



## Professional Engineering Services and CEI for Chemical Feed Improvements at Myakkahatchee Creek Water Treatment Plant and Booster Stations

### Firm's Legal Name

Hazen and Sawyer

### Points of Contact

Julie Karleskint, PE, Senior Associate  
941.378.2862 (office)  
941.321.4376 (cell)  
941.378.0196 (fax)  
jkarleskint@hazenandsawyer.com

Andre Dieffenthaler, PE, Senior Associate  
813.630.4498 (office)  
813.394.7706 (cell)  
813.630.1967 (fax)  
adiieffenthaler@hazenandsawyer.com

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# 1. Transmittal Letter





Hazen and Sawyer  
7334 Delaine Court  
Sarasota, FL 34240 • 941.378.2862

January 4, 2016

City of North Port  
Purchasing Division  
4970 City Hall Boulevard, Suite 337  
North Port, Florida 34286

**Re: RFP No. 2016-21  
Professional Engineering Services and CEI for Chemical Feed Improvements at  
Myakkahatchee Creek Water Treatment Plant**

Dear Evaluation Committee Members:

Hazen and Sawyer (Hazen) is excited to present our qualifications for providing Professional Engineering Services associated with the chemical feed improvements at the Myakkahatchee Creek Water Treatment Plant (WTP) and distribution system booster stations. Hazen has been established in Sarasota for over 25 years and will provide the City with local responsive service to make sure the project meets the City's expectations.

As one of Florida's leading utility engineering consulting firms, Hazen is one of the few consultants totally focused in the areas of water and wastewater engineering services for local utilities. We have successfully implemented over \$2 billion in water-related public works infrastructure projects in Florida in the past decade that include both design and construction of chemical feed systems. To provide North Port with a seasoned staff that has local roots and a detailed understanding of issues facing the City, we will manage this contract from our Sarasota office, with coordination from our other offices as needed.

Hazen has significant experience in the planning, design, permitting, and construction of chemical feed facilities for water treatment on a national level, even providing design services for the one of the largest surface water treatment plants in the United States—the New York City Department of Environmental Protection Croton WTP. On a local level, our team has provided similar services for chemical storage and feed systems across the west coast of Florida with our experience ranging from chemical system evaluation and optimization to detailed design to construction and start-up. This includes recent projects with other local utilities, City of Arcadia, and Sarasota County.

**Julie Karleskint, PE**, will serve as Project Manager. She brings in-depth relevant experience, having served as Project Manager for numerous projects in and around Sarasota County over the past 25 years. Ms. Karleskint's proven leadership will ensure the City receives technically sound, personalized, and responsive service

# Hazen

We appreciate the opportunity to present our team's qualifications and believe that the selection of Hazen for this contract will result in a continued successful relationship with the City of North Port. This proposal has been submitted without collusion with any other person or entity submitting a proposal pursuant to this RFP. As an officer of the firm, I am authorized to make representations on behalf of the firm. Please feel free to contact me at (813) 630-4498 or danderson@hazenandsawyer.com if you have any questions or would like to discuss our qualifications further.

Very truly yours,  
**HAZEN AND SAWYER**

  
Damann L. Anderson, PE  
Vice President

  
Julie L. Karleskint, PE  
Senior Associate

*Materials and Enclosures:*

*The Table of Contents on the first page of this proposal identifies all materials and enclosures included in response to the RFP.*

## 2. Qualifications of the Firm



## Tab 2

# Qualifications of the Firm

*Hazen has provided professional engineering services for the design, construction, and **start-up of chemical storage and feed systems since we opened our first Florida office in 1968.** We have worked with utilities across the state to address issues such as coagulation, organic carbon removal, disinfection, disinfection residual maintenance, and chemical treatment optimization.*

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 and Sawyer 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.

Hazen has provided complete in-house engineering services in Florida since 1968. Our staff members have extensive expertise in water, wastewater, reclaimed water, structural, electrical and instrumentation and controls. **Our Florida staff has been involved in the implementation of more than \$2 billion in water-related projects in Florida over the past 10 years.** These Florida projects include planning, design, value engineering, optimization, permitting, construction management, and start-up and operation of chemical storage and feed systems.

Most of our team members are long-time Florida residents and offer considerable knowledge of Florida's current and historic issues related to water and wastewater utilities and the natural environment.

The firm is owned entirely by its employees, many of whom have been with the firm for 15-20 years. With corporate headquarters in New York City, the firm also has local branch offices in Sarasota, Coral Gables, Boca Raton, Orlando, Tampa, and Jacksonville, Florida, as well as a full-service regional office in Hollywood, Florida. The firm has 850+ employees firm wide.

**65** years in  
existence 

**47** years in  
Florida 

**10** years  
serving   
North Port

**100%**   
of work devoted to  
the water environment

### Business Structure:

Hazen and Sawyer is a corporation registered as a legal entity in the State of Florida. The firm is not a minority- or woman-owned business.

### Primary Office Proposed for this Contract

7334 Delainey Court  
Sarasota, FL 34240  
941.378.2862 (main)  
941.378.0196 (fax)  
jkarleskint@hazenandsawyer.com  
www.hazenandsawyer.com

## Licenses

Hazen is authorized and licensed to provide engineering services by the State of Florida Board of Professional Engineers (Certificate of Authorization #2771), and all of our services are performed under the direction of a licensed professional engineer in the State of Florida.

**State of Florida**  
Board of Professional Engineers

Attests that  
**Hazen And Sawyer, P.C.**

is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2017  
Audit No: 228201704657



**FBPE**  
FLORIDA BOARD OF  
PROFESSIONAL ENGINEERS

CA Lic. No:  
**2771**

***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.

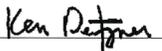
The document number of this corporation is 841657.

I further certify that said corporation has paid all fees due this office through December 31, 2015, that its most recent annual report/uniform business report was filed on February 23, 2015, and 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 Twenty-third day of February,  
2015*





**Secretary of State**

Authentication ID: CC6982987758

To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

<https://efile.sunbiz.org/certauthver.html>

# ARCHITECT - ENGINEER QUALIFICATIONS

## PART I - CONTRACT-SPECIFIC QUALIFICATIONS

### A. CONTRACT INFORMATION

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

Professional Engineering Services and CEI for Chemical Feed Improvements at Myakkahatchee Creek Water Treatment Plant and Booster Stations, City of North Port, Florida

2. PUBLIC NOTICE DATE

12/3/2015

3. SOLICITATION OR PROJECT NUMBER

RFP 2016-21

### B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

Damann L. Anderson, Vice President

5. NAME OF FIRM

Hazen and Sawyer

6. TELEPHONE NUMBER

(941) 378-2862

7. FAX NUMBER

(941) 378-0196

8. E-MAIL ADDRESS

danderson@hazenandsawyer.com

### C. PROPOSED TEAM

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

	<i>(Check)</i>			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON- TRACTOR			
a.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Hazen and Sawyer</b>  <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	7334 Delainey Court Sarasota, Florida 34240	<b>Primary Consultant</b>
b.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Hazen and Sawyer</b>  <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	10002 Princess Palm Avenue Registry One Building Suite 200 Tampa, Florida 33619	<b>Primary Consultant</b>
c.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Hazen and Sawyer</b>  <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	919 Lake Baldwin Lane Suite A Orlando, Florida 32814	<b>Primary Consultant</b>
d.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Hazen and Sawyer</b>  <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	4035 Ridge Top Road Suite 400 Fairfax, Virginia 22030	<b>Primary Consultant</b>
e.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	  <input type="checkbox"/> CHECK IF BRANCH OFFICE		
f.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	  <input type="checkbox"/> CHECK IF BRANCH OFFICE		

### D. ORGANIZATIONAL CHART OF PROPOSED TEAM

*(Attached)*

# ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

RFP 2016-21

## PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

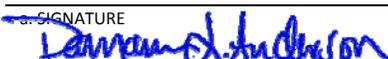
2a. FIRM (OR BRANCH OFFICE) NAME <b>Hazen and Sawyer</b>			3. YEAR ESTABLISHED <b>1951</b>	4. DUNS NUMBER <b>064966138</b>
2b. STREET <b>7334 Delainey Court</b>			5. OWNERSHIP	
2c. CITY <b>Sarasota</b>	2d. STATE <b>FL</b>	2e. ZIP CODE <b>34240</b>	a. TYPE <b>Employee Owned</b>	
6a. POINT OF CONTACT NAME AND TITLE <b>Damann L. Anderson, PE, Vice President</b>			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER <b>(941) 378-2862</b>	6c. E-MAIL ADDRESS <b>danderson@hazenandsawyer.com</b>		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				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS*		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	93	0	C15	Construction	8
06	Architects	8	0	C18	Cost Estimating	4
08	CAD Technicians/Designers	72	0	D02	Dams (Earth, Rock)	6
10	Chemical Engineers	24	0	D04	Design-Build	6
12	Civil Engineers	87	0	E03	Electrical Studies &	5
15	Construction Inspectors	36	0	E07	Energy Conservation	4
16	Construction Managers	33	1	E09	Environmental Impact	5
18	Cost Engineer/Estimator	8	0	F20	Financial/Rate Studies	5
20	Economists	5	0	H04	HVAC	4
21	Electrical Engineers	33	0	I03	Industrial Waste	3
23	Environmental Engineers	321	2	P05	Planning (Community)	4
24	Environmental Scientists	23	0	P06	Planning (Site)	4
42	Mechanical Engineers	26	0	P07	Plumbing and Piping	6
57	Structural Engineers	26	0	S04	Sewage Collection	10
62	Water Resources Engineers	12	0	S07	Solid Wastes	2
	Technicians/Field	48	0	S10	Surveying; Platting;	3
	O&M Specialists	8	0	S11	Sustainable Design	5
	Other	5	0	S13	Stormwater Handling &	7
			0	S20	Start-Up/Operations	5
			0	T02	Testing & Inspection	3
			0	W02	Water Resources	4
			0	W03	Water Supply	9
	<b>Total</b>	<b>868</b>	<b>3</b>			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER			
a. Federal Work	3	1. Less than \$100,000	6. \$2 million to less than \$5 million	7. \$5 million to less than \$10 million	8. \$10 million to less than \$25 million
b. Non-Federal Work	10	2. \$100,00 to less than \$250,000	9. \$25 million to less than \$50 million	10. \$50 million or greater	
c. Total Work	10	3. \$250,000 to less than \$500,000			
		4. \$500,000 to less than \$1 million			
		5. \$1 million to less than \$2 million			

### 12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE <b>January 4, 2016</b>
c. NAME AND TITLE <b>Damann L. Anderson, PE, Vice President</b>	

# ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

RFP 2016-21

## PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME <b>Hazen and Sawyer</b>			3. YEAR ESTABLISHED <b>1951</b>	4. DUNS NUMBER <b>064966138</b>
2b. STREET <b>10002 Princess Palm Avenue, Suite 200</b>			5. OWNERSHIP	
2c. CITY <b>Tampa</b>	2d. STATE <b>FL</b>	2e. ZIP CODE <b>33619</b>	a. TYPE <b>Employee Owned</b>	
6a. POINT OF CONTACT NAME AND TITLE <b>Damann L. Anderson, PE, Vice President</b>			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER <b>(813) 630-4498</b>	6c. E-MAIL ADDRESS <b>danderson@hazenandsawyer.com</b>		7. NAME OF FIRM (If block 2a is a branch office) <b>Hazen and Sawyer (Same)</b>	
8a. FORMER FIRM NAME(S) (If any)			8b. YR. ESTABLISHED	8c. DUNS NUMBER

### 9. EMPLOYEES BY DISCIPLINE

### 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS\*

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	93	0	C15	Construction	8
06	Architects	8	0	C18	Cost Estimating	4
08	CAD Technicians/Designers	72	3	D02	Dams (Earth, Rock)	6
10	Chemical Engineers	24	1	D04	Design-Build	6
12	Civil Engineers	87	2	E03	Electrical Studies &	5
15	Construction Inspectors	36	0	E07	Energy Conservation	4
16	Construction Managers	33	0	E09	Environmental Impact	5
18	Cost Engineer/Estimator	8	0	F20	Financial/Rate Studies	5
20	Economists	5	2	H04	HVAC	4
21	Electrical Engineers	33	0	I03	Industrial Waste	3
23	Environmental Engineers	321	5	P05	Planning (Community)	4
24	Environmental Scientists	23	2	P06	Planning (Site)	4
42	Mechanical Engineers	26	1	P07	Plumbing and Piping	6
57	Structural Engineers	26	0	S04	Sewage Collection	10
62	Water Resources Engineers	12	0	S07	Solid Wastes	2
	Technicians/Field	48	0	S10	Surveying; Platting;	3
	O&M Specialists	8	0	S11	Sustainable Design	5
	Other	5	0	S13	Stormwater Handling &	7
				S20	Start-Up/Operations	5
				T02	Testing & Inspection	3
				W02	Water Resources	4
				W03	Water Supply	9
<b>Total</b>		<b>868</b>	<b>16</b>			

### 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	3
b. Non-Federal Work	10
<b>c. Total Work</b>	<b>10</b>

### PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- |   |   |
|---|---|
| 1. Less than \$100,000                  | 6. \$2 million to less than \$5 million   |
| 2. \$100,00 to less than \$250,000      | 7. \$5 million to less than \$10 million  |
| 3. \$250,000 to less than \$500,000     | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million   | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater               |

### 12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE  
  
c. NAME AND TITLE  
**Damann L. Anderson, PE, Vice President**

b. DATE  
**January 4, 2016**

# ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*  
RFP 2016-21

## PART II - GENERAL QUALIFICATIONS

*(If a firm has branch offices, complete for each specific branch office seeking work.)*

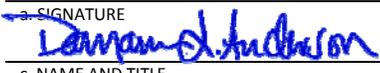
2a. FIRM (OR BRANCH OFFICE) NAME <b>Hazen and Sawyer</b>			3. YEAR ESTABLISHED <b>1951</b>	4. DUNS NUMBER <b>064966138</b>
2b. STREET <b>919 Lake Baldwin Lane, Suite A</b>			5. OWNERSHIP	
2c. CITY <b>Orlando</b>	2d. STATE <b>FL</b>	2e. ZIP CODE <b>32814</b>	a. TYPE <b>Employee Owned</b>	
6a. POINT OF CONTACT NAME AND TITLE <b>Damann L. Anderson, PE, Vice President</b>			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER <b>(407) 514-2688</b>	6c. E-MAIL ADDRESS <b>danderson@hazenandsawyer.com</b>		7. NAME OF FIRM <i>(If block 2a is a branch office)</i> <b>Hazen and Sawyer (Same)</b>	
8a. FORMER FIRM NAME(S) <i>(If any)</i>			8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS*		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number <i>(see below)</i>
		(1) FIRM	(2) BRANCH			
02	Administrative	93	0	C15	Construction	8
06	Architects	8	0	C18	Cost Estimating	4
08	CAD Technicians/Designers	72	1	D02	Dams (Earth, Rock)	6
10	Chemical Engineers	24	0	D04	Design-Build	6
12	Civil Engineers	87	0	E03	Electrical Studies &	5
15	Construction Inspectors	36	0	E07	Energy Conservation	4
16	Construction Managers	33	0	E09	Environmental Impact	5
18	Cost Engineer/Estimator	8	0	F20	Financial/Rate Studies	5
20	Economists	5	0	H04	HVAC	4
21	Electrical Engineers	33	0	I03	Industrial Waste	3
23	Environmental Engineers	321	4	P05	Planning (Community)	4
24	Environmental Scientists	23	0	P06	Planning (Site)	4
42	Mechanical Engineers	26	0	P07	Plumbing and Piping	6
57	Structural Engineers	26	0	S04	Sewage Collection	10
62	Water Resources Engineers	12	0	S07	Solid Wastes	2
	Technicians/Field	48	0	S10	Surveying; Platting;	3
	O&M Specialists	8	0	S11	Sustainable Design	5
	Other	5	0	S13	Stormwater Handling &	7
				S20	Start-Up/Operations	5
				T02	Testing & Inspection	3
				W02	Water Resources	4
				W03	Water Supply	9
<b>Total</b>		<b>868</b>	<b>5</b>			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
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## 12. AUTHORIZED REPRESENTATIVE

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a. SIGNATURE 	b. DATE January 4, 2016
c. NAME AND TITLE Damann L. Anderson, PE, Vice President	

# ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*  
RFP 2016-21

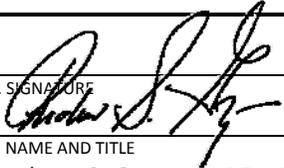
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2b. STREET <b>4035 Ridge Top Road, Suite 400</b>			5. OWNERSHIP	
2c. CITY <b>Fairfax</b>	2d. STATE <b>VA</b>	2e. ZIP CODE <b>22030</b>	a. TYPE <b>Employee Owned</b>	
6a. POINT OF CONTACT NAME AND TITLE <b>Andrew S. Gregson, PE, Vice President</b>			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER <b>(703) 218-2034</b>	6c. E-MAIL ADDRESS <b>agregson@hazenandsawyer.com</b>		7. NAME OF FIRM <i>(If block 2a is a branch office)</i> <b>Hazen and Sawyer (Same)</b>	
8a. FORMER FIRM NAME(S) <i>(If any)</i>			8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS*		
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				T02	Testing & Inspection	3
				W02	Water Resources	4
				W03	Water Supply	9
<b>Total</b>		<b>868</b>	<b>35</b>			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
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b. Non-Federal Work	10	2. \$100,00 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	10	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
		5. \$1 million to less than \$2 million	10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.	
a. SIGNATURE 	b. DATE January 4, 2016
c. NAME AND TITLE Andrew S. Gregson, PE, Vice President	

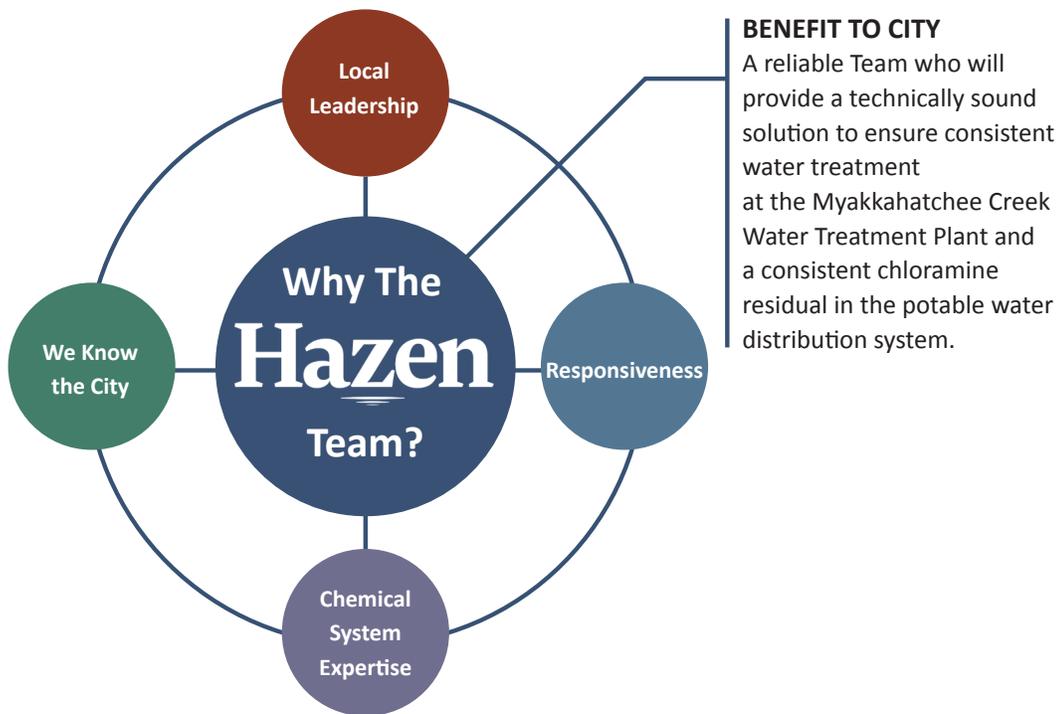
### 3. Key Personnel/Qualifications of the Project Team



Tab 3

## Key Personnel/Qualifications of the Project Team

Hazen offers the City a *combination of local knowledge and resources along with the expertise in aluminum sulfate (alum) and ammonium sulfate systems to provide a high quality design project, rapidly respond to the City's needs, and see the project through construction and start-up.*



Hazen will lead this project out of our Sarasota office, which is a full-service engineering office located near the City. Our proximity to the City and its facilities will allow for quick trips to perform site visits during design and assist in construction and start-up. The Sarasota office will be supported by the Tampa, FL, Orlando, FL, and Fairfax, VA offices. Our proposed **Project Manager, Julie Karleskint**, is committed to leading this project and brings an in-depth knowledge of the region and past work with the City. Ms. Karleskint has over 30 years of experience and has worked in the southwest region of Florida for the past 25 years, providing design and management of water related projects, including chemical system design. Ms. Karleskint has managed projects across the southwest region, including projects for the City of North



Port, Charlotte County, Sarasota County, City of Sarasota, City of Punta Gorda, Lee County, City of Arcadia, Pinellas County, and Hillsborough County. Ms. Karleskint also has an excellent relationship with local and state regulatory agencies, which will be helpful for discussing permitting requirements and obtaining necessary permits for the chemical improvements.

Ms. Karleskint has been a key member of the Hazen teams that have provided various engineering work assignments to the City of North Port through general services contracts since 2006. These projects have included:

- ✓ Regulatory Assistance, which included assisting with flushing program
- ✓ Water Use Permitting Coordination Assistance – Assisted City with compliance and coordination of Water Use Permit received for Myakkahatchee Creek WTP
- ✓ Master Plan Update for Water System – Included evaluation of service area and facilities, proposed development agreements and neighborhood expansions, updated projections for water demands, limited hydraulic modeling and recommended improvements.
- ✓ RO Concentrate Pipeline – Sub-consultant responsible for permitting and construction assistance for RO concentrate pipeline from WTP to WWTP
- ✓ Myakkahatchee Creek WTP Four Log Treatment Disinfection Study
- ✓ Cranberry Water Line Relocation – Design and construction assistance for relocation of water line

**Andre Dieffenthaler** will serve as the **Project Director** for this project. Mr. Dieffenthaler is the manager of Hazen’s Florida west coast operations and has 24 years of experience in the planning, design, permitting, and construction management of water treatment design projects. Mr. Dieffenthaler has significant experience in chemical feed system design, including chloramine systems and coagulation optimization.



**Aaron Duke** will serve as the **QA/QC Engineer** for this project. Mr. Duke is a senior associate in our Fairfax, VA office with over 16 years of experience in water treatment facility design, chemical system design, chemical system assessment and optimization, and construction and start-up. Mr. Duke’s wide range of experience with chemical system design, including alum and ammonium sulfate, will allow him to provide feedback to the team to make sure the design accounts for the many variables and provides the City with systems that are safe and easy to operate.

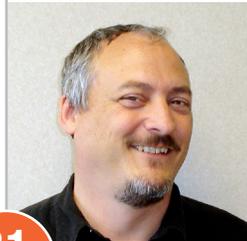


**In assembling our team, we have adhered to a basic philosophy of assigning tasks to the most qualified, experienced staff members. Our criteria in assigning team member roles and responsibilities include:**

- ✓ Best available technical expertise.
- ✓ Previous experience on similar projects.
- ✓ Availability of key staff for the duration of the project.
- ✓ Carry-over of key team members from detailed design to start-up.

Our proposed engineering support staff team will be small and agile to provide a cost effective approach and avoid a complex team structure, which can hinder the ability to meet the City’s schedule. Highlights for the proposed support staff are shown below followed by a matrix that reflects the skill set of the team in relation to the main items of the project scope.

**Dan Schmidt, PE**  
Electrical and Controls



**31**  
YEARS

- ✓ Extensive experience in both water treatment process design and control systems
- ✓ Knowledge of chemical feed system monitoring and control systems, PLC control systems, and SCADA
- ✓ Has experience in programming PLC and HMI based software products such as Allen Bradley, Seimens, and GE, along with Wonderware, iFIX, and Citect.

**Robert Anderson, PE**  
Senior Engineer



**27**  
YEARS

- ✓ Specializes in water treatment systems, supply and distribution, and chemical feed systems
- ✓ Experience in Southwest Florida dating back to 1994
- ✓ Developed the design standard for chemical storage and feed systems for Seminole County
- ✓ Oversaw design of disinfection chemical feed system for Arcadia WTP using hypochlorite and ammonium sulfate

**Drew Coleman**  
Project Engineer



**11**  
YEARS

- ✓ Extensive chemical system design experience, including knowledge of monitoring and controls of chloramine systems and distribution system trim facilities
- ✓ Has been involved in chemical systems from concept to start-up; experience ranging from jar testing and pilot systems to functional and performance testing and system operation
- ✓ Extensive experience in construction management and administration

Name	Chemical System Evaluation	Ammonium Sulfate Systems	Alum Systems	Chemical System Monitoring and Controls	Construction Management	Permitting
Julie Karleskint, PE	✓	✓	✓	✓	✓	✓
Andre Dieffenthaler, PE	✓	✓	✓	✓	✓	✓
Aaron Duke, PE	✓	✓	✓	✓	✓	✓
Andrew Coleman, PE	✓		✓	✓	✓	✓
Daniel Schmidt, PE	✓	✓	✓	✓	✓	✓
Robert Anderson, PE	✓	✓	✓	✓	✓	✓



**Project Director**  
Andre Dieffenthaller, PE

**QA/QC**  
Aaron Duke, PE

**Project Manager**  
Julie Karleskint, PE

**SUPPORT STAFF**

**Senior Engineer**  
Robert Anderson, PE

**Project Engineer**  
Andrew Coleman, PE

**Electrical and Controls**  
Daniel Schmidt, PE

SF330 Part 1, Section D  
Organization Chart of Proposed Team

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Julie Karleskint, PE Senior Associate</b>	13. ROLE IN THIS CONTRACT <b>Project Manager</b>	14. YEARS EXPERIENCE	
		a. TOTAL <b>32</b>	b. WITH CURRENT FIRM <b>9</b>

15. FIRM NAME AND LOCATION <i>(City and State)</i> <b>Hazen and Sawyer, Sarasota, FL</b>	
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16. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil Engineering; BS, Environmental Science; MS, Environmental Engineering	17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> PE / FL – Civil/Environmental Engineering (#42238)
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*  
Ms. Karleskint has more than 32 years of experience in the water and wastewater industry. She has been involved in project management, design, operations, permitting, auditing, and construction services for various water and wastewater projects ranging from master planning to operational start-up.

**19. RELEVANT PROJECTS**

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
<b>a.</b> <b>Water Treatment Plant and Well Improvements City of Arcadia, FL</b>	2015	2015
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Hazen oversaw the funding, evaluation, design, permitting, construction management and start-up assistance for a new ion exchange water treatment plant, operations building, maintenance building, chemical feed system, water supply well and rehabilitation of existing water wells. As part of this work, Hazen designed the chemical feed system which incorporated two Chem Scan units for monitoring and pacing chlorine and ammonia feed for maintaining a consistence residual leaving the plant. <b>Cost:</b> \$9 million <b>Specific Role:</b> Project Manager, Regulatory Assistance/Permitting		
<b>b.</b> <b>Carlton WTP Liquid Ammonium Sulfate Conversion Construction Management Services, Sarasota County, FL</b>	2011	2011
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Construction management services for installation of new liquid ammonium sulfate feed system to replace the anhydrous ammonia system at the Carlton WTP. <b>Cost:</b> \$47,000 (CMS fee). <b>Specific Role:</b> Project Manager		
<b>c.</b> <b>Pollard Road WTP Polk County, Florida</b>	2013	2013
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Engineering, design, permitting, construction services and start-up services for new water treatment plant, which included chemical system assessment, design, and start-up. <b>Cost:</b> \$5.1 million <b>Specific Role:</b> Engineer		
<b>d.</b> <b>Mims Water Treatment Plant: Disinfectant and Disinfection Byproducts Investigation, Brevard County, FL</b>	2012	2012
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Hazen investigated potential causes and prepared a summary report with recommendations to resolve the TTHMs violation. The combination of enhanced lime softening using ferric sulfate and changes to the operating protocols recommended by Hazen provided the means for the County to resolve the TTHM consent order. <b>Cost:</b> \$200K <b>Specific Role:</b> Engineer		
<b>e.</b> <b>Myakkahatchee Water Treatment Plant Demonstration of Four Log Virus Treatment, City of North Port, FL</b>	2012	N/A
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Hazen assisted the City of North Port with the evaluation and preparation of report demonstrating four log virus treatment for the Myakkahatchee Creek Reverse Osmosis WTP. Hazen evaluated the utilization of the degasifier clearwell and developed operating plan for providing disinfection with free chlorine prior to adding ammonia and blending with the surface water plant, which provided the City with an efficient method for meeting regulatory requirements. <b>Cost:</b> \$7,500 (fee). <b>Specific Role:</b> Project Manager		

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Andre Dieffenthaler, PE Senior Associate</b>	13. ROLE IN THIS CONTRACT <b>QA/QC</b>	14. YEARS EXPERIENCE	
		a. TOTAL <b>24</b>	b. WITH CURRENT FIRM <b>3</b>

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



16. EDUCATION (DEGREE AND SPECIALIZATION) <b>MS, Civil Engineering, 1993 / BS, Civil Eng., 1990</b>	17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>PE / FL – Environmental/Civil Engineering (#49928)</b>
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*  
Mr. Dieffenthaler has over 24 years of experience in the planning, design, permitting, and construction management of WTP and distribution system improvements, including water quality evaluations, regulatory assessments, advanced treatment, process optimization, bench/pilot testing, pressure and gravity piping, and chemical feed systems.

**19. RELEVANT PROJECTS**

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
<b>a. Chemical Feed System Upgrades at D.L. Tippin WTP, City of Tampa, FL</b>	2015	2015
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager for design, permitting, and construction administration for modifications to the ammonia feed system to limit bromate formation during use of the ASR system; emergency replacement of sodium hydroxide chemical storage and feed piping; and improvements to the chlorine piping. <b>Cost: \$230,000 (fee) Specific Role: Project Manager</b>		
<b>b. Keller WTP Modifications – Construction Management and Inspection Services, Pinellas County, FL</b>	2015	2015
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Construction admin./management and on-site inspection for the Keller PS Modifications for rehabilitation of the Keller WTP. Project includes a 45-mgd high service PS with four 700-Hp vertical turbine pumps; electrical bldg. with switchgear, MCC, drives, and equipment; generator with external fuel tank; chlorine and ammonia feed systems; 36-inch ductile iron WM; and ancillary piping, equipment and appurtenances. <b>Cost: \$340K (fee) Specific Role: Project Mgr.</b>		
<b>c. Tampa Bay Water (TBW): South Central Hillsborough County Improvements Project – Phases IA, IB, II, III, Hillsborough County, FL</b>	2009	2012
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project Manager for planning, design, permitting, and construction administration for a multiphase capital improvement project. Project included development and prioritization of projects, phasing requirements, and detailed cost estimates. Project included 8-mgd booster pumping station; over 5 miles of 12- to 24-inch piping; caustic, ammonium sulfate, ammonium hydroxide, and CO <sub>2</sub> feed systems; and design and construction of a 45-mgd side stream ozonation facility (responsible for design, permitting, and bidding only) <b>Cost: \$15M (fees and constr.) Specific Role: Project Mgr.</b>		
<b>d. TBW Improvements to Central Pasco County Connections, Pasco County, FL</b>	2009	2009
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Planning, design, permitting, and construction administration of the upgrade of three points of connection between TBW and Pasco County. Project included installation of three booster pumping facilities with new buildings; chlorine, ammonia, and caustic feed systems at Lake Bridge WTP; piping modifications; and electrical and controls to ensure proper chloramine formation and control. <b>Cost: \$12.5M (fee and construction) Specific Role: Project Mgr.</b>		
<b>e. TBW Chloramine Conversion Project, Land O'Lakes, FL</b>	2002	2003
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Construction phase of installation and startup of chloramination facilities at five WTPs, which included coordination among all member governments for chloramine conversion. Proj. included piping modifications to accommodate chemical injection points, tank modifications, and installation of 6,000 ft. of 42-inch piping; 600 ft. of 36-inch piping; 80 ft. of 84- and 42-inch above grade piping with venturi meters. Also included installation/startup of sodium hypochlorite and aqua ammonia at each facility along with sodium hydroxide to adjust pH. <b>Cost: \$9.8M (fee and constr.) Role: Proj. Mgr.</b>		

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Robert Anderson, PE Senior Associate</b>	13. ROLE IN THIS CONTRACT <b>Senior Engineer</b>	14. YEARS EXPERIENCE	
		a. TOTAL <b>26</b>	b. WITH CURRENT FIRM <b>5</b>

15. FIRM NAME AND LOCATION <i>(City and State)</i> <b>Hazen and Sawyer, Orlando, FL</b>	
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16. EDUCATION (DEGREE AND SPECIALIZATION) MS, Environmental Engineering BS, Chemical Engineering	17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> PE / FL – Environmental Engineering (#47129)
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*  
Mr. Anderson specializes in potable water supply, transmission, treatment, storage and distribution projects as well as chemical systems design. He has served as Project Manager/Project Engineer for water and wastewater treatment projects.

**19. RELEVANT PROJECTS**

(1) TITLE AND LOCATION <i>(City and State)</i> <b>David L. Tippin Surface Water Treatment Facility Bromate Control Project, City of Tampa, FL</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION (If applicable) 2013
a. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Hazen provided design, permitting, bidding, and construction administration services for the control of bromate formation in the ozonation process. The project included modifications to the existing anhydrous ammonia gas feed system, new ammonia gas feed piping and injection facilities. <b>Cost: \$80K (estimated fee) Specific Role: Engineer</b>	<input checked="" type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION <i>(City and State)</i> <b>Eugene Hickson WTP City of Arcadia, FL</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) 2014
b. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Hazen was retained to replace the City's existing lime softening Water Treatment Plant with a new 1.5-mgd ion exchange water treatment plant. The design included a new raw water well and piping, booster pump station, two-stage ion exchange system, free chlorine contact pipe, sodium hypochlorite, ammonium sulfate and caustic soda systems, new ground storage tank, and high service pumps. <b>Cost: \$8.5 million (construction) Specific Role: Engineer</b>	<input checked="" type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION <i>(City and State)</i> <b>Mims Water Treatment Plant: Disinfectant and Disinfection Byproducts Investigation, Brevard County, FL</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION (If applicable) 2012
c. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Hazen was retained to investigate potential causes and prepare a summary report with recommendations to resolve the TTHMs violation. The combination of enhanced lime softening using ferric sulfate and changes to the operating protocols recommended by Hazen provided the means for the County to resolve the TTHM consent order. <b>Cost: \$200K Specific Role: Project Engineer</b>	<input checked="" type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION <i>(City and State)</i> <b>Peace River Expansion DeSoto County, FL</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2008	CONSTRUCTION (If applicable) 2008
d. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project engineer responsible for the design of the chemical storage and feed facilities. Chemicals included alum, powdered activated carbon, polymer, sodium hypochlorite, ammonium hydroxide and sodium hydroxide. This project expanded the firm capacity of a surface water treatment plant from 24 to 51 mgd. <b>Cost: \$80 million (construction) Specific Role: Engineer for chemical systems</b>	<input checked="" type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION <i>(City and State)</i> <b>West Mitchell Hammock Water Treatment Facility City of Oviedo, FL</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2006	CONSTRUCTION (If applicable) 2006
e. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Project engineer responsible for process design for the City's 10-mgd West Mitchell Hammock WTF. The project included transfer pumping, ground storage, and high service pumping. Chloramines are used for disinfection. <b>Cost: \$12.5 million (construction) Specific Role: Project Engineer</b>	<input checked="" type="checkbox"/> Check if project performed with current firm	

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Aaron Duke, PE, BCEE</b> <b>Senior Associate</b>	13. ROLE IN THIS CONTRACT <b>QA/QC</b>	14. YEARS EXPERIENCE	
		a. TOTAL <b>16</b>	b. WITH CURRENT FIRM <b>11</b>

15. FIRM NAME AND LOCATION *(City and State)*  
**Hazen and Sawyer, Fairfax, Virginia**



16. EDUCATION (DEGREE AND SPECIALIZATION) MS, Environmental Engineering BSE, Civil and Environmental Engineering	17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> PE / VA – Civil Engineering (#0402037604) PE / DC – Sanitary Engineering (#901594) PE / MD – Civil Eng. (#32187) / PE / NY – Civil Eng. (#89391)
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18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)  
Mr. Duke’s experience covers an array of projects ranging from water facilities engineering to conveyance projects and elevated storage tanks. His specialties include water treatment plant evaluation and optimization, water reuse feasibility assessments and operational planning, facility planning and plant siting, pilot testing, and design of treatment facilities, including chemical feed systems. Professional Organizations: Chesapeake Section American Water Works Association – Chair/Past Chair of various committees; American Water Works Association

**19. RELEVANT PROJECTS**

a. (1) TITLE AND LOCATION <i>(City and State)</i> <b>New Design Road Water Treatment Plant (WTP) Upgrade</b> <b>Frederick County, MD</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2007	CONSTRUCTION (If applicable) 2009
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm 25-mgd WTP upgrade project, which includes design of a new residuals handling facility consisting of backwash equalization, gravity thickening, and belt filter presses, ten new chemical feed systems ranging from powdered activated carbon to sulfuric acid, and UV disinfection. <b>Cost: \$1,734,000 (fee) Specific Role: Project Manager/Engineer</b>		
b. (1) TITLE AND LOCATION <i>(City and State)</i> <b>Goose Creek Water Treatment Plant Upgrade</b> <b>Loudoun Water, VA</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) 2014
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Programmatic support (staff augmentation) related to development of an operations integration plan for Loudoun Water’s purchase of the City of Fairfax’s 18 MGD Goose Creek WTP and related assets. Also provided fast-track design of critical plant improvements identified by the integration plan, including installation of a new Liquid Ammonium Sulfate (LAS) feed system. <b>Cost: \$134,000 (fee) Specific Role: Project Manager/Engineer</b>		
c. (1) TITLE AND LOCATION <i>(City and State)</i> <b>Abingdon Water Treatment Plant Expansion</b> <b>Harford County, MD</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2009	CONSTRUCTION (If applicable) 2012
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Facility planning, preliminary engineering, final design, bid and construction-phase services for expansion of the 10-mgd Abingdon WTP to 20 mgd, including all facets of plant design from pre-treatment to filtration to residuals handling and permitting. <b>Cost: \$3.2 million (fee) Specific Role: Deputy Project Manager/Project Engineer</b>		
d. (1) TITLE AND LOCATION <i>(City and State)</i> <b>Ni River Water Treatment Plant</b> <b>Spotsylvania County, VA</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2015	CONSTRUCTION (If applicable) Ongoing
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Improvements to be evaluated at the WTP include new and/or improved treatment process units, finished water pumping, clearwell modifications, chemical feed system upgrades, raw water supply and plant hydraulics. The goal is to develop a master plan for improvements to the WTP. <b>Cost: \$980,000 (fee) Specific Role: Project Manager</b>		
e. (1) TITLE AND LOCATION <i>(City and State)</i> <b>R.C. Willson WTP Phase IV Improvements</b> <b>Williamsport, MD</b>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION (If applicable) 2015
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Bench-scale testing, study and final design of plant and distribution system improvements for Stage 2 Disinfection By-Product Rule compliance, including liquid chemical feed systems, and improvements to the 18-mgd plant’s residuals handling facilities. <b>Cost: \$1.32M (fee) Specific Role: Technical Advisor /QAQC</b>		

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Andrew Coleman, PE Senior Principal Engineer</b>	13. ROLE IN THIS CONTRACT <b>Project Engineer</b>	14. YEARS EXPERIENCE	
		a. TOTAL <b>10</b>	b. WITH CURRENT FIRM <b>1</b>

15. FIRM NAME AND LOCATION <i>(City and State)</i> <b>Hazen and Sawyer, Sarasota, FL</b>	
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16. EDUCATION (DEGREE AND SPECIALIZATION) <b>BS, Environmental Engineering</b>	17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>PE / FL – Environmental Engineering (#70650)</b>
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*  
**Mr. Coleman’s experience includes chemical treatment and storage design, pipeline and flow control design, pump station design and hydraulics, and associated permitting and construction for design projects.**

**19. RELEVANT PROJECTS**

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
<b>Industrial Water Treatment Plant (IWTP) Evaluation Pinellas County, FL</b>	2015	N/A
a. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm A holistic assessment of the main treatment processes – chemical treatment, clarification, microfiltration, reverse osmosis, and plant controls. This assessment included jar testing (alum and ferric coagulants) to assess the clarifier performance and coagulant chemistry and a water quality sampling effort across the entire plant. <b>Cost:</b> \$99,800 <b>Specific Role:</b> Project Engineer/Assistant PM		
<b>Central Pasco Improvements, Tampa Bay Water</b>	2006	2008
b. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Designed chemical treatment systems and influent and effluent pipelines for three booster pump stations (Odessa, US 41, and Lake Bridge). Chemical systems included sodium hypochlorite and ammonia chemical storage, feed systems, and controls. Served as resident engineer for periods of time at US 41 and Odessa construction sites. <b>Cost:</b> \$17 million <b>Specific Role:</b> Project Engineer		
<b>GSTs and Booster Pump Station Upgrade Charlotte County, FL</b>	2006	2008
c. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Project engineer for the design of four booster pump stations. With sodium hypochlorite and ammonia chemical feed and storage systems for three different sites, Mr. Coleman assisted with building and site layouts, and assisted with design of flow control and pump hydraulics. Chemical system design included dose determination, chemical storage and feed requirements, and control/analyzer systems. <b>Cost:</b> \$7 million <b>Specific Role:</b> Project Engineer		
<b>Cypress Creek Water Treatment Plant Upgrades Tampa Bay Water</b>	2006	2007
d. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Design and construction of new sodium hydroxide system for pH adjustment and regional pipeline bypass with blow-off connection at the Cypress Creek WTP. Mr. Coleman determined pH adjustment requirements and size of new sodium hydroxide chemical storage and feed system. <b>Cost:</b> \$2 million <b>Specific Role:</b> Project Engineer		
<b>City of Wheeling WTP Improvements, Wheeling, WV</b>	2008	
e. (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Design of new 12-mgd membrane filtration system. Mr. Coleman was responsible for design of low pressure membrane system, associated CIP and backwash chemical feed systems, sodium hypochlorite and liquid ammonia systems for new chloramine system, including chemical control and sampling, and membrane feed pumps. Performed pump hydraulic assessment including review of existing sedimentation basin connections. <b>Cost:</b> \$400,000 <b>Specific Role:</b> Project Engineer		

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

*(Complete one Section E for each key person.)*

12. NAME <b>Daniel Schmidt, PE Senior Associate</b>	13. ROLE IN THIS CONTRACT <b>Electrical and Controls</b>	14. YEARS EXPERIENCE	
		a. TOTAL <b>31</b>	b. WITH CURRENT FIRM <b>11</b>

15. FIRM NAME AND LOCATION <i>(City and State)</i> <b>Hazen and Sawyer, Tampa, FL</b>	
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16. EDUCATION (DEGREE AND SPECIALIZATION) BS, Chemical Engineering	17. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> PE / FL – Chemical Engineering (#40233) PE / MS – Chemical Engineering (#26703)
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18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*  
 Mr. Schmidt has extensive experience in the assessment, design, and construction management for electrical, instrumentation and controls for various chemical systems typically utilized at municipal water treatment facilities including facilities that utilize lime softening, ozone treatment, membrane treatment, flocculation, sedimentation, and numerous chemical feed systems for water treatment and disinfection, including alum, polymer, chlorine gas, sulfur dioxide, hypochlorite, ferric chloride, lime, ozone, liquid oxygen, NaOH, H<sub>2</sub>SO<sub>4</sub>, fluorosilic acid, HCl, CO<sub>2</sub>, ammonia, and salt solution. This experience is uniquely relevant for the needs anticipated for this project.

**19. RELEVANT PROJECTS**

(1) TITLE AND LOCATION <i>(City and State)</i>	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)
<b>a. City of Arcadia Water Treatment Plant Arcadia, Florida</b>	2014	2014
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schmidt provided design for the hypochlorite, ammonium sulfate, NaOH, and brine feed systems for this new water treatment plant as well as the instrumentation and control system design for the entire facility. <b>Cost:</b> \$8.5 million <b>Specific Role:</b> Design manager, I&C Engineer		
<b>b. Pollard Road WTP Polk County, Florida</b>	2013	2013
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schmidt provided design for the hypochlorite feed system for this new water treatment plant as well as the electrical and instrumentation and control system design for the entire facility. <b>Cost:</b> \$5 million <b>Specific Role:</b> Project manager, Electrical and I&C Engineer		
<b>c. City of Tampa Chemical Improvements Tampa, Florida</b>	2012	2013
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schmidt provided electrical and instrumentation design for the chlorine gas and ferric chloride feed system upgrades for this existing surface water treatment plant. <b>Cost:</b> \$500,000 <b>Specific Role:</b> Electrical and I&C Engineer		
<b>d. David L. Tippin Surface Water Treatment Facility Bromate Control Project, Tampa, Florida</b>	2015	2015
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schmidt provided electrical and instrumentation design for the ammonia feed system upgrades for this existing surface water treatment plant to control bromate formation. <b>Cost:</b> \$324,000 <b>Specific Role:</b> Electrical and I&C Engineer		
<b>e. Mims Water Treatment Plant: Disinfectant and Disinfection Byproducts Investigation, Brevard County, FL</b>	2012	N/A
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Schmidt provided electrical and instrumentation design for the replacement of the lime feed system upgrades for this existing water treatment plant. <b>Cost:</b> \$200,000 <b>Specific Role:</b> Electrical and I&C Engineer		

## 4. Team's Previous Experience/Proficiency in Similar Projects



## Tab 4

# Team's Previous Experience/ Proficiency in Similar Projects

*A proposed project team is only as good as its collective experience with similar projects. Hazen has chosen staff for the Chemical Feed Improvements at Myakkahatchee Creek WTP and Booster Stations that have **successfully demonstrated their capabilities on multiple projects with comparable challenges.***

The Chemical Feed System Improvements at Myakkahatchee Creek WTP and Booster Stations will consist of three main tasks – Evaluation, Detailed Design, and Construction Management. The Hazen team has extensive experience in all of these areas when it comes to chemical feed systems.

### Evaluation

Hazen has extensive experience in chemical system equipment assessment (through our background in asset management), water quality data review, jar and pilot testing, and cost analysis. We have a well-developed understanding of water chemistry and have helped clients determine more applicable chemicals or doses to utilize in their systems to improve treatment or decrease costs. The **Pinellas County IWTP Evaluation** included extensive assessment of their entire facility and included aluminum sulfate (alum) jar testing to verify the appropriate dosage. Review of their system and water chemistry indicated that the control of their system was pH based, which did not work for their plant. Our project team developed a new standard operating protocol for coagulation based on alkalinity.

### Detailed Design

Hazen has performed hundreds of chemical feed system designs, but each design is different due to water quality, plant operations, personnel preferences, site conditions, etc. Hazen understands that each project is unique; this is even more apparent with a retrofit, such as this project. For example, for a recent chemical system retrofit at the **Eugene Hixson Water Treatment Plant and Wells**, ammonia was present in the raw water. Our design team included a free ammonia analyzer on the raw water that allowed for flow and residual pacing of downstream sodium hypochlorite and ammonium sulfate feed systems. This helped maintain a consistent chloramine residual and avoid over-feeding of ammonia.

### Construction Management

Our Team has provided construction management and construction oversight on a variety of chemical system projects. A majority of our design projects include construction services as well, so we have had a chance to finely tune our designs based on what we have seen in the field. At the **Keller WTP Plant Modifications**, we identified some enhancements during the installation of the chemical feed skids in the field and provided guidance on how to improve their orientation and layout to make them more operator and maintenance friendly. We also coordinated controls meetings to coordinate with the integrator and limit plant downtime.

To further highlight our Team's successful comparable experience, the following pages provide 10 projects in Standard Form 330s.

<b>F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>	<b>20. EXAMPLE PROJECT KEY NUMBER</b>  <span style="font-size: 24pt; font-weight: bold;">1</span>
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<b>21. TITLE AND LOCATION (City and State)</b> <b>Mims Water Treatment Plant: Disinfection Study</b> <b>Brevard County, FL</b>	<b>22. YEAR COMPLETED</b>				
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">PROFESSIONAL SERVICES</td> <td style="width:50%;">CONSTRUCTION <i>(If applicable)</i></td> </tr> <tr> <td style="text-align: center;"><b>2012</b></td> <td style="text-align: center;"><b>N/A</b></td> </tr> </table>	PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>	<b>2012</b>	<b>N/A</b>
PROFESSIONAL SERVICES	CONSTRUCTION <i>(If applicable)</i>				
<b>2012</b>	<b>N/A</b>				

<b>23. PROJECT OWNER'S INFORMATION</b>
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<b>a. PROJECT OWNER</b> <b>Brevard County Utility Services</b>	<b>b. POINT OF CONTACT NAME</b> <b>Rudy Khan</b> <b>Chief Operator, Mims WTP</b>	<b>c. POINT OF CONTACT TELEPHONE NUMBER</b> <b>(321) 264-5070</b>
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<b>24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)</b>
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**Status**

Completed 2012

**Size**

2.4 mgd

**Cost**

\$200K (engineering fee)

**Description**

**Stage 1 Disinfectant/Disinfection Byproducts Consent Order**

Brevard County entered into a Consent Order (CO) with the State of Florida Department of Environmental Protection (FDEP) for violation of Stage 1 Disinfectant/Disinfection Byproducts Rule, specifically for exceeding the total trihalomethanes (TTHMs) maximum contaminant level (MCL). The original CO required Brevard County to implement a fast-tracked project to resolve the CO in a 1-year time frame.

Hazen was selected to investigate potential causes and prepare a summary report with recommendations to resolve the TTHM violation.

**Plant Optimization and Bench-Scale Testing**

The Mims WTP uses cold lime softening followed by dual media filtration for treatment. The bench-scale



testing performed by Hazen revealed significant concentrations of natural organic matter (NOM) in the raw water supply. The NOM compounds are the precursors for the formation of disinfection byproducts (DBPs). Hazen screened aluminum sulfate, ferric sulfate and ferric chloride coagulants and found that ferric sulfate was the most effective to reduce settled water turbidity and UV254 measurements, a surrogate measurement for organics. A plant optimization and bench-scale testing summary report was prepared and recommended a full-scale demonstration of ferric sulfate to enhance lime softening and pilot testing of ion exchange for the reduction of organic compounds.

**Full-Scale Ferric Sulfate Demonstration and Ion Exchange Pilot Testing**

Hazen was retained to conduct a full-scale ferric sulfate demonstration to enhance reduction of organics and improve settled water turbidity in the lime softening process. The demonstration was conducted over a 6-week period. Settled water turbidity improved significantly to less than 15 NTU, which increased filter run times and improved the aesthetics of the finished water. In addition, UV254 was reduced by 35% on average, which decreased the formation of DBPs. As a result of the bench- and full-scale testing, a plant operating protocol was developed to reduce the formation of TTHMs. Once implemented, the new operating protocol reduced the TTHM concentration to less than half the 80 µg/L MCL for three consecutive quarters, which brought the County back into compliance with the Stage 1 D/DBP Rule.

<b>25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT</b>
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<b>a.</b> (1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION <i>(City and State)</i> <b>Orlando, FL</b>	(3) ROLE <b>Primary Consultant</b>
<b>b.</b> (1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION <i>(City and State)</i> <b>Tampa, FL</b>	(3) ROLE <b>Primary Consultant</b>

**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)*

**Eugene Hixson Water Treatment Plant and Wells  
 City of Arcadia, Florida**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2009-2014**

CONSTRUCTION *(If applicable)*  
**2012-2014**

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**City of Arcadia, Florida**

b. POINT OF CONTACT NAME

**AJ Berndt  
 Utility Director**

c. POINT OF CONTACT TELEPHONE NUMBER

**(863) 558-2091**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

**Relevance**

Provided engineering design, permitting, construction services, and start-up services for new water treatment plant, which included chemical system assessment, design, and start-up.

**Size**

1.5-mgd ion exchange WTP

**Cost**

\$8.5 million (engineering and construction)



**Description**

Hazen and Sawyer recently completed the design, construction and start-up for the new 1.5-mgd ion exchange water treatment plant, which included a new water supply well, rehabilitation of existing wells, new influent booster pump station, cation and anion exchange systems, chemical feed systems (including sodium hypochlorite, ammonium sulfate, NaOH, and brine), disinfection chamber, ground storage tank, high service pumping, operations building and maintenance building. The source water has traces of ammonia, therefore special attention was required in the design of the chlorine and ammonia feed systems to ensure a

consistent chloramine residual was maintained. This was performed using a chloramine/free ammonia analyzer and chemical feed systems that are flow and residual paced. Monitoring of the source groundwater for ammonia allowed the sodium hypochlorite and ammonia chemical feed systems to be paced accordingly to ensure excess ammonia was not being fed into the system.

The City utilizes groundwater from the intermediate aquifer as their primary water source, which has higher concentrations of radio nuclides, aluminum, sulfide and organic carbon in addition to ammonia. These raw water conditions require treatment prior to distribution. Water treatment options evaluated included pilot studies for an ion exchange water treatment including chemical system assessment for chemicals needed for the process.

Construction of the ion exchange water treatment plant was completed within schedule and on budget without any contractor requested change orders. Hazen assisted the City in obtaining additional funding and negotiating with the Contractor to make additional improvements to the facility, which included a new maintenance building and rehabilitation of the existing wells.



During construction, it was essential to keep the existing plant in operation; therefore, Hazen worked closely with the operations staff to perform tie-ins with minimal impacts to the plant operations and distribution system. Detailed records were kept since this project was funded with SRF grants and loans for periodic audits.

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
a.	<b>Hazen and Sawyer</b>	<b>Sarasota, Florida</b>	<b>Primary Consultant</b>
b.	<b>Hazen and Sawyer</b>	<b>Tampa, Florida</b>	<b>Primary Consultant</b>

<b>F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>	<b>20. EXAMPLE PROJECT KEY NUMBER</b>  <span style="font-size: 24pt; font-weight: bold;">3</span>
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<b>21. TITLE AND LOCATION (City and State)</b>  <b>Keller Water Treatment Plant Modifications – Construction Management Services, Pinellas County, FL</b>	<b>22. YEAR COMPLETED</b>	
	PROFESSIONAL SERVICES  <b>2015</b>	CONSTRUCTION <i>(If applicable)</i>  <b>2015</b>

**23. PROJECT OWNER'S INFORMATION**

<b>a. PROJECT OWNER</b>  <b>Department of Environment and Infrastructure, Pinellas County</b>	<b>b. POINT OF CONTACT NAME</b>  <b>Jim Sanders Project Manager</b>	<b>c. POINT OF CONTACT TELEPHONE NUMBER</b>  <b>(727) 464-8206</b>
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**24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)**

**Status**

This contract is complete.

**Size**

New 45-mgd pump station to replace existing facility

**Cost**

\$340,000 (fee)

**Description**

To improve the reliability of Pinellas County's water supply system, the County constructed a new 45-mgd pump station to replace the existing facility. The existing facility was operating beyond its useful life and was incurring significant costs to maintain operations. The new project will also allow the County to blend treated groundwater with regional water before system distribution.

Under our General Engineering Services contract, Hazen served as Construction Manager and Resident Engineer for the WTP improvements. The design was performed by others. Improvements included installation of a 45-mgd pumping station with four 700-horsepower vertical turbine pumps; electrical building with switchgear, motor control centers, drives, and other equipment; 2,500-kW generator with 12,000-gallon external fuel tank; sodium hypochlorite and ammonia storage tanks and feed equipment; electrical and communications equipment and wiring; over 2,000 feet of 36-inch ductile iron transmission main; and all ancillary piping, equipment, and appurtenances. The project also



included modifications to the sodium hypochlorite and ammonia chemical feed systems at the regional connection point. A key aspect of this project was coordinating closely with operations personnel to avoid unplanned interruptions. Hazen also assisted with the startup and testing of the high service pump and all chemical feed systems.

Project highlights include:

- Provided construction engineering regarding chemical skid layout to improve operation and maintenance.
- Conducted several controls meeting with the chemical system integrator prior to startup and testing to minimize downtime in the field during startup.
- Performed complete pre-startup checkout and testing of all chemical feed systems prior to startup, including response time to the analyzers.
- Worked closely with controls integrator to test and trouble shoot high service pumps, chemical feed system, and analytical equipment during startup.
- Developed maintenance of operations plan to keep existing chemical in service during upgrades.

The project was successfully started up without any service interruptions.

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

<b>a.</b> (1) FIRM NAME  <b>Hazen and Sawyer</b>	(2) FIRM LOCATION <i>(City and State)</i>  <b>Tampa, Florida</b>	(3) ROLE  <b>Primary Consultant</b>
<b>b.</b> (1) FIRM NAME  <b>Hazen and Sawyer</b>	(2) FIRM LOCATION <i>(City and State)</i>  <b>Sarasota, Florida</b>	(3) ROLE  <b>Primary Consultant</b>

<b>F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>	<b>20. EXAMPLE PROJECT KEY NUMBER</b>  <span style="font-size: 24pt; font-weight: bold;">4</span>
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<b>21. TITLE AND LOCATION (City and State)</b> <b>IWTP Evaluation, Pinellas County, FL</b>	<b>22. YEAR COMPLETED</b>	
	<b>PROFESSIONAL SERVICES</b>  <b>2015</b>	<b>CONSTRUCTION (If applicable)</b>  <b>N/A</b>

23. PROJECT OWNER'S INFORMATION		
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<b>a. PROJECT OWNER</b> <b>Department of Environment and Infrastructure, Pinellas County</b>	<b>b. POINT OF CONTACT NAME</b> <b>Edwin Guasp Project Manager</b>	<b>c. POINT OF CONTACT TELEPHONE NUMBER</b> <b>(727) 464-8206</b>
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**24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)**

**Status**

This assignment is complete.

**Size**

One assignment

**Cost**

\$99,800 (fee)

**Description**

Pinellas County (County) owns and operates a 3-mgd industrial water treatment plant (IWTP) to treat water from its on-site retention pond for the cooling water and other service water within the adjacent Waste to Energy facility. The IWTP consists of chemical storage and feed systems, coagulation and clarification, microfiltration (MF) and reverse osmosis (RO) treatment processes and was started up in 2013. The IWTF has been successfully operating since that time; however, the County has had severe fouling of the RO membranes since startup.

Hazen and Sawyer evaluated the facility and identified the following goals for potential modifications to the IWTP – improve treatment efficiency, reduce biological fouling on the RO units, and reduce operational costs. This was accomplished by reviewing plant data, assessment of plant operations and equipment, discussion with operators and jar testing. As a result, Hazen developed a phased approach for implementing operational and capital improvements to achieve the County's goals.

Hazen also analyzed three significant modifications to the IWTP in more detail:

- Developed a conceptual chloramine system with sodium hypochlorite and ammonium sulfate to identify potential cost impact and improvement of biological fouling of the RO system
- Reviewed costs and capital improvements necessary to convert to a new coagulant
- Reviewed operational, control, and capital improvements for modifications to the sodium bisulfite and biocide injection points and monitoring upstream of the RO units



Project highlights include:

- Performed jar testing on three coagulants (ferric sulfate, aluminum sulfate, and ferric chloride).
- Performed an optimization assessment of the existing coagulation and clarification process.
- Identified integrity issues in the existing MF system and is working with the County on repairs.
- Provided training to IWTP staff for coagulation and clarifier operation and MF and RO operation. Also developed updated standard operating protocols for the clarification system and the RO CIP system.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT		
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<b>a.</b> (1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION (City and State) <b>Tampa, Florida</b>	(3) ROLE <b>Primary Consultant</b>
<b>b.</b> (1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION (City and State) <b>Sarasota, Florida</b>	(3) ROLE <b>Primary Consultant</b>

**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)*

**Pollard Road Water Treatment Plant  
 Polk County, Florida**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2010-2013**

CONSTRUCTION *(If applicable)*  
**2011-2013**

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**Polk County Utilities**

b. POINT OF CONTACT NAME

**Greg Hentschel, PE  
 Project Manager**

c. POINT OF CONTACT TELEPHONE NUMBER

**(863) 298-4212**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

**Relevance**

Provided engineering design, permitting, construction services and start-up services for new water treatment plant which included chemical system assessment, design, and start-up.

**Size**

5.6-mgd water treatment plant

**Cost**

\$5.1 million



**Description**

Polk County Utilities (PCU) owns, operates, and maintains a potable water distribution system to supply clean, safe, potable drinking water to its citizens. PCU was able to obtain land for a new water treatment plant (WTP) to accomplish the goals of balancing supply and distribution pressures in the Southwest Regional Utility Service Area (SWRUSA). The purchase of additional property allowed the County to construct a new potable WTP and supply well to ultimately take the place of the Valley View and Gus Stewart WTPs to meet future demands.

PCU retained Hazen, under the County's general services agreement, to provide preliminary design, detailed design, permitting, bidding services, and construction management of a new 5.6-mgd maximum day WTP along Pollard Road. The plant includes cascade aeration and a new sodium hypochlorite feed and storage system for disinfection. In addition, the WTP includes a new raw water supply well with a vertical turbine pump, a 2-million gallon above ground storage tank, an emergency generator, high-service pump station, and associated electrical and instrumentation. Treatment processes were designed for 2013 maximum day demand of 5.6 mgd and the high-service pump station was designed to meet the 2013 peak hour demand of 12-mgd. All work was completed on time and within budget without change orders.

Project highlights related to chemical feed systems include:

- Design of a new sodium hypochlorite feed and storage system, which included 2 sodium hypochlorite feed skids utilizing positive displacement diaphragm metering pumps along with two, 8,000 gallon high density polyethylene storage tanks.
- Assessment of CT and design of baffling within the storage tank and multiple feed points for pre-aeration, post-aeration, post-storage, and final residual maintenance.



Chlorine residual sampling and monitoring with control of the sodium hypochlorite system.

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

a.	(1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION <i>(City and State)</i> <b>Tampa, Florida</b>	(3) ROLE <b>Primary Consultant</b>
	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
b.	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
	(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE

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)

**David L. Tippin Surface Water Treatment Facility Bromate Control Project, Tampa, Florida**

22. YEAR COMPLETED

PROFESSIONAL SERVICES  
**2015**

CONSTRUCTION (If applicable)  
**2015**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

**City of Tampa, Florida**

b. POINT OF CONTACT NAME

**John Ranon, PE  
 Project Manager**

c. POINT OF CONTACT TELEPHONE NUMBER

**(813) 274-7103**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

**Status**

This assignment is completed.

**Size**

Provided engineering services to assist the City with design, permitting, bidding, and construction of chlorine and ammonia chemical system and controls modifications to control bromate formation.

**Cost**

\$324,000

**Description**

The City of Tampa owns and operates the 120-mgd David L. Tippin Surface Water Treatment Facility (DLTSWTF), which was originally constructed in 1924. The DLTSWTF consists of coagulation, flocculation, sedimentation, ozonation and biofiltration processes. The primary water supply is surface water from the Hillsborough River Reservoir located on the Hillsborough River. The primary water supply is augmented during the dry season by water stored in aquifer storage and recovery (ASR) wells. To control bromate formation after ozonation, the City requested modifications to the treatment plant to form chloramines in advance of ozonation. The City retained Hazen and Sawyer to provide engineering services to assist the City with design, permitting, bidding, and construction of chlorine and ammonia chemical system and controls modifications to control bromate formation in the ozonation process during ASR withdrawal periods. The project included design, permitting, bidding and construction phase services to:

- Modify existing chlorinators in chemical building to feed chlorine to sedimentation basins.

- Install a new stainless steel pipe within existing trenches to carry anhydrous ammonia to the injection point.
- Install new ammonia gas rotameters and controls in the existing chemical building.
- Modify the SCADA system and install power and control wiring.
- Install new ammonia diffuser(s) at Low Lift Pump Station, ensuring adequate mixing at the injection point.
- Install new access ladder and maintenance platform at low lift pump station.
- Install new chloramine analyzer and pH analyzer at ozone contactor.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

a.	(1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION (City and State) <b>Tampa, Florida</b>	(3) ROLE <b>Primary Consultant</b>
b.	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE

**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)*

**Carlton WTP Ammonium Sulfate Improvements  
 Sarasota County, Florida**

22. YEAR COMPLETED

PROFESSIONAL SERVICES

**2011**

CONSTRUCTION *(If applicable)*

**2011**

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**Sarasota County, Florida**

b. POINT OF CONTACT NAME

**John Chapman, Construction  
 Manager**

c. POINT OF CONTACT TELEPHONE NUMBER

**(941) 861-0550**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

**Status**

This assignment is completed

**Size**

One work assignment

**Cost**

\$315,000 (construction)

\$47,000 (CMS fee)

**Description**

Through our as-needed construction engineering and inspection contract with the County, Hazen provided construction management and inspection services for replacing an existing anhydrous ammonia feed system with a liquid ammonium sulfate feed system and storage. The new system is intended to provide chloramine disinfection to the flow from the County's Carlton Water Treatment Plant and provide chloramine trim for water purchased from the Peace River Manasota Regional Water Supply Authority. The project consisted of new concrete containment area for two 6,100 gallon ammonium sulfate storage tanks with a 500 gallon day tank, chemical feed pumps, injection piping and related electrical and instrumentation work.

Hazen's effort included oversight of construction, attendance at progress meetings, recording and reviewing all submittals, and passing on to EOR for approval, reviewing schedules, review of pay applications, interim field change agreements, maintaining a photo record of construction progress, preparing daily inspection reports, punch list and final acceptance, and performing other duties as required.



As part of this project, we worked closely with the plant operations staff and Project Manager to minimize impacts of the construction on plant operations and assisted with visits by regulatory agencies.

Project highlights include:

- Conversion of gas Ammonia to liquid Ammonium Sulfate to reduce safety hazards
- Installation of a new chemical containment area
- Installation of chemical feed line ductbanks to the contact tank and interconnect with Peace River water entering the WTP

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

(1) FIRM NAME	(2) FIRM LOCATION <i>(City and State)</i>	(3) ROLE
<b>a. Hazen and Sawyer</b>	<b>Tampa, Florida</b>	<b>Primary Consultant</b>
<b>b. Hazen and Sawyer</b>	<b>Sarasota, Florida</b>	<b>Primary Consultant</b>

**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)

**General Consulting Services  
 Tampa, Florida**

22. YEAR COMPLETED

PROFESSIONAL SERVICES

**Ongoing**

CONSTRUCTION (If applicable)

**Ongoing**

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER

**City of Tampa, Florida**

b. POINT OF CONTACT NAME

**John Ranon, PE  
 Plant Manager**

c. POINT OF CONTACT TELEPHONE NUMBER

**(813) 274-7103**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

**Status**

These assignments are ongoing.

**Size**

Two work assignments

**Cost**

\$239,300 (fee)

**Description**

Hazen and Sawyer has been one of the City's general engineering services consultants since 2002. Under this contract, services can be provided to the City for their water, wastewater, and stormwater utility groups. Hazen and Sawyer has been renewed for these services over the years, most recently in 2014. A brief description of the relevant projects that have been completed under this contract are given below.

**D.L Tippin WTP Caustic Feed System Modifications**

As part of an emergency order, the City need to replace its caustic feed system to avoid a potential catastrophic failure and service interruption. Project included replacement of leaking PVC piping, valves, and appurtenances with new stainless steel piping. PVC piping that was replaced included 2- and 3-inch piping between the bulk storage tanks and metering pumps as well as the metering pump suction and discharge piping inside the caustic feed room. New chemical flow meters were provided to monitor caustic flow to the injection points. A temporary caustic metering pump system was provided to maintain the service to the plant while improvements were constructed. Project was completed and started up in 2014.



**D.L Tippin WTP Chlorine Gas System Modifications**

To improve the overall reliability and redundancy of the City's chlorine gas feed system, the City requested Hazen and Sawyer evaluate the required improvements to upgrade the chlorine gas system. Project also included a structural evaluation of the rail car storage building to identify source of cracking and repair methods. Project includes:

- Demolition of existing liquid chlorine piping system.
- Installation of new liquid chlorine piping and feed equipment from rail car storage facility to chlorinators.
- Structural modifications and repair to storage area per building code requirements, including architectural treatments to match surrounding buildings of AWWA landmark.
- Replacement of all lighting within storage area.
- Detailed sequence of construction requirement to maintain operations during construction.

Project is currently in the construction phase.

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

a.	(1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION (City and State) <b>Tampa, Florida</b>	(3) ROLE <b>Primary Consultant</b>
	(1) FIRM NAME <b>Hazen and Sawyer</b>	(2) FIRM LOCATION (City and State) <b>Sarasota, Florida</b>	(3) ROLE <b>Primary Consultant</b>

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)

**Operations Integration Planning for City of Fairfax Assets (task assignment under Loudoun Water Basic Ordering Agreement contract), Fairfax, VA**

22. YEAR COMPLETED

PROFESSIONAL SERVICES

2014

CONSTRUCTION (If applicable)

2014

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

**Loudoun Water, VA**

b. POINT OF CONTACT NAME

**Thomas Lipinski, PE  
 Manager of Planning**

c. POINT OF CONTACT TELEPHONE NUMBER

**(571) 291-7992**

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

**Status**

Completed

**Size**

18-mgd Goose Creek WTP and related assets

**Cost**

\$134,000 (fee)

**Description**

Hazen and Sawyer has provided Loudoun Water with engineering services under four consecutive Basic Ordering Agreement (BOA) contracts. This work has included a number of projects encompassing engineering services related to water and wastewater systems. The Operations Integration Planning for the City of Fairfax Assets project is highlighted below.

Hazen and Sawyer is providing Program Management support to Loudoun Water in developing an Operations Integration Plan for the incorporation of the City of Fairfax's water supply and treatment assets into Loudoun Water's Central System operations. The assets being purchased include two large water supply reservoirs and associated dams, raw water pumping and treatment facilities, and a finished water transmission main. Condition assessments were performed and required facility improvements identified to meet Loudoun Water standards for regulatory compliance and operator risk. Development of CIP and operating budgets for the improvements projects and overall system operation were prepared, and a stepwise integration program developed. Program development included identification of required permits to be trans-



ferred from City of Fairfax to Loudoun Water, identification of new service contracts to be acquired, and development of staffing plans and new business units within Loudoun Water for

areas such as Dam Management and surface water supply monitoring. The program was developed over a 3-month period.



A number of improvements were identified as part of the integrations planning effort, including the need for a number of new

chemical feed systems. **Chemicals added included sodium hypochlorite (to replace the old gas chlorine feed system), sodium bisulfite, sodium permanganate, and liquid ammonium sulfate (LAS).** Visionary thinking was employed to develop methods to quickly implement required plant improvements, including the use of in-house staff to save cost as well as skid-style chemical feed systems and other pre-engineered components to expedite procurement and construction.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a. <b>Hazen and Sawyer</b>	<b>Baltimore, MD</b>	<b>Primary Consultant</b>
b. (1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE

<b>F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>	<b>20. EXAMPLE PROJECT KEY NUMBER</b>  <span style="font-size: 24pt; font-weight: bold;">10</span>
---	--

<b>21. TITLE AND LOCATION (City and State)</b>  <b>New Design Road Water Treatment Plant Expansion</b> <b>Frederick County, MD</b>	<b>22. YEAR COMPLETED</b>	
	<b>PROFESSIONAL SERVICES</b>  <b>2007</b>	<b>CONSTRUCTION (If applicable)</b>  <b>2009</b>

23. PROJECT OWNER'S INFORMATION		
<b>a. PROJECT OWNER</b>  <b>Frederick County, MD</b>	<b>b. POINT OF CONTACT NAME</b>  <b>Rodney Winebrenner</b> <b>Department Head</b>	<b>c. POINT OF CONTACT TELEPHONE NUMBER</b>  <b>(301) 300-2078</b>

**24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)**

**Status**

Operational

**Size**

25 mgd

**Cost**

\$1,734,000 (fee)

**Description**

Hazen and Sawyer was selected by Rummel, Klepper & Kahl as a specialty treatment process subconsultant for expansion of the New Design Road Water Treatment Plant (WTP) from 6.7 mgd to 25 mgd. Services included bench-scale testing and treatment process evaluation, design of chemical feed systems, evaluation and design of residuals handling systems, and design of ultraviolet disinfection facilities. The New Design WTP is a conventional plant treating Potomac River water. The existing treatment process consists of pre-sedimentation, coagulation with alum/polyaluminum chloride, flocculation, conventional sedimentation, and filtration. Free chlorine is used for primary and secondary disinfection.



**New Design Road project expanded treatment capacity from 6.7 mgd to 25 mgd.**

**Process Selection**

Bench-scale testing was conducted to identify the treatment process and chemical feed changes that would be necessary to achieve reliable compliance with current and future

drinking water regulations, including the Stage 2 Disinfection Byproduct (DBP) Rule. Comprehensive jar testing was conducted to identify optimum coagulation conditions for organics and particle removal. The effectiveness of chlorine dioxide as a pre-oxidant was also evaluated to determine its effectiveness in improving TOC removal, and an analysis of the benefits of chloramination in reducing DBP levels was performed.

**Chemical Feed Systems**

Based on the process selection, modifications to the existing chemical feed systems were designed along with the design of several new chemical feed systems. This was important as the existing 6.7-mgd facility would continue to be operated in parallel with the new 18.3-mgd treatment facility. The new chemical systems designed included ferric chloride for primary coagulation, potassium permanganate, flocculant aid polymer, solids conditioning polymer (for thickening and dewatering), fluoride, sodium hydroxide (caustic), sulfuric acid, orthophosphate, and sodium bisulfite. The new chemical feed systems are housed in a new Chemical and Residuals Handling Building designed by Hazen and Sawyer.

In addition to these chemicals, the plant's existing dry alum feed silo and equipment was repurposed to be used for storing and feeding powdered activated carbon (PAC) for enhanced organics and taste & odor removal.

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

<b>a.</b> (1) FIRM NAME  <b>Hazen and Sawyer</b>	(2) FIRM LOCATION (City and State)  <b>Fairfax, VA</b>	(3) ROLE  <b>Primary Consultant</b>
<b>b.</b> (1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE

**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
Andre Dieffenthaller, PE	Project Director	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Julie Karleskint, PE	Project Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aaron Duke, PE	QA/QC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Robert Anderson, PE	Senior Engineer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andrew Coleman, PE	Project Engineer	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daniel Schmidt, PE	Electrical and Controls	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**29. EXAMPLE PROJECTS KEY**

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Mims Water Treatment Plant: Disinfectant Study, Brevard County, FL	6	David L. Tippin Surface Water Treatment Facility Bromate Control Project, City of Tampa, FL
2	Eugene Hixson Water Treatment Plant and Wells, City of Arcadia, FL	7	Carlton Water Treatment Plant Ammonium Sulfate Improvements, Sarasota County, FL
3	Keller Water Treatment Plant Modifications – Construction Management Services Pinellas County, FL	8	General Consulting Services - David L. Tippin WTP Caustic Feed System Modifications and Chlorine Gas System Modifications, City of Tampa, FL
4	Pinellas County Industrial Water Treatment Plant (IWTP) Evaluation, FL	9	Operations Integration Planning for City of Fairfax Assets, Loudon Water, VA
5	Pollard Road Water Treatment Plant, Polk County, FL	10	New Design Road Water Treatment Plant, Frederick County, MD

## 5. Management Approach/Project Control



## Tab 5

# Management Approach / Project Control

*The experience gained by our Team on a vast array of projects of varying size and complexity has led to the **development of effective project management and control techniques.***

## Project Management Approach

Two of the main components of managing a project are adherence to schedule and budget constraints. At the onset of the project, Ms. Karleskint will develop an internal PM plan, which delineates the scheduling, manpower and budget; and record keeping system for this project. A key aspect of our PM program is the incorporation of specific controls and best practices, which include:

- **Cost Control.** Our Project Manager, Julie Karleskint, PE, will use our company project tracking software tool, Deltek. This tool provides the ability to check project costs on a daily basis, if needed, and allows for team members to stay up to date on the budget and minimize the potential for any cost overruns.
- **Conduct scoping meetings.** Our Team will work closely with the City to develop a concise scope of work to ensure that there is a clear understanding of the City's expectations. Deliverables and specific milestones will be identified to easily track progress and changes.
- **Meet early with the regulatory agencies.** Early regulatory meetings are critical to ensure that there are no permitting surprises that may delay the design or construction activities.
- **Utilize project standards and tools.** Working with existing standards, including those instituted by the City, and our previous chemical system designs will eliminate "re-inventing" the wheel, saving time and money.
- **Conduct regular project team meetings.** Internal staff team meetings are regularly scheduled as well as regular meetings and workshops with the City's PM and staff as required. Our PM will issue a monthly "Project Status Summary" to keep the City's PM is always kept up to date on project progress.
- **Use web-based document management system.** Accessible to the entire project team, this system facilitates document access and storage, maximizing the team's efficiency.

*Our Team understands the importance of maintaining schedule and budget and **commits to meeting City requirements for this chemical system improvement project.***

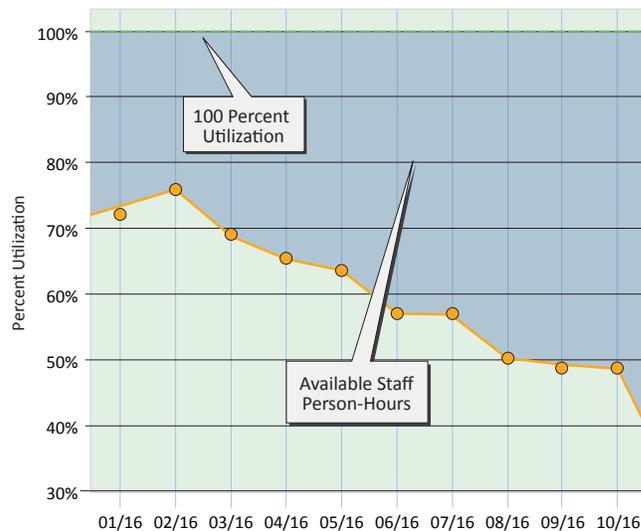


The success of our project management techniques is evidenced by our ability to provide projects that meet our client’s schedule and budgetary needs. See below for example projects showing our capability in this area.

Project	Owner Contact	Year Completed	Project Within Budget	Project Within Schedule
Eugene Hixson Water Treatment Plant	AJ Berndt City of Arcadia	2015	✓	✓
Bridle Path Water and Sewer Replacement	Steve Underwood City of Arcadia	2015	✓	✓
US 41 Transmission Improvements Design	Bruce Bullert Charlotte County Utilities	2014	✓	✓
Construction Inspection Services	Tim Hochuli City of Venice	2015	✓	✓
Air Release Valve Assessment	Tim Hochuli City of Venice	2013	✓	✓
RO Concentrate NPDES Permit and Mixing Zone Renewal	Tim Hochuli City of Venice	2013	✓	✓
LS 89 Improvements	Michael Crumpton City of Sarasota	2015	✓	✓
Phillippi Creek Master Plan Update	Lori Carroll Sarasota County	2014	✓	✓
Bahia Vista Force Main Hydraulic Assessment	Chris Cole Sarasota County	2013	✓	✓
RO Concentrate Pipeline (sub to TKW)	Patrick Zoeller City of North Port	2012	✓	✓
Four Log Removal Evaluation for Myakkahatchee Creek WTP	John Evano City of North Port	2012	✓	✓

### Workload and Availability

The Hazen team commits to providing the resources necessary to complete this project. Hazen has a conservative approach of undertaking new projects only when the workload permits, which enables us to provide the City of North Port with top-notch service. Should we be selected to provide engineering services to the City of North Port, the individuals identified in our Organizational Chart will serve on this assignment.



**Proposed Team’s Current and Planned Workload.** We do not anticipate any work that would prevent us from completing this assignment within schedule. **With the selection of Hazen and Sawyer, you can be assured that this project will be completed on time and within budget.**

1021-062

## Understanding of the Project

### Existing Chemical Systems

The City of North Port owns and operates the Myakkahatchee Creek WTP and two booster pump stations in their distribution system – the Southwest Booster Pump Station and the Northeast Booster Pump Station. The existing chemical systems consist of the following equipment:

- Myakkahatchee Creek WTP Alum system – two 6,595 gallon storage tanks (installed in 2015). Two metering pumps.
- Myakkahatchee Creek WTP Anhydrous Ammonia System – one 1,000 gallon pressurized storage tank and two gas pressure ammoniators
- Southwest and Northeast Booster Pump Stations Anhydrous Ammonia Systems – one 1,000 gallon pressurized storage tank and one gas pressure ammoniator at each facility

### Project Approach

Our Team's approach to provide a design that will address the City's objectives will follow tried and true guidelines developed over many years of chemical system design experience, but will also be tailored to meet the City's required schedule. There are three main components of the project scope – evaluation, detailed design, and construction management. The City of North Port has performed some preliminary effort in regards to the use of ammonium sulfate, however, the project will still include an evaluation of the existing chemical systems to provide additional confirmation on the approach and provide additional modifications to improve treatment.

### Evaluation

Our team will use the evaluation and resulting technical memorandum to assess the following areas of concern related to the chemical feed systems:

- Existing condition of equipment
- Existing water chemistry and potential impact on sulfate levels with use of ammonium sulfate
- Desired versus actual chlorine to ammonia ratio for creating chloramines
- Potential chemical injection locations and mixing to improve chloramine formation
- Options for sample point locations and monitoring
- Electrical and instrumentation panel and wiring availability
- Site and building constraints

### Project Objectives

The City is looking at improvements to the alum and ammonia chemical feed systems to address the following issues:

- Trouble maintaining chlorine residual in the distribution system resulting in excessive flushing. Currently on a remedial action plan with SWFWMD
- The anhydrous ammonia system is a maintenance challenge
- The anhydrous ammonia system is lacking adequate controls for consistent chloramine formation
- The alum chemical feed system is aging and in need of replacement

- Optimum sizing of storage and chemical feed equipment to avoid over/undersizing
- Overall O&M requirements

The resulting technical memorandum will summarize the above items and be used as a basis for detailed design and initial discussions with regulatory agencies.

### Detailed Design

Our team will proceed with the detailed design as we finish up the technical memorandum. Two things to focus on for the detailed design will be:

- Update ammonia monitoring and controls to improve chloramine formation
- Design that will allow for no shutdowns of the Myakkahatchee Creek WTP

**Ammonia Monitoring and Controls**—Chloramine formation is a complex process and requires attention to water chemistry, monitoring, and controls to provide consistent chloramine formation. The Myakkahatchee Creek WTP currently uses sodium hypochlorite for primary disinfection and chloramines for secondary disinfection. We will work with the City to make sure we are measuring the free chlorine leaving the combined treatment systems at the Myakkahatchee Creek WTP, thus enabling us to flow and residual pace the additional chlorine required to achieve our chloramine residual. The resulting ammonium sulfate injection will be residual paced based on the free chlorine residual and the desired free chlorine: ammonia ratio for chloramine formation. The new controls will remove the guess work that the plant operators have to go through in determining ammonia dose manually. We also recommend a free ammonia/chloramine analyzer to provide monitoring after chloramine formation to ensure the formation of mono-chloramines and avoid overdosing of ammonium sulfate.

**Maintenance of Operations at Myakkahatchee Creek WTP**—The City desires to avoid shutdowns of the Myakkahatchee Creek WTP so as not to disrupt water production or quality. Our team will look for a dedicated space where new chemical feed skids can be located so that they can be hooked up and connected independently of the existing system. This will allow for testing, start-up, and run-in to occur on the new ammonium sulfate chemical system and chloramine monitoring and control system without impacting operations of the facility since the existing ammonia system can be run in parallel and brought on-line in between testing and if there are any issues with the new system. We will develop a detailed maintenance of plant operations specification to address this start-up sequencing so that this concept is conveyed to the contractor and the City's desires are met.

### Construction Management

Our team's role during construction will be to maintain and respond to construction documentation, such as submittals, RFI's, and change order requests, closure of permits, certification of completion, and provide as-built drawing review. We approach construction services with a goal to provide regular and effective communication with the contractor and the City to help keep the project moving forward and make sure any issues are brought up in a timely manner. We also have tools to help keep track of construction documentation to make sure important comments are addressed in the field.

We have also found it effective to provide assistance during start-up, especially through control coordination meetings with the contractor and integrator. The new chemical systems will most likely include new monitoring and automation, especially for the chloramine system. Our expertise in this area will help to troubleshoot any issues and provide a smooth transition to the new system and provide valuable input to the facility operators.

# 6. References



## Tab 6

# References

*Assessment of Hazen's related past experience includes a review of client references. Our past **record of similar accomplishments is extensive.***

Five references, all knowledgeable of our related past experience and within the last five years are listed below and on the Form requested. 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.

## Carlton WTP Ammonium Sulfate Improvements

### Sarasota County, Florida

Through our as-needed construction engineering and inspection contract with the County, Hazen provided construction management and inspection services for replacing an existing anhydrous ammonia feed system with a liquid ammonium sulfate feed system and storage. The new system is intended to provide chloramine disinfection to the flow from the County's Carlton Water Treatment Plant and provide chloramine trim for water purchased from the Peace River Manasota Regional Water Supply Authority.

Hazen's effort included oversight of construction, attendance at progress meetings, recording and reviewing all submittals, and passing on to EOR for approval, reviewing schedules, review of pay applications, interim field change agreements, maintaining a photo record of construction progress, preparing daily inspection reports, punch list and final acceptance, and performing other duties as required.



### Total Cost of the Project

\$315,000 (construction)

\$47,000 (CMS fee)

## Eugene Hixson Water Treatment Plant and Wells

### City of Arcadia, Florida

Hazen and Sawyer recently completed the design, construction and start-up for the new 1.5-mgd ion exchange water treatment plant, which included a new water supply well, rehabilitation of existing wells, new influent booster pump station, cation and anion exchange systems, chemical feed systems (including sodium hypochlorite, ammonium sulfate, NaOH, and brine), disinfection chamber, ground storage tank, high service pumping, operations building and maintenance building.



### Total Cost of the Project

\$8.5 million (engineering and construction)

## Keller Water Treatment Plant Modifications – Construction Management Services

Pinellas County, Florida

Under our General Engineering Services contract, Hazen served as Construction Manager and Resident Engineer for the WTP improvements. The design was performed by others. Improvements included installation of a 45-mgd pumping station with four 700-horsepower vertical turbine pumps; electrical building with switchgear, motor control centers, drives, and other equipment; 2,500-kW generator with 12,000-gallon external fuel tank; sodium hypochlorite and ammonia storage tanks and feed equipment; electrical and communications equipment and wiring; over 2,000 feet of 36-inch ductile iron transmission main; and all ancillary piping, equipment, and appurtenances.



**Total Cost of the Project**  
\$340,000 (fee)

## David L. Tippin Surface Water Treatment Facility Bromate Control Project

City of Tampa, Florida

The City of Tampa owns and operates the 120 MGD David L. Tippin Surface Water Treatment Facility (DLTSWTF), which was originally constructed in 1924. The DLTSWTF consists of coagulation, flocculation, sedimentation, ozonation and biofiltration processes. Hazen provided

**Total Cost of the Project**  
\$324,000



engineering services to assist the City with design, permitting, bidding and construction of chlorine and ammonia chemical system and controls modifications to control bromate formation.

## Pollard Road Water Treatment Plant

### Polk County, Florida

PCU retained Hazen, under the County's general services agreement, to provide preliminary design, detailed design, permitting, bidding services, and construction management of a new 5.6-mgd maximum day WTP along Pollard Road. The plant includes cascade aeration and a new sodium hypochlorite feed and storage system for disinfection. In addition, the WTP includes a new raw water supply well with a vertical turbine pump, a 2-million gallon above ground storage tank, an emergency generator, high-service pump station, and associated electrical and instrumentation. Treatment processes were designed for 2013 maximum day demand of 5.6 mgd and the high-service pump station was designed to meet the 2013 peak hour demand of 12-mgd. All work was completed on time and within budget without change orders.



**Total Cost of the Project**  
\$5.1 million

## REFERENCES/CLIENT LISTING

(The firm shall provide a minimum of five (5) business related references for which they are currently providing, or have provided within the last five (5) years, services similar to the scope of services required by this RFP). Attach additional sheets if necessary.

1. Business/Customer Name: Sarasota County, Florida

Name of Contact Person/Title: John Chapman, Construction Manager

Telephone# (941) 861-0570 Fax (941) 861-0974 E-mail jchapman@scgov.net

Address 1001 Sarasota Center Blvd, Sarasota, FL 34240

Phone Number (941) 861-0550

Duration of Contract or business relationship Completed in 2011

Type of Services Provided Carlton WTP Ammonium Sulfate Improvements

2. Business/Customer Name: City of Arcadia, Florida

Name of Contact Person/Title: AJ Berndt, Utility Director

Telephone# (863) 558-2091 Fax (863) 494-4712 E-mail aj@arcadia-fl.gov

Address PO Box 1000 Arcadia, FL 34266

Phone Number (863) 558-2091

Duration of Contract or business relationship 2009-2014 (Professional Services) 2012-2014 (Construction)

Type of Services Provided Eugene Hixson Water Treatment Plant and Wells

3. Business/Customer Name: Pinellas County, Florida

Name of Contact Person/Title: Jim Sanders, Project Manager

Telephone# (727) 464-8206 Fax (727) 464-3595 E-mail jsanders@co.pinellas.fl.us

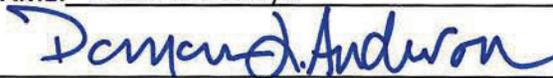
Address 14 South Fort Harrison Avenue, Clearwater, FL 33756

Phone Number (727) 464-8206

Duration of Contract or business relationship Completed in 2015

Type of Services Provided Keller Water Treatment Plant Modifications – Construction Management Services

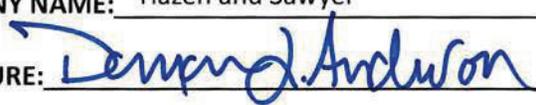
COMPANY NAME: Hazen and Sawyer

SIGNATURE: 

**THIS PAGE MUST BE SUBMITTED WITH PROPOSAL**

4. Business/Customer Name: Tampa, Florida  
Name of Contact Person/Title: John Ranon, PE, Plant Manager  
Telephone# (813) 274-7103 Fax (813) 274-8430 E-mail john.ranon@tampagov.net  
Address 306 East Jackson Street, Tampa, Florida 33602  
Phone Number (813) 274-7103  
Duration of Contract or business relationship Ongoing  
Type of Services Provided David L. Tippin Surface Water Treatment Facility Bromate Control Project

5. Business/Customer Name: Polk County Utilities  
Name of Contact Person/Title: Greg Hentschel, PE, Project Manager  
Telephone# (863) 298-4212 Fax (863) 298-4111 E-mail greghentschel@polk-county.net  
Address 1011 Jim Keene Boulevard, Winter Haven, Florida 33880  
Phone Number (863) 298-4212  
Duration of Contract or business relationship 2010-2013 (Professional Services) 2011-2013 (Construction)  
Type of Services Provided Pollard Road Water Treatment Plant

COMPANY NAME: Hazen and Sawyer  
SIGNATURE: 

**THIS PAGE MUST BE SUBMITTED WITH PROPOSAL**

## 7. Litigation and Insurance



## Tab 7 Litigation and Insurance

### Litigation

The following table identifies four professional liability claims brought against Hazen and Sawyer within the last 5 years. Our claims history clearly indicates a lack of litigation, reflective of quality design work and cooperative attitudes. Please note that none of the listed cases will affect the performance of services to be rendered.

In the last 10 years, the Southeast Region of Hazen and Sawyer has been responsible for approximately \$2 billion worth of public works construction. Our litigation record (or lack of it) is excellent. We also want to emphasize that Hazen and Sawyer is not wholly or partly self-insured, hence, our insurer bears the risk and not the client.

Professional Liability Claims	Description	Date of Action	Date Closed	Outcome	Identification Number
Recreational Design & Construction, Inc. vs. Hazen and Sawyer, Wiss, Janney, Elstner and Associates, Inc., John F. Duntemann, and B.D. Agarwal & Associates, Ltd, and Dr. Bhagwan D. Agarwal	RDC alleged malpractice in connection with a water slide built by RDC for the City of North Miami Beach and inspected by an H&S subcontractor, Wiss, Janney, Elstner.	3/10/11	9/20/11	Dismissed	Case No. 1:10-CV-21549-ASG
Clean Air Quality Service, Inc., against City of Peekskill, against Jett Industries, Kiewit Corporation, Kiewitt Jet Industries, Inc., against Hazen and Sawyer	Contractor Clean Air Quality brought a claim against the City of Peekskill. The City brought Hazen into the claim and withdrew the action within 1 month.	9/29/11	10/28/11	Withdrawn	Index No. 22660-2010
The City of New York against Greeley and Hanson/Hazen and Sawyer/Malcolm Pirnie, a Joint Venture, Greeley and Hansen, LLC, Hazen and Sawyer, Malcolm Pirnie, Inc., and Chu & Gassman Consulting Engineers	New York alleges an electrical design error by a subcontractor in connection with a new boiler.	10/28/11	2/29/12	Dismissed	Index No 11402855
Collier County v. John Reynolds & Sons, inc. D/B/A Reynolds, Inc. and Travelers Casualty and Surety Company of America v. Camp Dresser & McKee, Inc. and Greeley and Hanson, LLC. vs. Hazen and Sawyer, Greeley and Hanson, LLC, Ferguson Enterprises, Inc. and McDade Waterworks, Inc.	Reynolds, a contractor for Collier County, brought a third party suit against Hazen and Sawyer in connection with Hazen's inspection services for the County.	2/29/12	5/3/13	Settled	Case No 10-6658-CA



# 8. Additional Information



H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Quality Assurance/Quality Control Approach

One of the most important aspects of our project approach is our Project Quality Assurance/Quality Control (QA/QC) Plan. Hazen has a corporate QA/QC plan, which is implemented on all projects. This plan involves review by senior professionals at the various project milestones described below:

- The Project Manager will develop a QA/QC plan in conjunction with our proposed QA/QC Engineer so that a streamlined approach to reviews and team coordination can be implemented.
• The conceptual review will be performed after an initial site visit, interviews with facility operators, and data are gathered. The review will take advantage of our senior staff's vast knowledge and experience to identify a "better way" to accomplish project goals.
• The technical memorandum 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 more in depth coordination, using check lists, coordination of specifications and drawings, updates to the cost estimate, construction phasing review, constructability review, and legal review of front end documents. This effort will be performed for the 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.

Ms. Karleskint will work closely with our QA/QC Engineer and the Project Director throughout all phases of the project to ensure that this plan is followed. With our QA/QC plan and our Team's resources, the City can be assured that we will deliver quality deliverables.

Project Team Qualifications

Hazen prides itself on the long-term experience of our key personnel. Through our team's long-standing presence in Sarasota County and throughout Florida, we have established working relationships with the agencies, local governments, and key decision makers that will be crucial to making this project successful. We offer an outstanding and dedicated team with significant experience, local knowledge, and understanding of the City's needs. Our full-service team capabilities mean that we can quickly and cost-effectively address any assignment or challenge.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

31. SIGNATURE

Damann L. Anderson

32. DATE

January 4, 2016

33. NAME AND TITLE

Damann L. Anderson, PE, Vice President

# 9. Submission Requirements and Required Submittal Forms



**TAB 9 – SUBMISSION REQUIREMENTS AND REQUIRED SUBMITTAL FORMS:** This checklist is provided to assist each Proposer in the preparation of their response. Included in this checklist are important requirements, which is the responsibility of each Proposer to submit with their response in order to make their response fully compliant. This checklist is a guideline which is to be executed and submitted with the required forms. It is the responsibility of each Proposer to read and comply with the solicitation in its entirety.

**A. SUBMITTAL REQUIREMENTS**

1. **NUMBER OF PAGES:** SECTION III of the proposal **shall not exceed (22) pages (one-sided) or (11) pages (two-sided) in length. (The Title Page, Table of Contents, City Required Forms, 330 Forms and tabs do not count towards the TOTAL NUMBER OF PAGES).**
  - 1.1 When compiling a response, sections should be tabbed and labeled; pages should be sequentially numbered at the bottom of the page; proposals should be bound to allow flat stacking for easy storage; **do not use three ring binders of any kind;** and sections should be compiled in the sequence list above. Maximum number of pages shall be **22 pages (one sided) or 11 pages (two sided),** not including **the Title Page, Table of Contents, City Required Forms and required 330 Forms, resumes, and tabs do not count towards the TOTAL NUMBER OF PAGES).**
  - 1.2 Place proposal with all the required items in a sealed envelope clearly marked for specification number, project name, name of proposer, and due date and time.
2. **PAPER/FONT SIZE:** 8.5"x11"/Font Calibri 11, PDF FORMAT.
3. **NUMBER OF ORIGINAL PROPOSALS:** One (1) original hard-copy **UNBOUND** (marked **"ORIGINAL"**) and signed in blue ink. **NUMBER OF COPIES:** three (3) hard-copies **BOUND** (marked **"COPY"**). **(1 original + 3 copies = 4 total submittals).**
4. **CD or USB Flash Drive:** One (1) electronic version in Portable Document Format (PDF) **or** Flash Drive containing the entire submittal.

**B. REQUIRED SUBMITTAL FORMS:** City Required Submittal Forms/Checklist

**READ/EXECUTED  
& INCLUDED**

- Proposal Submittal Signature Form
- References **(included in Tab 6)**
- Drug-Free Workplace (If Applicable)
- Public Entity Crime Information
- Non-Collusive Affidavit

- Lobbying Certification
- Statement of Organization
- Conflict of Interest Form
- Disclosure Form (Consultant/Engineer/Architect)

State Registration Requirements (<http://www.sunbiz.org/search.html>)

- Copy of Registration, Attached
- State required license for Prime Firm Only (Not sub-consultants)

**SAMPLE INSURANCE CERTIFICATE:** Demonstrate your firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the Insurance Companies names for both Professional Liability and General Liability and the dollar amounts of the coverage.

YES  NO Sample Insurance Certificate is included with the submittal

**MBE/WBE:** If claiming Minority Business Enterprise/Women Business Enterprises, the Prime Firm (not sub-consultant) **shall be** certified as a Minority Business Enterprise by the State of Florida, Department of Management Services, Office of Supplier Diversity pursuant to Section 287.0943, Florida Statutes.

YES, CLAIMING STATUS AS PRIME ONLY

YES, I'VE ATTACHED THE CERTIFICATE OF MBE/WBE STATUS FROM THE STATE OF FLORIDA AS OUTLINED SECTION 1.

NOT CLAIMING MBE/WBE

**THE REMAINDER OF THE PAGE LEFT INTENTIONALLY BLANK**



**STATEMENT OF ORGANIZATION**  
**(Information Sheet for Transactions and Conveyances Corporation Identification)**

The following information will be provided to the City of North Port for incorporation in legal documents. It is, therefore, vital all information is accurate and complete. Please be certain all spelling, and capitalization is exactly as registered with the state or federal government.

Name of Respondent: Hazen and Sawyer

DBA (if any): \_\_\_\_\_

Type of Entity (Sole Proprietor, Corporation, LLC, LLP, Partnership, etc): Corporation

Business Address: 7334 Delainey Court, Sarasota, Florida 34240

Phone: (941) 378-2862 Fax: (941) 378-0196

E-Mail danderson@hazenandsawyer.com

Print Name and Title of person authorized to bind: Damann L. Anderson, PE, Vice President

Federal Identification Number: 13-2904652

Signature:   
(Damann L. Anderson, PE, Vice President)

Respondent shall submit proof that it is authorized to do business in the State of Florida unless registration is not required by law.

Is this a Florida Corporation:  Yes or  No (Please Check One)

If not a Florida Corporation,  
In what state was it created: New York  
Name as spelled in that State: Hazen and Sawyer

What kind of corporation is it:  "For Profit" or  "Not for Profit"

Is it in good standing:  Yes or  No

Authorized to transact business in Florida:  Yes or  No

State of Florida Department of State Certificate of Authority Document No.: 841657

Does it use a registered fictitious name:  Yes or  No

**THIS PAGE MUST BE SUBMITTED WITH PROPOSAL**

REQUEST FOR PROPOSAL NO. 2016-21  
PROFESSIONAL ENGINEERING SERVICES AND CEI FOR  
CHEMICAL FEED IMPROVEMENTS AT MYAKKAHATCHEE CREEK WATER TREATMENT PLANT AND BOOSTER STATIONS

**Names of Officers:**

**President:** Charles S. Hocking, PE **Secretary:** Richard E. Peters, PE

**Vice President:** Patrick A. Davis, PE, Damann L. Anderson, PE\*,  
Shajan Joykutti, PE, Albert Muniz, PE,  
Robert B. Taylor, Jr., PE, Patricia A. Carney, PE,  
Jayson J. Page, PE **Treasurer:** Richard E. Peters, PE

**Director:** \_\_\_\_\_ **Director:** \_\_\_\_\_

**Other:** \_\_\_\_\_ **Other:** \_\_\_\_\_

\*Named person interested in the proposal as a Principal.

**Name of Corporation (As used in Florida):**

Hazen and Sawyer, P.C.

(Spelled exactly as it is registered with the state or federal government)

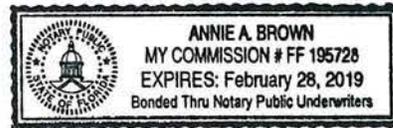
**Corporate Address:**

Post Office Box: N/A  
City, State Zip: \_\_\_\_\_  
Street Address: 498 7th Avenue, 11th Floor  
City, State, Zip: New York, New York 10018

STATE OF Florida  
COUNTY OF Sarasota

Sworn to and subscribed before me this 4th day of January, 2016, by Damann L. Anderson, PE who  is personally known to me or  has produced his/her driver's license as identification.

Annie A. Brown  
Notary Public - State of Florida  
Print Name: Annie A. Brown  
Commission No: FF 195728



**THIS PAGE MUST BE SUBMITTED WITH PROPOSAL**

# *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, 2015, that its most recent annual report/uniform business report was filed on February 23, 2015, and 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 Twenty-third day of February,  
2015*



*Ken DeFina*  
*Secretary of State*

Authentication ID: CC6982987758

To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

<https://efile.sunbiz.org/certauthver.html>



FLORIDA DEPARTMENT OF STATE  
Division of Corporations

September 1, 2015

HAZEN AND SAWYER  
498 SEVENTH AVENUE  
NEW YORK, NY 10018

Subject: **HAZEN AND SAWYER**

REGISTRATION NUMBER: **G15000090047**

This will acknowledge the filing of the above fictitious name registration which was registered on September 1, 2015. This registration gives no rights to ownership of the name.

Each fictitious name registration must be renewed every five years between January 1 and December 31 of the expiration year to maintain registration. Three months prior to the expiration date a statement of renewal will be mailed.

If the mailing address of this business changes, please notify this office in writing, or through the link provided on our website [www.sunbiz.org](http://www.sunbiz.org) for Address & FEI/EIN Changes. Please reference the original registration number.

Should you have any questions regarding this matter you may contact our office at (850) 245-6058.

Lewis S Berger  
Reinstatement Section  
Division of Corporations  
Letter No. 015A00018490

Account number: I20000000195 Account charged: 50.00

[www.sunbiz.org](http://www.sunbiz.org)

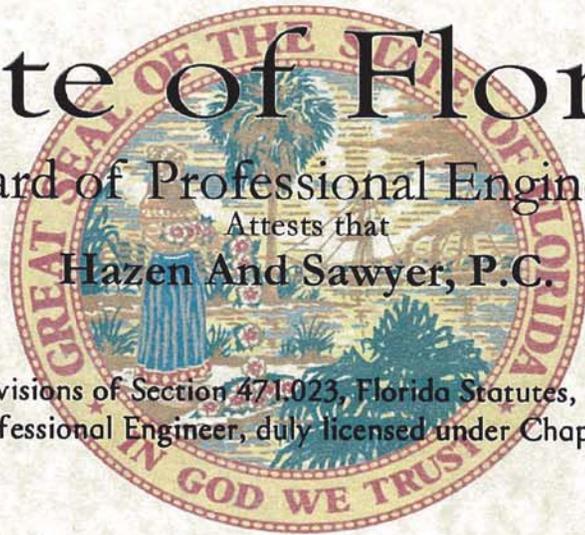
Division of Corporations - P.O. BOX 6327 -Tallahassee, Florida 32314

# State of Florida

Board of Professional Engineers

Attests that

Hazen And Sawyer, P.C.



is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2017

Audit No: 228201704657

CA Lic. No:

2771

**DRUG FREE WORKPLACE FORM**

The undersigned Consultant in accordance with Florida Statute 287.087 hereby certifies that  
Hazen and Sawyer does:  
(Company Name)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug free workplace through implementation of this section.

**Check one:**

- As the person authorized to sign this statement, I certify that this firm complies fully with above requirements.
- As the person authorized to sign this statement, this firm **does not** comply fully with the above requirements.



**Offeror's Signature** (Damann L. Anderson, PE, Vice President)

January 4, 2016

**Date**

**THIS PAGE MUST BE SUBMITTED WITH PROPOSAL**

**PUBLIC ENTITIY CRIME INFORMATION**

As provided by F.S. §287.133, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a Contractor, Supplier, Subcontractor, or Consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

I, Damann L. Anderson, PE, Vice President, being an authorized representative of the Respondent, Hazen and Sawyer, located at 7334 Delainey Court

City: Sarasota State: Florida Zip Code: 34240, have read and understand the contents above. I further certify that Respondent is not disqualified from replying to this solicitation because of F.S. §287.133.

Signature: *Damann L. Anderson* Date: January 4, 2016  
(Damann L. Anderson, PE, Vice President)

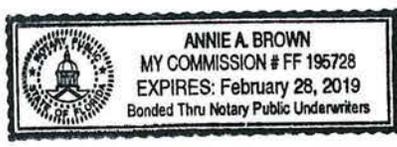
Telephone #: (941) 378-2862 Fax #: (941) 378-0196

Federal ID #: 13-2904652

STATE OF Florida  
COUNTY OF Sarasota

Sworn to and subscribed before me this 4th day of January, 2016, by Damann L. Anderson, PE who  is personally known to me or  has produced his/her driver's license as identification.

*Annie A. Brown*  
Notary Public - State of Florida



Print Name: Annie A. Brown

Commission No: FF 195728

**THIS PAGE MUST BE SUBMITTED WITH PROPOSAL**

NON-COLLUSIVE AFFIDAVIT

State of Florida }  
County of Sarasota } SS.

Before me, the undersigned authority, personally appeared:  
Damann L. Anderson, PE who, being first duly sworn, deposes and says that:

1. He/She is the Representative (Owner, Partner, Officer, Representative or Agent) of Hazen and Sawyer, the Respondent that has submitted the attached reply;
2. He/She is fully informed respecting the preparation and contents of the attached reply and of all pertinent circumstances respecting such reply;
3. Such reply is genuine and is not a collusive or sham reply;
4. Neither the said Respondent nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other respondent, firm, or person to submit a collusive or sham reply in connection with the work for which the attached reply has been submitted; or have in any manner, directly or indirectly sought by agreement or collusion, or communication or conference with any respondent, firm, or person to fix the price or prices in the attached reply or of any other respondent, or to fix any overhead, profit, or cost elements of the reply price or the reply price of any other respondent, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the reply work.

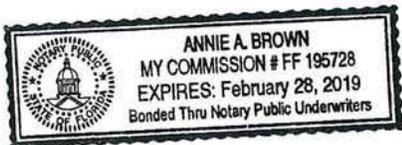
Signed, sealed and delivered this 4th day of January, 2016.

By: Damann L. Anderson

Damann L. Anderson, PE  
(Printed Name)  
Vice President  
(Title)

STATE OF Florida  
COUNTY OF Sarasota

Sworn to and subscribed before me this 4th day of January, 2016, by Damann L. Anderson, PE who  is personally known to me or  has produced his/her driver's license as identification.



Annie A. Brown  
Notary Public - State of Florida  
Print Name: Annie A. Brown  
Commission No: FF 195728

THIS PAGE MUST BE SUBMITTED WITH PROPOSAL

LOBBYING CERTIFICATION

"The undersigned hereby certifies, to the best of his or her knowledge and belief, that":

STATE OF Florida

COUNTY OF Sarasota

This 4th day of January of 2016

Damann L. Anderson, PE, Vice President, being first duly sworn, deposes and says that he or she is the authorized representative of Hazen and Sawyer (Name of the contractor, firm or individual), and that the vendor and any of its agents agree to have no contact or communication with, or discuss any matter related in any way to any active City of North Port solicitation, with any City of North Port elected officials, officers, their appointees or their agents or any other staff or outside individuals working with the city in respect to this request other than the designated Procurement Official Contact and to abide by the restrictions outlined in the General Terms and Conditions of the Solicitation. Technical questions directed to the project manager, is prohibited. These persons shall not be lobbied, either individually or collectively, regarding any questions for bid, proposal, qualification and/or any other solicitations released by the city. To do so is grounds for immediate disqualification from the selection process. The selection process is not considered final until such a time as the Commission has made a final and conclusive determination.

(a) No City appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence either directly or indirectly an officer or employee of the City, City Commission in connection with the awarding of any City Contract.

(b) If any funds other than City appropriated funds have been paid or will be paid to any person for influencing or attempting to influence a member of City Commission or an officer or employee of the City in connection with this contract, the undersigned shall complete and submit Standard Form-L "Disclosure Form to Report Lobbying", in accordance with its instructions.

Signed, sealed and delivered this 4th day of January, 2016.

By: Damann L. Anderson

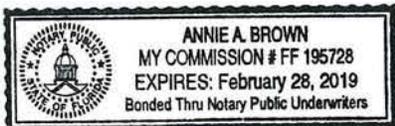
Damann L. Anderson, PE  
(Printed Name)  
Vice President  
(Title)

STATE OF Florida

COUNTY OF Sarasota

Sworn to and subscribed before me this 4th day of January, 2016, by Damann L. Anderson, PE who  is personally known to me or  has produced his/her driver's license as identification.

Annie A. Brown



Notary Public - State of Florida  
Print Name: Annie A. Brown  
Commission No: FF 195728

THIS PAGE MUST BE SUBMITTED WITH BID

### CONFLICT OF INTEREST FORM

F.S. §112.313 places limitations on public officers (including advisory board members) and employees' ability to contract with the City either directly or indirectly. Therefore, please indicate if the following applies:

#### PART I.

- I am an employee, public officer or advisory board member of the City  
\_\_\_\_\_ (List Position Or Board)
- I am the spouse or child of an employee, public officer or advisory board member of the City  
Name: \_\_\_\_\_
- An employee, public officer or advisory board member of the City, or their spouse or child, is an officer, partner, director, or proprietor of Respondent or has a material interest in Respondent. "Material interest" means direct or indirect ownership of more than 5 percent of the total assets or capital stock of any business entity. For the purposes of [§112.313], indirect ownership does not include ownership by a spouse or minor child.  
Name: \_\_\_\_\_
- Respondent employs or contracts with an employee, public officer or advisory board member of the City  
Name: \_\_\_\_\_
- None Of The Above

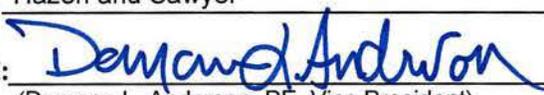
#### PART II:

Are you going to request an advisory board member waiver?

- I will request an advisory board member waiver under §112.313(12)
- I will NOT request an advisory board member waiver under §112.313(12)
- N/A

The City shall review any relationships which may be prohibited under the Florida Ethics Code and will disqualify any vendors whose conflicts are not waived or exempt.

COMPANY: Hazen and Sawyer

SIGNATURE: 

(Damann L. Anderson, PE, Vice President)

THIS PAGE MUST BE SUBMITTED WITH PROPOSAL

DISCLOSURE FORM  
FOR  
CONSULTANT/ENGINEER/ARCHITECT

Please select (only) one of the following three options:

Our firm has no actual, potential, or reasonably perceived, **financial\*** or **other interest\*\*** in the outcome of the project.

Our firm has a potential or reasonably perceived **financial\*** or **other interest\*\*** in the outcome of the project as described here: \_\_\_\_\_.

Our firm proposes to mitigate the potential or perceived conflict according to the following plan:  
\_\_\_\_\_.

Our firm has an actual **financial\*** or **other interest\*\*** in the outcome of the project as described here:  
\_\_\_\_\_.

**\*What does "financial interest" mean?**

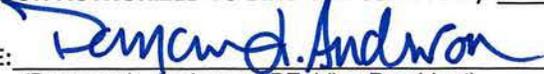
If your firm, or employee of your firm working on the project (or a member of the employee's household), will/may be perceived to receive or lose private income depending on the government business choices based on your firm's findings and recommendations, this must be listed as a financial interest. An example would be ownership in physical assets affected by the government business choices related to this project. The possibility of contracting for further consulting services is not included in this definition and is not prohibited.

**\*\*What does "other interest" mean?**

If your firm, or employee of your firm working on the project (or a member of the employee's household), will/may be perceived to have political, legal or any other interests that will affect what goes into your firm's findings and recommendations, or will be/may be perceived to be affected by the government business choices related to this project, this must be listed as another interest.

BUSINESS NAME: Hazen and Sawyer \_\_\_\_\_

NAME (PERSON AUTHORIZED TO BIND THE COMPANY): Damann L. Anderson, PE, Vice President \_\_\_\_\_

SIGNATURE:  DATE: January 4, 2016 \_\_\_\_\_  
(Damann L. Anderson, PE, Vice President)

END OF PART III





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
03/30/2015

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

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

<b>PRODUCER</b> Marsh USA, Inc. 1166 Avenue of the Americas New York, NY 10036 Attn: NewYork.certs@Marsh.com Fax: (212) 948-0500  700402--GAUWP-15-16	<b>CONTACT NAME:</b> _____	
	<b>PHONE (A/C, No, Ext):</b> _____	<b>FAX (A/C, No):</b> _____
<b>E-MAIL ADDRESS:</b> _____		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A:</b> Hartford Fire Insurance Co		19682
<b>INSURER B:</b> Hartford Casualty Ins Co		29424
<b>INSURER C:</b> N/A		N/A
<b>INSURER D:</b> Twin City Fire Insurance Co		29459
<b>INSURER E:</b>		
<b>INSURER F:</b>		

**COVERAGES**                      **CERTIFICATE NUMBER:** NYC-005574245-34                      **REVISION NUMBER:** 7

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC			10 UUN UU0890	03/29/2015	03/29/2016	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 10,000 MED EXP (Any one person) \$ 1,000,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS			10UENUU0960 (AOS) 10UENAN2667 (MA)	03/29/2015 03/29/2015	03/29/2016 03/29/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Comp./Coll. Deductible \$ 1,000
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED    RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
D	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y <input checked="" type="checkbox"/> N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	10 WB AJ 7349	03/29/2015	03/29/2016	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

<b>CERTIFICATE HOLDER</b>  FOR PROPOSAL PURPOSES ONLY	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE of Marsh USA Inc.  Manashi Mukherjee <i>Manashi Mukherjee</i>