design of improvements to six chemical storage facilities at the East Water Treatment Plant. The project included preparation of preliminary basis of design report, detailed design of associated improvements to chemical systems, preparation of detailed design/bid drawings and technical specifications, preparation of permitting submittals, participation in meetings with regulatory agencies, and responding to requests for additional information submitted by regulatory agencies. Phase II construction is ongoing.

East and Central Water Treatment Plants Membrane Replacement:
Hazen was responsible for membrane pilot testing and data evaluation, performing calculations for full-scale membrane performance projections, post-treatment stabilization modifications, and conducting present worth evaluations for the membrane manufacturer selection. Hazen pilot tested 8-inch elements from two membrane manufacturers on a full-scale train to provide an alternative for replacement of the elements the plant had been using for many years. The membrane replacement resulted in energy savings of about 35% to 45% at the East Water Treatment Plant (EWTP) and Central Water Treatment Plant (CWTP). The membrane selection utilized a hybrid array to allow rejection of target ions and passage of elements that contribute to the overall water stability based on target finished water quality goals and to minimize corrosion potential on the distribution system.

Diffused Aeration: The City of Plantation operates the Plantation Regional Wastewater Treatment Plant (RWWTP), an 18.9-mgd facility based on a three-month average daily flow (TMADF) basis. The RWWTP facility utilized a mechanically aerated activated sludge treatment process for secondary treatment. Hazen completed an Energy Savings Analysis that projected the City would increase the efficiency of their aeration process and save over $200,000 annually in electricity costs by converting their mechanical aeration process to fine bubble diffused aeration. After this study, the City retained Hazen to provide design, permitting and engineering services for the conversion of the surface aerators to fine bubble. Our work included determination of oxygen demands, selection of blower technology, and design of a new blower facility and aeration system. After the system start-up, the energy bills demonstrated that the City started realizing the expected energy savings.

Water Master Plan: Hazen developed the Plantation Water Master Plan that defines short- and long-term planning goals through the year 2040, including goals that serve to optimize operation and management of the City's entire water system. The Master Plan identifies recommended capital improvements for: 1) water supply; 2) treatment; 3) distribution system quality; and 4) distribution system capacity. A key task for this project included the development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. Benefits of the service area-wide water distribution system hydraulic model include synchronization with the City's GIS water atlas, which will minimize efforts associated with future model updates. The model provides the ability to simulate water age as it moves from the WTP to customers. Model results are being used to prioritize capital improvement projects targeting the replacement of aging infrastructure, as well as for the evaluation of operational alternatives designed to reduce pumping energy costs.

East and Central WTPs Scale Inhibitor Pilot Testing: Both the EWTP and CWTP utilize membrane technology to treat the Biscayne aquifer supply. Each of the facilities has a treatment capacity of 12.0 mgd and utilizes multiple membrane arrays configured to operate at 85% recovery. Pilot testing of several scale inhibitors was conducted at the EWTP to determine the suitability of these products with the existing water supply, treatment process recovery and the Dow FilmTec membrane elements. Our services included coordinating the scale inhibitor pilot testing operation, performing calculations and conducting an evaluation to select a new formulation to improve operations at the facility, and providing assistance to the City during the scale inhibitor chemical procurement process. The City has witnessed higher recovery rates and longer time periods between cleanings.

12-mgd Membrane Softening Plant Expansion: Hazen designed the expansion of Plantation's existing 6-mgd membrane softening facility to the

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	FIRM NAME	FIRM LOCATION *(City and State)*	ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**
c.	**Hazen and Sawyer**	**Jacksonville, Florida**	**Primary Consultant**

buildout treatment capacity of 12-mgd. Our design services included the addition of three 2-mgd arrays, a third membrane booster pump and the addition of a permeate flushing system within the existing membrane building. Also included in the design were the addition of a clearwell, transfer pumps and high service pumps sized to meet the higher flow rates provided during the expansion.

Injection Well Services: The City of Plantation operates four injection wells at three sites; two at the wastewater treatment plant and one at each of the water treatment plants. Hazen has assisted the City with a number of permitting issues associated with each of the wells. In addition, Hazen designed a cemented-in-place fiberglass injection tubing to replace the failed liner in the tubing and packer well at the CWTP. Also, at the RWWTP, Hazen designed a new deep dual zone monitor well to replace failed injection well monitor tubes.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
a.	FIRM NAME **Hazen and Sawyer**	FIRM LOCATION *(City and State)* **Hollywood, Florida**	ROLE **Primary Consultant**
b.	FIRM NAME **Hazen and Sawyer**	FIRM LOCATION *(City and State)* **Boca Raton, Florida**	ROLE **Primary Consultant**
c.	FIRM NAME **Hazen and Sawyer**	FIRM LOCATION *(City and State)* **Jacksonville, Florida**	ROLE **Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **4**

21. TITLE AND LOCATION *(City and State)*

General Water Consultant Agreement
Fort Lauderdale, Florida

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Fort Lauderdale, Florida	**Miguel Arroyo,** **Water and Wastewater Treatment Manager**	**(954) 828-7806**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
General water consultant since 1998.

Status
Ongoing

Cost
$20,490,969 (fee-to-date);
$172 million bid value of projects designed by Hazen since 1998

Description
Hazen has been providing general water engineering services to the City of Fort Lauderdale Utilities Department under a general consultant contract since 1998. A sample of projects completed or ongoing under this contract during the last five years is listed below:

- Fiveash WTP High-Service Pumps
- Fiveash WTP Upgrades
- Fiveash WTP Operational Control Plan Design
- Poinciana Park and 2nd Ave. Storage Tank and PS Replacements - Design and Construction Services
- Saltwater Intrusion Monitoring
- Fiveash WTP BODR Study
- Water Master Plan 2006 Update
- Peele-Dixie Membrane Procurement Bid Package Study
- Dixie Wellfield Modeling
- Peele-Dixie WTP Hourly Tasks for Construction Field Services
- Fiveash WTP Consolidated Phase 1 Construction Services
- Dixie Wellfield Design and Construction Services
- Fiveash WTP Upgrades Phase II
- Fiveash WTP Upgrades Phase III
- South Andrews Avenue Water Main Improvements
- Peele-Dixie Membrane Softening WTP Design and Construction Services
- Central New River Water Main Crossings
- Second Avenue Pump Station Improvements Design Services
- Dixie Wellfield Well Abandonment Design Services
- Water Supply Planning Assistance

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Hazen and Sawyer	**Hollywood, Florida**	**Primary Consultant**
b.	Hazen and Sawyer	**Boca Raton, Florida**	**Primary Consultant**
c.	Hazen and Sawyer	**Jacksonville, Florida**	**Primary Consultant**
d.	Hazen and Sawyer	**Tampa, Florida**	**Primary Consultant**
e.	Hazen and Sawyer	**Virginia Beach, Virginia**	**Primary Consultant**
f.	Hazen and Sawyer	**New York, New York**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **5**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
General Wastewater and Water Engineering Services (since 2002) **Broward County, Florida**	PROFESSIONAL SERVICES **Ongoing**	CONSTRUCTION *(If applicable)* **Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Broward County Water and Wastewater Services, Florida	**Alan Garcia, PE** **Director of Water and Wastewater Services**	**(954) 831-0705**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
Since 2002, Hazen has provided general wastewater and water consulting services to Broward County under a 2002 and subsequently under a 2008 Agreement.

Status
Ongoing; Hazen was reselected in early 2024 to provide wastewater services.

Cost
$17.98 million (estimated fee-to-date)
2002 General Consulting Agreement: $8 million
2008 General Consulting Agreement: $9.98 million

Description
Hazen has provided general wastewater and water consulting services to Broward County under a 2002 and 2008 Agreement in the following areas: water and wastewater treatment plants; water collection and wastewater distribution; hydraulic modeling; pumping stations; water wells and effluent disposal wells; water reclamation; Ongoing ocean science and marine engineering; and financial studies; and regulatory assistance. Hazen completed over 100 separate projects under the Agreements. Some of these projects are summarized below.

- Design, permitting, bid, and construction oversight services for the replacement of the supervisory control and data analytics (SCADA) system at the NRWWTP (ongoing)
- Design, permitting, and inspection services for generator no. 4 installation at NRWWTP (ongoing)
- Design, permit, bid, and construction oversight services for floating gasholder cover for a 100-foot diameter anaerobic digester (Digester 3)
- Preliminary study and basis-of-design report for improvements at the Septage Receiving Facility followed by design through construction management services
- Design, permit, bid, and construction oversight services for chlorination improvements project including both vacuum chlorine and sodium hypochlorite delivery
- Design, permit, bid, and construction oversight services for the addition of a generator to Master Pump Station 462
- Design, permit, and construction management services for construction of a replacement Master Pump Station 310
- Basis-of-design for mechanical and electrical upgrade of Deerfield Beach Master Pump Station 440
- Design, permit, and construction management for replacement of multiple motor control centers
- Design and construction management services for the rehabilitation and conversion to in-line booster configuration of the Coral Spring East Master Pump Station
- Preparation of basis-of-design reports for Master Pump Stations 424, 440, 450, and 456
- Study for improvements to the wastewater metering systems
- Mechanical Integrity Testing of six Class I injection wells at the NRWWTP
- Plan of Study for the Florida Atlantic Coast Environmental Initiative
- Design for installation of concrete mats on the 54-inch open ocean outfall pipe
- Deployment of ADCP current meter near the terminus of outfall pipe
- Water and Wastewater Annual Reports for Fiscal Years 2001 through 2009
- Engineer's Report for Utility Bonds Series 2003 and 2009
- Wastewater flow measurement of targeted rehab area
- Monitoring well rehabilitation at NRWWTP
- Development of design standards for the NRWWTP (electrical and mechanical disciplines ongoing)
- Design, permitting, and construction management (ongoing) for bypass and lift station force main rerouting
- Design, permitting, and construction management for control panel replacement for the outfall pump station

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**
c.	**Hazen and Sawyer**	**Jacksonville, Florida**	**Primary Consultant**
d.	**Hazen and Sawyer**	**Tampa, Florida**	**Primary Consultant**
e.	**Hazen and Sawyer**	**Virgnia Beach, VA**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **6**

21. TITLE AND LOCATION *(City and State)*: **General Consultant Services (1984-Present), Hollywood, FL**

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Hollywood Public Utility Services Department, FL	**Vincent (Vin) Morello Public Works Director**	**(954) 967-4455**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
Having partnered with Hollywood on many projects continuously since 1984, Hazen brings a profound understanding of the issues facing the utility, as well as the historical context surrounding each issue.

Status
This contract is ongoing.

Cost
$2.3 million to date, estimated fees (since 2017 contract renewal)

Description
Since 1984, the firm has been providing general engineering consultant (GEC) services for water treatment plant (WTP) and wastewater treatment plant (WWTP) projects to the City. Hazen was reselected in 2002 and again in 2017 and 2023. Projects have included numerous projects for the City's wastewater plant, wastewater collection and transmission system, and reuse transmission system; Pump Station Upgrades and Replacement, Stormwater Management Program, Stormwater Utility, Ocean Outfall Services, instrumentation and controls, and successful anticipation and management of many of the most pressing regulatory issues including Class 1 Injection Well Rule Changes, Ocean Outfalls, Bird Rule, and Reclaimed Water. Selected projects Hazen has been involved with at the Southern Region WWTP are highlighted include the following:

Reuse Water System Expansion Phase 2. Update of the City's reuse hydraulic model and replacement of existing reuse pumps to provide flexibility to better serve existing customers on demand with provisions to serve additional future customers. Construction was completed in 2017.

Headworks Rehabilitation and Replacement. This project involved rehabilitation of headworks facility, replacement of the bar screens, grit pumps, slide gate replacement, large-diameter plant pipe lining, grit pipe replacement, bypass pumping, specialty coatings, and lighting upgrades. Hazen provided detailed design, permitting, bidding, and technical services during construction.

Clarifier Nos. 5-8 Flow Distribution Box Rehabilitation. Inspection of deteriorated mixed-liquor distribution box, detailed design of rehabilitation including replacement of transfer pumps, bypass pumping, specialty coatings and electric actuator replacement.

PLC System Upgrade. Complete replacement of 15 WWTP PLCs, shop drawing review, and contractor coordination.

Aquifer Recharge Pilot Study. Design, construction, start-up, operation and testing of a pilot plant to determine the feasibility of MF, IX, AOP, BAC as treatments alternative to RO for use with a highly saline effluent for aquifer recharge.

Reclaimed Water (Regulatory). When the state of Florida implemented the Antidegradation Rule and placed the Southern Region WWTP under a building moratorium by denying a permit for expansion of the SRWWTP, Hazen and the City jointly negotiated a solution with Tallahassee through implementation of a reclaimed water system. Hazen also argued for a 25% reduction in the later Ocean Outfall Rule Change reuse mandate by convincing the state to credit the City for existing industrial reuse.

SRWWTP RAS PS No. 2 Rehabilitation. The existing RAS PS No. 2 was constructed in 1973 and is critical to the proper functioning biological process at the wastewater treatment plant. Severe cracking of the walls and revisions to the operating levels within the neighboring clarifier trough in order to meet new regulatory requirements provided a pathway for multiple leaks to penetrate the interior of the pump station. In addition, electrical and mechanical equipment had reached the end of their useful life and required replacement. The design work was completed in March 2015 and construction was completed in June 2017.

SRWWTP Facility Permit Renewal. The City of Hollywood operates the Southern Regional Wastewater Treatment Plant (SRWWTP) under the existing Florida Department of Environmental Protection (FDEP) Domestic Wastewater Facility Permit number FL0026255 which was due to expire on August 27, 2017. Permit renewal activities were initiated in January 2017 and the new permit was issued on June 30, 2017 (effective date of August 30, 2017). A key element to NPDES limits negotiated with FDEP under the new permit was the relaxation of minimum total residual chlorine limits (TRC) for disinfection to 0.3 mg/L and maximum TRC limits for toxicity of 2.0 mg/L.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**
c.	**Hazen and Sawyer**	**Jacksonville, Florida**	**Primary Consultant**
d.	**Hazen and Sawyer**	**Tampa, Florida**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **7**

21. TITLE AND LOCATION *(City and State)*

General Consulting Services (since 2004)
Sunrise, Florida

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Sunrise, Florida	**Rodrigo de Castro, PE, CFM** **Director of Utilities**	**(954) 888-6055**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
General consulting services related to water and wastewater on an as-needed basis since 2004.

Status
Contract is ongoing.

Cost
$14.9 million (estimated fees to date)

Description
Hazen has served the City of Sunrise on a range of planning, design, permitting, and/or construction management services for wastewater treatment plants; wastewater distribution collection and transmission; hydraulic modeling; pumping stations; water supply wells, biosolids and effluent disposal wells; regulatory assistance since 2004. The City owns and operates three wastewater treatment plants that are interconnected via force mains and about 250 lift stations (214 city owned). Service areas include Sunrise, Weston, and portions of Davie and Southwest Ranches. Some of the work provided under this contract to date is summarized below:

2020 Water and Wastewater Master Plan. This Master Plan (MP) update was completed as a separate authorization to the general consulting services agreement with specifics provided under a separate cover. The MP update included asset inventory and condition assessment of the City's wastewater collection and water transmission systems.

Clarifier Scum Improvements. In 2015, Hazen was retained for design, bidding, and construction administration services for clarifier scum system improvements at the Sawgrass WWTP. As part of the design, Hazen evaluated the hydraulic characteristics of the existing scum handling system to retrofit the system with two scum pumping stations. Each pump station services two clarifiers and is designed to send clarifier scum to a sludge holding tank at a design capacity of 100 gpm. Hazen provided 100% design for this project, secured necessary permits, and assisted the City in the bidding process of this project.

Southwest Wastewater Treatment Plant Renewal and Replacement and High-Level Disinfection Improvements. Hazen recently completed design, permitting, construction management, and startup of comprehensive improvements associated with renewal and replacement of aging facilities at the plant and the addition of deep bed filters for high level disinfection. Facilities designed included: headworks and influent pump station upgrades, filter influent pump station, deep bed sand filters, chlorine contact basins, bulk hypochlorite facility, MCC and emergency power, onsite lab facility, modification of tertiary clarifier, rehabilitation of oxidation ditches, secondary clarifiers and percolation ponds.

Lift Station Upgrades and Force Main Design. Hazen established design criteria, design points, and operating ranges for a number of lift stations that have already been prioritized for rehabilitation. The task was completed by evaluating modeling results, lift station collection area characteristics, historical SCADA data, flow meter readings, and pressure readings. Hazen is designing upgrades for six lift stations to increase their capacity and meet the updated City standards. Services include permitting, bidding/award, and construction management services. A force main is also being designed, which will accommodate rerouting and increasing flows.

Injection Well Pumping System. Hazen designed the expansion of the effluent injection well pumping system at the Sawgrass WWTP. Various alternatives to increase the long-term capacity of the system were evaluated. Hazen recommended, designed, and provided services during construction for the addition of a third pumping station to increase the capacity of the injection well pumping system to more than 52.6 mgd.

Biosolids Management Improvements. Preliminary design and phasing of sludge thickening, anaerobic digestion, and centrifuge dewatering facilities at the 20-mgd Sawgrass WWTP and the 10-mgd Springtree WWTP were completed in 2011. Detailed design, permitting, construction oversight and startup of the centrifuge dewatering systems at both facilities (including sludge conveyance, polymer and truck loading systems) were completed in 2016; this project also included a new hypochlorite storage/feed facility at Springtree.

Model Update and Field-Testing Plan. Included updating the City's existing water distribution system hydraulic model, applying the model to address specific system related concerns of the City, and developing a plan for field verifying the model's ability to accurately predict distribution system behavior.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	Hazen and Sawyer	**Hollywood, Florida**	**Primary Consultant**
b.	Hazen and Sawyer	**Boca Raton, Florida**	**Primary Consultant**
c.	Hazen and Sawyer	**Jacksonville, Florida**	**Primary Consultant**
d.	Hazen and Sawyer	**Coral Gables, Florida**	**Primary Consultant**
e.	Hazen and Sawyer	**Virginia Beach, VA**	**Primary Consultant**
f.	Hazen and Sawyer	**New York, New York**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **8**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
General Water and Wastewater Services **Miramar, Florida**	**Ongoing**	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Miramar, Florida	**Francois Domond, PE** **Director of Utilities Department**	**(954) 883-5845**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
Since the 1990s, Hazen has worked with the City's water, wastewater, and reuse services on all phases of project implementation.

Status
This contract is ongoing.

Cost
$1.27 million

Description
Since initiating services for the City of Miramar in 1993, Hazen has assisted the City in the successful implementation of over $110 million in infrastructure improvements to the City's water, wastewater, and reuse systems. These projects have encompassed all aspects of traditional utility-related engineering, including studies, facilities planning, design, cost estimation, permitting, construction administration, startup services, and regulatory assistance for both water and wastewater infrastructure, as well as assistance in the establishment of a stormwater utility, construction of new administration and fleet maintenance facilities, and a new citywide Local Area Network / Wide Area Network (LAN/WAN) communications system. In addition to these technical efforts, Hazen has also worked with the City on truly unique activities, such as grants procurement and "good neighbor" community involvement programs. Below are a few project highlights, illustrating Hazen's continued support and in-depth knowledge of the City's system.

City of Miramar Wastewater Reclamation Facility. Hazen has worked with the City on all phases of their Wastewater Reclamation Facility – from inception to the latest reuse facilities expansion from 4 mgd to 7.5 mgd: Wastewater System Master Planning; planning, design, and construction of the Miramar WWRF, including fine mechanical screens, forced vortex type grit removal, activated sludge treatment with fine bubble aeration, final clarification, effluent pump station and deep well injection, with an initial capacity of 7.4 mgd, as well as reuse facilities to produce 2 mgd of reclaimed water for irrigation. Other wastewater projects have involved hydraulic modeling, transmission system expansion, sewer system rehabilitation, I/I program management, pump station design and rehabilitation, telemetry assistance, and rate studies.

City of Miramar West WTP. Hazen has assisted the City with their water system needs, performing studies/assessments, specialty plant evaluations, and construction management services at the West WTP.

City of Miramar East WTP. Within the last ten years, Hazen has assisted the City with converting the East WTP from lime softening to membrane softening, including upgrades to meet finished water quality goals and rehabilitation.

City of Miramar Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP). In 2020, Hazen performed an RRA of the City's water system, including the East WTP, West WTP, raw water wells, storage tanks, pump stations and pipelines, to meet their regulatory requirement under America's Water Infrastructure Act (AWIA) of 2018. The RRA involved workshops with leaders from utility departments and emergency response agencies, field inspections of critical assets, identification of threats and vulnerabilities to the water system, risk calculations using a tool developed by Hazen, recommendations of mitigation measures to improve resilience, and development of a report that is "for official use only" and certified by the US EPA. The detailed RRA report provides an implementation plan for capital and operational needs for risk and resilience management of the City's water system. Hazen is currently developing an ERP for the City that includes response protocols for emergencies/events identified as threats during the RRA.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **9**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Water, Wastewater and Reclaimed Water Continuing Engineering Services Boca Raton, Florida	**Ongoing**	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Boca Raton, Florida	**Chris Helfrich, PE** **Director, Utility Services**	**(561) 338-7303**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include s*

Size
Since 1995, Hazen has served as a general consultatn for the City of Boca Raton, responsible for completing a variety of projects.

Status
This contract is ongoing.

Cost
$45 million (approximate)

Description
Hazen has assisted the City of Boca Raton with planning, design, and construction projects since 1995. Various City projects completed by Hazen include:

Primary Clarifier Restoration Project: Hazen performed design and construction services for the rehabilitation of two 100-foot diameter primary clarifiers located at the City's wastewater treatment facility. The project also included design and construction management for a new 50,000-cfm single-stage scrubber unit to provide odor control for both primary clarifier units in addition to the City's preliminary treatment building. The project also included replacement of the existing Bristol Babcock DCU-2 control panel with a new Allen Bradley Control Logix PLC-2 that was fully programmed to receive input/output signals from all new equipment installed as part of this project.

Final Clarifier Refurbishment Project: The Final Clarifiers Refurbishment project included replacement of five final clarifier mechanisms. Improvements were made on both mechanical and structural components including replacement of the existing PLC, electrical improvements for each unit, and miscellaneous site improvements. Hazen provided design, permitting, bidding, and construction administration services for this project, which was completed in July 2011.

Digester Building and Gas Piping Rehabilitation: The Digester Building and Gas Piping System Rehabilitation project included replacement of two combination boiler/heat exchangers, four sludge pumps, one 80-foot diameter digester floating gasholder cover, and waste gas burner system; installation of an above-ground stainless steel gas piping and appurtenances and one diesel above ground storage tank; and restoration of 3 digester floating covers. Hazen completed design, permitting, and bidding services, and is currently providing construction administration services. Construction was completed in 2014 for a total cost of $4 million.

pH and Dissolved Oxygen Outfall Mixing Zone Evaluation Report: In 1997, Hazen performed an engineering analysis for the City's wastewater treatment plant facility with regards to its ocean outfall for discharging treated secondary effluent. Hazen conducted the analysis to obtain a needed mixing zone for pH and dissolved oxygen for the discharge of effluent at the ocean outfall.

Capacity Analysis and Operation and Maintenance Reports: In 2007, Hazen prepared and completed these reports as part of the City's wastewater treatment plant permit renewal process. The Capacity Analysis Report demonstrated that the City's existing wastewater treatment plant facilities provided adequate treatment and disposal of flows through the year 2017 based on its current permitted capacity of 17.5-mgd annual average daily flow.

Water and Wastewater Telemetry Reliability Improvements Plan: In 2010, Hazen completed a water and wastewater telemetry reliability improvements study that provided recommendations to the City to maintain the long-term reliability of its existing system while identifying the availability of alternative communications methods, media, and equipment that would result in improved speed and reliability.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	FIRM NAME	FIRM LOCATION *(City and State)*	ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **10**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Water and Wastewater General Engineering Consultant (since 2007) **Margate, Florida**	**Ongoing**	**Ongoing**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Margate, Florida	**Curt Keyser, PE** **Director, Department of Environmental & Engineering Services**	**(954) 972-0828, ext. 204**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Size
General water and wastewater consulting services on an as-needed basis since 2007.

Status
Ongoing

Cost
$2.8 million (estimated fee-to-date)

Description
Since 2007, Hazen has served as one of the City's general consultants for Water and Wastewater General Engineering Services. In this capacity, we have undertaken multiple assignments for the City and gained a valuable understanding of Margate's facilities, operations, and priorities.

Projects have ranged from small, specialized studies to large, complex designs, and have addressed numerous aspects of the City's operations including the treatment and distribution of potable water as well as the treatment, reuse, and disposal of wastewater.

Hazen's most recent assignments during the last several years of the contract include the following projects:

- Water Supply Plan Update, 2020
- Water Use Permit, 2020
- Wastewater Treatment Plant Operation Permit Renewal, 2020
- Injection Well Permit Renewal, 2020
- Comprehensive Plan Update
- West Wastewater Treatment Plant Design Criteria Package
- Structural Analysis of East Wastewater Treatment Plant Aerobic Digester and Aeration Tank
- Risk and Resilience Assessment under AWIA
- Emergency Response Plan under AWIA
- Ground Water Rule Challenge Study, MIEX Evaluation, and Computational Fluid Dynamics Modeling
- Breakpoint Chlorination and Disinfection By-Product Jar Testing
- Hypochlorite System Evaluation
- WWTP Operating Permit Renewal Application and Capacity Analysis Report
- West WWTP Digester Rehabilitation
- Injection Well Mechanical Integrity Testing

Previous projects include the Alternative Water Supply Evaluation, Wastewater Secondary Treatment Alternatives Evaluation, Reclaimed Water Facility Water Use Planning, East Wastewater Treatment Plant Membrane Bioreactor Feasibility Study, Reclaimed Water Directional Drill Design Criteria Package, Ground Water Rule Assistance, Reclaimed Water Directional Drill Services During Construction, Reclaimed Water Filtration Facilities Design, Hydropneumatic Tank Replacement, and Large User Delivery Method Hydraulic Modeling and Cost-Benefit Evaluation task orders.

Select projects are highlighted below.

Design Criteria Package (DCP) for West WWTP Upgrades
Hazen is presently preparing the DCP for the West WWTP Upgrades, which includes rehabilitation of the existing headworks and replacement of the rotating biological contactors (RBCs) with a fine bubble activated sludge system. Hazen will issue the DCP for the City to issue with an RFQ. Hazen will assist the City with evaluation of proposals and oversight of the contract.

Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP)
Under America's Water Infrastructure Act (AWIA), Hazen prepared both the RRA and the ERP for the City's water infrastructure. Hazen identified risks and mitigation efforts for those risks for the City to implement. Hazen also developed the ERP to provide incident response procedures to the City. The City maintains a checklist to ensure recommendations are implemented.

Reclaimed Water Facility
Hazen was responsible for design and permitting of a 1.5-mgd reclaimed water facility at the West WWTP, designed to service nearby golf courses with the primary goal of augmenting Margate's own Biscayne Aquifer water supply resource.

DCP for Pipeline Crossing for Horizontal Directional Drilling
Projects associated with the Reclaimed Water Facility included a Financial Forecast and Rate and Fee Study to provide a financial plan of action related to construction and operation of a reclaimed water system, hydraulic modeling for reclaimed water delivery to large users, and design of necessary transmission piping for installation via traditional open cut methods as well as directional drilling.

West WWTP East Digester Rehabilitation
Hazen provided services for the rehabilitation of the east digester at the City's West WWTP. The digester operates as a combined clarifier and digester for waste sludge. Rehabilitation included replacement of fine air diffusers, clarifier mechanism, tank walls, stairways, and walkways.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	FIRM NAME	FIRM LOCATION *(City and State)*	ROLE
a.	**Hazen and Sawyer**	**Hollywood, Florida**	**Primary Consultant**
b.	**Hazen and Sawyer**	**Boca Raton, Florida**	**Primary Consultant**

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Janeen Wietgrefe, PE, PMP	Project Manager	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒
Patrick Davis, PE	Principal-in-Charge	☒	☒	☒	☒	☒	☒	☐	☒	☒	☒
Robert Taylor, Jr., PE	Technical Advisor	☒	☐	☐	☒	☒	☒	☒	☐	☐	☐
Patricia Carney, PE, BCEE, DBIA	Technical Advisor	☒	☒	☒	☒	☒	☐	☒	☐	☐	☒
John Burke, PE	Technical Advisor	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐
George Brown, PE	Water Lead; Water Treatment Systems and Conveyance and Storage; Pump Stations; Project Management/Owner's Representative/Cost Estimating; Engineering Plan Review	☒	☒	☒	☒	☒	☐	☒	☐	☐	☐
Alonso Griborio, PhD, PE	Wastewater Lead; Wastewater Treatment Plant Process Engineering	☐	☒	☒	☒	☒	☒	☒	☒	☒	☒
Lucia Medina, PE	Stormwater Lead; Stormwater Collection and Conveyance; GIS	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
Monique Durand, PE	Water Treatment Systems and Conveyance and Storage; Permitting/Regulatory	☒	☒	☒	☒	☒	☒	☐	☒	☐	☒
Isuru Abeysiriwardana, PhD, EI	Wastewater Treatment Plant Process Engineering	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
Christopher Kish, PE, ENV SP	Wastewater Conveyance Systems (Force Mains); Gravity Sewer Systems	☐	☐	☐	☒	☒	☐	☐	☒	☐	☐
David Bannett, PE, LEED AP	Gravity Sewer Systems	☐	☒	☐	☐	☒	☒	☒	☐	☒	☒
Jennifer McMahon, PE	Wastewater Conveyance Systems (Force Mains); Pump Stations; Mechanical; Engineering Plan Review	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒
Rachel Loffing, EI	Stormwater Collection and Conveyance; NPDES/MS4 Permitting; GIS	☒	☒	☐	☐	☒	☒	☒	☒	☐	☒
Evan Curtis, PE	Instrumentation/SCADA	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
Alfredo Jimenez	Instrumentation/SCADA	☒	☒	☒	☒	☒	☒	☒	☐	☐	☒
Jose Cano, PE	Electrical	☐	☐	☐	☐	☐	☐	☒	☐	☐	☐
James Broad	Electrical	☒	☐	☒	☐	☒	☒	☒	☐	☐	☐

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Continuing Professional Engineering Services Cooper City, Florida	6	General Consultant Services Hollywood, Florida
2	General Consulting Services Hallandale Beach, Florida	7	General Consulting Services Sunrise, Florida
3	Continuing Consulting Engineering Services Plantation, Florida	8	General Water and Wastewater Services Miramar, Florida
4	General Water Consultant Agreement Fort Lauderdale, Florida	9	Water, Wastewater, and Reclaimed Water Continuing Engineering Services Boca Raton, Florida
5	General Wastewater and Water Engineering Services Broward County, Florida	10	Water and Wastewater General Engineering Consultant Margate, Florida

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS											
26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Orlando Castro, PE, DBIA	Structural; Project Management/Owner's Representative/Cost Estimating	☐	☒	☒	☒	☐	☒	☒	☐	☐	☐
Jean Paul Silva, PE	Structural	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
David Witte, PE, CEM	Mechanical	☐	☐	☐	☒	☒	☐	☒	☐	☐	☒
Elie Andary, PhD, PE	Construction Management/Administration/CEI	☒	☒	☒	☒	☒	☐	☒	☐	☐	☐
Leonardo Galvan	Construction Management/Administration/CEI	☐	☒	☐	☒	☐	☐	☐	☐	☐	☐
Sharon Simington	Grant Management	☒	☐	☒	☒	☒	☒	☐	☐	☐	☒
Marta Alonso, PE, ENV SP	Grant Management; Permitting/Regulatory	☒	☒	☒	☐	☒	☒	☒	☐	☐	☒
Ryan Nagel, PE, PMP, ENV SP	Asset Management	☐	☐	☐	☒	☒	☐	☒	☐	☐	☐
Alexandra Kelly, PE, ENV SP	Asset Management; I/I	☐	☐	☒	☐	☐	☒	☐	☐	☐	☐
Guillermo Regalado, PE	Hydraulic Modeling; Climate Change/Resilience	☒	☒	☐	☒	☒	☒	☒	☐	☐	☒
Nandita Ahuja, PE	Hydraulic Modeling	☐	☒	☐	☐	☐	☐	☒	☐	☐	☐
Enrique Vadiveloo, PE, ENV SP	Climate Change/Resilience	☐	☐	☒	☒	☐	☒	☒	☐	☐	☐
Gerrit Bulman, PG	Hydrogeological/Well Engineering	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒
Angela Giuliano, PG	Hydrogeological/Well Engineering	☐	☒	☒	☒	☒	☒	☒	☒	☐	☒
Ethan Heijn, PE	I/I	☐	☒	☒	☒	☒	☐	☒	☐	☒	☒

29. EXAMPLE PROJECTS KEY			
NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Continuing Professional Engineering Services Cooper City, Florida	6	General Consultant Services Hollywood, Florida
2	General Consulting Services Hallandale Beach, Florida	7	General Consulting Services Sunrise, Florida
3	Continuing Consulting Engineering Services Plantation, Florida	8	General Water and Wastewater Services Miramar, Florida
4	General Water Consultant Agreement Fort Lauderdale, Florida	9	Water, Wastewater, and Reclaimed Water Continuing Engineering Services Boca Raton, Florida
5	General Wastewater and Water Engineering Services Broward County, Florida	10	Water and Wastewater General Engineering Consultant Margate, Florida

The Hazen team offers award-winning national expertise through local water, wastewater, reclaimed water, and stormwater-focused engineers with in-depth experience in the disciplines being submitted—**"Water, Wastewater, Stormwater" and "Other."**

Firm Qualifications

Hazen and Sawyer, a professional corporation wholly owned by employees of the firm, was incorporated on June 16, 1977 in the State of New York. Hazen's roots go back over 100 years to the accomplishments of Allen Hazen, one of the pioneers of modern water supply engineering and co-developer of the Hazen-Williams formula for fluid flow in pipes in 1903. Hazen was established by Hazen's son Richard and Alfred W. Sawyer in 1951. Together they created a company culture focused on the profession—not just the business—of engineering. Their legacy is a firm with a reputation for high-quality work and customer service. Since 1951, Hazen has focused on two critical activities: Helping our clients provide safe drinking water to their customers and controlling water pollution and resultant effects on the environment. Hazen's exclusive focus is water resources engineering. We provide comprehensive capabilities in areas including, but not limited to, evaluation, planning, design, and permitting; hydraulic modeling; regulatory compliance; grant funding; construction management and administration; and startup, training, and operations assistance. Hazen has served utilities with complete in-house engineering services from our regional headquarters/design center in Hollywood, Florida, since 1968.

73 years in **existence**

56 years in **Florida**

100% of work devoted to **the water environment**

1021-699

Hazen has a local office in Broward County, Florida.

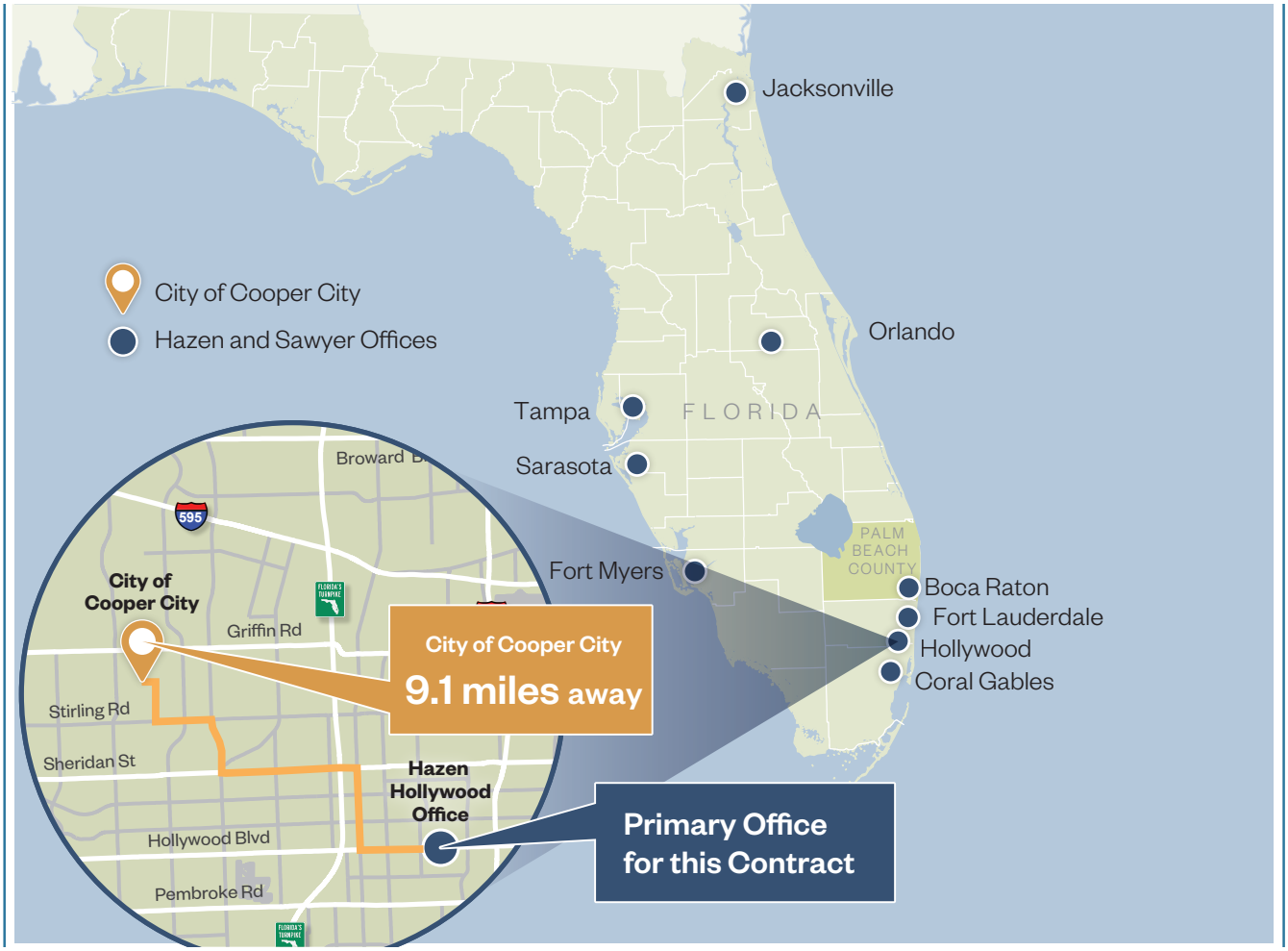
Hazen has nine offices in Florida strategically located to provide full engineering services our clients. Our local Hollywood office will be leading projects for the City of Cooper City. **When needed, over 120 supporting engineers and technical staff are available in Hazen offices within an hour of the City. Our Hollywood office is home to a staff of 76.**

Office in Charge of Managing Work

Hazen and Sawyer
4000 Hollywood Boulevard, Suite 750N
Hollywood, FL 33021
(954) 987-0066 (office)
(800) 304-8791 (fax)

www.hazenandsawyer.com

Contact Person
Janeen Wietgrefe, PE, PMP, Vice President
Hollywood Office
(954) 987-0066 (office)
jwietgrefe@hazenandsawyer.com



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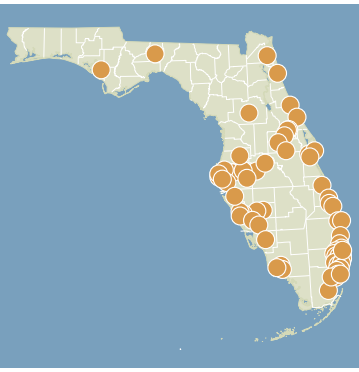
General Consulting Experience



Hazen has served as general consultant for more than 80 utilities in Florida, including City of Cooper City. Many of these utilities have retained us for multiple continuing contracts and are long-standing, repeat assignments.

Our general consulting assignments include water, wastewater, reclaimed water, and stormwater experience. We are also providing planning, design, permitting, construction, start-up, and troubleshooting of membrane treatment plants along with the refurbishment and replacement of water and wastewater infrastructure.

Water Supply
Led the design and permitting of **more than 50 facilities in Florida with an installed capacity of over 1.5 billion gallons per day**

Wastewater Treatment
Designed **1+ billion gallons per day of plant upgrades in the last 10 years** (cumulative capacity)

Water Treatment
Designed **1+ billion gallons per day of plant upgrades** over the last 15 years (cumulative capacity)

Water Distribution
Designed more than 3.2 million linear feet of water pipe larger than 6 inches

Pumping Systems
Designed new or upgraded **more than 150 pump stations throughout Florida**

Stormwater Management
Assisted many communities with master planning for stormwater impacts

Resilience
Assisted many coastal communities with **planning for sea level rise and stormwater impacts**

Asset Management
Physically assessed **more than 10,000 assets and 20 treatment plants** throughout Florida

Construction Management
Oversaw construction of **more than $8 billion in water infrastructure** over the past decade

Effluent Disposal
Designed and overseeing construction of **deep injection wells in Broward County~.**

Instrumentation
Instrumentation & control system design and process optimization studies **on numerous projects since the firm's founding in 1951.**

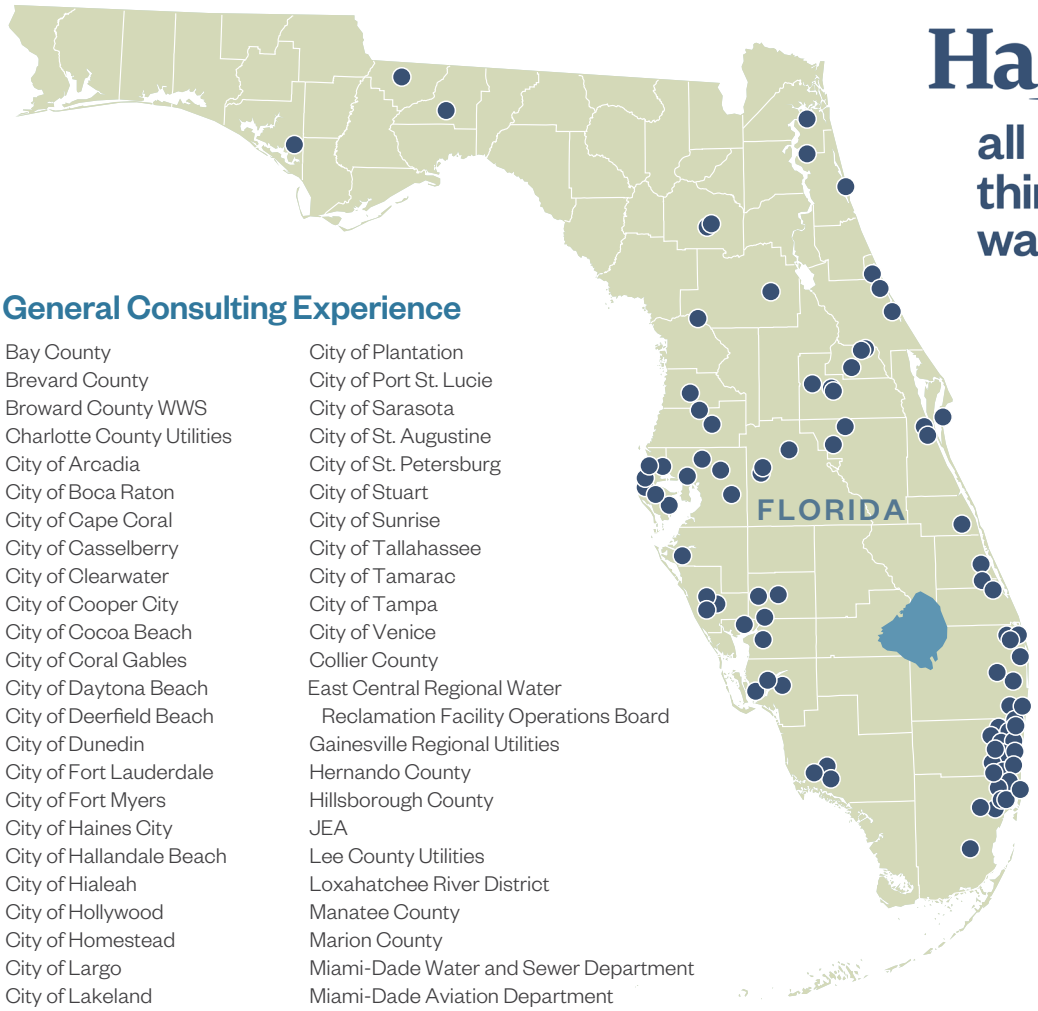
Reclaimed Water
Worked on reclaimed water projects at **24 facilities in Florida** and involved in Florida's regulation process for direct and indirect potable reuse.

Hydraulic Modeling
Modeling expertience includes **2,000+ sewer lift stations and 4,000+ miles of water and force mains**

Wastewater Collection
Provided I/I flow reduction and rehabilitation for **6,740+ miles of sewer**

1021-699

Hazen's extensive experience working on general consulting contracts (current and past) is highlighted in the map below.



Hazen
all things water®

General Consulting Experience

Bay County
Brevard County
Broward County WWS
Charlotte County Utilities
City of Arcadia
City of Boca Raton
City of Cape Coral
City of Casselberry
City of Clearwater
City of Cooper City
City of Cocoa Beach
City of Coral Gables
City of Daytona Beach
City of Deerfield Beach
City of Dunedin
City of Fort Lauderdale
City of Fort Myers
City of Haines City
City of Hallandale Beach
City of Hialeah
City of Hollywood
City of Homestead
City of Largo
City of Lakeland
City of Marco Island
City of Margate
City of Melbourne
City of Miami Beach
City of Miramar
City of Naples
City of North Lauderdale
City of North Miami
City of North Miami Beach
City of North Port
City of Oakland Park
City of Ocoee
City of Oldsmar
City of Orlando
City of Pembroke Pines
City of Plant City
City of Plantation
City of Port St. Lucie
City of Sarasota
City of St. Augustine
City of St. Petersburg
City of Stuart
City of Sunrise
City of Tallahassee
City of Tamarac
City of Tampa
City of Venice
Collier County
East Central Regional Water Reclamation Facility Operations Board
Gainesville Regional Utilities
Hernando County
Hillsborough County
JEA
Lee County Utilities
Loxahatchee River District
Manatee County
Marion County
Miami-Dade Water and Sewer Department
Miami-Dade Aviation Department
Northwest Florida Water Management District
Orange County Utilities
Orlando Utilities Commission
Palm Beach County Water Utilities Department
Pasco County Utilities
Peace River Manasota Regional Water Supply Authority
Pinellas County
Polk County Utilities
St. Lucie County
Sarasota County
Seminole County
Seminole Tribe of Florida
South Central Regional Wastewater Treatment and Disposal Board
South Florida Water Management District
Southwest Florida Water Management District
St. Johns River Water Management District
Tampa Bay Water
Toho Water Authority
Town of Bay Harbor Islands
Town of Highland Beach
Town of Jupiter
University of Florida Utilities Commission, City of New Smyrna Beach
Village of Wellington
Villages Community Development Districts
Withlacoochee Regional Water Supply Authority

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Our projects earn **national and local recognition.**

2022

Institute of Sustainable Infrastructure Bronze Envision® Award
Cocoplum 1 Pump Station and Force Main Improvements, City of Coral Gables, FL

2022

ASCE-FL Section Large Project of the Year
Emergency Pipeline Project, City of Fort Lauderdale, FL

2021

ACEC-FL Grand Award; Trenchless Technology Honorable Mention

ASCE-FL Broward Branch Project of the Year
Emergency Pipeline Project, City of Fort Lauderdale, FL

2021

DBIA Design-Build Honor Award – Water/Wastewater
San Carlos Pumping Station Rehabilitation Project, City of Tampa, FL

2021

NAEP Environmental Excellence Award
NYCDEP East Side Coastal Resiliency EIS
New York, NY

2019

ASCE Palm Beach Outstanding Project of the Year, ECRWRF Biosolids Improvements Project, ECRWRF, West Palm Beach, FL

2018

Resilient Utility Coalition Resilient Project of the Year
Cocoplum 1 Pump Station and Force Main Improvements, City of Coral Gables, FL

2018

ENR Mid-Atlantic Best Water/Environment Project of the Year
SWIFT Research Center
Hampton Roads Sanitation District, VA

US Water Prize
SWIFT Initiative
Hampton Roads Sanitation District, VA

2017

Best Overall in the Water/Wastewater Category – FL Region Design-Build Awards
Intercoastal Waterway Crossings at Las Olas Blvd.
City of Fort Lauderdale, FL

2016

2016 FWEA Reuse System of the Year
Loxahatchee River Environmental Control District
South Florida

2014

FICE Florida Grand Conceptor Award; ACEC National Recognition Award
South District WWTP High-Level Disinfection Upgrade, Miami-Dade Water and Sewer Dept., FL

2011

FICE FL Engineering Excellence Award
Arlington East BNR Upgrade
JEA, Jacksonville, FL

2008

APWA Project of the Year
Membrane Facility Expansion, City of Hallandale Beach, FL

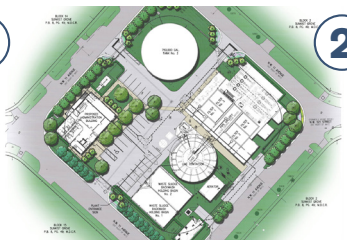
CMAA Project Achievement Award Southeast Construction Best Civil Project
Peele-Dixie Membrane Plant, City of Fort Lauderdale, FL

1021-699

Water Treatment Plant Experience

Designed more than
1 BILLION
gallons per day
of plant upgrades
over the last
15 years

Hazen has designed over 15 water treatment plants in South Florida alone, including both membrane and lime softening plants. The experience gained in the successful execution of these projects is of direct value to our clients.



1. Fort Lauderdale Peele Dixie Membrane Plant

Design and construction oversight for a 12-mgd membrane softening facility, two 4-mg storage tanks, related chemical storage and feed facilities, air strippers/clear well, and high service and transfer pump stations.

2. North Miami Winson Water Treatment Plant

Directly involved in the design and process improvements to the Winson WTP, raw water supply wells, and future above groundwater storage tanks.

3. Fort Lauderdale Dixie Wellfield Improvements

Planning, design, permitting, bidding assistance, services during construction for 20-mgd Biscayne Aquifer wellfield and 16,000 ft of raw water pipeline to supply the 12-mgd Peele-Dixie Membrane WTP.

4. Town of Jupiter Nanofiltration Facility

Design, permitting and pilot testing oversight services for a new 14.5-mgd Nanofiltration Facility (expandable to 17 mgd). Innovative center-feed design provides annual 30% savings in electrical costs.

5. Hallandale Beach 6-mgd Membrane Softening Facility

Design, bidding, permitting, construction management services, as well as oversight, pilot testing, start-up coordination, and first-year operational assistance.

6. Cooper City Bench-Scale Testing

Conducted bench-scale testing with Hazen's mobile laboratory to assess the impact on disinfection by-products of changing the chlorination strategy from monochloramine to free chlorine in the water tanks.

Wastewater Treatment Plant Experience

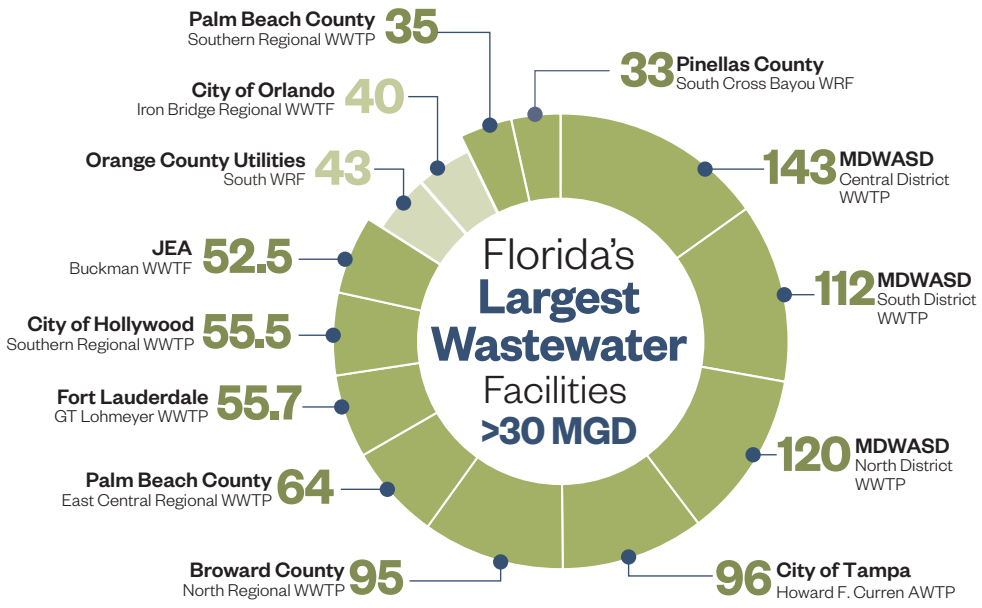
Designed more than **1 BILLION** gallons per day **of WW plant upgrades** over the last 10 years

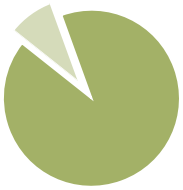
Hazen has performed planning and/or design for over 40 wastewater treatment plants in Florida. In addition, Hazen has been designing basic collection system elements for over seven decades in the United States and overseas.

In connection with these services, Hazen conducted process and optimization evaluations, prepared/processed permits, performed engineering analyses, conducted hydraulic modeling, prepared cost estimates, developed bid and contract documents, and provided start-up and operations assistance.

The firm and staff have developed unique expertise for collection and treatment system design and construction techniques in the Florida area. Our staff has experience with almost every available pipe material, pump, and pump drives offered in both national and international markets.

Hazen has provided significant design services at 91% of the largest wastewater treatment plants in the state. These include new facilities and subsequent upgrades. Most of these are repeats assignments for subsequent expansions.





Plants where Hazen provided significant design services

Plants designed by others

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Stormwater Experience

Hazen has provided **STORMWATER** services for **33 Florida Clients** since **1968**

Hazen has provided stormwater consulting services in Florida for over six decades and served as general stormwater consultant to numerous municipalities.

Hazen understands the importance of leveraging existing stormwater infrastructure to aid in the improvement of the system

to address the dynamic flood management, coastal resiliency, and water quality challenges that municipalities continue to face in Florida.

Efforts include numerous completed projects related to stormwater management design and permitting; stormwater utility development, implementation, and operations; and regulatory assistance, including NPDES programs and projects. Much of our experience is related to Clean Water Act resultant programs and retrofitting existing drainage/stormwater management systems to improve flood control and meet water quality objectives. Hazen has completed Stormwater Master Plans (or plan updates) for the Cities of Hollywood, Plantation and Stuart, St. Lucie County, Sarasota County, and the Town of Jupiter. Additionally, we have completed numerous basin studies throughout Florida.

1. Town of Jupiter Stormwater Consultant

Hazen has served as the General Stormwater Consultant for the Town of Jupiter for over 15 years, and in this capacity has provided stormwater planning, design, permitting, plan review, and construction oversight services. During this time, Hazen has become an extension of the Town's staff and has helped ensure the continued reliability of the stormwater system. This experience helps demonstrates our vast understanding of the potential climate change impacts in Southeast Florida.

2. Fort Lauderdale Stormwater Master Plan Modeling and Design Implementation Services

Hazen was selected in 2016 as the Program Manager for delivery of a new stormwater master plan and implementation of designs to address chronic flooding, other stormwater management challenges, and sea level rise adaptation. The City covers 23,000 acres of highly-urbanized neighborhoods, with much of its coastal land area within the floodplain and numerous rivers and tributaries running throughout the City. The project team evaluated long-range solutions that perform effectively over a broad range of climatological and other uncertain future conditions.

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Pump Station and Pump System Experience

Hazen has designed over **10.9 BILLION gallons per day** in pumping capacity firmwide.

Hazen's Florida pump station and booster station design experience includes more than 200 projects. Projects range from new regional stations to rehabilitation of existing prefabricated pumping units.

Our staff has experience with almost every available pump technology and pump drive offered. Through this experience, we have developed knowledge regarding the main pump manufacturers on the current market, allowing us to assess the best technology for each application.

In addition, many of our lift station and pump station projects have included hydraulic modeling analysis for pump and distribution system operation, and ground storage tank design. CFD models allow Hazen to evaluate operational scenarios and design modifications for storage tanks. These proactive efforts allow our team to identify the best mixing and tank operation approach during design.

Pump Station Services

Hazen is synonymous with hydraulics and pumping.

Stormwater	Wastewater	Water
8 Facilities Over 100 mgd	23 Facilities Over 100 mgd	11 Facilities Over 100 mgd

1. North Miami Beach Pump Station Improvement Program

Hazen was responsible for designing and permitting two of the stations on a fast-track basis to obtain approval from DERM as well as the State Revolving Loan Fund (SRF), the entity funding the project. Once complete, the City requested that Hazen perform a constructability review of all 10 stations based on our knowledge of the City's standards and experience.

2. Hialeah, FL Pump Station Improvement Program

As part of the Pump Station Improvement Program (PSIP), the City proposed upgrades to 14 pump stations. Improvements were performed to satisfy regulatory requirements, replace aging infrastructure, increase reliability, and standardize all stations on a submersible type configuration. Improvements replaced mechanical, electrical, structural, and instrumentation components in 14 submersible pump stations along with associated force main improvements ranging in size from 8 - 16 inches. This project has been ongoing for more than 15 years and we have designed upgrades for over 35 pump stations, including 2 master pump stations.

Collection, Transmission and Distribution Experience

Hazen has designed over **$1.8 billion** of water and wastewater pipelines in Florida using both open-cut and trenchless technologies.

Hazen has been designing wastewater collection/ transmission systems, water distribution, and stormwater systems for over six decades. Our staff has experience with almost every available pipe material offered in both national and international markets.

Hazen's experience in conveyance systems covers the full range of services including initial planning, preliminary and detailed design, permitting, hydraulic modeling including numerous hydraulic studies and network analyses, and construction management. We have supported municipalities in the relocation of utilities for road conflicts, expanded distribution systems to create loops for improving water quality and assisted with the rehab and replacement of gravity sewer, force mains, and water distribution piping.

Hazen's engineers have designed numerous potable water mains, reclaimed water mains, wastewater force mains, and gravity sewers. Many of these projects have incorporated open-cut, horizontal directional drilling (HDD), microtunneling, and jack and bore techniques.

1. Fort Lauderdale Andrews Avenue Water Main Replacement

Hazen provided design, permitting, bidding, and services during construction of 15,100 feet of ductile iron pipe along a six-lane highly urbanized right-of-way. The water main ran along Andrews Avenue between SR 84 and SW 7th Avenue. Maintenance of traffic plans were designed to ensure access to the many commercial and public facilities along Andrews Avenue.

2. Fort Lauderdale Intracoastal Waterway Crossing

Hazen served as the Design Criteria Professional (Water) for preparation of the design criteria package (DCP) for the water main replacement and also provided permitting services. This award-winning project included replacement of the existing 16-inch subaqueous water main with a deeper 20-inch-diameter water main.

3. Hollywood WWTP Improvements – New Effluent Force Main and Injection Well Pump Station

Hazen provided design, permitting, bidding, and construction management services for the Seminole Tribe of Florida. The project included construction of a new 24-inch effluent force main under Florida's Turnpike, installed with horizontal directional drilling. The effluent force main also crossed a section of the Hollywood Reservation community where the pipe was also installed with horizontal directional drilling. A new injection well pump station was constructed at the WWTP site to receive the effluent water of the new WWTP and membrane concentrate from the existing WTP.

Water Distribution Experience

Hazen's experience in water conveyance systems covers the full range of services, including initial planning, preliminary and detailed design, permitting, hydraulic modeling including numerous hydraulic studies and network analyses, and construction management. We have supported municipalities in the relocation of utilities for road conflicts, expanded distribution systems to create loops for improving water quality, and assisted with the rehab and replacement of water distribution piping.

The major capital investment of a water utility is in the water distribution system. These systems consist of transmission mains, distribution lines, services, and meters.

Our recent water main experience includes a key project with Fort Lauderdale, the Las Olas Boulevard Intracoastal Waterway Crossing. For this project, Hazen prepared a design criteria package (DCP) for replacing a 16-inch sub-aqueous water main with a deeper 20-inch water main to cross the Intracoastal Waterway at Las Olas Boulevard, as well as provided permitting assistance. The City decided to install a new 16-inch diameter sub-aqueous wastewater force main on the south side of the Las Olas Boulevard Bridge. Hazen partnered with another consultant to prepare the DCP documents for the sewage force main.

The Las Olas Boulevard Intracoastal Waterway Crossing was recognized with the 2017

Design-Build Institute of America's Florida Region Best Overall in Water/Wastewater Award.

Las Olas Boulevard Intracoastal Waterway Crossing

City of Fort Lauderdale, FL

Dredging planned for the Intracoastal Waterway (ICW) required rapid replacement of the City of Fort Lauderdale's water main at the Las Olas Boulevard bridge at a deeper elevation or risk cutting of the water main. The City completed the replacement water main crossing of the ICW at Las Olas Boulevard in record time (6 months) via collaborative design-build procurement to accelerate project delivery. The design-build resulted in completing the project 20 percent faster than traditional methods. Hazen served as the design criteria professional for the water main replacement. Another team member prepared the DCP drawings for the 16-inch force main intracoastal waterway crossing.

DBIA Design-Build '17
BEST OVERALL IN WATER/WASTEWATER
Las Olas Boulevard Intracoastal Waterway Crossing, City of Fort Lauderdale
Florida Region Design-Build Institute of America Awards

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Reclaimed Water Experience

Hazen has worked at **24** reclaimed water facilities in Florida totaling over **400 MILLION** gallons per day in capacity

Reclaimed water is a core business of Hazen. We are a leader in the planning and implementation of effluent reclaimed water programs in Florida.

Our expertise covers the planning, permitting, design, construction, and operations of water reclamation facilities and distribution systems across the full range of treatment processes, water quality, and regulatory requirements.

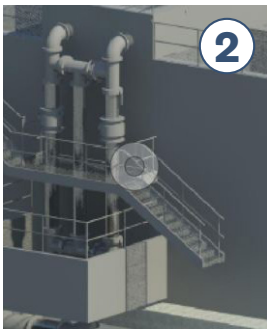
For over five decades, Hazen has worked with local utilities staff to evaluate, plan, and implement reclaimed water opportunities to satisfy our clients' most challenging needs while achieving and exceeding the regulatory requirements of the Florida Department of Environmental Protection.

Hazen's Florida reuse experience dates back to 1986.

We've completed numerous projects since then, and Hazen is at the forefront of reclaimed water research.

1986: Loxahatchee River District

Master planning and implementation of the first regional reuse system in South Florida.



1. City of Hollywood Indirect Potable Reuse Pilot Test

Pilot testing demonstrated that advanced oxidation provides effective treatment for recharging the aquifer with highly treated wastewater effluent at a lower cost than reverse osmosis.

2. Broward County North Regional WWTP Reclaimed Water Plant Expansion to 26 mgd

Process mechanical and structural design to filter and disinfect additional secondary effluent using upflow sand bed filters.

3. City of Miramar Wastewater Reclamation Facility Reuse Phase I Expansion to 7.5 mgd

The Reclaimed Water Expansion Phase I project included expansion of the existing 5-mgd reclaimed water treatment and distribution system processes to 7.5 mgd.

4. Palm Beach County Southern Region WRF

Preliminary design, final design, permitting, bidding and construction phase engineering for original SRWRF design and the subsequent Phase II and 5-mgd Capacity Upgrade projects.

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Project Team/Manager's Experience

The Hazen team's ability to consistently deliver quality services and work products is a direct result of having the **right team members committed to the project.**

We have assembled a qualified team to serve the City, as demonstrated in the organizational chart in Section D. Our project team emphasizes concise and direct communication lines between key Hazen staff and the City. We understand that clients select consultants based on team qualifications, and we have proposed individuals who will work on your project—what you see is what you get. In addition, many of our team members have worked together on previous and current projects.

Our proposed key team members are primarily local South Florida staff, which is a significant benefit to the City in that access to a range of experienced engineers and construction management and inspection staff are just a short drive away. Our team leadership consists of staff members who have worked together for many years, with some relationships spanning 20+ years. The most experienced individuals lead our projects, ensuring that our clients are provided with effective and efficient project development, implementation, and completion. Our team leadership is further strengthened by seasoned technical experts (in all required disciplines), who have performed numerous projects of a similar nature. Our Project Manager, Janeen Wietgrefe, PE, PMP, will be supported by our proposed team members representing major engineering and support disciplines.

Brief resumes detailing the relevant experience of key team members are provided in Section E. Additional qualifications on our Project Manager and the contact information for all proposed team members, as requested in Addendum 6, is included on the following pages.

CITY OF Cooper City
Someplace Special

Janeen Wietgrefe, PE, PMP
Project Manager

Ms. Wietgrefe will remain as the Project Manager throughout the term of the contract and will be responsible for the following:

- Direction of all work
- Review of all work
- Approval of all work
- Interpretation of scope
- Program administration for contract compliance
- Project budget
- Coordination with City staff

George Brown, PE
Water Lead

Alonso Griborio, PhD, PE
Wastewater Lead

Lucia Medina, PE
Stormwater Lead

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Project Manager

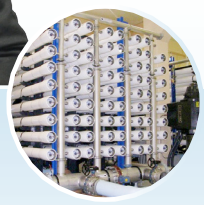
Janeen Wietgrefe, PE, PMP

Ms. Wietgrefe has extensive experience in the design, piloting, construction oversight, and/or testing of membrane plants in South Florida for over 20 years. She has served in capacities ranging from Lead Process Mechanical Design Engineer to Project Manager, Project Director, and Design Manager.

- Serves as Project Manager for several water and wastewater projects completed under the Cooper City Continuing Professional Services agreement since 2009.
- Experience ranges from planning for future water infrastructure for clients to providing design, permitting, budgeting, construction management, and operational assistance services for water and wastewater projects.
- Can perceive the potential treatment and/or permitting issues and steer the team clear of those obstacles.
- Serving as Owner's Advisor to the Cities of Fort Lauderdale and Delray Beach.

City of Cooper City Water Storage Tank Replacement

- Prepared an evaluation of repair/replacement options for the tank. Phase I included design, permitting, and bidding services. Phase 2 services included construction management and inspection services and project closeout with regulatory agencies.



City of Hallandale Beach 6-mgd Expandable Membrane Plant

- Project Manager/ Process Mechanical Engineer for the design, construction, and start-up phases. Also provided construction management services. The facility included a concentrate booster pump station for injection well disposal.

City of Cooper City Continuing Professional Services

- Project Manager for water and wastewater projects. Projects include the Pine Island Road Pump Station, Lift Stations 2 and 49 Improvements, Master Plan Update of the Feasibility Review of Infrastructure Improvements for Wastewater, and the Effluent Reuse and Disposal Master Plan.

City of Plantation Continuing Consulting Engineering Services

- Project Manager who provides multiple engineers to the City to assist with operational assistance at the East and Central membrane plants and at the Regional WWTP as well as complete design through construction management services for various facility projects.

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H. ADDITIONAL INFORMATION

Company address, phone number, E-Mail address, and web site for each team member

Name	Role	Office/Address	Contact Information
Janeen Wietgrefe, PE, PMP	Project Manager	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 jwietgrefe@hazenandsawyer.com www.hazenandsawyer.com
Patrick Davis, PE	Principal-in-Charge	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 pdavis@hazenandsawyer.com www.hazenandsawyer.com
Robert Taylor, Jr., PE	Technical Advisor	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 rbtaylor@hazenandsawyer.com www.hazenandsawyer.com
Patricia Carney, PE, DBIA, BCEE	Technical Advisor	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 pcarney@hazenandsawyer.com www.hazenandsawyer.com
John Burke, PE	Technical Advisor	Hazen and Sawyer 7751 Belfort Pkwy Suite 110 Jacksonville, FL	(904) 296-1503 jburke@hazenandsawyer.com www.hazenandsawyer.com
George Brown, PE	Water Lead; Water Treatment Systems and Conveyance and Storage; Pump Stations; Project Management/ Owner's Rep/Cost Estimating; Engineering Plan Review	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 gbrown@hazenandsawyer.com www.hazenandsawyer.com
Alonso Griborio, PhD, PE	Wastewater Lead; Wastewater Treatment Plant Process Engineering	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 agriborio@hazenandsawyer.com www.hazenandsawyer.com
Lucia Medina, PE	Stormwater Lead; Stormwater Collection and Conveyance; GIS	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 lmedina@hazenandsawyer.com www.hazenandsawyer.com
Monique Durand, PE	Water Treatment Systems and Conveyance and Storage; Permitting/ Regulatory	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 mdurand@hazenandsawyer.com www.hazenandsawyer.com
Isuru Abeysiriwardana, PhD, EI	Wastewater Treatment Plant Processing	Hazen and Sawyer 2420 S. Lakemont Ave. # 325 Orlando, FL 32814	(407) 367-2626 iabeysiriwardana@hazenandsawyer.com www.hazenandsawyer.com
Christopher Kish, PE, ENV SP	Wastewater Conveyance Systems (Force Mains); Gravity Sewer Systems	Hazen and Sawyer 999 Ponce de Leon # 1150 Coral Gables, FL 33134	(305) 443-4001 ckish@hazenandsawyer.com www.hazenandsawyer.com
Jennifer McMahon, PE	Wastewater Conveyance Systems (Force Mains); Pump Stations; Mechanical; Engineering Plan Review	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 jmcmahon@hazenandsawyer.com www.hazenandsawyer.com
Rachel Loffing, EI	Stormwater Collection and Conveyance; GIS; NPDES/ MS4 Permitting	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 rloffing@hazenandsawyer.com www.hazenandsawyer.com
David Bannett, PE, LEED AP	Gravity Sewer Systems	Hazen and Sawyer 2420 S. Lakemont Ave. # 325 Orlando, FL 32814	(954) 987-0066 dbannett@hazenandsawyer.com www.hazenandsawyer.com
Evan Curtis, PE	Instrumentation/SCADA	Hazen and Sawyer 2101 Corporate Blvd NW # 301 Boca Raton, FL 33431	(561) 997-8070 ecurtis@hazenandsawyer.com www.hazenandsawyer.com
Alfredo Jimenez	Instrumenttaion/SCADA	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 ajimenez@hazenandsawyer.com www.hazenandsawyer.com
Jose Cano, PE	Electrical	Hazen and Sawyer 999 Ponce de Leon # 1150 Coral Gables, FL, 33134	(305) 443-4001 jcano@hazenandsawyer.com www.hazenandsawyer.com

H. ADDITIONAL INFORMATION

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Jean Paul Silva, PE	Structural	Hazen and Sawyer 2101 Corporate Blvd NW # 301 Boca Raton, FL 33431	(561) 997-8070 jsilva@hazenandsawyer.com www.hazenandsawyer.com
David Witte, PE, CEM	Mechanical	Hazen and Sawyer 498 Fashion Ave # 11 New York, NY	(212) 539-7000 dwitte@hazenandsawyer.com www.hazenandsawyer.com
Elie Andary, PhD, PE	Construction Management/ Administration/CEI	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 eandary@hazenandsawyer.com www.hazenandsawyer.com
Leonardo Galvan	Construction Management/ Administration/CEI	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 lgalvan@hazenandsawyer.com www.hazenandsawyer.com
Sharon Simington	Grant Management	Hazen and Sawyer 1000 N Ashley Dr. Tampa, FL	(813) 630-4498 ssimington@hazenandsawyer.com www.hazenandsawyer.com
Marta Alonso, PE, ENV SP	Grant Management; Permitting/Regulatory	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 malonso@hazenandsawyer.com www.hazenandsawyer.com
Alexandra Kelly, PE, ENV SP	Asset Management; I/I	Hazen and Sawyer 999 Ponce de Leon # 1150 Coral Gables, FL 33134	(305) 443-4001 akelly@hazenandsawyer.com www.hazenandsawyer.com
Ryan Nagel, PE, PMP, ENV SP	Asset Management	Hazen and Sawyer 4500 Main St #500 Virginia Beach, VA	(757) 497-0490 rnagel@hazenandsawyer.com www.hazenandsawyer.com
Guillermo Regalado, PE	Hydraulic Modeling; Climate Change/Sustainability/ Resilience	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 gregalado@hazenandsawyer.com www.hazenandsawyer.com
Nandita Ahuja, PE	Hydraulic Modeling	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 nahuja@hazenandsawyer.com www.hazenandsawyer.com
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Gerrit Bulman, PG	Hydrogeological/Well Engineering	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 gbulman@hazenandsawyer.com www.hazenandsawyer.com
Angela Giuliano, PG	Hydrogeological/Well Engineering	Hazen and Sawyer 2101 Corporate Blvd NW # 301 Boca Raton, FL 33431	(561) 997-8070 agiuliano@hazenandsawyer.com www.hazenandsawyer.com
Ethan Heijn, PE	I/I	Hazen and Sawyer 4000 Hollywood Blvd # 750N Hollywood, FL 33021	(954) 987-0066 eheijn@hazenandsawyer.com www.hazenandsawyer.com

Litigation, bankruptcy, foreclosure, etc.

Hazen has not been involved in any bankruptcy, mortgage foreclosures restrictions, restraints or impositions imposed by federal or state regulatory agencies such as Federal Housing Administration, Securities and Exchange Commission, etc., that apply to the proposer/ contractor/developer. Information regarding litigation is provided below.

Litigation

In the last 10 years, the Southeast Region of Hazen has been responsible for approximately $8 billion worth of public works construction. Our litigation record (or lack of it) is excellent. We also want to emphasize that Hazen is not wholly or partly self-insured, hence, our insurer bears the risk and not the client.

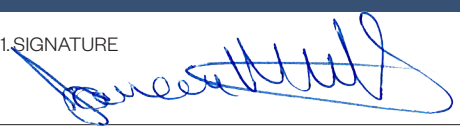
The following table identifies litigation brought against Hazen within the last five years. Please note that none of the listed cases will affect the performance of services to be rendered.

Case Name	Description	Date of Action	Outcome/ Date Closed/ Value	Identification Number
Marc Fodera against The City of New York, The New York City Department of Environmental Protection, The New York City Department of Sanitation and Northeast Remsco Construction, Inc. against Hazen & Sawyer, PC, Bidwell Environmental, LLC and Barbaro Electric Co., Inc.	Fodera, an employee of Barbaro Electric Co., Inc., alleges he tripped and fell on a drainpipe at the Gowanus Canal site.	7/26/17	8/02/2022 Settled $10,000	Index No. 511003/2015
The City of High Point, North Carolina v. Suez Treatment Solutions, Inc., Fidelity and Deposit Company of Maryland and CPPE Carbon Process & Plant Engineering, S.A. and Suez Treatment Solutions, Inc., v. Hazen and Sawyer, P.C.	Suez, a contractor for the City of High Point, brought a third party suit against Hazen and Sawyer in connection with H&S' engineering design services for the City.	7/24/19	5/13/22 Settled $700,000	Civil Action No. 1:19-cv-540
Close Construction, LLC v. City of Riviera Beach Utility Special District, C Solutions, Mark Drummond v Hazen and Sawyer	C Solutions, engineer for the City of Riviera Beach seeks indemnity from Hazen as its subcontractor.	11/9/20	9/20/21 Dismissed	Case No. 16 CA 013117 MB-AF
Michael and Josephine D'Amato vs. WDF Development, LLC, WDF, Inc., American Insurance Group, American Insurance Corporation, American International Group, Inc., Insurance Co. of the State of PA, "John Doe," Lasalle LaSalle & Dwyer, PC, Sean P. Dwyer, Leo Dudin, Anthony Colaizzi, and Hazen and Sawyer.	Michael D'Amato an employee of the City of New York alleges he was caused to trip and fall as a result of the negligence of WDF Development, LLC.	9/30/20	3/08/21 Settled	Index No. 157484/2020
Michael Patrick Corbett, Jr. and Lisa Corbett against Skanska USA, Inc., Hazen & Sawyer, AECOM USA, Inc., and ARCADIS U.S., Inc	Michael Corbett an employee of the City of New York alleges he contracted a bronchial infection while working at the Croton Filtration Plant from 2012 through Feb. 2016.	2/15/19	Open	Index No.: 21995/2019E
Gregory Bowman against City of New York, Skanska-Picone, J.V. and Hazen and Sawyer.	Gregory Bowman an employee of Ward Electric alleges he was struck by a cabinet unit at the 26th Ward WWTP.	11/13/19	Open	Index No.: 159692/2019

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts

31. SIGNATURE



32. DATE

December 18, 2024

33. NAME AND TITLE

Janeen Wietgrefe, PE, PMP, Vice President

1021-699

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: Hazen and Sawyer			3. YEAR ESTABLISHED: 1951	4. UNIQUE ENTITY IDENTIFIER: FFSSK2D6MD53
2b. STREET: 4000 Hollywood Boulevard, Suite 750 North			5. OWNERSHIP	
2c. CITY: Hollywood	2d. STATE: FL	2e. ZIP CODE: 33021	a. TYPE: Corporation (Employee-Owned)	
6a. POINT OF CONTACT NAME AND TITLE: Robert Taylor, Jr., PE, Senior Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE MBER: (954) 987-8070	6c. E-MAIL ADDRESS: rbtaylor@hazenandsawyer.com		7. NAME OF FIRM *(If block 2a is a branch office)*: Hazen and Sawyer (Same)	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	191	12
06	Architect	22	
08	CADD Technician	150	4
10	Chemical Engineer	34	
12	Civil Engineer	307	15
15	Construction Inspector	84	6
16	Construction Manager	88	2
18	Cost Engineer/Estimator	6	
20	Economist	6	1
21	Electrical Engineer	124	2
23	Environmental Engineer	517	20
24	Environmental Scientist	41	1
29	GIS Specialist	23	
30	Geologist	7	1
32	Hydraulic Engineer	34	3
39	Landscape Architect	2	
41	Mechanical Engineer	63	
57	Structural Engineer	86	3
58	Technician/Analyst	16	
62	Water Resources Engineer	130	6
	Other Employees		
	Total	**1931**	**76**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W03	Water Resources; Hydrology; Ground Water	9
W02	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: 

b. DATE: November 15, 2024

c. NAME AND TITLE: Robert Taylor, Jr., PE, Senior Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: Hazen and Sawyer			3. YEAR ESTABLISHED: 1951	4. UNIQUE ENTITY IDENTIFIER: FFSSK2D6MD53
2b. STREET: 2101 NW Corporate Boulevard, Suite 301			5. OWNERSHIP	
2c. CITY: Boca Raton	2d. STATE: FL	2e. ZIP CODE: 33431	a. TYPE: Corporation (Employee-Owned)	
6a. POINT OF CONTACT NAME AND TITLE: Kurt Pfeffer, PE, Associate Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER: (561) 997-8070	6c. E-MAIL ADDRESS: kpfeffer@hazenandsawyer.com		7. NAME OF FIRM *(If block 2a is a branch office)*: Hazen and Sawyer (Same)	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	191	2
06	Architect	22	
08	CADD Technician	150	1
10	Chemical Engineer	34	1
12	Civil Engineer	307	2
15	Construction Inspector	84	2
16	Construction Manager	88	2
18	Cost Engineer/Estimator	6	
20	Economist	6	
21	Electrical Engineer	124	1
23	Environmental Engineer	517	7
24	Environmental Scientist	41	1
29	GIS Specialist	23	1
30	Geologist	7	
32	Hydraulic Engineer	34	
39	Landscape Architect	2	
41	Mechanical Engineer	63	
57	Structural Engineer	86	2
58	Technician/Analyst	16	
62	Water Resources Engineer	130	2
	Total	**1931**	**24**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W03	Water Resources; Hydrology; Ground Water	9
W02	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: Kurt A Pfeffer

b. DATE: November 15, 2024

c. NAME AND TITLE: Kurt Pfeffer, PE, Associate Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: Hazen and Sawyer			3. YEAR ESTABLISHED: 1951	4. UNIQUE ENTITY IDENTIFIER: FFSSK2D6MD53
2b. STREET: 1000 N. Ashley Drive, Suite 1000			5. OWNERSHIP	
2c. CITY: Tampa	2d. STATE: FL	2e. ZIP CODE: 33602	a. TYPE: Corporation (Employee-Owned)	
6a. POINT OF CONTACT NAME AND TITLE: Andre Dieffenthaller, PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER: (813) 630-4498	6c. E-MAIL ADDRESS: adieffenthaller@hazenandsawyer.**com**		7. NAME OF FIRM *(If block 2a is a branch office)*: Hazen and Sawyer (Same)	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	191	5
06	Architect	22	
08	CADD Technician	150	5
10	Chemical Engineer	34	3
12	Civil Engineer	307	7
15	Construction Inspector	84	1
16	Construction Manager	88	
18	Cost Engineer/Estimator	6	
20	Economist	6	
21	Electrical Engineer	124	4
23	Environmental Engineer	517	17
24	Environmental Scientist	41	2
29	GIS Specialist	23	1
30	Geologist	7	
32	Hydraulic Engineer	34	1
39	Landscape Architect	2	
41	Mechanical Engineer	63	1
57	Structural Engineer	86	1
58	Technician/Analyst	16	
62	Water Resources Engineer	130	9
	Total	**1931**	**57**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W03	Water Resources; Hydrology; Ground Water	9
W02	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE: November 15, 2024

c. NAME AND TITLE: Andre Dieffenthaller, PE, Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: Hazen and Sawyer			3. YEAR ESTABLISHED: 1951	4. UNIQUE ENTITY IDENTIFIER: FFSSK2D6MD53
2b. STREET: 999 Ponce de Leon Boulevard, Suite 1150			5. OWNERSHIP	
2c. CITY: Coral Gables	2d. STATE: FL	2e. ZIP CODE: 33143	a. TYPE: Corporation (Employee-Owned)	
6a. POINT OF CONTACT NAME AND TITLE: Jayson Page, PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER: (305) 443-4001	6c. E-MAIL ADDRESS: jpage@hazenandsawyer.com		7. NAME OF FIRM *(If block 2a is a branch office)*: Hazen and Sawyer (Same)	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	191	1
06	Architect	22	
08	CADD Technician	150	
10	Chemical Engineer	34	1
12	Civil Engineer	307	10
15	Construction Inspector	84	1
16	Construction Manager	88	1
18	Cost Engineer/Estimator	6	
20	Economist	6	
21	Electrical Engineer	124	3
23	Environmental Engineer	517	3
24	Environmental Scientist	41	1
29	GIS Specialist	23	
30	Geologist	7	
32	Hydraulic Engineer	34	
39	Landscape Architect	2	
41	Mechanical Engineer	63	1
57	Structural Engineer	86	1
58	Technician/Analyst	16	
62	Water Resources Engineer	130	
	Total	**1931**	**23**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W03	Water Resources; Hydrology; Ground Water	9
W02	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

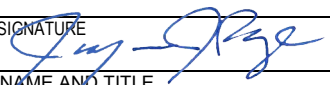
PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE



b. DATE: November 15, 2024

c. NAME AND TITLE: Jayson Page, PE, Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: Hazen and Sawyer			3. YEAR ESTABLISHED: 1951	4. UNIQUE ENTITY IDENTIFIER: FFSSK2D6MD53
2b. STREET: 2420 S. Lakemont Avenue, Suite 325			5. OWNERSHIP	
2c. CITY: Orlando	2d. STATE: FL	2e. ZIP CODE: 32814	a. TYPE: Corporation (Employee-Owned)	
6a. POINT OF CONTACT NAME AND TITLE: Ervin Myers, Jr., PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER: (407) 367-2626	6c. E-MAIL ADDRESS: emyers@hazenandsawyer.com		7. NAME OF FIRM *(If block 2a is a branch office)*: Hazen and Sawyer (Same)	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	191	3
06	Architect	22	
08	CADD Technician	150	3
10	Chemical Engineer	34	
12	Civil Engineer	307	5
15	Construction Inspector	84	1
16	Construction Manager	88	
18	Cost Engineer/Estimator	6	
20	Economist	6	
21	Electrical Engineer	124	
23	Environmental Engineer	517	17
24	Environmental Scientist	41	1
29	GIS Specialist	23	
30	Geologist	7	
32	Hydraulic Engineer	34	1
39	Landscape Architect	2	
41	Mechanical Engineer	63	1
57	Structural Engineer	86	
58	Technician/Analyst	16	
62	Water Resources Engineer	130	2
	Total	**1931**	**34**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W03	Water Resources; Hydrology; Ground Water	9
W02	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 

b. DATE: September 13, 2024

c. NAME AND TITLE: Ervin Myers, Jr., PE, Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: Hazen and Sawyer			3. YEAR ESTABLISHED: 1951	4. UNIQUE ENTITY IDENTIFIER: FFSSK2D6MD53
2b. STREET: 7751 Belfort Parkway, Suite 110			5. OWNERSHIP	
2c. CITY: Jacksonville	2d. STATE: FL	2e. ZIP CODE: 32256	a. TYPE: Corporation (Employee-Owned)	
6a. POINT OF CONTACT NAME AND TITLE: Andre Dieffenthaller, PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER: (904) 296-1503	6c. E-MAIL ADDRESS: adieffenthaller@hazenandsawyer.com		7. NAME OF FIRM *(If block 2a is a branch office)*: Hazen and Sawyer (Same)	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	191	
06	Architect	22	
08	CADD Technician	150	
10	Chemical Engineer	34	
12	Civil Engineer	307	
15	Construction Inspector	84	2
16	Construction Manager	88	1
18	Cost Engineer/Estimator	6	
20	Economist	6	
21	Electrical Engineer	124	1
23	Environmental Engineer	517	3
24	Environmental Scientist	41	
29	GIS Specialist	23	
30	Geologist	7	
32	Hydraulic Engineer	34	
39	Landscape Architect	2	
41	Mechanical Engineer	63	
57	Structural Engineer	86	
58	Technician/Analyst	16	
62	Water Resources Engineer	130	
	Total	**1931**	**8**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W03	Water Resources; Hydrology; Ground Water	9
W02	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

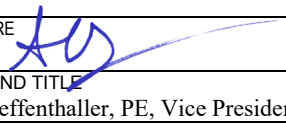
a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: 

b. DATE: August 2, 2024

c. NAME AND TITLE: Andre Dieffenthaller, PE, Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*
RFQ #2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME **Hazen and Sawyer**		3. YEAR ESTABLISHED **1951**	4. DUNS NUMBER **06-496-6138**
2b. STREET **498 Seventh Avenue, 11th Floor**		5. OWNERSHIP	
2c. CITY **New York**	2d. STATE **NY**	2e. ZIP CODE **10018**	a. TYPE **Employee Owned**
6a. POINT OF CONTACT NAME AND TITLE **Sarah Galst, PE, Vice President**			b. SMALL BUSINESS STATUS
6b. TELEPHONE NUMBER **(212) 539-7000**	6c. E-MAIL ADDRESS **sgalst@hazenandsawyer.com**		7. NAME OF FIRM *(If block 2a is a branch office)*
8a. FORMER FIRM NAME(S) *(If any)*		8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE

a Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH (New York)
02	Administrative	157	34
06	Architect	16	6
08	CADD Technician	112	4
10	Chemical Engineer	28	5
12	Civil Engineer	230	13
15	Construction Inspector	49	6
16	Construction Manager	94	17
18	Cost Engineer/Estimator	6	4
20	Economist	3	
21	Electrical Engineer	101	8
23	Environmental Engineer	440	55
24	Environmental Scientist	37	10
29	GIS Specialist	15	
30	Geologist	3	
32	Hydraulic Engineer	31	1
39	Landscape Architect	2	2
41	Mechanical Engineer	44	9
47	Planner: Urban/Regional	1	
53	Scheduler	1	1
57	Structural Engineer	73	3
58	Technician/Analyst	28	1
62	Water Resources Engineer	119	10
	Total	**1931**	**189**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS*

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W02	Water Resources; Hydrology; Ground Water	9
W03	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	6
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE
September 6, 2024

c. NAME AND TITLE
Sarah Galst, PE, Vice President

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*
RFQ#2024-1-PW

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME			3. YEAR ESTABLISHED	4. UNIQUE ENTITY IDENTIFIER
Hazen and Sawyer (Virginia Beach Branch Office)			**1951 (Firm) 2007 (Virginia Beach)**	**FFSSK2D6MD53**
2b. STREET			5. OWNERSHIP	
4500 Main Street, Suite 500				
2c. CITY	2d. STATE	2e. ZIP CODE	a. TYPE	
Virginia Beach	**VA**	**23462**	**Employee Owned**	
6a. POINT OF CONTACT NAME AND TITLE			b. SMALL BUSINESS STATUS	
Jamie Bondurant, PE, Associate Vice President				
6b. TELEPHONE NUMBER	6c. E-MAIL ADDRESS		7. NAME OF FIRM *(If block 2a is a branch office)*	
(757) 497-0490	**jbondurant@hazenandsawyer.com**		**Hazen and Sawyer (Same)**	
8a. FORMER FIRM NAME(S) *(If any)*			8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH (Virginia Beach)
02	Administrative	183	3
06	Architect	20	
08	CADD Technician	130	3
10	Chemical Engineer	31	
12	Civil Engineer	271	20
15	Construction Inspector	77	3
16	Construction Manager	88	
18	Cost Engineer/Estimator	6	
20	Economist	5	
21	Electrical Engineer	116	4
23	Environmental Engineer	482	7
24	Environmental Scientist	39	2
29	GIS Specialist	17	
30	Geologist	8	
32	Hydraulic Engineer	33	
39	Landscape Architect	2	
41	Mechanical Engineer	53	1
57	Structural Engineer	79	2
58	Technician/Analyst	23	2
62	Water Resources Engineer	127	2
	Total	**1931**	**49**

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS*

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
C15	Construction Management	10
C18	Cost Estimating	3
D02	Dams (Earth, Rock)	6
D03	Desalination (Process & Facilities)	2
D04	Design-Build	8
E03	Electrical Studies & Design	2
E07	Energy Conservation	4
E08	Engineering Economics	5
E09	Environmental Impact Studies	6
H04	HVAC	2
I03	Industrial Waste Treatment	5
P05	Planning (Comm., Reg., Area, State)	7
P06	Planning (Site, Install. and Project)	4
P07	Plumbing and Piping Design	3
S04	Sewage Collect, Trmt and Disposal	10
S07	Solid Wastes	1
S10	Surveying; Platting; Mapping	3
S11	Sustainable Design	6
S13	Stormwater Handling & Facilities	9
T02	Testing & Inspection Services	5
W02	Water Resources; Hydrology; Ground Water	9
W03	Water Supply; Trmt and Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

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a. Federal Work	6
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PROFESSIONAL SERVICES REVENUE INDEX NUMBER

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6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE

June 24, 2024

c. NAME AND TITLE

Jamie Bondurant, PE, Associate Vice President

Tab

4

Professional Registration Certificates

4 Professional Registration Certificates

Florida dbpr Department of Business & Professional Regulation

HOME CONTACT US MY ACCOUNT

ONLINE SERVICES

- Apply for a License
- Verify a Licensee
- View Food & Lodging Inspections
- File a Complaint
- Continuing Education Course Search
- View Application Status
- Find Exam Information

Licensee

Name:	HAZEN AND SAWYER, P.C.	License Number:	2771
Rank:	Registry	License Expiration Date:	
Primary Status:	Current	Original License Date:	11/08/1978

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
44165	Current, Active	TAYLOR, ROBERT B JR	Registry	04/27/2017	Professional Engineer	02/28/2025

Florida dbpr Department of Business & Professional Regulation

HOME CONTACT US MY ACCOUNT

ONLINE SERVICES

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- Verify a Licensee
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- File a Complaint
- Continuing Education Course Search
- View Application Status
- Find Exam Information

Licensee

Name:	HAZEN AND SAWYER, PC	License Number:	
Rank:	Geology Business Information	License Expiration Date:	
Primary Status:	Current	Original License Date:	06/16/2021

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
PG2697	Current, Active	BULMAN, GERRIT RIJK	Professional Geologist	05/20/2021	Professional Geologist	07/31/2026

Ron DeSantis, Governor — Melanie S. Griffin, Secretary — FBPE Florida Board of Professional Engineers

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

WIETGREFE, JANEEN M.
18480 SW 4TH ST
PEMBROKE PINES FL 33029

LICENSE NUMBER: PE57632
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

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Ron DeSantis, Governor — Melanie S. Griffin, Secretary — Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

BOARD OF PROFESSIONAL GEOLOGISTS

THE PROFESSIONAL GEOLOGIST HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 492, FLORIDA STATUTES

BULMAN, GERRIT RIJK
4000 HOLLYWOOD BOULEVARD
SUITE 750 NORTH TOWER
HOLLYWOOD FL 33021

LICENSE NUMBER: PG2697
EXPIRATION DATE: JULY 31, 2026
Always verify licenses online at MyFloridaLicense.com

ISSUED: 05/03/2024
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Ron DeSantis, Governor — Melanie S. Griffin, Secretary — FBPE Florida Board of Professional Engineers

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

TAYLOR, ROBERT B JR
13393 159TH ST N
JUPITER FL 334780000

LICENSE NUMBER: PE44165
EXPIRATION DATE: FEBRUARY 28, 2025
Always verify licenses online at MyFloridaLicense.com

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1021-699

State of Florida
Department of State

I certify from the records of this office that HAZEN AND SAWYER, P.C. is a New York corporation authorized to transact business in the State of Florida, qualified on October 18, 1978.

The document number of this corporation is 841657.

I further certify that said corporation has paid all fees due this office through December 31, 2024, that its most recent annual report/uniform business report was filed on January 12, 2024, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twelfth day of January, 2024

Secretary of State

Tracking Number: 6917077668CC

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

1021-699

Tab

5

Approach to Handling of Potential Projects

5 Approach to Handling of Potential Projects

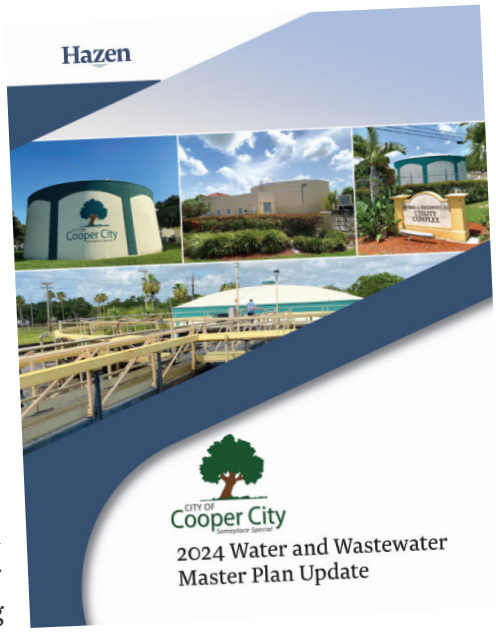
Hazen understands the value and importance of general engineering consultant services. **Continuing service contracts allow us to build strong relationships with our clients and work along side them to deliver projects that facilitate their goals for the future.**

Understanding of the City's Needs, Goals, and Objectives

Engineering services for the City of Cooper City under this professional services agreement will involve a variety of assignments. The major goal of this contract is to support the City in the successful implementation of the City's Capital Improvement Program (CIP) including planning, design, permitting, bidding, and construction services. It is also anticipated that this contract could include services to assist the City with the transition from conventional lime softening to membrane treatment, including redevelopment of the water treatment plant site.

Our team will work closely with the City to develop concise task orders **to ensure that there is a clear understanding of the City's expectations.**

Hazen is familiar with Cooper City and the surrounding municipalities. Like most cities in South Florida, the City faces many challenges related to providing water and wastewater services and adequate drainage and flood protection to its citizens and customers. Challenges involve managing aging infrastructure in the City's sanitary sewer system, stormwater system, and water distribution system as well as challenges in complying with various requirements and compliance planning requirements. Other particular challenging issues in South Florida include floodplain management and coastal resiliency.



The Hazen team is ready to continue working with the City to address these challenges. Our team's detailed knowledge of the challenges faced by municipalities and utilities staff will facilitate rapid and efficient design decisions. Hazen's exclusive focus on water, wastewater, reclaimed water, conveyance, and stormwater engineering means that we will provide the City with expertise ranging from water distribution and sanitary sewer systems designs to wastewater system plan and program development, stormwater design, permitting, modeling, construction support services, and everything in between and beyond. Our experienced team looks forward to continuing our partnership with the City.

Hazen's understanding of the City's needs is unparalleled.

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Approach to General Engineering Consulting Services

We have developed our approach methodology with the City's needs and objectives in mind.

The Hazen team understands the importance of responding promptly to each work assignment under continuing services contracts, developing concise scopes, successfully executing work assignments, and effectively managing our resources. We are ready to respond and successfully manage a variety of assignments. By leveraging our resources, we are able to maintain the highest level of responsiveness.

We recognize that budget constraints often impart challenging limitations, and **we will work with the City to ensure an appropriate approach and schedule for each project.**

The Hazen team has the commitment, understanding, experienced staff, technical expertise, and thorough project planning approach to provide the City with successful projects across the range of assignments that might be part of this contract. Specifically, we would like to be considered to provide water and wastewater treatment plant and stormwater services including conveyance and distribution to the City. Hazen has been providing these services to South Florida clients for over 55 years.

Our approach is simple and straightforward.

Hazen empowers local leadership and provides highly technical local resources. **Though the size of assignments under these types of contracts range from small to large, Hazen treats each with the utmost importance and attention.** We have extensive experience on as-needed engineering/engineer-of-record contracts, having served as a general consultant for more than 80 utilities in Florida over our 56-year presence in the state. Continuing service contracts make up the majority of our workload. Clients have shown confidence in our capabilities to deliver, and in return, we have invested in the communities we serve by establishing full-service offices with expertise in a range of specialty disciplines. We believe that the combination of local presence with full design capabilities, availability, and responsiveness are key factors to our success. Hazen takes great pride in being the firm that clients first call when they face challenges that require assistance.

Work Assignment Philosophy and Scope Development

Upon being awarded an assignment, Hazen will develop an appropriate and concise scope of work with the City of Cooper City to ensure that there is a clear understanding of the City's expectations. We recognize that budget constraints often impart challenging limitations, and we will work with the City to ensure an appropriate approach and schedule for each project. Hazen's goal will be to design a project that is cost effective and designed with minimal disruption to the facility.

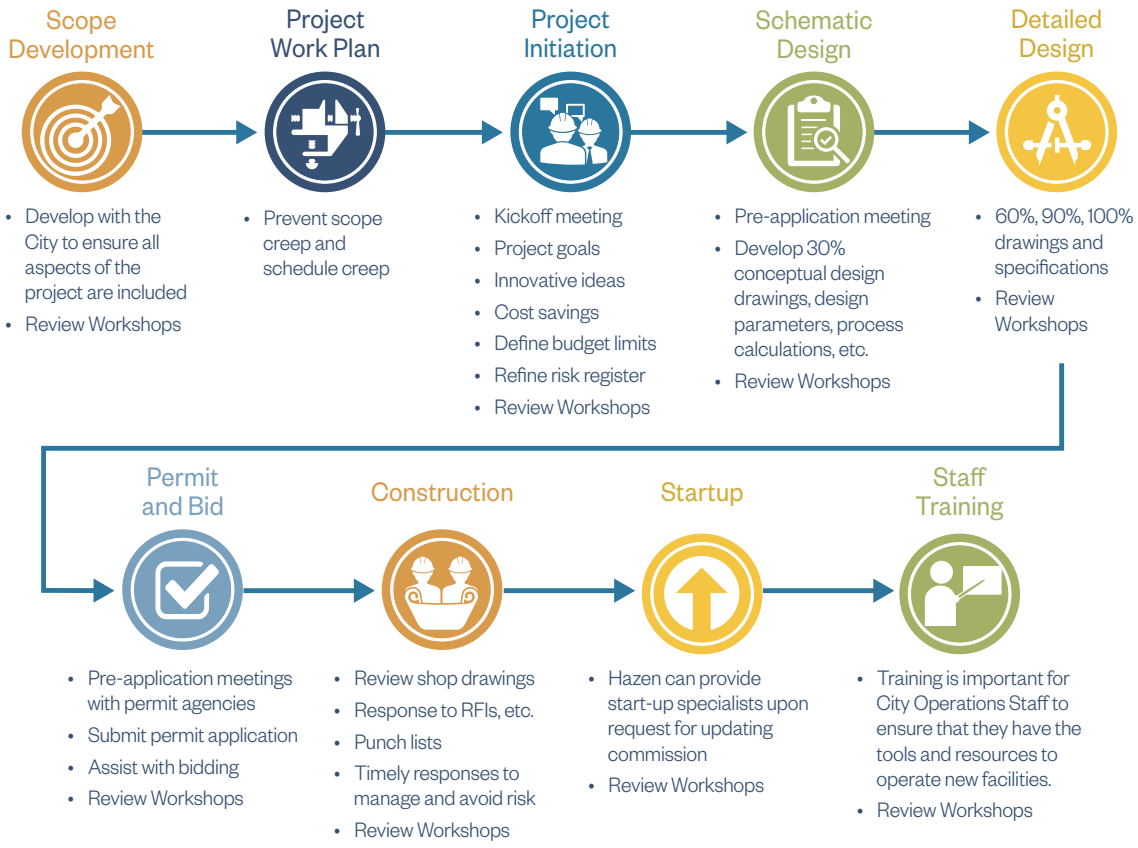
As part of developing the scope of work for a given assignment, specific issues that present challenges will be identified during a pre-scoping meeting. The pre-scoping meeting will be conducted with City staff and key team members as appropriate for that assignment. Our expertise in a wide range of disciplines will provide the City with a detailed understanding of the challenges each assignment may face. More importantly, this meeting will be our opportunity to discuss the goals and objectives of the City for that particular assignment.

Hazen encourages client involvement in the decision-making process on a regular basis throughout the design phase. In addition to typical information exchanged during progress meetings, critical criteria are developed and discussed together with all members of the design and construction team. All members are encouraged to participate and offer insight relative to the importance of each topic discussed during the meeting.

As part of our approach to this contract, we will schedule periodic deliverables for review by City staff so that staff has the opportunity to review and approve the initial concepts. This allows for constructive feedback throughout project, which avoids unnecessary reworking of the project documents late in the project phase, saving time and money. For design projects, this is done generally through 30 percent, 60 percent, 90 percent, permitting, and final design submittals, with interim meetings held to review specific design concepts, if necessary.

Should the City realize an economic advantage by contracting directly with a subcontractor for a portion of the work, the flexibility of our management approach allows for such accommodations. Next, our project manager will select the appropriate member from our team to manage the technical aspects of the work assignment. This approach allows us to be engaged in multiple work assignments as the management responsibilities can be spread out over the breadth of skills and experience of our team.

Project Life Cycle Approach



We understand that each project has a budget, and we will commence development of an Opinion of Probable Construction Costs from the 30% complete phase through final design (i.e., bid documents). **The formulation of project costs will be estimated using Hazen's construction database and recent bids.**

Project Management Approach

Our project management approach is based on our experience with similar management, design, and implementation assignments and focuses on several key objectives.

Project Management Plan

One of the cornerstones of Hazen's project approach is early planning.

Our Project Manager, **Janeen Wietgrefe, PE, PMP,** will adhere to Hazen's guidelines for project management, which include development of a Project Management Plan (PMP) at the project onset. The PMP identifies all team members, contact information, and a date-specific timeline for milestones and deliverables. The PMP also clearly defines each team member's responsibilities, budget assignments, and expectations. Ms. Wietgrefe will also use the firm's computerized, web-based tool (Deltek Vantagepoint) to help with project planning, monitoring, and reporting. She will serve as the main point of contact with the City of Cooper City for each work assignment, along with the selected technical lead. She will oversee execution of all tasks and the performance of the task leaders. The City's Project Manager will be kept informed of any delay or possible cost issue through regular communication. This will allow the City and our team to monitor the progress and budget to identify and resolve issues prior to them negatively impacting the project. We will facilitate early decision making to keep each assignment on schedule. The key aspects of our project management plan are highlighted on the next page along with the benefits to the City of Cooper City.

Anticipating Major Problems and How We Approach Solutions

We recognize that it is prudent to develop a plan for dealing with major problems at the outset of the project and to be prepared in the event a change is unavoidable. Hazen proposes to include in the PMP a Change Management Plan (CMP) to document procedures for managing changes (in scope, schedule, and budget).

The plan will dictate that:

- Problems must be addressed in a timely manner.
- The impact(s) of proposed changes—whether implemented or not—must be documented.
- Approved changes must be clearly defined in the scope/schedule/budget.
- Project baselines should be changed only when necessary (i.e., focus should be placed on maintaining the original scope/schedule/budget to the greatest extent possible).

If a potential change of scope is identified, Ms. Wietgrefe will communicate the information to the City's Project Manager. The two project managers will discuss the matter and decide whether a change should be incorporated into the project, what the potential impacts are, the degree of risk associated with and without the change, and what level of authorization is needed from the City before proceeding. Ms. Wietgrefe will also keep the respective task manager, as applicable, continually updated on all potential changes.

Key Aspects of Project Management Plan

Keys to a Successful Project	Approach to Meeting Project Budget, Goals, Timetables, and Quality Criteria	Benefits
 **Effective project management**	• Develop clear scope-of-work using WBS structure concepts. • Maintain regular City and project team communication. • Submit monthly progress reports. • Effectively use electronic tracking/PM systems.	Reduces scope creep and schedule slippage.
 **Proactive cost and schedule control**	• Maximize use of City standards. • Assign milestone dates and budget goals for subtasks. • Provide bi-monthly schedule updates. • Apply value engineering opportunities at project onset.	Avoid unexpected changes to budget and schedule late in the project.
 **Assignment of personnel**	• Technical expertise. • Local presence and familiarity. • Previous experience on similar projects. • Availability over the duration of the work assignment.	Ensures availability and involvement of experienced engineers throughout the project.
 **Regular and thorough QA/QC**	• Assign QA/QC tasks to experts in the specific field. • Involve QA/QC team at project onset. • Identify specific QA/QC milestones.	Ensures lessons learned are incorporated into the design and provides assurances that QA/QC reviews are being regularly performed.
 **Anticipate and control risks during implementation**	• Develop a risk register to document potential risks that could affect schedule, budget, and quality. • Regularly update the risk register. • Document actions to minimize risk.	Identifies project risks and potential mitigation strategies to mitigate unexpected impacts to budget, schedule, and deliverables.
 **Provide necessary documentation**	• Utilize comprehensive logging, tracking, reporting system. • Provide access to all parties. • Use Sharepoint or similar contract manager software.	Improves efficiency of project team and reduces potential conflicts during construction.

Our Management Approach

Hazen is committed to accomplishing our engineering, design, construction administration, and start-up assignments with the requisite quality, within schedule and cost limitations, and meeting any special needs of our clients. To this end, quality assurance programs on our projects include both quality assurance and control, as well as project scheduling, management and budgetary control measures as part of our integrated quality management program.

Hazen's projects are internally managed using a strong project manager approach in concert with a structured support team. The Hazen team will be led by Project Manager, **Janeen Wietgrefe, PE, PMP.** Her institutional knowledge of the City's infrastructure and procedures will help facilitate efficient planning, design, modeling, permitting, construction management, and coordination through our proposed discipline leads. Ms. Wietgrefe will be responsible for maintaining full knowledge of all aspects of each project. This approach is designed to provide one person answerable to the City at all times. Our project management framework results in direct lines of communication and responsibility and allows for simplified and centralized project coordination. **For a detailed organizational chart of our team's structure, see Tab 4.**

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Current Workload

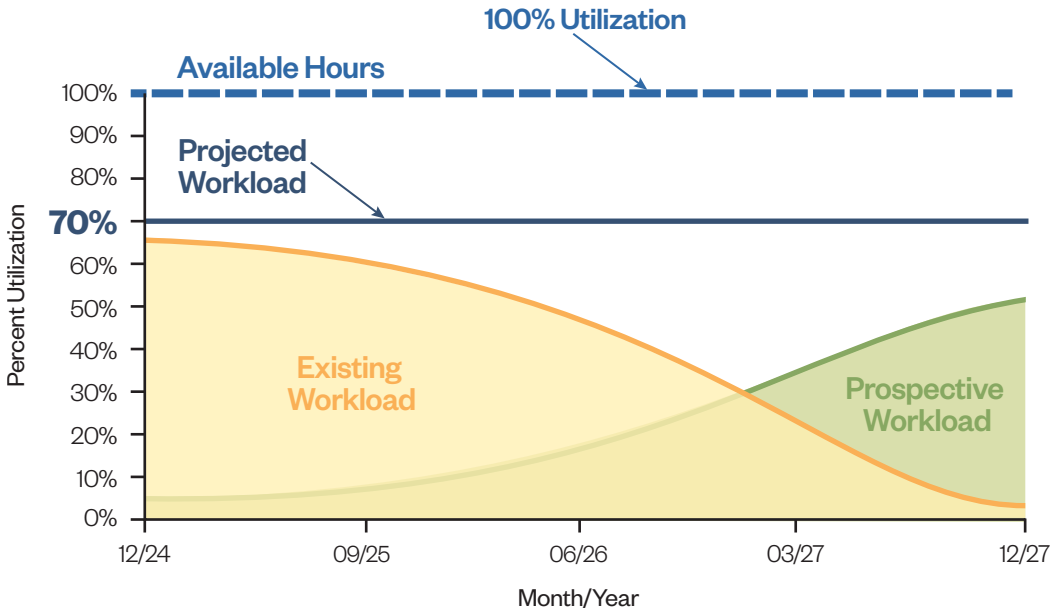
Should we be selected for this contract, **we commit that the individuals identified on our organizational chart will be available to the City**.

Hazen strives to maintain a well-balanced workload, which allows our staff to be appropriately allocated to projects, but not overly committed, so they have the ability to provide first-class service to our existing clients and the flexibility to take on new assignments and opportunities with our clients. To achieve these goals, Hazen has a conservative approach of only undertaking new assignments when workload permits and adequate staff is available to provide the complete range of services required, and for the expected duration of the project.

Our proposed Project Manager, **Janeen Wietgrefe, PE, PMP,** will maintain regular communications with the City. Through this communication, we will be able to anticipate required resources and proactively plan staff assignments. Should unforeseen circumstances occur, and project acceleration is required, our team has the necessary support and backup staff at all levels with experience in all disciplines required. If additional resources are necessary to support our team, Hazen maintains sufficient staff in our nine Florida offices and has the capacity to draw upon our firm-wide staff members.

Staff Availability

This chart demonstrates our anticipated availability for this project, considering all other active projects. Hazen is committed to keeping our professional resources available to the City to provide the services described in the RFQ.

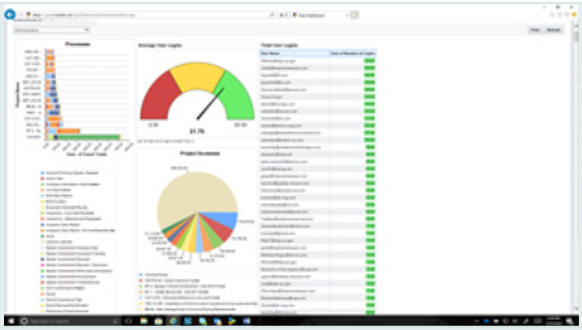


We foresee adequate staff availability to work on these projects, and **we are confident that all projects will be completed on schedule.**

1021-699

Available Facilities, Technological Capabilities and Other Available Resources

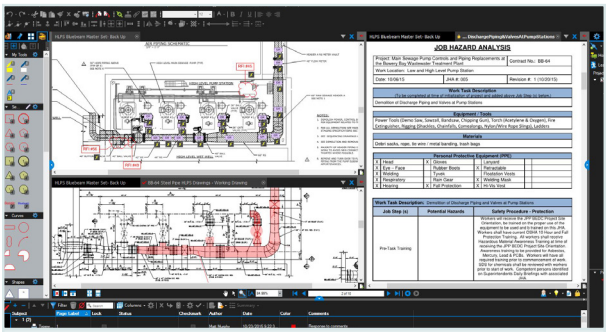
Hazen has the personnel, resources, facilities, and equipment to perform and successfully complete the projects that will be assigned under this continuing services contract. We have over 200 staff members located in our nine Florida offices and in-house expertise in all of the major disciplines noted in the RFQ. We also have the capacity to draw upon our 2,000+ firm-wide staff members, if necessary.



Cloud-Based Systems

All Hazen team members are familiar with cloud-based systems including SharePoint, Procore, and e-Builder.

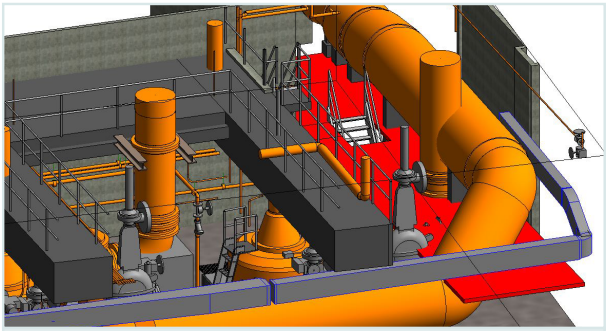
- We will adapt document control to the meet the City's desired requirements, level of accessibility, and cost.
- Project information/records are available at all times.
- Common file cabinet allows for project information to be shared with the entire team.



Bluebeam©

We use Bluebeam throughout the life of a project, from preliminary design and into construction.

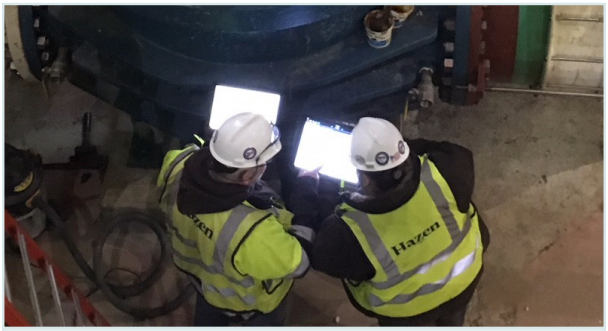
- Allows team members to concurrently review plans and automatically creates a log of comments to facilitate QA/QC activities.
- Provides instant access to details, shop drawings, RFIs, etc. through hyperlinks on the contract drawings. No need to open additional windows or carry extra documents.
- Creates redline drawings as work is installed, thus initiating close-out as the project progresses.



BIM

Hazen embraces the use of the BIM model.

- Facilitates coordination between the various project trades (i.e., electrical, piping, HVAC, equipment).
- Simulates critical and dangerous work activities. Can run various scenarios through the model to identify clashes, risks and develop remedies.
- Creates a final as-built project record.



Tablets

We use tablets extensively in the field. All project information is available to our staff in the field in real time.

- Information is stored on the Cloud. Field staff has access to the information that they need, when they need it, and at the physical location where it is needed.
- Condition assessment inspections can be conducted efficiently using tablets that allow the user to immediately upload photos and notes.
- On-site access to the full project record, including shop drawings, allows more collaborative interaction with the contractor.

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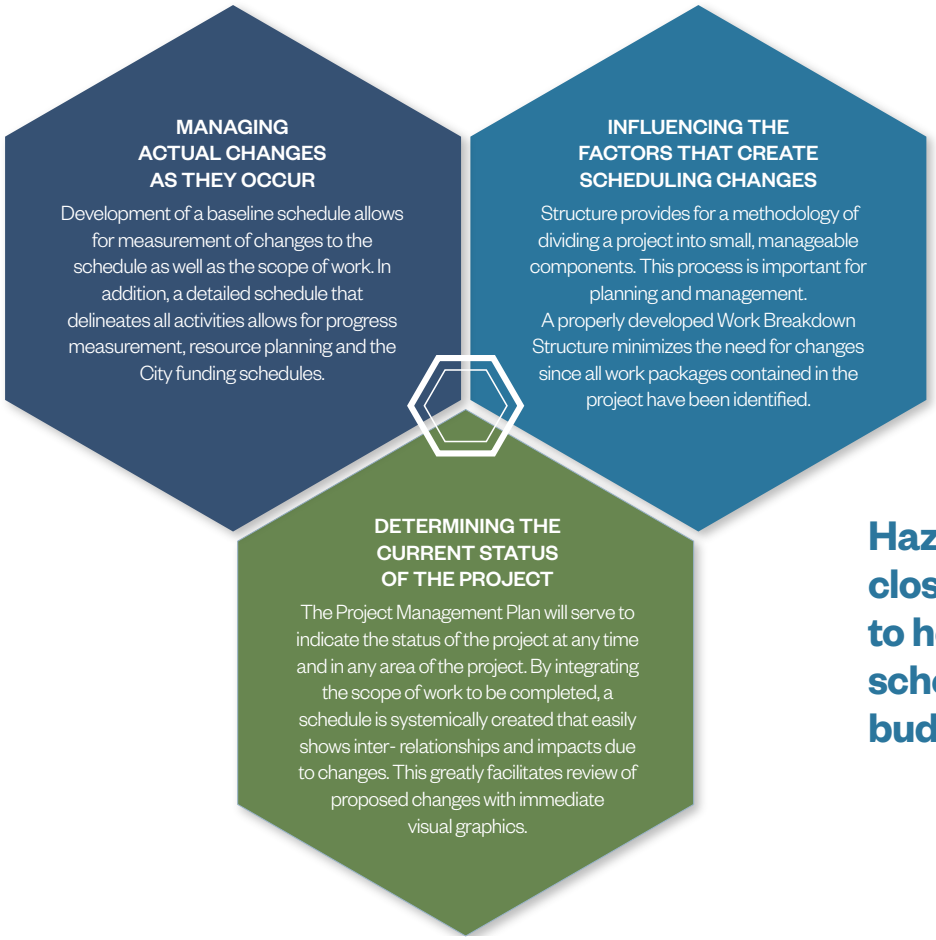
Scheduling Methodology (Timeline) for Effectively Managing and Executing Work in the Optimum Time

To ensure that schedules are met in accordance with the City's time frame, project schedules are developed immediately following the issuance of a notice to proceed for each individual assignment.

Hazen subscribes to the Project Management Institute's (PMI) approach for project management, including specific areas such as planning, executing, monitoring and controlling, and close-out. For lengthy and complex projects, a detailed project schedule will be developed in Primavera or Microsoft Project. The project schedule details the steps required to complete the project utilizing a critical path methodology. Using scheduling software provides a time management tool to better track progress of the project in real time. These types of scheduling techniques are tailored to the complexity of the project and reporting preferences of our clients.

Our Project Manager, Janeen Wietgrefe, PE, PMP, will be responsible for ensuring that the overall schedule for each assignment is met. We know that task assignments come in various shapes and sizes, and we adapt our delivery approach accordingly. All City of Cooper City projects will get the same focus and attention to detail. Hazen subscribes to a strong project manager approach where all lines of communication are via the project manager. **Ms. Wietgrefe will be responsible for maintaining full knowledge of all aspects of each project. This approach is designed to provide one person answerable to the City at all times.**



Hazen will work closely with the City to help ensure all schedules and budgets are met.

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Cost Control

Hazen is committed to cost control during all phases of the project. This commitment is supported by **effective design management, construction cost management, and a Cost Estimating Group committed to highly accurate estimates.**

We understand that designing projects to budget starts with detailed scope development and cost estimating during preliminary design and continues during detailed design development, while collaborating with the City.

Cost Control of the Design Process

Our process begins with development of a work plan that defines deliverables and due dates, assigns staff and resources needed for the duration, details the effort and expertise required by each task, and overlays a defined project schedule. Deliverables will be submitted to allow sufficient time for client review prior to meetings (workshops) to discuss concepts, finalize design criteria, and allow for client input.

Ms. Wietgrefe will closely monitor the progress of each activity to identify any issues that could negatively impact the budget and/or schedule, as well as develop a corresponding corrective action plan if issues arise.

Hazen uses Deltek Vantagepoint to provide rapid and accurate accounting of project labor, subconsultants, and other expenditures. The project data facilitate keeping the project on schedule and on budget. By constantly monitoring progress, schedule, and budget, Ms. Wietgrefe will proactively make any necessary adjustments to keep the work moving forward effectively and efficiently. We also use reporting visualization tools such as PowerBI® to keep track of progress schedule and budget. These tools can be used to facilitate communication and reporting to Cooper City.

We will leverage our AACE-certified Cost Estimators
to provide accurate project budgets.

We specialize in providing defensible cost estimates for budgeting and decision-making

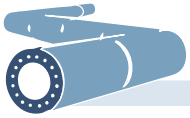
217
estimates in 2023

were worked on from the conceptual design through bid phase

$9.8B
Total value of that work

ASPE& AACE
Certified estimators

Our knowledge of construction market conditions will inform the cost estimate. We understand the changing dynamics of the industry.



$1.5B
in low-interest
loans provided by the Water Infrastructure Finance and Innovation Act for water and wastewater-related work

+30%
rise in construction cost
prices since 2020

13%
increase in construction wages
due to a skilled labor shortage

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QA/QC

Every project is required to have a Quality Control Plan and execution and adherence to the plan is strictly enforced. Our firm has a Chief Quality Officer, **J. Philip Cooke, PE,** (a senior partner of the firm), regional quality coordinators (all partners in the firm), and local office liaisons. QA/QC implementation is a daily practice with formal milestone reviews and quarterly auditing and reporting to the firm's President and Board of Directors. This provides for the highest quality deliverables for your projects. **Ms. Wietgrefe** will ensure the successful implementation of quality control reviews. She will develop a quality control plan as part of the project work plan.

Providing quality engineering services and deliverables is a core element of Hazen's business practice and is inherent to our culture. We have a company-wide Quality Assurance Policy Manual to provide guidance to staff during the execution of every project. This plan involves discipline and inter-discipline review by senior professionals at the conceptual, preliminary, draft, and final design stages, as further described below:

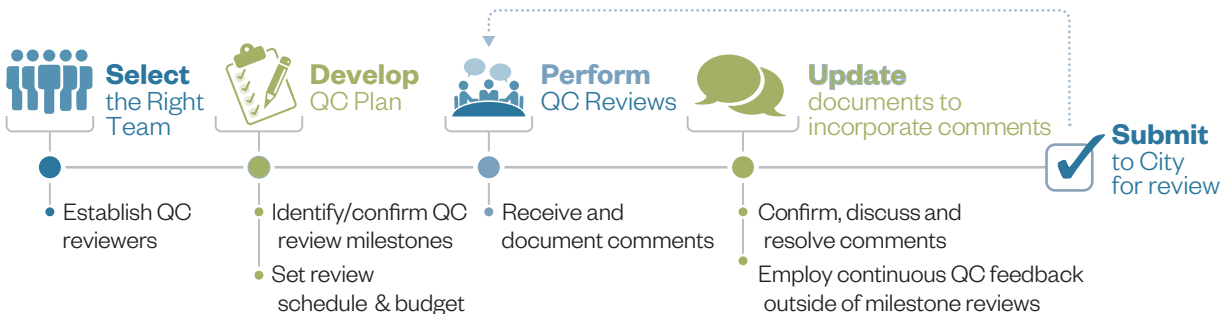
- The 10% preliminary review is done very early in the project and takes advantage of our senior staff's vast knowledge and experience to identify a "better way" to accomplish project goals. We encourage client participation in this stage of review.
- The 30% conceptual review checks for compliance with the project schedule and budget, and involves performing checks on calculations, discipline specific issues, inter-discipline coordination, preliminary cost estimates, and regulatory compliance.
- The draft review performs in-depth discipline and inter-discipline coordination reviews using extensive checklists, coordination of specifications and drawings, updates to cost estimate, construction phasing review, constructability review, and legal review of front end documents. This is typically performed for interim deliverables such as 60% and 90% submittals.
- Final review verifies previous reviews have been completed with issues addressed, constructability review has been completed, applicable permits obtained or otherwise addressed, construction cost estimates are complete, and that the project is ready for construction.

Our Process

Every work product requires review by appropriate professionals prior to submission.

This practice applies to all work performed by Hazen and the work of our subconsultants.

Quality Control Approach



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Tab

6

References

6 References

Our clients' testimonials serves as the driving force behind our **commitment to delivering unmatched quality** and building enduring relationships.

At Hazen, our clients' feedback is of paramount importance, serving as the cornerstone of our reputation and success. Listening to their perspectives validates our commitment to excellence and guides our continuous improvement. Their invaluable insights shape our practices, foster trust, and ensure we consistently meet and exceed expectations. Selected client quotes are included below.

> Hazen...has proven itself to be all the City had anticipated and more. The personnel with whom the City has worked have been **diligent, responsive, timely, cooperative, and technically informed.**
>
> **William M. Brant, PE,**
> Former Director Public Works, Utilities & Engineering
> City of Hallandale Beach

> George Brown served as design manager for the City of Cooper City's Pine Island Road Pump Station. **Mr. Brown is a complete design professional and delivers superior results."**
>
> **Michael F. Bailey, PE**
> Former Director of Utilities
> City of Cooper City

> ...Hazen provides designprofessionals that are highly qualified with **extensive relevant experience to each assignment..."**
>
> **Alan W. Garcia, PE**
> Director
> Broward County Water and Wastewater Service

> ...The firm performs in a timely manner, produces technologically sound documents and works well with contractors **to ensure the City's interests are protected."**
>
> **Martha S. Graham, PE**
> Public Works Director
> City of St. Augustine

> Hazen has been associated with Plantation and a part of our team for over 20 years. **We feel their team's expertise and attention to detail places them at the top of their field."**
>
> **Daniel Pollio**
> Utilities Director
> City of Plantation

Assessment of related past experience includes a review of client references. Our past record of similar accomplishments is extensive. We encourage the City to contact each reference as we are proud of our proven success at meeting the goals and objectives of our clients.

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Exhibit A
Services to be Considered
Civil Engineering

Discipline: Civil Engineering

ϒ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

✓ **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Roadway or Bridge Repairs, Replacement or Construction
	Site Engineering/ Planning
	Parking Lots
	Structural Analysis, Design and Reporting
	Other (please list):

Exhibit A
Services to be Considered
Water/Wastewater/Storm-water

Discipline: Water/Wastewater/Storm-water

✓ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

Y **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
✓	Gravity Sewer Systems
✓	Wastewater or Storm-water Pump Stations
✓	Wastewater conveyance Systems (Force Mains)
✓	National Pollution Discharge Elimination System (NPDES)/MS4 Permitting
✓	Storm-water collection and conveyance
✓	Other (please list):
✓	Water Treatment Systems
✓	Water Conveyance and Storage

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Exhibit A
Services to be Considered
Architecture

Discipline: Architecture

ϒ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

✓ **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Community Centers
	Fire Stations
	Other Municipal Buildings
	Site Plans
	Structural
	Other (please list):

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Exhibit A
Services to be Considered
Landscape Architecture

Discipline: Landscape Architecture

ϒ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

✓ **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Parks
	Medians
	Streetscapes
	Wetlands
	FDOT Certified Landscape Architecture
	Other (please list):

Exhibit A
Services to be Considered
Geotechnical

Discipline: Geotechnical

ϒ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

✓ **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Environmental Testing/Studies
	Foundations, soil borings, soil density testing
	Special Inspection Services
	Asbestos Surveys
	Other (please list):

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Exhibit A
Services to be Considered
Transportation/Transit

Discipline: Transportation/Transit

ϒ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

✓ **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Traffic/Mobility Studies
	Traffic Calming
	Signage/Pavement Marking
	Parking Analysis
	Signalization
	Other (please list):

Exhibit A
Services to be Considered
Mechanical, Electrical, Plumbing (MEP)

Discipline: Mechanical, Electrical, and Plumbing

ϒ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

✓ **No, my firm would not like to be considered for services within the above-referenced discipline.**

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Mechanical
	HVAC Systems
	Plumbing
	Electrical
	Lighting/Photometric
	Fountains
	Other (please list):

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Exhibit A
Services to be Considered
Other

Discipline: Other Services

✓ **Yes, my firm would like to be considered for services within the above-referenced discipline that are marked below with an "X", or otherwise listed.**

No, my firm would not like to be considered for services within the above-referenced discipline.

NOTE: Check only those services your firm will provide as a prime consultant. Do not include outside or sub-consultants.

CONSIDER MY FIRM FOR THE SERVICES MARKED BELOW WITH AN "X".	
	Bridge
	Unsafe Structures
	Land Surveying & Mapping
✓	GIS for Engineering, Utilities, and Development Services
	Construction Engineering Inspection Services FDOT Certified
✓	Construction Engineering Inspection Services Non-FDOT Certified
✓	Engineering Plan Review
✓	Project Management
✓	Owners Representative
✓	Cost Estimating
✓	Grant Management
✓	Electrical Engineering Designs
✓	Other (please list):
✓	Resilience
✓	Stormwater

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The following pages include our references and project examples for the Water/Wastewater/Stormwater Discipline, and the Other Discipline categories. **The table below highlights the discipline/areas of service that are applicable to the example projects provided.**

Services/disciplines covered within the example projects	Reference/Project					
	City of Deerfield Beach Continuing Services Contract	City of Fort Lauderdale General Water Consultant Services	City of Hallandale Beach General Consulting Services	City of Plantation Continuing Consulting Engineering Services	Town of Jupiter Professional Engineering Services for Stormwater and Water Capital Improvements	City of Miramar General Water and Wastewater Services
Gravity Sewer Systems				●		●
Wastewater or Stormwater Pump Stations				●	●	●
Wastewater Conveyance Systems				●		●
National Pollution Discharge Elimination System/MS4 Permitting	●				●	
Stormwater Collection and Conveyance	●				●	
Water Treatment Systems	●	●	●	●	●	●
Water Conveyance and Storage	●	●	●	●	●	●
GIS for Engineering and Utilities	●	●	●	●	●	
CEI - Non FDOT Certified	●	●	●	●	●	●
Engineering Plan Review	●	●	●	●	●	●
Project Management	●	●	●	●	●	●
Owners Representative		●		●		
Cost Estimating	●	●	●	●	●	●
Resilience	●	●	●	●	●	●
Stormwater	●				●	

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Continuing Services Contract

City of Deerfield Beach, FL

Since 2018, Hazen has provided water treatment plant, wellfield engineering, injection well regulatory compliance, risk/resilience, stormwater, and other environmental engineering services under a continuing services contract with the City.

Services provided under this contract range from planning and design to permitting, bidding, and construction administration services in connection with water treatment and supply/distribution and wastewater collection facilities, effluent disposal and reuse, environmental assessment, and/or miscellaneous infrastructure improvements. Work also includes general consulting, stormwater and environmental engineering design, on-site representation, and cost estimating services.

Select assignments awarded under the contract are highlighted as follows:

West Water Treatment Plant Chemical Systems Replacement. Hazen led the design and permitting of upgrades to the West WTP Chemical Storage and Feed Facilities. The West WTP utilizes several chemicals as part of the overall nanofiltration (NF) and reverse osmosis (RO) treatment processes, including sulfuric acid, antiscalant, corrosion inhibitor, and sodium hydroxide (a.k.a., caustic). These chemical systems were designed as part of the original membrane plant design under prior building code requirements and as such, required improvement to achieve current code requirements. Because maintenance challenges associated with the underground piping for these chemicals has increased, the City decided to replace these chemical systems along with all associated piping. The project includes demolition of existing sulfuric acid, antiscalant, corrosion inhibitor, and caustic storage and feed facilities and replacement with new improved facilities.

Client Reference

City of Deerfield Beach
290 Goolsby Blvd.
Deerfield Beach, FL 33442
Joshua Niemann, Assistant Director of Environmental Services
(954) 480-4369 (phone)
jniemann@deerfield-beach.com

Project Details

Contract Duration:
2018-Present

Project Cost:
$988,000 (fees to date)
Construction costs vary per project

Project Highlights

- Assisted the City with meeting all regulatory milestones for the injection wells by collaboratively tracking changes in performance and designing a rehabilitation program to restore capacity. Hazen's efforts have protected the use and reliability of existing infrastructure.
- Hazen avoids conflicts during construction by preparing a detailed Maintenance of Plant Operations (MOPO), ensuring the contractor understands the limits of construction at the fully operational WTP.

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Deep Injection Well System Mechanical Integrity Testing. Hazen prepared planning documents for the mechanical integrity testing of the City's Class I industrial deep injection well at the West WTP. Work included management of field services and regulatory communication during testing and submittal of a certified report to FDEP following testing of the well.

Deep Injection Well System Rehabilitation and Rerating. For this multi-phase project, Hazen is providing services to investigate and restore capacity of the City's Class I injection well. The first phase involved planning, permitting, contract document preparation, and procurement assistance. Hazen prepared a technical memorandum (TM) for the evaluation of the deep injection well system performance, as well as planning documents, specifications, and contract for rehabilitation and rerating of the City's Class I industrial deep injection well at the West Water Treatment Plant. The TM outlines the history of performance issues, previous work and recommendations, and current capacity losses. Hazen also prepared a plan for investigating and mitigating additional capacity losses. The second ongoing phase includes injectivity testing, oversight of contractor rehabilitation activities including geophysical logging, tubing brushing, reverse air development, and acidization to restore injection capacity.

West Water Treatment Plant FDEP UIC Class I Injection Well, IW-1, FDEP Operation Re-Permitting. Hazen prepared the application for operation re-permitting, coordinated with the FDEP, reviewed operational data, and updated the injection well system Operation and Maintenance Manual. We continue to provide post-application services and correspondence with FDEP.

Stormwater Utility Fee Update & Non-ad Valorem Implementation. Hazen provided assistance in the update and modification of the City's Stormwater Utility Program. Work was accomplished in two phases. Phase I will update the most recent impervious area GIS and develop stormwater utility fee financing scenarios, in accordance with the City's existing Citywide Stormwater Master Plan. The fee adjustment will cover future capital improvement expenses as described in the City's CIP and will evaluate the impact of different funding methods including PayGo and financing through a government loan program or commercial lending. Phase II will encompass the work required to implement the stormwater fee as a non-ad valorem stormwater assessment on the property tax bill starting in Fiscal Year 2024.

America's Water Infrastructure Act (AWIA) Compliance. The City developed the Risk and Resilience Assessment (RRA) in compliance with the AWIA and requested Hazen complete the AWIA compliance by preparing the Emergency Response Plan (ERP). Hazen developed the ERP based on the City's RRA and ensured the City submitted certification to the EPA to confirm completion of the ERP prior to the deadline. Further, Hazen identified incident specific responses to be developed under future efforts.

General Water Consultant Services (1998-Present)

City of Fort Lauderdale, FL

Hazen has been providing general water engineering services to the City of Fort Lauderdale Utilities Department under a general consultant contract since 1998.

Work assignments provided under this contract have included: Fiveash WTP HS Pumps; Fiveash WTP Upgrades; Fiveash WTP Operational Control Plan Design; Poinciana Park and 2nd Ave. Storage Tank and PS Replacements Design and Construction Services; Saltwater Intrusion Monitoring; Fiveash WTP Basis of Design Report (BODR) Study; Water Master Plan 2006 Update; Peele-Dixie Membrane Procurement Bid Package Study; Dixie Wellfield Modeling; Peele-Dixie WTP Hourly Tasks for Construction Field Services; Fiveash WTP Consolidated Phase 1 Construction Services; Dixie Wellfield Design and Construction Services; South Andrews Avenue Water Main Improvements; and Peele-Dixie Membrane Softening WTP Design and Construction Services.

A sample of projects completed or ongoing under this contract during the last five years is listed below:

- Intracoastal Waterway Pipeline Crossing at Las Olas Design-Build
- Hydrotreator Influent Pipe Modification Design
- Fiveash WTP Reliability Upgrades and Disinfection System Replacement Design and Permitting
- 2018 Bond Report
- 2020 Water Supply Plan
- Peele-Dixie WTP Injection Well Mechanical Integrity Testing FY2020
- Water Use Permit Update for the C-51 Reservoir Supply

Client Reference

City of Fort Lauderdale
Utilities Department
101 NE 3rd Avenue Suite 2100
Fort Lauderdale, FL 33301
Alan Dodd, Director of Public Works
(954) 828-5806
adodd@fortlauderdale.gov

Project Details

Contract Duration:
1998-Present

Project Cost:
$20.5 million (fees to date)
$172 million (construction to date)

Project Highlights

- Planning design, permitting, and/or construction management services for water treatment, water distribution, water supply, water distribution, regulatory assistance, and financial studies.
- Designed 4,160-volt power distribution at the Dixie Wellfield; resulted in $200,000 savings over City's traditional approach.
- Won the Intracoastal Waterway Pipeline Crossing - DBIA 2017 Project of Year Award

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- Total Coliform Rule Level 2 Assessment
- Water Master Plan 2006 Update
- Peele-Dixie Membrane Procurement Bid Package Study
- Dixie Wellfield Modeling
- Peele-Dixie WTP Hourly Tasks for Construction Field Services
- Fiveash WTP Consolidated Phase 1 Construction Services
- Dixie Wellfield Design and Construction Services
- Fiveash WTP Upgrades Phase II
- Fiveash WTP Upgrades Phase III
- South Andrews Avenue Water Main Improvements
- Peele-Dixie Membrane Softening WTP Design and Construction Services
- Central New River Water Main Crossings
- Second Avenue Pump Station Improvements Design Services
- Dixie Wellfield Well Abandonment Design Services
- Water Supply Planning Assistance

General Consulting Services (2001-Present)

City of Hallandale Beach, FL

Since the 1990s, Hazen has been providing general consulting services for water treatment and wastewater transmission system projects to the City of Hallandale Beach.

General consulting services are provided on an as-requested basis and consist of engineering services ranging from studies, hydraulic models and master planning services through detailed design and construction oversight services.

Wastewater Master Plan. Under the most recent GC agreement (2016 Continuing Professional Architectural and Engineering Services Firms), Hazen recently completed the Wastewater Master plan that defined both short- and long-range planning goals through the year 2035. This plan also identified the operational and maintenance needs of the City for the wastewater system. The City utilized this plan for adjustment of future Capital Improvement Plan (CIP) needs.

Water and Wastewater Model Updates. The wastewater master plan was developed based on the wastewater model that was developed by Hazen under the 2014 Water and Wastewater Model Updates project under the previous GC agreement. The model update involved reforecasting water demand projections and wastewater flow projections, updating the hydraulic model configuration to match updated piping throughout the City, calibrating the hydraulic model, running various scenarios through the hydraulic model, and determining what potential improvements are necessary to correct any present and future system deficiencies. The model updates project formulated the basis for the water improvements and wastewater transmission improvements CIP.

Water Treatment Plant Renewal and Replacement Planning. Hazen provided the City of Hallandale Beach a team of senior mechanical,

Client Reference

City of Hallandale Beach
630 NW 2nd Street
Hallandale Beach, FL 33009
Jeffrey Odoms, MA, FAEM,
Public Works/Utilities Director
(954) 457-1669
JOdoms@hallandalebeachfl.gov

Project Details

Contract Duration:
2001-Present

Project Cost:
$4.2 million (fees to date)
Construction costs vary per project

Project Highlights

- General Consultant for water treatment and wastewater transmission system projects.
- Experience with permitting agencies (e.g., FDEP, SFWMD).
- Continuous water supply planning services saved the City $12 million in wellfield relocation costs.
- Designed membrane plant to blend with lime-softened water, saving $6 million in capital and $400,000 in annual operating costs.

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electrical, controls, and water treatment process engineers to assess the condition of the above-ground assets at its lime softening/membrane water treatment plant. Hazen's expertise in lime softening treatment facilities allowed the team to rapidly assess the remaining useful life of the WTP's major lime softening assets to develop a 20-year plan of capital improvements to sustain the capacity of the existing infrastructure. The City is presently using the recommended improvements and associated budgetary costs for planning CIP projects.

Brackish Water Reverse Osmosis (BWRO) Train Addition Updates. Hazen provided preliminary and detailed design services for the addition of a reverse osmosis skid to the existing membrane plant, including appurtenant pretreatment and chemical facilities. The BWRO train was designed with the flexibility to treat multipe raw water sources. The NF plant was designed with space, piping and electrical provisions to add two, 2.0 mgd (treated water capacity) BWRO trains in the future. Hazen also provided services for Wells PW-7 and 8 Modifications.

Additional Projects. In addition to the above described projects, Hazen also completed the following projects under the ongoing GC Agreements (2012, 2016, and 2020):

- Fire Hydrant Model
- Salt Water Wells Services During Construction
- Deep Injection Well Operating Permit 2015
- Injection Well Mechanical Integrity Test
- Biscayne Aquifer Modeling for Regional Water Availability Rule
- Operational Assistance FY 2014-2015
- CRS Verification Services
- Utility Rate Study Update
- Chateau Square Development Review
- Diplomat Development Review
- Nine Hundred Development Review
- Oasis Phase II Development Review
- Operational Assistance FY 2015-2016
- Wastewater Master Plan
- SSES Planning Activities Under SRF Funding
- Operational Assistance FY2016-2017
- Water Treatment Plant Infrastructure Assessment/ Renewal and Replacement Planning
- Operational Assistance FY 2017-2018
- SFWMD Water Use Permit Renewal
- Operational Assistance FY 2018-2019
- Operational Assistance FY 2019-2020

Additionally, Hazen recently prepared the Water Supply Plan Update 2019 based on the SFWMD Lower East Coast Water Supply Plan Update in 2018. Hazen is also scoping required services for compliance with the Water Infrastructure Act of 2018, specifically preparation of the Risk Assessment and the Emergency Response Plan Updates.

Under the previous general consulting agreement (transportation planning and engineering, traffic studies, utilities, roadways, geotechnical consulting and testing services), Hazen completed the design of a new Biscayne Aquifer well (PW-9) and the design of a third membrane skid. The design of the membrane skid is flexible for future water supply considerations (increased salinity in City wells, blends with County water supply solely). Hazen assisted the City with long term water supply planning considerations while adapting the design of both facilities (well and membrane skid) accordingly. Hazen will be completing bidding services for the well in 2019.

Membrane Plant. In addition to the general consulting services contracts, Hazen also provided services for the expandable membrane softening facility from 2001 through 2007. Hazen provided pilot testing, design, bidding, permitting, and construction management services for the membrane facility which included 6 mgd membrane skids initially with all associated pretreatment facilities (chemicals, cartridge filters) and all post-treatment facilities (degasifiers, chemical stabilization, and blending with lime softened water). Hazen designed the facility with flexibility for the future and the City is presently benefiting from the foresight. Hazen continues to provide operational assistance services to the membrane facility on an as-requested basis under the general consulting agreement.

Continuing Consulting Engineering Services

City of Plantation, FL

Hazen has provided services to the City for a wide range of projects including studies, design, permitting and construction management services at the Regional WWTP, East WTP, and Central WTP.

Assignments have included facilities for the City's water and wastewater treatment plants, collection systems, distribution systems, and neighborhood improvement projects. A representative sampling of project assignments awarded under the general consulting contract is included below.

East and Central Water Treatment Plants Membrane Replacement. In 2011, the City decided to start a program for replacement of the aging membranes to improve overall water quality and to reduce operation and maintenance costs. Hazen was responsible for membrane pilot testing and data evaluation, performing calculations for full-scale membrane performance projections, post-treatment stabilization modifications, and conducting present worth evaluations for the membrane manufacturer selection. Hazen pilot tested 8-inch elements from two membrane manufacturers on a full-scale train to provide an alternative for replacement of the elements the plant had been using for many years.

The membrane replacement resulted in energy savings of about 35% to 45% at the East Water Treatment Plant (EWTP) and Central Water Treatment Plant (CWTP). The membrane selection utilized a hybrid array to allow rejection of target ions and passage of elements that contribute to the overall water stability based on target finished water quality goals and to minimize corrosion potential on the distribution system.

Water Master Plan. Hazen developed the Plantation Water Master Plan that defines short- and long-term planning goals through the year 2040, including goals that serve to optimize operation and management of the City's entire water system. The Master Plan identifies recommended capital

Client Reference

City of Plantation
400 NW 73rd Avenue
Plantation, FL 33317
Daniel Pollio, Utilities Director
(954) 797-2209
dpollio@plantation.org

Project Details

Contract Duration:
2000-Present

Project Cost:
$11.9 million (fees to date)
Construction costs vary per project

Project Highlights

- Effected $200,000 in annual savings at the Regional WWTP by conversion to fine bubble.
- Selected membrane elements for replacement with an electric savings of 35% to 45%.
- Interactions with the same permitting agencies (e.g. FDEP and SFWMD).

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improvements for: 1) water supply; 2) treatment; 3) distribution system quality; and 4) distribution system capacity.

A key task for this project included the development and calibration of a new water distribution system hydraulic model using the InfoWater modeling platform. Benefits of the service area-wide water distribution system hydraulic model include synchronization with the City's GIS water atlas, which will minimize efforts associated with future model updates. The model provides the ability to simulate water age as it moves from the WTP to customers. Model results are being used to prioritize capital improvement projects targeting the replacement of aging infrastructure, as well as for the evaluation of operational alternatives designed to reduce pumping energy costs.

Diffused Aeration. The City of Plantation operates the Regional Wastewater Treatment Plant (RWWTP), an 18.9-mgd facility based on a three month average daily flow (TMADF) basis. The RWWTP facility utilized a mechanically aerated activated sludge treatment process for secondary treatment. Hazen completed an Energy Savings Analysis that projected the City would increase the efficiency of their aeration process and save over $200,000 annually in electricity costs by converting their mechanical aeration process to fine bubble diffused aeration. After this study, the City retained Hazen to provide design, permitting and engineering services for the conversion of the surface aerators to fine bubble. Our work for the City included determination of oxygen demands, selection of blower technology, and design of a new blower facility and aeration system. After the system start-up, the energy bills demonstrated that the City started realizing the expected energy savings.

East and Central WTPs Scale Inhibitor Pilot Testing. Both the EWTP and CWTP utilize membrane technology to treat the Biscayne Aquifer supply. Each of the facilities has a treatment capacity of 12.0 mgd and utilizes multiple membrane arrays configured to operate at 85% recovery.

Pilot testing of several scale inhibitors was conducted at the EWTP to determine the suitability of these products with the existing water supply, treatment process recovery and the Dow FilmTec membrane elements. Hazen's services included coordinating the scale inhibitor pilot testing operation, performing calculations and conducting an evaluation to select a new formulation to improve operations at the facility, and providing assistance to the City during the scale inhibitor chemical procurement process. The City has witnessed higher recovery rates and longer time periods between cleanings.

12-mgd Membrane Softening Plant Expansion. Hazen designed the expansion of Plantation's existing 6-mgd membrane softening facility to the build out treatment capacity of 12-mgd. Our design services included the addition of three 2-mgd arrays, a third membrane booster pump and the addition of a permeate flushing system within the existing membrane building. Also included in the design were the addition of a clearwell, transfer pumps and high service pumps sized to meet the higher flow rates provided during the expansion. Final deign was complete in November 2002 and construction was complete in 2003.

Injection Well Services. The City of Plantation operates four injection wells at three sites: two at the wastewater treatment plant and one at each of the water treatment plants. Hazen has assisted the City with a number of permitting issues associated with each of the wells. In addition, Hazen designed a cemented-in-place fiberglass injection tubing to replace the failed liner in the tubing and packer well at the CWTP. Also, at the RWWTP, Hazen designed a new deep dual zone monitor well to replace failed injection well monitor tubes.

Professional Engineering Services for Stormwater and Water Capital Improvements

Town of Jupiter, FL

Since 2000, Hazen has served as general consultant, responsible for managing and completing well over 100 assignments.

Since 2000, Hazen has served as general consultant, responsible for managing and completing well over 100 assignments for the Town of Jupiter. The following descriptions focus on the stormwater element of our service. Hazen has provided assistance to the Town in almost every aspect of its stormwater program, including updates to the Town's Stormwater Master Plan in 2002, 2007, 2012, and 2017; modeling; design; NPDES permitting; stormwater system upgrades, including pump stations, storm sewers, and BMPs; rate/financial analysis; plan review; construction oversight; grant assistance; and public outreach.

At the peak of its Community Investment Program, we largely acted as a Program Manager and extension of Town staff, assisting with implementation of capital projects, helping coordinate infrastructure with that of the development community and sister governments, and assisting with oversight of numerous utility-related programs and initiatives. In addition to CIP-related efforts, relevant water task assignments include the following:

IX System PFAS Evaluation. The Town operates an ion exchange (IX) system that treats a portion of their water treatment plant's raw water. This system effectively reduces color and total organic carbon (TOC) while preserving beneficial minerals like calcium, which are essential for remineralizing water processed through reverse osmosis. To ensure compliance with proposed maximum contaminant levels (MCLs) for PFAS and to maintain reliable operation, the Town has requested that Hazen do the following: 1.) Evaluate the existing IX system's condition; 2.) Recommend improvements and upgrades; and 3.) Assess alternative treatment options. The evaluation should include advantages and disadvantages of each option and a high-level

Client Reference

Town of Jupiter Utilities
210 Military Trail
Jupiter, FL 33458
Amanda Barnes, Utilities Director
(561) 741-2537 (phone)
amandab@jupiter.fl.us

Project Details

Contract Duration:
2000-Present

Project Cost:
$6.6 million (fees to date)
$40 million (construction to date)

Project Highlights

- Since 2000, Hazen has served as general consultant for the Town of Jupiter, providing assistance to the Town in almost every aspect of its stormwater program.
- Hazen has provided master planning, stormwater planning and modeling, design, NPDES permitting, asset management, rate/financial analysis, plan review, and construction oversight.

cost comparison of the proposed solutions. This comprehensive analysis will help the Town make informed decisions about their water treatment process, ensuring both regulatory compliance and optimal system performance.

10-Year Water Supply Facilities Work Plan. The purpose of the Work Plan was to identify and plan for the water supply sources and facilities needed to serve existing and new development within the municipality's jurisdiction. Chapter 163, Part II, Florida Statutes (F.S.), requires local governments to prepare and adopt updated Work Plans into their comprehensive plans. Hazen researched and reported on the following main elements to produce the work plan; regional issues effecting water supply; population projections; water demand projections; water supply sources and treatment capacities; water supply projects; water conservation and reuse; and intergovernmental coordination activities. Hazen also reviewed the municipality's current Comprehensive Plan related to water supply and provide suggested revisions to the Comprehensive Plan to be compliant and consistent with the Updated Work Plan.

Lead and Copper Rule Revisions (LCRR) Compliance Assistance. The Town provides drinking water to a service area of 88,000 in northern Palm Beach County. Hazen worked with the Town to develop a multi-phase LCRR compliance program. Phase I of the project included historical record review and development of an initial water service line inventory along with regulatory coordination with FDEP and FDOH. Hazen assisted the Town with development of an action plan to achieve compliance with LCRR requirements by the EPA's October 16, 2024 deadline.

2022 Water Master Plan Update. The Water Master Plan was developed through a collaborative approach and will provide a comprehensive evaluation of the Town's Water Utility anticipated future challenges including sustainability of water supply sources, climate change/coastal resiliency, existing and future regulatory compliance, membrane treatment concentrate management disposal, condition assessment of existing treatment plant infrastructure, and financial positions. The project included review of historical data and regulatory compliance and development of 25-year capital plan.

14.5-mgd Nanofiltration Facility (Expandable to 17 MGD). Under a separate contract, Hazen provided design, permitting, and pilot testing oversight services for a new 14.5-mgd nanofiltration facility (NF), expandable to 17 mgd. Hazen designed the NF facility to replace the lime softening facility and blend with the Town of Jupiter's reverse osmosis (RO) plant. Predesign activities for the project included preparation of 22 separate technical memoranda (TM) and review of the Town's pilot testing data. These documents were developed to identify design parameters for the new NF facility. Hazen's center port design saves the Town 30% in annual electrical costs. Total construction cost for the facility was $37 million, with construction and start-up complete by 2010.

General Water and Wastewater Services

City of Miramar, FL

Since the 1990s, Hazen has worked with the City's water, wastewater, and reuse services on all phases of project implementation to provide cost effective and innovative solutions to meet their growth and regulatory needs.

Hazen has assisted the City in the successful implementation of over $110 million in infrastructure improvements to the City's water, wastewater, and reuse systems. These projects have encompassed all aspects of utility-related engineering, including studies, facilities planning, design, cost estimation, permitting, construction administration, startup services, and regulatory assistance for both water and wastewater infrastructure, as well as assistance in the establishment of a stormwater utility, construction of new administration and fleet maintenance facilities, and a new citywide Local Area Network / Wide Area Network (LAN/WAN) communications system. In addition to these technical efforts, Hazen has also worked with the City on unique activities, such as grants procurement and "good neighbor" community involvement programs. Below are a few project highlights, illustrating Hazen's continued support and in-depth knowledge of the City's system.

City of Miramar Wastewater Reclamation Facility. Hazen has worked with the City on all phases of their Wastewater Reclamation Facility—from inception to the latest reuse facilities expansion from 4 mgd to 7.5 mgd.

- Wastewater System Master Planning
- Planning, design, and construction of the Miramar WWRF, including fine mechanical screens, forced vortex type grit removal, activated sludge treatment with fine bubble aeration, final clarification, effluent pump station and deep well injection, with an initial capacity of 7.4 mgd, as well as reuse facilities to produce 2 mgd of reclaimed water for irrigation.
- Planning, design and construction of the wastewater and reclaimed water transmission systems.

Client Reference

City of Miramar
Utilities Department
13900 Pembroke Road
Miramar, FL 33027
Francois Domond, PE
Director of Utilities Department
(954) 883-6813
fdomond@miramarfl.gov

Project Details

Project Duration:
1993-Ongoing

Project Cost:
$1.27 million (est. fee-to-date)

Construction costs varies per project

Project Highlights

- Implementation of infrastructure improvements to the City's water, wastewater, and reuse systems.
- Assisted the City with their water system needs, performing studies/assessments, specialty plant evaluations, and construction management services at the West WTP.
- Conversion of the East WTP from lime softening to membrane softening, including upgrades to meet finished water quality goals and rehabilitation.

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Other wastewater projects have involved hydraulic modeling, transmission system expansion, sewer system rehabilitation, I/I program management, pump station design and rehabilitation, telemetry assistance, and rate studies.

City of Miramar West WTP. Hazen has assisted the City with their water system needs, performing studies/assessments, specialty plant evaluations, and construction management services at the West WTP. Select projects:

- ***Membrane Softening Expansion Construction Management Services:*** Construction administration services to implement the plant's 3-mgd membrane softening expansion, involving constructability review, stringent construction sequencing constraints to maintain uninterrupted service, comprehensive inspections to ensure construction according to the contract documents, start-up services, compliance with regulatory agencies, and record drawing development.
- ***Taste and Odor Investigation:*** Treatment process evaluation involving investigation of taste and odor complaints and high turbidity following the addition of reverse osmosis treatment of Floridan aquifer supply water (designed by a different firm). The problem was traced to iron sulfide precipitation, pH shift, and deficient degasification facilities. Hazen recommended segregating NF and RO permeate, whereby the City modified the permeate piping with successful results.
- ***Chemical Hazard / Forensic Engineering Evaluation:*** As a result of accidental sulfuric acid leaks, Hazen examined the chemical system hazards associated with the existing facility, including probable cause of spills, air sampling program evaluating potential risk from release, effects of spills on concrete containment, and recommended remedial actions.

City of Miramar East WTP. Within the last ten years, Hazen has assisted the City with converting the East WTP from lime softening to membrane softening, including upgrades to meet finished water quality goals and rehabilitation. Select projects include:

- ***Ammoniation Feed System and Construction Services:*** Evaluation to assess the feasibility of installing an ammonia feed system to mitigate production of disinfection byproducts while maintaining adequate disinfection in the distribution system. Hazen designed the ammonia feed system following the study and performed construction oversight.
- ***East WTP Process Enhancements/Renovation Preliminary Design:*** Planning and design of plant conversion from lime softening to membrane treatment. Based on initial evaluation of the City's raw water supply data and infrastructure, Hazen determined that additional raw water capacity would be needed to implement membrane softening. At the City's request, Hazen evaluated multiple raw water supply augmentation alternatives for 3 mgd (blended treatment) and 6 mgd (full conversion) membrane treatment. Based on comparison of the qualitative considerations and estimated $/gpd for each alternative, the City decided to proceed with preliminary design of full plant conversion to 6 mgd membrane softening treatment, including the installation of new production wells and raw water transmission piping. Hazen developed the preliminary design report and drawings to implement 6 mgd of membrane softening treatment capacity at the EWTP while maximizing use of existing facilities and re-purposing the Chemical Building to accommodate new processes. Treatment plant improvements included raw water wells and piping, sand separation and cartridge filters, membrane feed pumps, two 2-stage membrane units designed with the flexibility, raw water blending flexibility, concentrate and permeate pipelines, post-treatment, chemical feed and storage upgrades, electrical and I&C upgrades, miscellaneous building modifications, and site work. Hazen developed the project delivery schedule for design and construction of the proposed improvements. The City elected to proceed via Design-Build construction delivery.

Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP). In 2020, Hazen performed an RRA of the City's water system, including the East WTP, West WTP, raw water wells, storage tanks, pump stations and pipelines, to meet their regulatory requirement under America's Water Infrastructure Act (AWIA) of 2018. The RRA involved workshops with leaders from utility departments and emergency response agencies, field inspections of critical assets, identification of threats and vulnerabilities to the water system, risk calculations using a tool developed by Hazen, recommendations of mitigation measures to improve resilience, and development of a report that is "for official use only" and certified by the US EPA. The detailed RRA report provides an implementation plan for capital and operational needs for risk and resilience management of the City's water system. Hazenalso developed an ERP for the City that includes response protocols for emergencies/events identified as threats during the RRA.

Tab

7

Attached Forms

PROPOSAL CERTIFICATION FORM

I hereby declare that I have carefully examined this RFQ, and any other documents made a part of this RFQ.

I hereby propose to furnish the services specified in this RFQ. I agree that my Statement of Qualifications will remain firm for a period of 180 days in order to allow the City adequate time to evaluate the Statement of Qualifications.

I certify that all information contained in this Statement of Qualifications is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this Statement of Qualifications on behalf of the firm.

Authorized Signature	Janeen Wietgrefe, PE, PMP Printed Name & Title
Hazen and Sawyer Company Name	4000 Hollywood Boulevard, Suite 750N Company Address
Hollywood, FL 33021 City, State, Zip Code	December 12, 2024 Date
(954) 987-0066 Phone Number	jwietgrefe@hazenandsawyer.com Email Address

NON-COLLUSION AFFIDAVIT

By submission of this affidavit, the Proposer certifies that this price is made independently and free from collusion. Proposer shall disclose below, to the best of its knowledge, any City of Cooper City officer or employee, or any spouse, son, daughter, stepson, stepdaughter, or parent of any such officer or employee, who is an officer or director of, or has a material interest in, the Proposer's business who is in a position to influence this procurement. Any City of Cooper City officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement. For purposes hereof, a person has a material interest if he or she directly or indirectly owns more than five percent (5%) of the total assets or capital stock of any business entity, or if he or she otherwise stands to personally gain if the contract is awarded to this vendor.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City of Cooper City Code of Ordinances.

NAME	RELATIONSHIP
N/A	

Janeen Wietgrefe

Signature Janeen Wietgrefe, PE, PMP

STATE: Florida
COUNTY: Broward

Sworn to (or affirmed) and subscribed before me this 12th day of December, 2024, by: Janeen Wietgrefe, PE.
Name of Person Making Statement

PEGGY M. JAIME
State of Florida - Notary Public
Commission # HH 98589
My Commission Expires Feb. 28, 2025

Peggy Jaime
Signature of Notary Public

PEGGY JAIME
Name of Notary Public (Typed, Printed, Stamped)

Personally Known: X OR Identification Produced: ____

Type of Identification Produced: ____

SWORN STATEMENT UNDER SECTION 287.133(3)(A), FLORIDA STATUTES, ON THE PUBLIC ENTITY CRIMES

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

STATE OF Florida COUNTY Broward

Before me, the undersigned authority, personally appeared, who, being by me first duly sworn, made the following statement:
Name of Proposer Hazen and Sawyer
Business address 4000 Hollywood Boulevard, Suite 750N, Hollywood, FL 33021

I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or any such agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
I understand that "convicted" or "conviction" is defined by the statue to mean a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

I understand that "affiliate" is defined by the statute to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime, or (2) and entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime, or (3) those officers, directors, executives, partners, shareholders, employees, members and agents who are active in the management of an affiliate, or (4) a person or corporation who knowingly entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.

Please mark the appropriate paragraph below:
✓ Neither the proposer, contractor, nor any officer, director, executive, partner, shareholder, employee member or agent who is active in the management of the proposer or contractor nor any affiliate of the proposer or contractor has been convicted of a public entity crime subsequent to July 1, 1989.

_____There has been a conviction of a public entity crime by the proposer or contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the proposer or contractor who is active in the management of the proposer or contractor or an affiliate of the proposer or contractor. A determination has been made pursuant to Section 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest for the name of the convicted person or affiliate to appear on the convicted vendor list. The name of the convicted person or affiliate is _____.

A copy of the order of the Division of Administrative Hearings is attached to this statement.

Janeen Wietgrefe

Proposer's Signature Janeen Wietgrefe, PE, PMP

STATE: Florida
COUNTY: Broward

Sworn to (or affirmed) and subscribed before me this 12th day of December, 2024, by: Janeen Wietgrefe, PE
Name of Person Making Statement

PEGGY M. JAIME
State of Florida - Notary Public
Commission # HH 98589
My Commission Expires Feb. 28, 2025

Signature of Notary Public

PEGGY JAIME
Name of Notary Public (Typed, Printed, Stamped)

Personally Known: X OR Identification Produced: _____

Type of Identification Produced: _____

PEGGY M. JAIME
State of Florida - Notary Public
Commission # HH 98589
My Commission Expires Feb. 28, 2025

SCRUTINIZED COMPANIES CERTIFICATION
(PURSUANT TO FLORIDA STATUTE § 287.135)

I, Janeen Wietgrefe, PE, PMP, Vice President, on behalf of Hazen and Sawyer,
Print Name and Title — Company Name

certify that Hazen and Sawyer does not:
Company Name

1. Participate in a boycott of Israel; and
2. Is not on the Scrutinized Companies that Boycott Israel List; and
3. Is not on the Scrutinized Companies with Activities in Sudan List; and
4. Is not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and
5. Has not engaged in business operations in Syria.

Submitting a false certification shall be deemed a material breach of contract. The City shall provide notice, in writing, to the Company of the City's determination concerning the false certification. The Company shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Company does not demonstrate that the City's determination of false certification was made in error, then the City shall have the right to terminate the contract and seek civil remedies pursuant to Florida Statute § 287.135.

Section 287.135, Florida Statutes, prohibits the City from:

1) Contracting with companies for goods or services in any amount if at the time of bidding on, submitting a proposal for, or entering into or renewing a contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, F.S., or is engaged in a boycott of Israel; and,
2) Contracting with companies for goods or services over $1,000,000.00 that are on either the Scrutinized Companies with activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or are engaged in business operations in Syria.

As the person authorized to sign on behalf of the Company, I hereby certify that the company identified above in the section entitled "Company Name" does not participate in any boycott of Israel, is not listed on the Scrutinized Companies that Boycott Israel List; the Scrutinized Companies with Activities in Sudan List; the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and is not engaged in business operations in Syria. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject the company to civil penalties, attorney's fees, and/or costs. I further understand that any contract with the City for goods or services may be terminated at the option of the City if the company is found to have submitted a false certification or has been placed on any of aforementioned lists.

* SIGNATURE

Janeen Wietgrefe, PE, PMP, Vice President
PRINT NAME & TITLE

* Individual must have the authority to bind the Company.

Form must be executed and returned with attached proposal to be considered.

E-VERIFY FORM

Definitions:

"Contractor" means a person or entity that has entered or is attempting to enter into a contract with a public employer to provide labor, supplies, or services to such employer in exchange for salary, wages, or other remuneration.

"Subcontractor" means a person or entity that provides labor, supplies, or services to or for a contractor or another subcontractor in exchange for salary, wages, or other remuneration.

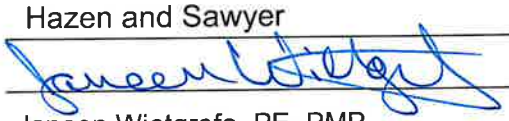
Effective January 1, 2021, public and private employers, contractors, and subcontractors will begin required registration with, and use of the E-verify system in order to verify the work authorization status of all newly hired employees. Vendor/Consultant/Contractor acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of:

a) All persons employed by Vendor/Consultant/Contractor to perform employment duties within Florida during the term of the contract; and

b) All persons (including sub-vendors/sub-consultants/subcontractors) assigned by Vendor/Consultant/Contractor to perform work pursuant to the contract with the Department. The Vendor/Consultant/Contractor acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the contract is a condition of the contract with the City of Cooper City; and

Should vendor become successful Contractor awarded for the above-named project, by entering into this Contract, the Contractor becomes obligated to comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility," as amended from time to time. This includes but is not limited to utilization of the E-Verify System to verify the work authorization status of all newly hired employees and requiring all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. The contractor shall maintain a copy of such affidavit for the duration of the contract. Failure to comply will lead to termination of this Contract, or if a subcontractor knowingly violates the statute, the subcontract must be terminated immediately. If this contract is terminated for a violation of the statute by the Contractor, the Contractor may not be awarded a public contract for a period of 1 year after the date of termination.

Company Name: Hazen and Sawyer

Authorized Signature: 

Print Name: Janeen Wietgrefe, PE, PMP

Title: Vice President

Date: December 12, 2024

CONFLICT OF INTEREST DISCLOSURE FORM

The award of this contract is subject to the provisions of Chapter 112, *Florida Statutes.* All Proposers must disclose within their Proposal: the name of any officer, director, or agent who is also an employee of the City of Cooper City.

Furthermore, all Proposers must disclose the name of any City employee who owns, directly or indirectly, an interest of more than five percent (5%) in the Proposer's firm or any of its branches.

The purpose of this disclosure form is to give the City the information needed to identify potential conflicts of interest for evaluation team members and other key personnel involved in the award of this contract.

The term "conflict of interest" refers to situations in which financial or other personal considerations may adversely affect, or have the appearance of adversely affecting, an employee's professional judgment in exercising any City duty or responsibility in administration, management, instruction, research, or other professional activities.

Please check one of the following statements and attach additional documentation if necessary:

✓ To the best of our knowledge, the undersigned firm has no potential conflict of interest due to any other cities, counties, contracts, or property interest for this Proposal.

_____ The undersigned firm, by attachment to this form, submits information that may be a potential conflict of interest due to any other cities, counties, contracts, or property interest for this Proposal.

Acknowledged by:

Hazen and Sawyer
Firm Name


Signature

Janeen Wietgrefe, PE, PMP, Vice President
Name and Title (Print or Type)

December 12, 2024
Date

Addendum #1 - CLARIFICATIONS

(Issued Monday, November 25, 2024)

RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum is issued to make the following change(s)/correction(s)/clarification(s) to:

Question 1: There appear to be multiple dates listed in the RFQ regarding the submission deadline. Could you please clarify the final and correct deadline?

Answer 1: The correct Due Date is Friday December 13, 2024 at 3pm

Acknowledgment of Addendum #1

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Addendum #2 - CLARIFICATIONS

(Issued Tuesday, December 3, 2024)

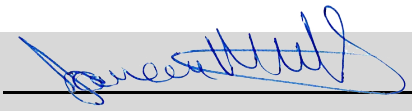
RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum is issued to make the following change(s)/correction(s)/clarification(s) to:

Due to the holidays, the due date for the submission of this proposal has been extended to Monday, January 6, 2024 at 3:00pm.

Acknowledgment of Addendum #2

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Addendum #3 - CLARIFICATIONS

(Issued Monday, December 9, 2024)

RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum is issued to make the following change(s)/correction(s)/clarification(s) to:

Question 1: Does the City want the Proposers to include five references for each category?

Answer 1: No. Five (5) references will be sufficient

Question 2: Under what section does the City prefer the Proposers to include their project experience (besides the reference section)?

Answer 2: TAB 6 References please provide the details of "Project Experience" per each area your firm desires to be considered the prime consultant.

Question 3: Our firm is able to provide more than one of the requested services. Section 2.1 Introduction of the solicitation states, "a firm may submit only as a prime." Is the City looking for us to (a) ONLY submit for services specific to each Exhibit A in which we will be prime and omit any potentially needed sub-consultant? Alternatively (b) include sub-consultants that we anticipate would be needed, even if they have their own dedicated Exhibit A? (For example: How do we address Civil Engineering as prime and Geotechnical Engineering as a sub-consultant?)

Answer 3: The City desires only the prime consultant, as identified in Exhibit A.

Question 4. Would the City consider extending the deadline due to the holidays?

Answer 4: Yes. January 6th 2025

Question 5: Section 1.21 requests that an original and three copies be submitted in a sealed envelope, with a USB. Does the city prefer a certain method for binding the hard copy responses (e.g. spiral bound vs three-ring binder)?

Answer 5: No preference on binding

Question 6: How much work ($ amount and type of projects) were distributed under the previous continuing contract?

Answer 6: The City currently has several contracts and approximately twenty-five (25) active capital projects of varying scale, cost, and complexity. It is also preparing to enter the bond market soon to obtain a rating and secure funding for many more projects over the next one to two years.

Question 7: Is there an existing contract in place for these services, and if so, could you confirm the incumbent's name?

Answer 7: Currently the city has three (3) contracts in place: Hazen and Sawyer, Chen Moore &B Corradino Group. Additionally, there are several existing contracts for services. However, the City wishes to deepen the pool of available consultants, and values small to intermediate sized firms who can complete the types of projects Cooper City has to complete, including water and wastewater utility projects, general fund and public works capital projects, building facilities, resiliency and other types of projects (such as lighting, electrical, MEP and other services).

Question 8: While we understand this is a continuing contract, could you provide information on any allocated budget, or the budget assigned to previous or similar projects?

Answer 8: The City has projects that will range from several hundred thousands of dollars to as much as twelve to twenty million dollars in magnitude, and include the various types of projects outlined in response to question 8 (eight) above.

Question 9: Is it acceptable to submit the proposal ONLY via DemandStar?

Question 9: Yes

Question 10: Could you please confirm whether the current RFQ 2024-1-PW will replace the contracts previously awarded under RFQ 2020-1-UTL? If that is the case, would CMA need to resubmit to be reconsidered under the new RFQ?

Question 10: Existing contracts have been replaced by submissions under RFQ 2024-1-PW. CMA should submit again under this RFQ. Any contracts that have already been executed will proceed to completion, but new assignments will require re-selection through this RFQ.

Question 11: Can we use 11 x 17 paper size for the organizational chart?

Question 11: Yes but fold it into 8.5 x 11 inch size book.

Question 12: Can we extend Exhibit B to include all project team members and add a column for "Other"?

Question 12: Yes

Question 13: Page 46, Domestic Partnership has two sections – Section one has applicable information to select, Section two mentions contract price terms and is not applicable to section one – How do we proceed?

Question 13: Please select an item for Section Two only if Item #4 in Section One is selected

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Question 14: If a firm is pursuing continuing consulting services for architectural services, should that firm include subconsultants/services such as MEP, Structural etc.?

Question 14: Yes, and if you change these, the Contract eventually executed should require you to update any of these selections and

request approval by City before using any different sub consultants.

Question 15: We would like to know if the City wants subconsultants included in the proposal submittal.If subconsultants as to be included should they fill out the Exhibits A & B?

Question 15: No, those sub consultants would not necessarily need to complete the Exhibit A & B inquiries. We can evaluate them through the proposal review process.

Question 16: In regard to the above referenced project, is it acceptable to recreate the Exhibit B form (page 2) with the table that lists the project team? It is difficult to fit the information on the form provided with the RFQ. :

Question 16: Yes, please complete Form 330, Parts I and II, as required by the RFQ. The form has been uploaded to Demandstar as an amendment.

Question 17: Is the expectation of the City that each firm submits its qualifications as a sole entity and not as a team with subconsultants?

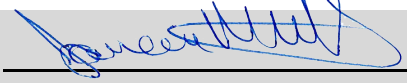
Question 17: Yes. Each consultant should submit its own qualifications and list its sub consultants to be used, not as a team of consultants. The City desires specialized consultants that can self-perform a substantial amount of work included in the project, but acknowledges some sub consultants may be needed for specific needs in portions of any project undertaken.

Question 18: As currently worded, we believe that the indemnity provisions in Section 1.15 on page 8, and Article 6.1 on page 56, of the RFQ does not comply with FL Statute 725.08 and is unenforceable. Will you agree to reword the indemnification to conform with the statute? Suggested language per FL Statute 725.08: "The design professional shall indemnify and hold harmless the agency, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the design professional and other persons employed or utilized by the design professional in the performance of the contract.

Question 18: The City will ensure that contract awarded pursuant to the RFQ is consistent with Sec. 725.08, F.S., and the other requirements of Florida law.

Acknowledgment of Addendum #3

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Addendum #4

(Issued Thursday, December 12, 2024)

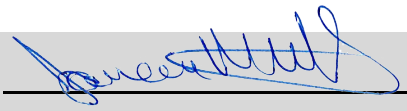
RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum is issued to make the following change(s)/correction(s)/clarification(s) to:

The due date for the submission of questions for this proposal has been extended to Monday, December 16, 2024 at 3:00pm.

Acknowledgment of Addendum #4

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Addendum #5

(Issued Thursday, December 19, 2024)

RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum becomes a part of the subject solicitation.

A. CHANGES TO THE SOLICITATION:
Please note the following changes to the Solicitation:

1. Question and Answer Deadline: Extended to Monday, December 23, 2024, at 12:00 PM EST.

2. Proposal Due Date: Extended to Monday, January 6, 2025 at 3:00 PM EST.

3. Section 1.15, Indemnification has been **replaced** with the following:
   1.15 Indemnification
   Pursuant to Florida Statutes 725.08 and notwithstanding the provisions of Florida Statutes 725.06, the CONSULTANT shall indemnify and hold harmless the CITY, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the CONSULTANT and other persons employed or utilized by the CONSULTANT in the performance of this Agreement.

   To the extent this indemnification clause or any other indemnification clause in this Agreement does not comply with Chapter 725, Florida Statutes, as may be amended, this provision and all aspects of the Contract Documents shall hereby be interpreted as the parties' intention for the indemnification clauses and Contract Documents to comply with Chapter 725, Florida Statutes, as may be amended. This Section shall survive expiration or termination of this Agreement.

4. Section 1.21 Proposal Submission Deadline and Opening has been **replaced** with the following:
   1.21 PROPOSAL SUBMISSION DEADLINE AND OPENING: Sealed proposals will be received electronically via www.DemandStar.com and by the City Clerk's Office, City of Cooper City, 9090 SW 50th Place, Cooper City, Florida until 3:00 PM, Friday, December 13, 2024. The proposals will be opened and read aloud shortly thereafter. One (1) USB, one (1) original and three (3) copies of proposals must be presented in a sealed envelope and identified with the following information: "Continuing Professional Consulting Services, RFQ2024-1-PW#" for physical submissions. Electronic proposal submissions require the uploading of electronic attachments via www.DemandStar.com. The submission of electronic attachments containing embedded documents or proprietary file extensions is prohibited. All electronic proposals received and time stamped through DemandStar, prior to the proposal submittal deadline shall be accepted as timely submitted. **If you submit your Proposal and subsequently an Addendum is issued, failure to resubmit the Proposal, after acknowledging Addenda or making any edits to your Proposal, may result in your Proposal not being received by the City.** The City of Cooper City reserves the right to reject any or all proposals, to waive any informalities or irregularities in any proposals received, to re-advertise for proposals, to award only portions of the project, to award to multiple Proposers, or take any similar actions that may be deemed to be in the best interests

of the City.

5. Section 2.4, Statement of Qualifications Content has been **replaced** with the following:

2.4 Statement of Qualifications Content:

Consultants interested in performing these professional services must identify which area(s) the firm(s) are interested in being considered. Consultants must display considerable relevant experience with the specified type of work (as listed on Exhibit "A") and should emphasize both the experience and capability of particular personnel who will actually perform the work. In order to ensure a uniform review process and to obtain the maximum degree of comparability, it is required that the Statements of Qualifications be organized in the manner specified. The following information and documents are required to be provided with Proposer's Statement of Qualifications. Failure to do so may deem your Statement of Qualifications non-responsive.

TAB 1: Table of Contents
The table of contents should outline in sequential order the major areas of the Statement of Qualifications, including enclosures. All pages must be consecutively numbered and correspond to the Table of Contents.

TAB 2: Letter of Interest
Provide a Letter of Interest indicating your firm's commitment to the project. Letter of interest shall include which area(s) the Proposer is interested in being considered for. The shall also include the following:

a. Size of firm
b. Range of activities
c. Firms strength and stability
d. Location of firm
e. Summary of abilities and experience of the firms' professional personnel (Standard Form 330 - Attached)
f. Summary of past performance of the firm on similar projects (Standard Form 330 - Attached)
g. Recent, current, and projected workload of the firm, and availability and access to the firms' top level management personnel.
h. Identification of firms, single, professionally licensed point of contact for all City projects.

TAB 3: Standard Form 330
Proposers shall complete both Part I and II of the Standard Form 330 so that the City can obtain adequate information for this RFQ. Proposer's shall u*se the attached Standard Form 330 or visit https://www.gsa.gov/forms-library/architect-engineer-qualifications for a PDF fillable version of this form.*

Indicate the firm's number of years of experience in providing Engineering / Architect and or professional services. Indicate Business structure (Corp., Partnership, etc.) with proof;Firmshould be established as a legal entityin theState of Florida; Company address, phone number, E-Mail address, web site, contact person(s), etc.; Relative size of the firm, including management, technical and support staff; Licenses and any other pertinent information shall be submitted. Please include the firm's proximity to the City of Cooper City, as well as the number of employees or staff members. TAB 4: Project Team/Manager's Experience (Form - Exhibit B) Proposers must list the members of the project team per discipline. Provide a list of the personnel to be used on each project and their qualifications. A briefresume including education, experience, licenses and any other pertinent information shall be included for each team member, for each project, to be assigned to each project. Provide any other documentation that demonstrates their ability to satisfy all of the minimum qualification requirements. Provide a summary of the experience and qualifications of the individual(s) who will be selected to serve as project managers for the City. Individuals MUST have a minimum of five (5) years' experience in architectural, engineering, or landscape architectural services, and have served as project manager/construction manager on similar projects on a minimum of three previous occasions.

TAB 4: Approach to Handling of Potential Projects
Describe your proposed approach to the project(s) that may be assigned to your firm. As part of the project approach, the firm shall propose a scheduling methodology (timeline) for effectively managing and executing the

work in the optimum time. Provide the methodology or approach to formulating an "Opinion of Project Cost" Also provide information on your firm's current workload and how the potential project(s) will fit into your workload. Describe available facilities, technological capabilities and other available resources you offer for the potential project(s). Provide in concise narrative form, your understanding of the City's needs, goals and objectives as they relate to the potential project(s), and your overall approach to accomplishing the project(s). Give an overview on your proposed vision, ideas and methodology.

TAB 5: References
Provide a minimum of five (5) references, for each service that the Proposer's wishes to be considered for. Each reference shall be able to confirm the Proposer's experience and performance within the last five (5) years. References shall be from clients of similar size and complexity to Cooper City or larger municipalities, for which the Proposer has performed scopes similar those listed in this RFP. Proposers shall include the following information for each reference:

- Client Name, address, contact person, email address and phone number
- Description of service(s)/work performed
- Year the project was completed
- Total of fee(s) paid to firm
- Total cost of the construction, both estimated and actual.

TAB 6: Attached Forms

- Proposal Certification Form
- Sworn Statement regarding Public Entities Crimes
- Non-Collusion Form
- Scrutinized Companies Certification Form
- E-verify Certification Form
- Conflict of Interest Disclosure Form

6. Exhibit B has been **replaced** by Standard Form 330.

7. Domestic Partnership Certification Form has been **deleted** from this solicitation and not required to be submitted.

8. Article 6, Indemnification of the Sample Continuing Professional Services Agreement has been **replaced** with the following:

Article 6
INDEMNIFICATION

6.1 Pursuant to Florida Statutes 725.08 and notwithstanding the provisions of Florida Statutes 725.06, the CONSULTANT shall indemnify and hold harmless the CITY, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the CONSULTANT and other persons employed or utilized by the CONSULTANT in the performance of this Agreement.

To the extent this indemnification clause or any other indemnification clause in this Agreement does not comply with Chapter 725, Florida Statutes, as may be amended, this provision and all aspects of the Contract Documents shall hereby be interpreted as the parties' intention for the indemnification clauses and Contract Documents to comply with Chapter 725, Florida Statutes, as may be amended. This Section shall survive expiration or termination of this Agreement.

B. QUESTION AND ANSWERS:

The following questions were received during the Question-and-Answer period.

Question 1: Is the SF330 form required for this proposal response? It is included in the downloads on Demandstar, but not mentioned anywhere in the RFQ, including in what section to include it. Information requested in designated tabs including qualifications of firm, project team resumes, and references will all be duplicated information if the SF330 is required.

Answer 1: Yes. Please refer to Section A.5. of this addendum.

Question 2: I noticed that the City added an SF-330 document to the procurement site. The RFQ does not require an SF-330 to be submitted. Are we allowed to submit our information following the format requested in the RFQ – or do we need to include an SF-330 also?

Answer 2: No, Proposers shall submit Standard Form 330 with their submittal. Please refer to Section A.5. of this addendum.

Question 3: I'm emailing in regard to the above referenced RFQ. On 11/27 SF 330 forms were uploaded to Demand Star with no explanation in the RFQ or addendum. Do we need to include these in our submittal? If so, is there a preferred tab?

Answer 3: Proposers shall include Standard Form 330 with their submittal. Please refer to Section A.5. of this addendum to determine what information should be included on each Tab.

Question 4. I am following up to see if the clarification on Standard Form 330, added to the submission, will be answered in the Addendum scheduled for Friday, December 6. This inquiry is based on the question from my previous email below. Thank you.

Answer 4: Proposers shall include Standard Form 330 with their submittal. Please refer to Section A.5. of this addendum to determine what information should be included on each Tab.

Question 5: We have encountered a query regarding the Domestic Partnership Certification Form as we finalize our submission for printing. The first four checkbox items refer to Section 2-197.1 of the City of Cooper City's Code of Ordinances. However, when we searched the City's Municipal Code of Ordinances & Charter website, Section 2-197 is marked as "Reserved" and lacks a definition (please see the attached document). Without knowing what Section 2-197.1 entails, we are unsure which items to select for our firm. Could you please provide the definition for Section 2-197.1?

Answer 5: The Domestic Partnership Certification Form has been removed from this solicitation. Please refer to Section A.7. of this addendum.

Question 6: Regarding Addendum 3, Clarification: In which section of the submittal does the City require the SF-330 to be included? It is not listed in the original RFQ. As per the RFQ, firm information/background, org chart, staff resumes, and key projects are already included. Are we providing a separate tab with the entire SF-330 in one spot?

Answer 6: Proposers shall include Standard Form 330 with their submittal. Please refer to Section A.5. of this addendum to determine what information should be included on each Tab.

Question 7: Respectfully, we request clarification re: addendum #3. Question/answer #9 indicates that submissions will be permitted via Demandstar: However, the e-bidding function does not show that it is active: Please confirm whether electronic responses are accepted. If so, please advise if the e-bid feature will be activated before the submission deadline.

Answer 7: Yes, electronic responses shall be accepted. The e-bid feature has been activated.

Question 8: Regarding the above-referenced RFQ, the latest addendum (#3) states that Form 330 must also be submitted. Could you please clarify in which section of the RFQ these forms should be included?

Answer 8: Proposers shall include Standard Form 330 with their submittal. Please refer to Section A.5. of this addendum to determine what information should be included on each Tab.

Question 9: Question 16 of Addendum No. 3 asks about recreating the Exhibit B form. The answer to the question doesn't address Exhibit B and instead references completing Form 330 as required by the RFQ. I am not coming across anything in the original RFQ about including an SF330 with the submission. Can you please confirm if we are to include an SF330 and if yes, which tab should it be included in?

Answer 9: Proposers shall include Standard Form 330 with their submittal. Please refer to Section A.5. of this addendum to determine what information should be included on each Tab.

Question 10: The answer to question 9 of Addendum No. 3allows for submitting through DemandStar only, but there is no option to submit an e-bid. Will the City be enabling the e-bid feature so we can submit electronically?

Answer 10: Yes, electronic responses shall be accepted. The e-bid feature has been activated.

Question 11: With reference to the above RFQ and Addendum 3, Item 9. Please confirm that bids will be received online through Demandstar. If that is the case, please let us know when Demandstar will be updated to be able to receive the uploaded bids. At this time there is no ability to upload to Demandstar. Also, What section do you want SF330 to be placed.

Answer 11: Yes, electronic responses shall be accepted. The e-bid feature has been activated. Section A.5. of this Addendum details how Standard Form 330 shall be submitted.

Question 12: Answer to No. 1 of Addendum No. 3 states: 5 references are sufficient. Answer to Question No. 2 states "per each area your firm desires". Which would the City prefer: 5 total references or 5 per category?

Answer 12: TAB 5: References, has been replaced to require Proposers to p*rovide a minimum of five (5) references, for each service that the Proposer's wishes to be considered for.* Please refer to Section A.5. of this addendum to determine what information should be included on each Tab.

Question 13: Answer to No. 3 states: the City desires only the Prime Consultant. Answer to No. 15 & 17 indicates that subs should be on the team. Should the proposer add subconsultants to the team?

Answer 13: If a Proposer intends to utilize sub-consultant(s), then the sub-consultant shall be added to the team.

Question 14: We are still unsure what to do with reference to Question 16. Is it ok to recreate the 2nd page to Exhibit B since the form is difficult to manipulate?

Answer 14: Proposer's shall submit Standard Form (SF) 330.

Question 15: Question 9: the City responded "yes" to submit submittal on Demandstar. The RFQ states on Page 10, No. 1.21 to deliver proposals to the City. Which does the City prefer, to submit on Demandstar or deliver a hard copy to the City? There is not an option to submit on DemandStar.

Answer 15: DemandStar has been updated to allow for electronic submissions. Method of submittal is at the discretion of the Proposer.

Question 16: Under which Tab would the City prefer we include the SF330?

Question 16: Please refer to Section A.5. of this addendum to determine how to include Standard Form 330.

Question 17: In addendum 3, question #9 of the above referenced solicitation someone asked if we were able to submit the RFQ through Demandstar only and the response was yes. The RFQ indicates printed hard copies would be required to be brought to City Hall and there isn't an option on Demandstar to submit anything. I just wanted to confirm whether a digital submittal is an option or if it is required to submit only hard copies?

Answer 17: DemandStar has been updated to allow for electronic submissions. The method of submittal is at the discretion of the Proposer.

Question 18: Will you clarify which portions of the proposal need to be in SF 330 format? For example, what exactly is a "key person"? Do you want all of the proposed team's resumes to be in SF 330 format instead of the format we usually use, or in addition to the resumes we usually use? Or do you just want the project manager's resume to be in SF 330 format?

Answer 18: Section A.5. of this addendum details how to include Standard Form 330. Key Personnel are employees of the Proposer considered to be essential to the performance of execution of the resultant scope of work.

Question 19: The first four checkbox items refer to Section 2-197.1 of the City of Cooper City's Code of Ordinances. However, when we searched the City's Municipal Code of Ordinances & Charter website, Section 2-197 is marked as "Reserved" and it does not provide a description or definition for what it is (please see the attached Word document). Without knowing what Section 2-197.1 pertains to, we are unsure which items to select for our firm on the Domestic Partnership Certification Form in our qualifications submittal. Can you please provide the definition for Section 2-197.1?

Answer 19: The Domestic Partnership Certification Form has been removed from this solicitation. Please refer to Section A.7. of this addendum.

Question 20: Can the City provide a list of previous incumbents/ previously awarded firms?

Answer 20: CCNA services were previously awarded under RFQ 2020-1-UTL. The solicitation was awarded to the following firms:

Chen Moore and Associates, Inc. | Hazen & Sawyer, P.C. | The Corradino Group, Inc.

Question 21: Is a hardcopy proposal required or will the City accept a electronic submittal through Demandstar?

Answer 21: The City will accept electronic submittals. DemandStar has been updated to allow for electronic submissions.

Question 22: Is there a page limit for the Statement of Qualifications Package?

Answer 22: No.

Question 23: Does the City have any small business preference?

Answer 23: No, unfortunately, Cooper City does not have a small business preference.

Question 24: Does the City have any local business preference?

Answer 24: No, unfortunately, Cooper City does not have a local business preference; however If all bids received are for the same total amount or unit price, quality and service being equal, the contract shall be awarded based on the following criteria to be

considered in the following order of priority: (a) A local bidder with a primary business location within the City of Cooper City. (b) A bidder with a primary business location within Broward, Miami- Dade or Palm Beach Counties. (c) A bidder with a primary business location within the State of Florida.

Question 25: A standard form 330 was added as a document on Demandstar, is the SF 330 expected to be filled out by proposers, if so, under which Tab would the City prefer it to be included?

Answer 25: Proposer's shall submit Standard Form (SF) 330. Section A.3. of this addendum details how to include Standard Form 330.

Question 26: As currently worded, we believe that the indemnity provisions in Section 1.15 on page 8, and Article 6.1 on page 56, of the RFQ does not comply with FL Statute 725.08 and is unenforceable. Will you agree to reword the indemnification to conform with the statute? Suggested language per FL Statute 725.08: "The design professional shall indemnify and hold harmless the agency, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the design professional and other persons employed or utilized by the design professional in the performance of the contract."

Answer 26: Both Section 1.15 and Article 6.1 of Draft Agreement have been revised. Please see Section A.5. of this Addendum.

Question 27: A sample SF330 was posted on November 27th, could you please clarify if this was posted solely for informational purposes? If it is intended to be an addition to the submittal, may we provide the resume and project information in our own format, as long as it includes the same details as the attached SF330?

Answer 27: Proposer's shall submit Standard Form (SF) 330. Proposer's shall follow the instructions listed within Standard Form 330.

Question 28: Will you accept the previously requested brief resumes instead of SF-330, which was just instructed on 11/27/24

Answer 28: No, Proposer's shall submit Standard Form (SF) 330. Section A.5. of this addendum details how to include Standard Form 330.

Question 29: Please explain/clarify the purpose of Addendum #2. Does the City prefer that we use the SF-330 form for the proposal submittal?

Answer 29: The purpose of Addendum # 2 was to extend the proposal due date. Proposer's shall submit Standard Form (SF) 330. Section A.5. of this addendum details how to include Standard Form 330.

Question 30: Will Section 2.4 Statement of Qualifications Content be revised to include the requirement for the SF330?

Answer 30: Section 2.4 has been revised. Section A.5. of this addendum details how to include Standard Form 330.

Question 31: An addendum for the City of Cooper City called (Standard Form 330-Architect Engineering Qualifications) was just posted; does a full SF 330 also need to be apart of the submittal along with the original resumes requested?

Answer 31: Section A.5. of this addendum details how to include Standard Form 330.

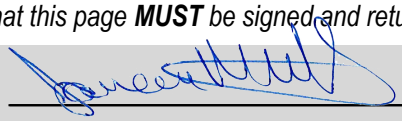
Question 32: According to Addendum 3, Question 9, it states that proposals can be submitted via DemandStar only. However, we

are currently unable to see an option to submit on DemandStar. Will this feature be enabled to accept e-submissions?

Answer 32: DemandStar has been updated to allow for electronic submissions. The method of submittal is at the discretion of the Proposer.

Acknowledgment of Addendum #5

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Addendum #6

(Issued Monday, December 30, 2024)

RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum becomes a part of the subject solicitation.

A. *CHANGES TO THE SOLICITATION:*

Please note the following changes to the Solicitation:

1. Proposal Due Date: Extended to Tuesday, January 21, 2025 at 3:00 PM EST.

2. Question and Answer Due Date: Extended to Friday, January 3, 2025 at 12:00 PM EST.

3. Section 2.4, Statement of Qualifications Content has been **replaced** with the following:

2.4 Statement of Qualifications Content:

Consultants interested in performing these professional services must identify which area(s) the firm(s) are interested in being considered. Consultants must display considerable relevant experience with the specified type of work (as listed on Exhibit "A") and should emphasize both the experience and capability of particular personnel who will actually perform the work. In order to ensure a uniform review process and to obtain the maximum degree of comparability, it is required that the Statements of Qualifications be organized in the manner specified. The following information and documents are required to be provided with Proposer's Statement of Qualifications. Failure to do so may deem your Statement of Qualifications non-responsive.

TAB 1: Table of Contents

The table of contents should outline in sequential order the major areas of the Statement of Qualifications, including enclosures. All pages must be consecutively numbered and correspond to the Table of Contents.

TAB 2: Letter of Interest

Provide a Letter of Interest indicating your firm's commitment to the project. Letter of interest shall include which area(s) the Proposer is interested in being considered for. The letter shall also include the following:

a. Size of firm, to include the number of employees or staff members (including management, technical and support staff);
b. Range of activities
c. Firms strength and stability
d. Location of firm; proximity to the City of Cooper City
e. Summary of abilities and experience of the firms' professional personnel
f. Summary of past performance of the firm on similar projects
g. Indicate the firm's number of years of experience in providing Engineering / Architect and or professional services and Business structure (Corp., Partnership, etc.) with proof;
h. Recent, current, and projected workload of the firm, and availability and access to the firms' top level management personnel.

i. Identification of firms, single, professionally licensed point of contact for all City projects.

TAB 3: Exhibit A/Standard Form 330
Proposers shall complete both Part I and II of the Standard Form 330 so that the City can obtain adequate information for this RFQ. Proposer's shall u*se the attached Standard Form 330 or visit https://www.gsa.gov/forms-library/architect-engineer-qualifications for a PDF fillable version of this form. Tab 3 must include* a list of the personnel to be used on each project and their qualifications. A brief resume including education, experience, licenses and any other pertinent information (such as company address, phone number, E-Mail address, web site, contact person(s), etc.) shall be included for each team member, for each project, to be assigned to each project. Provide any other documentation that demonstrates their ability to satisfy all of the minimum qualification requirements. Provide a summary of the experience and qualifications of the individual(s) who will be selected to serve as project managers for the City. Individuals MUST have a minimum of five (5) years' experience in architectural, engineering, or landscape architectural services, and have served as project manager/construction manager on similar projects on a minimum of three previous occasions. All additional information shall be included in Section H. Additional Information of SF 330.

TAB 4: Professional Registration Certificates
A reproduction of the firm's current professional registration certificate(s) is required for the services offered and must be in the name of the firm offering said services (architecture, engineering, general contractor or other certification required). Firms must be properly registered at the time of application to practice their profession in the State of Florida and with the appropriate State Board governing the services offered. Firm should be established as a legal entity in the State of Florida.

TAB 5: Approach to Handling of Potential Projects
Describe your proposed approach to the project(s) that may be assigned to your firm. As part of the project approach, the firm shall propose a scheduling methodology (timeline) for effectively managing and executing the work in the optimum time. Provide the methodology or approach to formulating an "Opinion of Project Cost" Also provide information on your firm's current workload and how the potential project(s) will fit into your workload. Describe available facilities, technological capabilities and other available resources you offer for the potential project(s). Provide in concise narrative form, your understanding of the City's needs, goals and objectives as they relate to the potential project(s), and your overall approach to accomplishing the project(s). Give an overview on your proposed vision, ideas and methodology.

TAB 6: Exhibit A/References
*Proposers shall complete Exhibit A – Services to be Considered For and p*rovide a minimum of five (5) references, for each discipline that the Proposer's wishes to be considered for. Each reference shall be able to confirm the Proposer's experience and performance within the last five (5) years. References shall be from clients of similar size and complexity to Cooper City or larger municipalities, for which the Proposer has performed scopes similar those listed in this RFP. Proposers shall include the following information for each reference:

- Client Name, address, contact person, email address and phone number
- Description of service(s)/work performed
- Year the project was completed
- Total of fee(s) paid to firm
- Total cost of the construction, both estimated and actual.

TAB 7: Attached Forms

- Proposal Certification Form
- Sworn Statement regarding Public Entities Crimes
- Non-Collusion Form
- Scrutinized Companies Certification Form
- E-verify Certification Form
- Conflict of Interest Disclosure Form

B. QUESTION AND ANSWERS:

The following questions were received during the Question-and-Answer period.

Question 1: Do we need to include in our response package a copy of our Certificate of Insurance or after notification of award?

Answer 1: The successful proposer will furnish to the City, Certificates of Insurance or endorsements evidencing the insurance coverage specified above within seven (7) days after notification of an award. The required Certificates of Insurance or endorsements will not only name the types of policies continued but will also refer specifically to this contract and will state that such insurance is as required by this contract. Refer to Section 16. Proof of Insurance Coverage

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Question 2: Do we need to include/provide in our response package a statement and/or documentation concerned with the performance of the following listed below, if applicable? If so, what tab should we use to insert this information/statement? (bankruptcy, mortgage foreclosures; previous or pending litigation and/or restrictions, restraints or impositions imposed by federal or state regulatory agencies such as Federal Housing Administration, Securities and Exchange Commission, etc.)

Answer 2: The City will have the right to investigate the financial condition, experience record, and equipment of each proposer and determine to its satisfaction the competency of each to undertake the project. The proposer will submit documentation concerned with the past performance and integrity of a contractor/developer. Accordingly, proposer should provide information as to any of the following: (a) bankruptcy, (b) mortgage foreclosures; (c) previous or pending litigation and (d) restrictions, restraints or impositions imposed by federal or state regulatory agencies such as Federal Housing Administration, Securities and Exchange Commission, etc., that apply to the proposer/contractor/developer. Refer to Section 1.7 Proposer's Experience Record.

Question 3: Since the City extended the "Q&A" deadline, can you revise the proposal due date, again, to sometime after January 6th, 2025? Due to the holidays, many offices are closed or short-staffed the last week of December.

Answer 3: Proposal due date has been extended to Monday, January 20, 2025 at 3:00 PM EST.

Question 4. Addendum #3, Question #2: Under what section does the City prefer the Proposers to include their project experience (besides the reference section)? CITY OF COOPER CITY RESPONSE / ANSWER 2: TAB 6 References Please provide the details of "Project Experience" per each area your firm desires to be considered the prime consultant. COMMENT/QUESTION: We're an architectural firm, so TAB 6 will only include projects/services listed in "Exhibit A – Architecture", correct? Can these projects be the same and/or different than those found in the SF330 form? Also, can you clarify what is meant by "structural" listed in "Exhibit A – Architecture"? What type of project experience are you looking for/referring to? Example?

Answer 4: Correct. Yes those projects can be the same. Structural as it relates to Exhibit A - Architecture, are structural design services limited of Architects licensure. These types of projects may include design of a multi-floor habitable structure, docks or seawalls, slabs, or buildings with reinforced concrete, wood or plastics design and construction.

Question 5: Addendum #3, Question 3: .... "is the City looking for us to (a) ONLY submit for services specific to each Exhibit A in which we will be prime and omit any potentially needed sub-consultant? Alternatively (b) include sub-consultants that we anticipate would be needed, even if they have their own dedicated Exhibit A? (For example: How do we address Civil Engineering as prime and Geotechnical Engineering as a sub-consultant?) CITY OF COOPER CITY RESPONSE / ANSWER 3: The City desires only the prime consultant, as identified in Exhibit A. COMMENT/QUESTION: As architects, our specialty includes studies, design, plan review, and cost estimating among others. These tasks can be achieved by our firm alone, but for many other projects, additional disciplines are required. How do we list/mention and/or where do we include subconsultant information in our response package?

Answer 5: Subconsultants shall be listed on Standard Form 330.

Question 6: Addendum #3, Question 12: Can we extend Exhibit B to include all project team members and add a column for "Other"? CITY OF COOPER CITY RESPONSE / ANSWER 12: Yes COMMENT/QUESTION: Is "Exhibit B" Form being replaced entirely by SF330 packet (Parts I +II) or is it a separate form/requirement in addition to the SF330 packet (Parts I +II)?

Answer 6: Exhibit B Form has been replaced by Standard Form 330. Please see Section A. of Addendum No. 6.

Question 7: Addendum #3, Question 14: If a firm is pursuing continuing consulting services for architectural services, should that firm include subconsultants/services such as MEP, Structural etc.? CITY OF COOPER CITY RESPONSE / ANSWER 14: Yes, and if you change these, the Contract eventually executed should require you to update any of these selections and request approval by City before using any different sub consultants. COMMENT/QUESTION: As architects, our specialty includes studies, design, plan review, and cost estimating among others. These tasks can be achieved by our firm alone, but for many other projects, additional disciplines are required. How do we list/mention and/or where do we include subconsultant information in our response package?

Answer 7: Subconsultants shall be listed on Standard Form 330.

Question 8: Addendum #3, Question 15: We would like to know if the City wants subconsultants included in the proposal submittal. If subconsultants as to be included should they fill out the Exhibits A & B? CITY OF COOPER CITY RESPONSE / ANSWER 15: No, those sub consultants would not necessarily need to complete the Exhibit A & B inquiries. We can evaluate them through the proposal review process. COMMENT/QUESTION: please clarify on how the city will "evaluate subconsultants through the proposal review process". The answer to Question 14 states that an architectural firm should include subconsultants/services such as MEP, Structural, etc. however, the subconsultant will not be part of Exhibits A & B, so are subconsultants going to be included in the SF330 packet (Parts I +II), then? Or is a list all that is needed?

Answer 8: Subconsultants shall be listed on Standard Form 330.

Question 9: Addendum #3, Question 16: In regard to the above-referenced project, is it acceptable to recreate the Exhibit B form (page 2) with the table that lists the project team? It is difficult to fit the information on the form provided with the RFQ. : CITY OF COOPER CITY RESPONSE / ANSWER 16: Yes, please complete Form 330, Parts I and II, as required by the RFQ. The form has been uploaded to Demandstar as an amendment. COMMENT/QUESTION: you stated above that the SF330 "is required by the RFQ". Where else in the RFQ is form SF330 mentioned? In 2020, SF300 was part of "Tab 2". This year (2024), there is no mention of an SF 330 form other than in your response to Question #16 above. Is TAB #4 going to include Exhibit B Form and the SF330 packet (Parts I +II) or is Exhibit B being replaced entirely by SF330 packet (Parts I +II)?

Answer 9: Please refer to Section A. of Addendum No. 6.

Question 10: Addendum #3, Question 17: Is the expectation of the City that each firm submits its qualifications as a sole entity and not as a team with subconsultants? CITY OF COOPER CITY RESPONSE / ANSWER 17: Yes. Each consultant should submit its own qualifications and list its sub consultants to be used, not as a team of consultants. The City desires specialized consultants that can self-perform a substantial amount of work included in the project but acknowledges some sub consultants may be needed for specific needs in portions of any project undertaken. COMMENT/QUESTION: Where should we include the list of sub consultants to be used? are subconsultants going to be included in the SF330 packet (Parts I +II)?

Answer 10: Subconsultants shall be listed on Standard Form 330.

Question 11: Regarding Addendum 5, can you please clarify the following:

- *Item 5 on page 2 revises the proposal content from the original RFQ – will there be an additional deadline extension to revise our proposals?*

- *The new content shows as follows:*
  - *TAB 1: Table of Contents*
  - *TAB 2: Letter of Interest (SF 330 information is requested in this section)*
  - *TAB 3: Standard Form 330 (do you want the SF 330 twice?)*
  - *TAB 4: Project Team/Manager's Experience (Form - Exhibit B) – (elsewhere in this addendum it is noted that Exhibit B is replaced by SF 330 – do we include Exhibit B or not?)*
  - *TAB 4: Approach to Handling of Potential Projects (there are two Tab 4s – do we change this to Tab 5 and revise the other tab numbers accordingly?)*
  - *In which Tab should we include Exhibit A?*

Answer 11: Proposal due date has been extended to *Monday, January 20, 2025 at 3:00 PM EST. SF 330 replaced Exhibit B.* The TABs have been updated; please see Section A. of Addendum No. 6. Exhibit A should be submitted under TAB 6.

Question 12: In regards to the Addendum #5 which was just issued for the above noted RFQ, I have the following questions. Under section A.5 on page 2, the Standard Form 330 is called out for under Tab #2 (items e and f) and also at the beginning of Tab #3. In addition, under the first noted Tab #4 (mid paragraph in the middle of page 2), Exhibit B is still called out which according to section A.6 on page 3, should be replaced with the SF330 form. So, where in fact do you want the SF 330 included?

Answer 12: Please see Section A. of Addendum No. 6.

Question 13: In regards to the Addendum #5 which was just issued for the above noted RFQ, I have the following questions. Also under section A.5 on page 2, there appear to be multiple Tab #4 sections now listed (mid paragraph in the middle and also at the bottom of page 2). Is this correct or if not, how should these Tabs be numbered?

Answer 13: Please see Section A. of Addendum No. 6.

Question 14: In regards to the Addendum #5 which was just issued for the above noted RFQ, I have the following questions. Under section A.5 on page 3, the Tab #5 References now states that a minimum of 5 references shall be provided for ***each service*** *that the Proposer wishes to be considered for. So for example, a proposer who wishes to be considered for providing the 5 services listed under the Transportation discipline along with the 5 services listed under the Water/Wastewater/Stormwater discipline would need to provide 50 references (i.e. 10 services x 5 references per service). Would this be correct?*

Answer 14: No, 5 references per discipline. See Section A. of Addendum No. 6.

Question 15: Where in our submittal should we include Exhibit A?

Answer 15: Exhibit A should be included under TAB 6. See Section A. of Addendum No. 6.

Question 16: *Could you please confirm the term "References" refers to providing five project examples for each service, rather than reference letters from other clients?*

Answer 16: Provide a minimum of five (5) references, for each discipline that the Proposer's wishes to be considered for. Each reference shall be able to confirm the Proposer's experience and performance within the last five (5) years. References shall be from clients of similar size and complexity to Cooper City or larger municipalities, for which the Proposer has performed scopes similar those listed in this RFP. Proposers shall include the following information for each reference:

- Client Name, address, contact person, email address and phone number
- Description of service(s)/work performed
- Year the project was completed
- Total of fee(s) paid to firm
- Total cost of the construction, both estimated and actual.

Question 17: *In the References TAB, can one project cover more than one service? For example, one project covering both Civil and Landscape Architecture*

Answer 17: Yes, just ensure that reference highlights each discipline in which it will cover.

Question 18: *Addendum #5 Response 4. Kept due date of December 13? and by the City Clerk's Office, City of Cooper City, 9090 SW 50th Place, Cooper City, Florida until 3:00 PM, Friday, December 13, 2024.*

Answer 18: Section A. of Addendum No. 6 extended the Proposal Due Date to Monday, January 20, 2025 *at 3:00 PM EST.*

Question 19: *On page 2 of 4, You have Tab 4 listed as Project Team/Manager's experience and then you have another Tab 4 of Approach to Handling the Potential Projects?*
TAB 4: Project Team/Manager's Experience (Form - Exhibit B) Proposers
TAB 4: Approach to Handling of Potential Projects

Answer 19: The TABs have been updated. Please see Section A. of Addendum No. 6.

Question 20: *On Page 2 of 4, you request licenses in Tab 3 and also in the first Tab 4. Where would you like the licenses placed?*

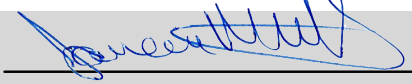
Answer 20: The TABs have been updated. Please see Section A. of Addendum No. 6.

Question 21: *Answer 6 states Exhibit B has been replaced with SF-330s. However, in your first Tab 4, you request Exhibit B Page 2 of 4 (really 2 of 8). Do you want Exhibit B or not and if not what do you want under Tab 4. Project Team?*
TAB 4: Project Team/Manager's Experience (Form - Exhibit B) Proposers must list the members of the project team per discipline. Provide a list of the personnel to be used on each project.

Answer 21: The TABs have been updated. Please see Section A. of Addendum No. 6. Project team shall be input on SF 330.

Acknowledgment of Addendum #6

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Addendum #7

(Issued Friday, January 3, 2025)

RFQ 2024-1-PW, Continuing Professional Consulting Services (CCNA)

This addendum becomes a part of the subject solicitation.

A. *CHANGES TO THE SOLICITATION:*

Please note the following changes to the Solicitation:

1. Section 2.4, Statement of Qualifications Content has been **replaced** with the following:

2.4 Statement of Qualifications Content:

Consultants interested in performing these professional services must identify which area(s) the firm(s) are interested in being considered. Consultants must display considerable relevant experience with the specified type of work (as listed on Exhibit "A") and should emphasize both the experience and capability of particular personnel who will actually perform the work. In order to ensure a uniform review process and to obtain the maximum degree of comparability, it is required that the Statements of Qualifications be organized in the manner specified. The following information and documents are required to be provided with Proposer's Statement of Qualifications. Failure to do so may deem your Statement of Qualifications non-responsive.

TAB 1: Table of Contents

The table of contents should outline in sequential order the major areas of the Statement of Qualifications, including enclosures. All pages must be consecutively numbered and correspond to the Table of Contents.

TAB 2: Letter of Interest

Provide a Letter of Interest indicating your firm's commitment to the project. Letter of interest shall include which area(s) the Proposer is interested in being considered for. The letter shall also include the following:

a. Size of firm, to include the number of employees or staff members (including management, technical and support staff);
b. Range of activities
c. Firms strength and stability
d. Location of firm; proximity to the City of Cooper City
e. Summary of abilities and experience of the firms' professional personnel
f. Summary of past performance of the firm on similar projects
g. Indicate the firm's number of years of experience in providing Engineering / Architect and or professional services and Business structure (Corp., Partnership, etc.) with proof;
h. Recent, current, and projected workload of the firm, and availability and access to the firms' top level management personnel.
i. Identification of firms, single, professionally licensed point of contact for all City projects.

TAB 3: Standard Form 330

Proposers shall complete both Part I and II of the Standard Form 330 so that the City can obtain adequate information for this RFQ. Proposer's shall u*se the attached Standard Form 330 or visit https://www.gsa.gov/forms-library/architect-engineer-qualifications for a PDF fillable version of this form. Tab 3 must include* a list of the personnel to be used on each project and their qualifications. A brief resume including education, experience, licenses and any other pertinent information (such as company address, phone number, E-Mail address, web site, contact person(s), etc.) shall be included for each team member, for each project, to be assigned to each project. Provide any other documentation that demonstrates their ability to satisfy all of the minimum qualification requirements. Provide a summary of the experience and qualifications of the individual(s) who will be selected to serve as project managers for the City. Individuals MUST have a minimum of five (5) years' experience in architectural, engineering, or landscape architectural services, and have served as project manager/construction manager on similar projects on a minimum of three previous occasions. All additional information shall be included in Section H. Additional Information of SF 330.

TAB 4: Professional Registration Certificates

A reproduction of the firm's current professional registration certificate(s) is required for the services offered and must be in the name of the firm offering said services (architecture, engineering, general contractor or other certification required). Firms must be properly registered at the time of application to practice their profession in the State of Florida and with the appropriate State Board governing the services offered. Firm should be established as a legal entity in the State of Florida.

TAB 5: Approach to Handling of Potential Projects

Describe your proposed approach to the project(s) that may be assigned to your firm. As part of the project approach, the firm shall propose a scheduling methodology (timeline) for effectively managing and executing the work in the optimum time. Provide the methodology or approach to formulating an "Opinion of Project Cost" Also provide information on your firm's current workload and how the potential project(s) will fit into your workload. Describe available facilities, technological capabilities and other available resources you offer for the potential project(s). Provide in concise narrative form, your understanding of the City's needs, goals and objectives as they relate to the potential project(s), and your overall approach to accomplishing the project(s). Give an overview on your proposed vision, ideas and methodology.

TAB 6: Exhibit A/References

*Proposers shall complete Exhibit A – Services to be Considered For and p*rovide a minimum of five (5) references, for each discipline that the Proposer's wishes to be considered for. Each reference shall be able to confirm the Proposer's experience and performance within the last five (5) years. References shall be from clients of similar size and complexity to Cooper City or larger municipalities, for which the Proposer has performed scopes similar those listed in this RFP. Proposers shall include the following information for each reference:

- Client Name, address, contact person, email address and phone number
- Description of service(s)/work performed
- Year the project was completed
- Total of fee(s) paid to firm
- Total cost of the construction, both estimated and actual.

TAB 7: Attached Forms

- Proposal Certification Form
- Sworn Statement regarding Public Entities Crimes
- Non-Collusion Form
- Scrutinized Companies Certification Form
- E-verify Certification Form
- Conflict of Interest Disclosure Form
- Acknowledgement of Addendum(s)

B. QUESTION AND ANSWERS:

The following questions were received during the Question-and-Answer period.

Question 1: Would you like us to include the signed addendums under the forms section?

Answer 1: The signed addendums should be included in Tab 7.

Question 2: On Page 2, Tab 3 includes Exhibit A and then Tab 6 includes Exhibit A – Do you want this in both places?

Answer 2: Exhibit A has been removed from Tab 3. Please see Section A. of Addendum No. 7.

Question 3: Due date is January 21, 2025 – on Question 18 it refers to January 20? Please confirm Question 18: Addendum #5 Response 4. Kept due date of December 13? and by the City Clerk's Office, City of Cooper City, 9090 SW 50th Place, Cooper City, Florida until 3:00 PM, Friday, December 13, 2024.

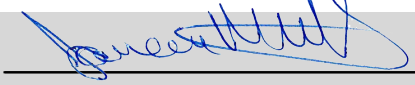
Answer 3: Proposal due date is Tuesday, January 21, 2025 at 3:00 PM EST.

Question 4. Since Exhibit A is to be included in Tab 6, shouldn't "Exhibit A" be deleted from the title of Tab 3?

Answer 4: Exhibit A has been removed from Tab 3. Please see Section A. of Addendum No. 7.

Acknowledgment of Addendum #7

*Bidders hereby acknowledges that he/she has received and understands the information contained in this Addendum. Bidders further acknowledges that this page **MUST** be signed and returned with its Bid, along with any revised Bid Forms, if applicable.*

Acknowledged by:		*Company:*	Hazen and Sawyer
Print Name:	Janeen Wietgrefe, PE, PMP, Vice President	*Date:*	1/20/2025

Hazen

Hazen and Sawyer
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