



City of Hollywood
Public Utilities
Vincent Morello, Director
2600 Hollywood Boulevard, Hollywood, FL 33020

[TETRA TECH, INC.] RESPONSE DOCUMENT REPORT

RFQ (CCNA Proj) No. RFQ-238-24-JJ

Design, Construction Management and Inspection Services for the Influent Pump Station Upgrade

RESPONSE DEADLINE: December 12, 2024 at 3:00 pm

Report Generated: Wednesday, September 3, 2025

Tetra Tech, Inc. Response

CONTACT INFORMATION

Company:

Tetra Tech, Inc.

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carey.baird@tetrattech.com

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Carey Baird

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Suite 1000
Orlando, FL 32801

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(407) 839-3955

Website:

N/A

Submission Date:

Dec 12, 2024 12:46 PM (Eastern Time)

ADDENDA CONFIRMATION

Addendum #1

Confirmed Dec 12, 2024 11:18 AM by Carey Baird

Addendum #2

Confirmed Dec 12, 2024 11:18 AM by Carey Baird

QUESTIONNAIRE

1. Upload Statement of Qualification*

Please upload your COMPLETE response, including any and all required forms listed in the solicitation and the corresponding attachments. Please exclude uploading any CONFIDENTIAL / PROPRIETARY information here.

- A. Table of Contents
- B. Executive Summary
- C. Firm's Qualification & Experience
- D. Organizational Profile and Project Team Qualifications
- E. Approach to Scope of Work
- F. References/Past Performances

Please refer to [#SUBMITTAL REQUIREMENTS](#) section, for details regarding the requirement of each section of the Statement of Qualification.

TetraTech_RFP238-24-JJ.pdf

2. Please upload any CONFIDENTIAL / PROPRIETARY information here (as applicable).

No response submitted

3. Required Forms and Acknowledgements

VENDOR REFERENCE FORM*

Please download the below documents, complete, and upload.

- [Vendor Reference Form \(1\).pdf](#)

Form4_MacombCounty.pdf

TT_Form4_BrooksRdPS_ReferenceForm_KMC_(11-25-24).pdf

TT_Form4_EastLansing.pdf

Form4_LFUCG.pdf

HOLD HARMLESS AND INDEMNITY CLAUSE *

I, an authorized representative, the contractor, shall indemnify, defend and hold harmless the City of Hollywood, its elected and appointed officials, employees and agents for any and all suits, actions, legal or administrative proceedings, claims, damage, liabilities, interest, attorney's fees, costs of any kind whether arising prior to the start of activities or following the completion or acceptance and in any manner directly or indirectly caused, occasioned or contributed to in whole or in part by reason of any act, error or omission, fault or negligence whether active or passive by the contractor, or anyone acting under its direction, control, or on its behalf in connection with or incident to its performance of the contract.

Confirmed

NON-COLLUSION STATEMENT*

I, being first duly sworn, depose that:

- A. He/she is an authorized representative of the Company, the Proposer that has submitted the attached Proposal.
- B. He/she has been fully informed regarding the preparation and contents of the attached Proposal and of all pertinent circumstances regarding such Proposal;
- C. Such Proposal is genuine and is not a collusion or sham Proposal;

- D. Neither the said Proposer nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Proposer, firm or person to submit a collusive or sham Proposal in connection with the contractor for which the attached Proposal has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Proposer, firm or person to fix the price or prices, profit or cost element of the Proposal price or the Proposal price of any other Proposer, or to secure an advantage against the City of Hollywood or any person interested in the proposed Contract; and
- E. The price or prices quoted in the attached Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

Confirmed

CERTIFICATIONS REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS*

The applicant certifies that it and its principals:

Are not presently debarred, suspended, proposed for debarment, declared ineligible, sentenced to a denial of Federal benefits by a State or Federal court, or voluntarily excluded from covered transactions by any Federal department or agency;

Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction, violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and

Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.

Confirmed

DRUG-FREE WORKPLACE PROGRAM*

- A. IDENTICAL TIE PROPOSALS - Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie proposals will be followed if none of the tied vendors have a drug-free workplace program. In order to have a drug-free workplace program, a business shall:
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 employee 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 these requirements.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Confirmed

SOLICITATION, GIVING, AND ACCEPTANCE OF GIFTS POLICY*

Florida Statute 112.313 prohibits the solicitation or acceptance of Gifts. “No Public officer, employee of an agency, local government attorney, or candidate for nomination or election shall solicit or accept anything of value to the recipient, including a gift, loan, reward, promise of future employment, favor, or service, based upon any understanding that the vote, official action, or judgment of the public officer, employee, local government attorney, or candidate would be influenced thereby.” The term “public officer” includes “any person elected or appointed to hold office in any agency, including any person serving on an advisory body.”

The City of Hollywood/Hollywood CRA policy prohibits all public officers, elected or appointed, all employees, and their families from accepting any gifts of any value, either directly or indirectly, from any contractor, vendor, consultant, or business with whom the City/CRA does business.

The State of Florida definition of “gifts” includes the following:

- Real property or its use,
- Tangible or intangible personal property, or its use,
- A preferential rate or terms on a debt, loan, goods, or services,
- Forgiveness of indebtedness,
- Transportation, lodging, or parking,
- Food or beverage,
- Membership dues,
- Entrance fees, admission fees, or tickets to events, performances, or facilities,
- Plants, flowers or floral arrangements
- Services provided by persons pursuant to a professional license or certificate.
- Other personal services for which a fee is normally charged by the person providing the services.
- Any other similar service or thing having an attributable value not already provided for in this section.

Any contractor, vendor, consultant, or business found to have given a gift to a public officer or employee, or his/her family, will be subject to dismissal or revocation of contract.

As the person authorized to sign the statement, I certify that this firm will comply fully with this policy.

Confirmed

LIST OF SUBCONTRACTORS*

Please download the below documents, complete, and upload.

- [Form 14 - List of Subcontra...](#)

Form_14_-_List_of_Subcontractors.docx.pdf

CERTIFICATE OF INSURANCE*

See requirements in the [#SPECIAL TERMS AND CONDITIONS](#) section.

Tetra_Tech,_Inc-Hollywood,_FL,_PL1M.pdf

PROOF OF SUNBIZ REGISTRATION*

Enter company FEIN to be verified in Sunbiz

95-4148514

[Click to Verify](#) *Value will be copied to clipboard*

PROOF OF LICENSE - DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION

Enter license number to be verified in Department of Business & Professional Regulation

Please see attached proposal

[Click to Verify](#) *Value will be copied to clipboard*

4. ACKNOWLEDGMENT AND SIGNATURE PAGE

IF CORPORATION - DATE INCORPORATED/ORGANIZED:*
1988

STATE INCORPORATED/ORGANIZED:*
Delaware

REMITTANCE ADDRESS*
6303 Waterford District Drive, Suite 305, Miami, FL 33126

BIDDER/PROPOSER'S AUTHORIZED REPRESENTATIVE'S TYPED FULL NAME*
Ken Caban

IT IS HEREBY CERTIFIED AND AFFIRMED THAT THE BIDDER/PROPOSER CERTIFIES ACCEPTANCE OF THE TERMS, CONDITIONS, SPECIFICATIONS, ATTACHMENTS AND ANY ADDENDA. THE BIDDER/PROPOSER SHALL ACCEPT ANY AWARDS MADE AS A RESULT OF THIS SOLICITATION. BIDDER/PROPOSER FURTHER AGREES THAT PRICES QUOTED WILL REMAIN FIXED FOR THE PERIOD OF TIME STATED IN THE SOLICITATION.*
Confirmed

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF BIDDER/PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED BY AN AUTHORIZED REPRESENTATIVE SHALL RENDER THE BID/PROPOSAL NON-RESPONSIVE. THE CITY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY BID/PROPOSAL THAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE BIDDER/PROPOSER TO THE TERMS OF ITS OFFER.*
Confirmed

PROPOSAL FORM*
Please download the below documents, complete, and upload.

- [Proposal Form.docx](#)

Proposal_Form.docx

5. SWORN STATEMENT PURSUANT TO SECTION 287.133 (3) (a) FLORIDA STATUTES ON PUBLIC ENTITY CRIMES

THIS FORM STATEMENT IS SUBMITTED TO THE CITY OF HOLLYWOOD BY:*

(Print individual's name and title) (Print name of entity submitting sworn statement)

Ken Caban, Vice President

SWORN STATEMENT CONTINUATION:*

Enter business address:

6303 Waterford District Drive, Suite 305, Miami, FL 33126

SWORN STATEMENT CONTINUATION:*

Enter Federal Employer Identification Number (FEIN) is:

If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.

95-4148514

SWORN STATEMENT CONTINUATION:*

I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in an federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

I acknowledge the statement above.

SWORN STATEMENT CONTINUATION:*

I understand that “Affiliate,” as defined in paragraph 287.133(1)(a), Florida Statutes, means:

1. A predecessor or successor of a person convicted of a public entity crime, or
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm’s length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

Confirmed

SWORN STATEMENT CONTINUATION:*

I understand that “person,” as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity.

The term “person” includes those officers, executives, partners, shareholders, employees, members, and agents who are active in management of an entity

Confirmed

SWORN STATEMENT CONTINUATION:*

Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies.)

Division of Administrative Hearings, determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (attach a copy of the Final Order).

Neither the entity submitting sworn statement, nor any of its officers, director, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

SWORN STATEMENT CONFIRMATION*

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THAT PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017 FLORIDA STATUTES FOR A CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Confirmed

FORM 1**SUBMITTAL CHECKLIST FORM**

The items below are required components of your solicitation response in order for your bid/proposal/submittal to be considered responsive and responsible. Please complete and submit this submittal checklist form as the cover page of your submittal with all of the items below in the order listed.

Please indicate Yes or No in the "Submitted (Yes/No)" column below to indicate which required components were provided with your submittal.

Submitted (Yes/No)	Required Bid Components
YES	This Submittal Checklist Form completed and included as the cover page of your submittal.
YES	A Table of Contents that clearly identifies each section and page number of your submittal.
YES	Information and/or documentation that addresses and/or meets the requirements outlined in Section III – Scope of Work/Services, including any procedural or technical enhancements/innovations which do not materially deviate from the objectives or required content of the Scope of Work/Services.
YES	Forms (Completed) Form 1 Submittal Checklist Form* Form 2 Acknowledgement and Signature Page Form 3 Bid Form* Form 4 Vendor Reference Form* Form 5 Hold Harmless and Indemnity Clause Form 6 Non-Collusion Affidavit Form 7 Sworn Statement...Public Entity Crimes Form 8 Certifications Regarding Debarment... Form 9 Drug-Free Workplace Program Form 10 Solicitation, Giving, and Acceptance... Form 11 W-9 (Request for Taxpayer Identification)
YES	Certificate(s) of insurance that meet the requirements of Section 2.17
YES	Proof of State of Florida Sunbiz Registration

This checklist is only a guide, please read the entire solicitation to ensure that your submission includes all required information and documentation.

TAB A

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TETRA TECH



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TETRA TECH

12/12/2024

Giselle Hipolito
Senior Project Manager
City of Hollywood, FL
2600 Hollywood
Hollywood, FL 33313

RE: RFP No 238-24-JJ Design, Construction Management and Inspection Services for the Influent Pump Station Upgrade

Dear Selection Committee Members:

The City of Hollywood is seeking a qualified firm to provide comprehensive design, permitting, construction administration, and inspection services for the South Regional Wastewater Treatment Plant (SRWWTP) Influent Pump Station Upgrade. Tetra Tech has partnered with the City of Hollywood for over 15 years, bringing deep expertise in infrastructure design, engineering, and consulting, as well as comprehensive knowledge of the City's critical facilities.

The scope of this RFQ aligns closely with Tetra Tech's experience in wastewater pumping, structural rehabilitation, mechanical and electrical upgrades, HVAC system optimization, and compliance with Florida's permitting requirements for large-scale infrastructure projects. Our team brings proven capabilities in similar pump station and wastewater treatment plant upgrade projects, throughout Florida and beyond.

Our proposed project team is deeply experienced in handling large municipal wastewater facilities and familiar with the specific challenges of this site. Having successfully completed numerous similar projects in Florida, we are prepared to address the site-specific conditions of the SRWWTP, including the necessary structural and mechanical upgrades, flow management, and VFD facility expansions. Furthermore, our expertise in managing permit applications and grant funding will help the City efficiently navigate regulatory requirements, securing compliance and financial support for this critical upgrade.

We take pride in our longstanding commitment to quality, safety, and cost-effective solutions for the City of Hollywood. Our track record of on-time and on-budget project delivery for City of Hollywood design and construction projects has earned Tetra Tech the trust of the Public Utilities Department we are confident in our ability to deliver the Influent Pump Station Upgrade successfully.

We welcome the opportunity to continue serving as an extension of the City's staff and are dedicated to bringing our knowledge, resources, and commitment to the SRWWTP Influent Pump Station Upgrade project.

Sincerely,

Ken Caban, PE
Principal

Diana Santander, PE
Project Manager

A MESSAGE FROM OUR Principal

"We are excited to continue our long-standing partnership with the City of Hollywood.



Having worked closely with the you over the years, our team shares your commitment to delivering efficient, reliable wastewater services to the Broward region.

We look forward to the opportunity to build on our successful collaboration by delivering a successful project. Tetra Tech brings local knowledge, industry-leading wastewater treatment plant and pump station experience, and the resources needed to meet your goals.

We are fully committed to working closely with you to set a clear vision and ensure our team delivers results that exceed your expectations."

— Ken Caban, PE
Principal

TAB B

EXECUTIVE SUMMARY



TETRA TECH

EXECUTIVE SUMMARY

Just The Facts

Local and Global

Tetra Tech is a full-service engineering consulting firm that offers proven experience and demonstrated excellence in professional engineering services in many engineering disciplines including wastewater pumping and construction engineering, management, and inspection. A registered corporation in Florida, Tetra Tech serves over 50 public entities under continuing services contracts. Tetra Tech has provided these services to clients in Florida since 1975. It is our core belief that our professionals serve as an extension of our client's staff. We emphasize serving the specific project needs of the City of Hollywood while maintaining and updating an in-depth knowledge of the City's various systems.

Tetra Tech has more than 550 offices worldwide and eight infrastructure offices serving Florida. The City of Hollywood will be served from our Miami office, just a few miles from the City of Hollywood's Office. Our proximity and management philosophy will allow sound communication between the Tetra Tech team and City staff. Physical proximity will also enhance the involvement of City staff in every element of planning, design, permitting, and construction. Tetra Tech is committed to continuing to provide the City with on-time, responsive service without delays.

Tetra Tech takes a proactive approach to all levels of project management, including engineering studies, design and plan development, permitting, and construction administration. Our management plan is based on

client service and technical excellence. Tetra Tech has developed and refined this approach through numerous continuing contracts we have throughout South Florida and beyond.

History Serving The City Of Hollywood

Tetra Tech has provided engineering services to the City of Hollywood since 2003. Our understanding of the City's underground infrastructure and its operation has been gained through years of dedicated service to the Engineering and Underground Utilities Divisions of the Public Utilities Department. Our work with the City includes work on the water, wastewater, roadways, and stormwater systems, and grant and asset management.

Office Location

The City will be served from our Miami office for this project. Our proximity to the project sites and City offices will facilitate client service to the City. From our office in Miami, we have successfully completed numerous projects for the City of Hollywood and other municipalities in South Florida.

Tetra Tech has assisted the City with water, wastewater, stormwater, and roadway infrastructure. In addition, we have assisted the city with its Vulnerability Assessment and will assist with the Floodplain Management Plan. Because of our office location, we are able to successfully design, permit, and assist during the construction of various projects. Our location allows ease of coordination between the City, regulatory agencies, and the project site.

Corporate Headquarters:

3475 East Foothill Blvd.,
Pasadena, CA 91107



Local Office of Proposer:

Ken Caban, PE
6303 Waterford District Drive
Suite 305
Miami, FL 33126
Cell: 305.849.3404
ken.caban@tetratech.com

Tetra Tech Ranks High with

Engineering News-Record *Rankings for 2024*

#1 Water Treatment & Desalination

#1 Environmental Management

#2 Sewer & Waste

#2 Solid Waste

#3 Sanitary & Storm Sewers

Key Personnel Directly Involved on Projects

The following officers, principals, supervisory staff, and key individuals who will be directly involved with the work and their office locations are listed below:

- Ken Caban | Miami, FL
- Diana Santander | Miami, FL
- Jennifer Ribotti | Orlando, FL
- Michael Schmidt | Atlanta, GA
- John Toomey | Orlando, FL
- Christopher Zavatsky | Miami, FL
- Alberto Abarca | Orlando, FL
- Kevin Friedman | Orlando, FL

Our Team Knows Hollywood

Tetra Tech has successfully completed over 30 projects for the City of Hollywood. We have gained extensive knowledge of the City's infrastructure, staff, administration, and stakeholders through the years. We are familiar with the WWTP and the associated infrastructure.

Firm Description

Tetra Tech was founded in 1966 to provide engineering services for waterways, harbors, and coastal areas. We are highly ranked by *Engineering News-Record* (ENR), including ranked No. 1 in numerous categories. Tetra Tech is ranked the No. 3 Top 500 Design Firm in the United States by ENR. Over the past 58 years, we have substantially increased the size and scope of our business becoming a more diverse company, including individuals with expertise in science research, engineering, construction, and information technology through a network of more than 550 offices and 30,000 associates.

Tetra Tech is a leading provider of high-end consulting and engineering services for projects worldwide. We provide clear solutions to complex problems in water, environment, infrastructure, resource management, energy, and international development. Tetra Tech is *Leading with Science*® to provide sustainable and resilient solutions for our clients.

We have more than 500 staff in Florida, including those in South Florida offices. Tetra Tech's technical knowledge and hands-on site work is broad and deep. Our staff is supported by a uniform administrative and management system that project teams access in real-time to effectively complete work. As a full-service multidisciplinary firm, Tetra Tech has every type of professional necessary for this project.



TAB C

FIRM QUALIFICATIONS AND EXPERIENCE



TETRA TECH

FIRM QUALIFICATIONS AND EXPERIENCE

Just The Facts

Primary Business

Established in 1966, Tetra Tech is a multi-national corporation with 30,000 professionals worldwide. Tetra Tech is a leader in the engineering industry, providing science-based planning, permitting, funding, design engineering, and construction administration services for multiple industries including water/wastewater, environment, infrastructure, resource management, energy, and international development.

For nearly six decades, Tetra Tech engineers and scientists have been helping local governments and municipal utilities provide safe, secure water solutions. Our integrated approach to water resources management and innovative water treatment practices produces high-quality, sustainable outcomes that comply with all applicable regulations.

Expert Local Team

Tetra Tech is the proposed primary engineer for this contract, licensed to operate in Florida from our offices in Miami and Orlando. Our local offices leverage staff from regional design centers and national expertise to deliver successful, world-class infrastructure projects in Florida.

Experience

Tetra Tech has extensive experience in completing comprehensive rehabilitation of municipal wastewater systems, pumping and treatment. Our team has successfully completed numerous

projects involving the creation and calibration of detailed hydraulic models to assess and optimize sewer infrastructure. These models have been instrumental to identifying capacity constraints, surcharging risks, and necessary upgrades to sewer mains, lift stations, and other critical infrastructure components. Our approach integrates advanced modeling techniques with a deep understanding of municipal systems, ensuring that our master plans provide actionable insights for both immediate and future infrastructure needs.

In addition to our technical expertise, Tetra Tech has a proven track record in guiding municipalities through the complex process of capital planning and infrastructure rehabilitation. We have partnered with numerous cities to develop tailored solutions that enhance operational sustainability, reduce maintenance costs, and improve overall system reliability. Our holistic approach ensures that our clients are equipped with the tools and strategies necessary to manage their sewer systems effectively over the long term, aligning with both current needs and future growth projections.

Relevant areas of key expertise include:

- **Pumping and Equalization/Storage Facilities:** Our experience also includes the design and construction management of hundreds of water, wastewater, combined sewer, and stormwater pump station and storage projects ranging from 1 MGD up to 206 MGD stations.

- **Conveyance Piping:** We have planned, designed, permitted and provided construction management services for hundreds of miles of pipelines throughout the southeastern US ranging from 6-inch to 72-inch diameter pipelines. This experience includes condition assessment of large diameter pipelines, along with in-situ rehabilitation and replacement of sections of large pipelines. Tetra Tech successfully completed a project along Taft Street, on the 72-inch sewer pipe entering the WWTP.

- **Multidisciplinary Capabilities:** Tetra Tech has the staff and technical abilities to perform every aspect of this project. Our staff include the following disciplines:

- ◆ Hydraulic Pumping Engineering
- ◆ Condition Assessment
- ◆ Structural Engineering
- ◆ Architecture
- ◆ Mechanical Engineering
- ◆ Electrical Engineering
- ◆ Instrumentation And Controls
- ◆ Grant Management
- ◆ Permitting
- ◆ Construction Administration
- ◆ Construction Engineering
- ◆ Construction Observation

While we have the capabilities to perform every piece of this project, we have assembled a team to best serve the City for this critical project.

Wastewater Experience

Tetra Tech has performed each of the required scope items on many previous wastewater treatment efforts for clients in Florida and across the nation. In Florida, the company has worked on projects addressing the unique challenges of the state's coastal and environmentally sensitive areas, delivering advanced treatment systems to improve water quality and support regulatory compliance. Nationally, Tetra Tech is recognized for its expertise in designing, constructing, and optimizing wastewater facilities, leveraging cutting-edge technologies such as

nutrient removal, water reuse, and energy-efficient systems. Our commitment to delivering resilient and cost-effective solutions ensures communities are equipped with reliable infrastructure to meet current and future wastewater management needs.

The table below presents a sample of some of our local and national experience in wastewater treatment plant and pumping experience. The following pages include detailed project descriptions of key similar projects.



SIMILAR COMPREHENSIVE WWTP/PUMPING EXPERIENCE

	Project	Client	Condition Assessment	Pumping	Electrical Upgrades	Instrumentation & Controls	Structural / Architectural	Large-Diameter Piping
1	West Hickman WWTP Reliability Upgrades and Equalization Tank	Lexington-Fayette Urban County Government, KY	▲	▲	▲	▲	▲	▲
2	Lift Station Nos 1 and 7 Rehabilitation	City of Orlando, FL	▲	▲	▲	▲	▲	▲
3	Brooks Road Pump Station Improvements	Gwinnett County Department of Water Resources, GA	▲	▲	▲	▲	▲	▲
4	Nine Mile Pump Station	Macomb County Public Works, MI		▲	▲	▲	▲	▲
5	Headworks and Improvements	City of East Lansing, MI		▲	▲	▲	▲	▲
	Wastewater Treatment Plant	Detroit Water and Sewerage Department, MI	▲	▲	▲	▲	▲	▲
	Wayne County Downriver Wastewater Treatment Plant	Wayne County, MI	▲		▲	▲		
	Wastewater Treatment Plant	City of Grand Rapids, MI	▲		▲	▲		
	Lansing WWTP	City of Lansing, MI	▲	▲	▲	▲		
	J.B. Messerly Water Pollution Control Plant (WPCP) Expansion & Upgrade	Augusta Utilities Department, GA	▲	▲	▲	▲	▲	▲
	YCUA WWTP	Ypsilanti Community Utilities Authority, MI	▲		▲	▲	▲	▲
	North Canadian Wastewater Treatment Plant Improvements	City of Oklahoma City, OK	▲	▲	▲	▲	▲	▲
	Saginaw WWTP	City of Saginaw, MI	▲	▲	▲	▲	▲	▲
	Northwest Regional Water Reclamation Facility	Hillsborough County, FL		▲	▲	▲	▲	▲
	Kalamazoo WWTP	City of Kalamazoo, MI	▲		▲	▲	▲	▲
	Haikey Creek Lift Station and Odor Control Study and Improvements	Regional Metropolitan Utility Authority, OK	▲	▲	▲	▲	▲	▲

1

**West Hickman
WWTP Reliability
Upgrades and
Equalization Tank****Lexington, Kentucky****CAPACITY**
70.0 MGD**PROJECT DURATION**
2014 – 2019**PROJECT STAFF**
Jason Burkett, PE
*Structural Engineer***REFERENCE**
Lexington-Fayette Urban
County Government
200 East Main Street
Lexington, KY 40507Bob Peterson, PE
☎ 859.425.2438
✉ rbpeterson@lexingtonky.gov**SIMILAR PROJECT
FEATURES:**

- ✓ New Influent Headworks Building
- ✓ Screens
- ✓ 70 MGD Influent Pump Station
- ✓ 80 Mgd Peak Flow Pump Station
- ✓ Grit Facilities
- ✓ Piping Replacement
- ✓ Electrical Upgrades

Tetra Tech was prequalified by the Lexington-Fayette Urban County Government (LFUCG) in 2012 to provide design services for the Remedial Measures Program (RMP). The RMP is a Consent Decree–mandated effort to control SSOs from the separate sanitary sewer collection system and is estimated to cost \$600M. Tetra Tech was selected to provide design services for the West Hickman WWTP Reliability Upgrades and Equalization Tank.

The project includes a new influent headworks building for the plant and a 22 MG equalization tank. The headworks building includes four screens with a 150 MG capacity; 70 MGD influent pump station; 80 MGD wet weather pump station; and new grit facilities. The project also includes a new recycle pump station, upgrades to the non-potable water system, and all associated piping and electrical.

Tetra Tech developed the design drawings, contract documents, and permitting applications and responded to comments from all regulatory agencies, such as the Kentucky Division of Water, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service. Tetra Tech also developed a comprehensive design report that contained the design approach and calculations for civil, structural, process, mechanical, and electrical disciplines.

Tetra Tech conducted an in-depth QA/QC review of the construction documents with the client to ensure that the documents clearly depicted the design intent and to minimize bidding phase RFIs. This process resulted in highly competitive construction bids that were lower than the planning estimates in the RMP capital plan.

Tetra Tech also currently provides construction services, including a full-time resident inspector; reviews and processes shop drawings; reviews and responds to requests for information; evaluates and provides recommendations on change orders; processes pay requests; and will provide final inspection and project certification. The project is scheduled to be completed in 2019.

2

**Lift Station Nos 1
and 7 Rehabilitation****Orlando, Florida****CAPACITY**
20.0 MGD**PROJECT DURATION**
2014 – 2021**PROJECT STAFF**John Toomey, PE
*Sr. Engineer*Jennifer Ribotti, PE
*Project Engineer***REFERENCE**City of Orlando
400 South Orange Avenue
Orlando, FL 32801Chuck Shultz, PE
Assistant Wastewater
Division Manager
☎ 407.246.2658
✉ chuck.shultz@orlando.
gov**SIMILAR PROJECT
FEATURES:**

- ✓ Basis of Design Report
- ✓ Condition Assessment
- ✓ 20 MGD Pump Station
- ✓ Piping Replacement
- ✓ Electrical Upgrades

This project consists of the reconstruction of master lift station No. 001 & 007, both triplex wet-pit/dry-pit pumping stations. These stations are in the same site and are capable to pump to two different wastewater treatment plants owned by the City of Orlando. Both stations were originally construction in the 1950's and rehabilitated in 1984, but the equipment and controls have reached its useful life. Odor control and standby power systems are provided at the facility along with a hydraulic transient (water hammer) control tank which is currently unused. Due to the age and condition of the existing facilities, and to address corrosion and confined space concerns, the City teamed with Tetra Tech to implement improvements.

Tetra Tech provided surveying, hydraulic analysis and modeling, permitting and services. We are currently providing construction engineering services for this contract.

Innovations included:

- ◆ **The facility includes robust reliability provisions such as a split wetwell, main-tie-main switchgear, standby power system, and radio telemetry system. Also, the building constructed as part of the station is architecturally pleasing and consistent with the surrounding neighborhood.**
- ◆ **The caisson method of construction facilitated cost effective construction on a very small site located in an urban setting. This method minimized excavation, sheeting, dewatering, and off-site neighborhood impacts and traffic disruption. The project also involved a detailed maintenance of traffic plan and coordination with the local expressway authority.**
- ◆ **The pump station facility included a monorail bridge crane system above the driveway for lifting the submersible pumps. This system allows for pump removal and passage of a vehicle with an overall height of 18 feet to the bottom of the I-Beam.**
- ◆ **The City wanted the pump station to match the surrounding architecture and blend in with the community. To aid with this goal and public outreach activities, Tetra Tech produced extensive Revit 3-D renderings to aid in the visualization of multiple options for the facility.**
- ◆ **As part of the project, a steady state model of the Lift Station No. 1/7 manifold force main network was constructed and a hydraulic analysis was performed to determine various pumping configurations, operational conditions, and pump selections. A steady state hydraulic model was also developed for the existing discharge system for use as an evaluation tool to simulate operation of the future wastewater transmission system under various operational scenarios to determine a design configuration with the most reasonable blend of economics and reliability.**

3

**Brooks Road Pump
Station Improvements****Gwinnett County, GA****CAPACITY**
10.5 MGD**PROJECT DURATION**
2020 – 2022**PROJECT STAFF**
Mike Schmidt, PE
*Design Manager***REFERENCE**
Gwinnett County
Department of Water
Resources
684 Winder Hwy
Lawrenceville, GA 30046Charlie Roberts
Deputy Director
☎ 678.376.6715
✉ Charlie.roberts@
gwinnettcountry.com**SIMILAR PROJECT
FEATURES:**

- ✓ 10 MGD Pump Station
- ✓ Pumps Replacement And Addition
- ✓ Piping Replacement
- ✓ Electrical Upgrades

Gwinnett County Department of Water Resources (GCDWR) selected Tetra Tech to provide professional services for civil/mechanical, electrical, and instrumentation and control improvements at the Brooks Road Pump Station (PS). The Brooks Road PS is one of 19 regional wastewater pump stations that serve Gwinnett County.

The pump station pumps an average of 2.3 MGD from the Alcovy drainage basin and has a firm capacity of approximately 10.5 MGD. Flows from this pump station pump directly to the F. Wayne Hill Water Resources Center via a 28.5 mile, 36-inch ductile iron force main shared with Lower Big Haynes PS, Alcovy River PS, Brooks Road Booster PS, and Alcovy River Booster PS.

The following improvements will provide additional safety, reliability, and redundancy at the pump station:

- 💧 **Replacement of existing pumps**
- 💧 **Addition of pumps (providing a third set)**
- 💧 **Replacement of existing 4160-volt electrical system with 480-volt electrical system**
- 💧 **New 2,000KW generator**
- 💧 **Upgraded controls**
- 💧 **New check valves**
- 💧 **Addition of third grinder**
- 💧 **Replacement of fluorescent lighting with LED**
- 💧 **Addition of canopy over the grinder monorail crane**

Tetra Tech performed a detailed hydraulic and surge analysis for the entire Eastside Force Main System to assess the operating conditions and pumping capacities of Brooks Road PS and other pump stations within the force main system.

During model calibration, the team ran into challenges due to inconsistencies in the field pressure readings. To resolve these challenges, the team first used the model to isolate segments of the system and identify specific locations where field pressure readings did not match model results. After that, Tetra Tech coordinated with GCDWR staff to confirm that valves in these areas were open and combination air/vacuum relief valves were functioning correctly. The team then installed pressure data loggers at key locations to compare with the field pressure readings. With the information gathered from these field investigations, the team calibrated the model network within the set project criteria. The pump station was put into service in 2022.

4

Nine Mile Pump Station

St. Clair Shores, MI



CAPACITY
385 MGD

PROJECT DURATION
2021 – 2025

PROJECT STAFF

Justin Voss, PE
Project Engineer

Jason Burkett, PE
Structural Engineer

Albert Hernandez-Davila
Project Engineer

REFERENCE

Macomb County Public Works
21777 Dunham Road
Clinton Township, MI 48036

Vince Astorino
Operations and Flow Manager
☎ 586.469.6320
✉ Vincent.astorino@macombgov.org

SIMILAR PROJECT FEATURES:

- ✓ 385 MGD Pump Station
- ✓ Electrical & Instrumentation
- ✓ Structural
- ✓ Architectural
- ✓ Large-Diameter Piping

Tetra Tech led the engineering design for the construction of the Nine Mile Pump Station, which will be the second-largest pump station in Macomb County. This project was initiated by the Macomb County Public Works Office (MCPWO) to provide redundancy for the Chapaton Pump Station and protect sewer customers during high lake elevations.

Our design includes procuring additional site area, vacating the Nine Mile ROW, wet well design, physical modeling, screening and automatic cleaning; structural, architectural, instrumentation, and electrical components; pumping and generators that will help provide backup power. The structural design was especially complex as it involved constructing portions of the new pump station directly over the existing retention treatment basin (RTB). Geotechnical work included the design of a temporary earth retention system to fit the wet well between the existing Nine Mile Box sewer and the RTB. The design included collaboration with the MCPWO staff and Construction Manager at Risk.

Tetra Tech designed the Chapaton Pump Station in 1969 to collect wastewater from southeastern Macomb County and capture it in the Chapaton Retention Basin. The Chapaton Pump Station is one of the largest Pump Stations in Michigan and the largest in Macomb County.

Seeking to provide redundancy for Chapaton Pump Station and protection of the sewer customers during high lake elevations, MCPWO initiated the design and construction of the Nine Mile Pump Station in 2021. MCPWO retained Tetra Tech to lead the design through a qualification-based selection.

The project will include the following elements:

- ◆ **Procurement of additional site area through vacating the Nine Mile ROW**
- ◆ **Wetwell design of 385-MGD pump station**
- ◆ **Physical modeling to verify performance of wet well**
- ◆ **Coarse screening**
- ◆ **Structural and architectural elements for the substructure and superstructure**
- ◆ **Instrumentation to automate pumping, secure the site, and monitor motors**
- ◆ **Design of generators to provide backup power to the Chapaton Pump Station**

5 Headworks and Improvements

East Lansing, MI



CAPACITY
62 MGD

PROJECT DURATION
2015 – 2018

PROJECT STAFF

Jason Burkett, PE
Structural

Justin Voss, PE
Hydraulic Modeling

REFERENCE
City of East Lansing
410 Abbott Road East
Lansing, MI 48823

Bob Scheuerman, PE
Engineering Administrator
☎ 678.376.6715
✉ Charlie.roberts@
gwinnettcounty.com

SIMILAR PROJECT FEATURES:

- ✓ 62 MGD Pump Station
- ✓ Electrical & Instrumentation
- ✓ Structural
- ✓ Architectural
- ✓ Large-Diameter Piping

The City of East Lansing identified several priorities for infrastructure improvements to provide an immediate return on the investment through projected energy savings, labor savings, and/or treatment efficiency. Tetra Tech was selected to provide professional engineering services for the design, construction engineering, and resident project representation for the following work related to the City's Water Resource Recovery Facility (WRRF):

- **Relief WRRF Influent Sewer**
- **Pump Station and Fine Screen Improvements**
- **Grit System Improvements**

Our design team performed a detailed analysis of each project to determine the best equipment and configuration for the application. The evaluations included a site assessment, data review, and analysis for the upgrade of the wastewater pumping, screening, and grit removal systems. The necessary relief sewer improvements were closely coordinated with the locations for the new pumping and headworks processes. The best layout for the new facilities was determined based on evaluation of the physical requirements for the various process elements within the context of the existing site constraints.

Wastewater Pumping

The new influent pump station was designed to provide a firm capacity of 62 MGD to meet the peak hour flow capacity of the WRRF. The proposed plan included six vertical turbine solids handling (VTSH) pumps equipped with variable frequency drives (VFDs) for influent wastewater pumping. The final pump selection and physical arrangement was performed during the design phase. Tetra Tech worked closely with the City to identify the best approach for the new pump station design. The VTSH pumps offered some key advantages including space optimization, reliability, wet well redundancy, wet well flushing, and process efficiency. In addition, our expert SCADA control system capabilities supplemented the process design to provide the best practice solution for the improvements for seamless integration and process efficiency. The pump station discharge connects to the new grit removal system.

Relief Sewer Siting and Design

The new relief sewer was provided to connect an existing, repurposed 60-inch outfall sewer to the WWTP headworks. The design and construction requirements were integral with the planning for the new wastewater pumping and screen improvements. Our civil and process design teams worked closely with our structural engineers and City staff to identify the critical interface and constructability issues. The sequencing was developed for the installation of the new relief sewer to minimize potential for process shutdowns and interferences with the operation of the WRRF.

ADDITIONAL FIRM QUALIFICATIONS

in addition to our previously listed qualifications, we
submit the following as requested by the RFQ:

YEARS OF EXPERIENCE
IN PROVIDING SERVICES
AS IT RELATES TO THE
WORK AND SERVICES
CONTEMPLATED IN
THIS RFQ

58

BUSINESS STRUCTURE:

CORPORATION

CONTACT INFORMATION:

Ken Caban, PE, LEED AP
ken.caban@tetrattech.com
Principal, Vice President
6303 Waterford District Dr., Ste. 305,
Miami, FL 33126

TELEPHONE: 305.849.3404 | www.tetrattech.com
FAX: 305.264.1805

State of Florida Department of State

I certify from the records of this office that TETRA TECH, INC. is a Delaware corporation authorized to transact business in the State of Florida, qualified on April 28, 1988.

The document number of this corporation is P19034.

I further certify that said corporation has paid all fees due this office through December 31, 2023, that its most recent annual report/uniform business report was filed on January 12, 2023, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twenty-first day of February,
2023*



[Signature]
Secretary of State

Tracking Number: 9663253682CU

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

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>

State of Florida Authorized Corporation

FIRM LICENSES

Newly passed Florida legislation "Occupational Freedom and Opportunity Act" (effective July 1, 2020) eliminates separate business licenses for architects, geologists, and landscape architects who already hold an individual license. Therefore, we have included licenses of Tetra Tech, Inc.'s sponsoring qualifiers, Professional Engineer, William Brownlie (PE 70052), and Professional Geologist, Mark Peterson (PG 2806).

Licensee

Name: **TETRA TECH, INC** License Number: **2429**
Rank: **Registry** License Expiration Date:
Primary Status: **Current** Original License Date: **05/10/1977**

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
70052	Current, Active	BROWNIE, WILLIAM ROBERT	Registry	08/11/2009	Professional Engineer	02/28/2025

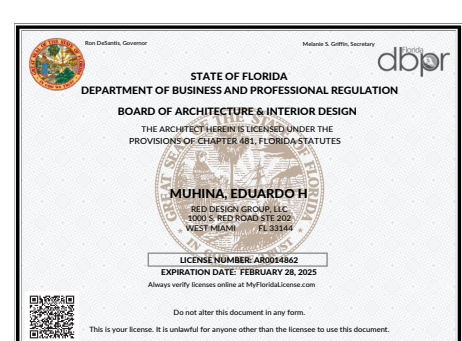
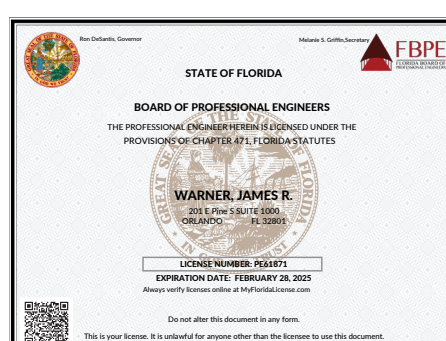
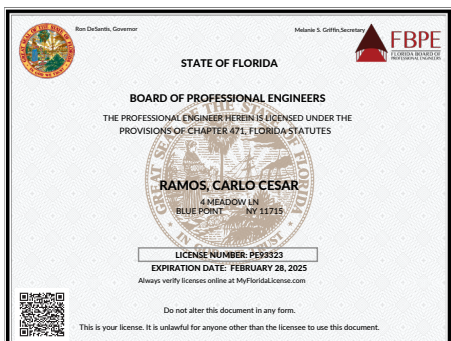
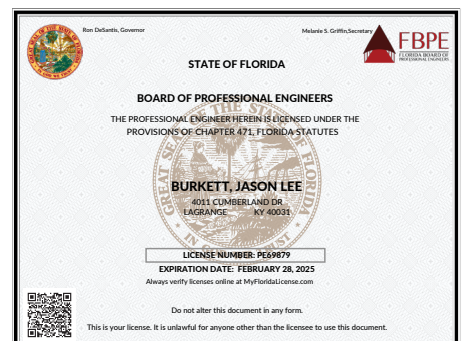
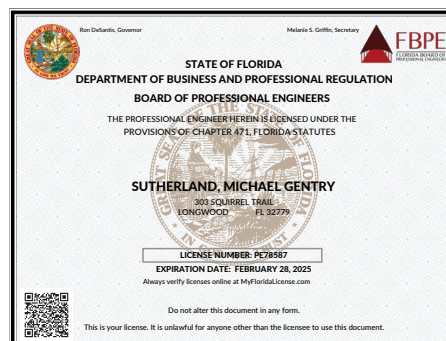
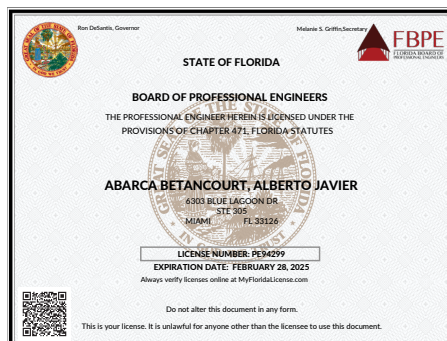
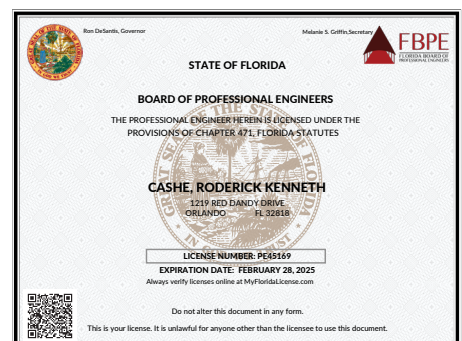
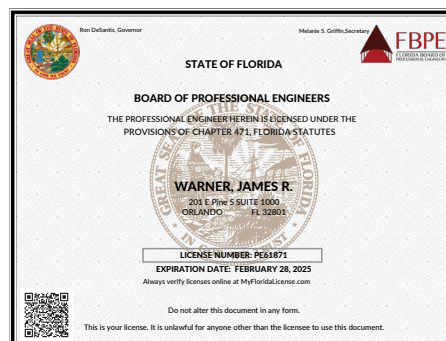
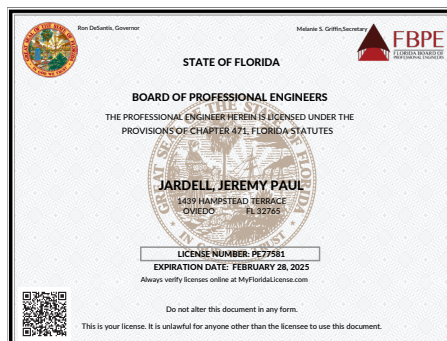
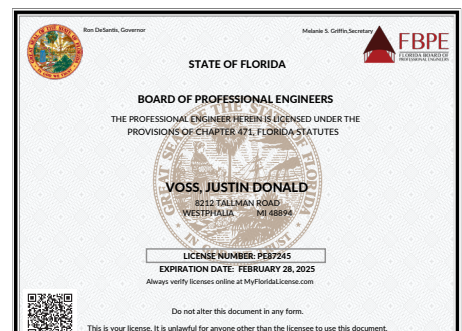
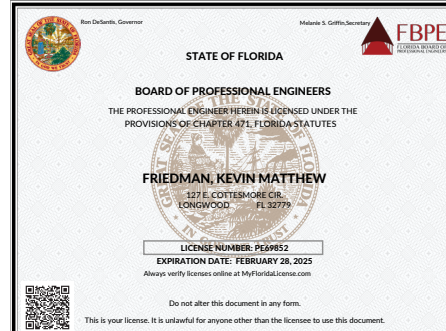
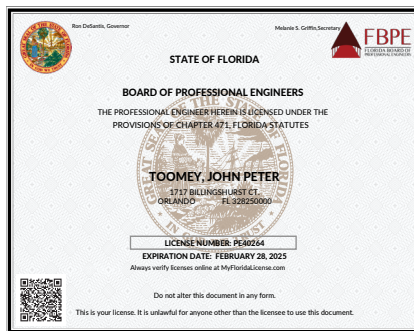
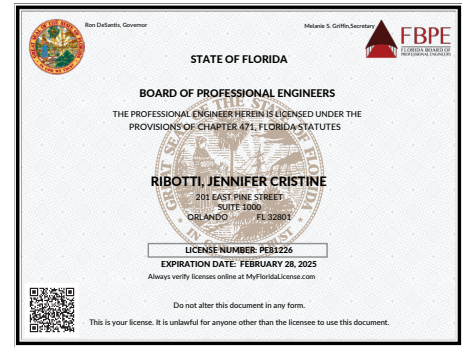
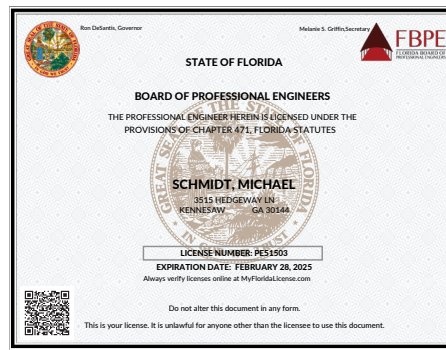
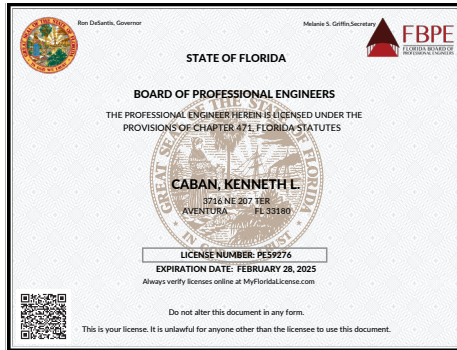
Licensee

Name: **PETERSON, MARK ANDREW** License Number: **PG2806**
Rank: **Professional Geologist** License Expiration Date: **07/31/2024**
Primary Status: **Current** Original License Date: **05/28/2013**
Secondary Status: **Active**

Related License Information

License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
	Current, Active	TETRA TECH INC	Professional Geologist	04/22/2015	Geology Business Information	

KEY STAFF LICENCES



ASSOCIATION OF STATE
FLOODPLAIN MANAGERS, INC.
CERTIFICATION BOARD OF REGENTS

HEREBY CERTIFIES THAT IN ACCORDANCE TO THE PROVISIONS OF THE CHARTER FOR THE
(CERTIFIED FLOODPLAIN MANAGER PROGRAM)

Jacob Oldenburger, CFM

IS FULLY RECOGNIZED AS AN

ASFPM CERTIFIED FLOODPLAIN MANAGER

IN TESTIMONY WHEREOF THE CERTIFICATE AND SEAL ARE HEREBY GIVEN IN FULL FAITH OF THE
CERTIFICATION BOARD OF REGENTS, CERTIFICATE NO. 10-14-10-000, DATED 07/24/2010. THIS
CERTIFICATE SHALL REMAIN IN FULL FORCE, UNLESS REVOKED ACCORDING TO THE RULES OF THIS BOARD.

[Signature]
CERTIFICATION BOARD OF REGENTS
PRESIDENT, ROGER LINDEY, P.E., CFM

[Signature]
ASSOCIATION OF STATE FLOODPLAIN MANAGERS
EXECUTIVE DIRECTOR, CHAD M. BERGENDIN, CFM

2010
CFM
SEAL

DATE: _____		
	Florida Department of Agriculture and Consumer Services	License No. <u>155364</u>
	Division of Professional Surveyors and Mappers	Expiration Date <u>February 28, 2025</u>
	Board of Professional Surveyors and Mappers	
	2005 Apalachee Pkwy Tallahassee, Florida 32309-6500	
 Professional Surveyor and Mapper License Under the provisions of Chapter 472, Florida Statutes		
 LAWRENCE E. JENKINS 324 KIWANS CIR CHIEF OF FA, FL 32566-9637		
  WILSON BISHOPSON COMMISSIONER OF AGRICULTURE		

 Florida Department of Agriculture and Consumer Services
Division of Consumer Services
2001 Apalachee Parkway Tallahassee, Florida 32304-6000
License No. **LS4574**
Expiration Date: February 28, 2025

Professional Surveyor and Mapper License
Under the provisions of Chapter 477, Florida Statutes

STEPHEN KENT SERLEY
2311 HOLLYWOOD BLVD STE 204
HOLLYWOOD, FL 33020-6508


WILLIAM GORDON
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyed and register whose name and address are shown above is (are) duly licensed as required by Chapter 477, Florida Statutes.

[illegible]

The image shows a large, circular professional engineer seal for the State of Florida. The outer ring of the seal contains the text "STATE OF FLORIDA" at the top and "BOARD OF PROFESSIONAL ENGINEERS" at the bottom. Inside the ring, there is a smaller circle with the text "THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES". In the center of the seal, the name "ARENAS, MARIA ISABEL" is prominently displayed. Below the name, the address "2106 STANLEY ST." and "ORLANDO, FL 32803" are listed. At the bottom of the seal, the "LICENSE NUMBER: PE34986" and "EXPIRATION DATE: FEBRUARY 28, 2025" are provided. A QR code is located in the bottom left corner of the seal. The seal is signed by Ben DeSantis, Governor, and Malina S. Griffin, Secretary. The seal is set against a background of a light blue sky with white clouds. The seal is surrounded by a black border. The seal is the central focus of the image.

This image shows a professional engineer license for Alfredo Budik, License Number PE43884, issued by the State of Florida. The license is valid from February 28, 2025, to February 28, 2027. It is for the discipline of Electrical Engineering. The license holder's address is 40191 E. Country Club Dr., Apt 2308, Aventura, FL 33180. The license is issued to a male, born on 01/11/1978, with a Social Security Number of 123-45-6789. The license is for a term of 2 years. The background of the license features the Great Seal of the State of Florida and the Florida Department of Business and Professional Regulation logo. The text "STATE OF FLORIDA" and "BOARD OF PROFESSIONAL ENGINEERS" is prominently displayed. The license number "PE43884" is highlighted in a red box. The expiration date "FEBRUARY 28, 2025" is also highlighted in a red box. A QR code is located in the bottom left corner, and a URL "https://www.flsos.com" is in the bottom right corner.

SUNBIZ

		CERTIFICATE OF LIABILITY INSURANCE		DATASAC0400000 09-26-2024	
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER. IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION is WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsements(s).					
PRODUCER MetLife Insurance Services West, Inc. Los Angeles Office 107 Alhambra Boulevard Suite 2600 West 2600 Los Angeles, CA 90017-0460 USA		CONTACT NAME (LIC. No.) (866) 283-7322 FAX (LIC. No.) (800) 363-0055 E-MAIL ADDRESS		INSURER(S) AFFORDING COVERAGE INSURER A: Safety National Liability Corp 11509 INSURER B: Ameri-Can International Group, Inc. Ltd. 21135B INSURER C: Allied World Surplus Lines Insurance Co 24319 INSURER D: INSURER E: INSURER F:	
INSURED Tetra Tech, Inc. 4001 Sheridan St, Ste 212 Suite #212 Hollwood Pl. 33021 USA		NAIC #		Holder Certificate # : 179	
COVERAGES		CERTIFICATE NUMBER: 57010839077		REVISION NUMBER:	
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR ANY PURPORT TO BE ISSUED, THIS CERTIFICATE DOES NOT ALTER, AMEND, EXTEND OR CONTRADICT THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested					
TYPE	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE	EXPIRATION DATE	COVERAGE LIMITS
A	COMMERCIAL GENERAL LIABILITY ☐ CLAIMS MADE & OCCUR ☒ C & O Coverage	CA 6678504	10/01/2024	10/01/2025	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (As agreed) \$1,000,000 MED EXP (Max per person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS/COMPOUND AGG \$4,000,000
					LIMITED LIABILITY (Per person) BODILY INJURY (Per accident) BODILY INJURY (Per occurrence) PROPERTY DAMAGE (Per occurrence)
A	AUTOMOBILE LIABILITY ☐ ANY AUTO OWNED AUTO ONLY ☐ NON-OWNED AUTO ONLY	CA 6678605	10/01/2024	10/01/2025	COMBINED SINGLE LIMIT \$5,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per occurrence)
B	UMBRELLA/LIAB ☐ EXCESS LIAB ☐ CLAIMS MADE & OCCUR	BT 8783232	10/01/2024	10/01/2025	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
					LIMIT \$10,000,000, OR EXCESS COVERAGE LIMIT
A	EMPLOYER LIABILITY ANY INSURANCE COVERS EXECUTIVE AND EMPLOYEES (As employee) Statutory in MS	LC 4068970 AG PL4068969 WS	10/01/2024	10/01/2025	A. PER STATUTE (2024) B. BASE ACCIDENT \$1,000,000 C. DISEASE (EMPLOYEE) \$1,000,000 D. EMPLOYEE POLICY LIMIT \$1,000,000 E. Each State Aggregate \$1,000,000
C	EMPLOYMENT CONTRACTORS AND PROF CAUTION OF OPERATIONS make and use of equipment	01120276 Prof/Pol1-Claims Made cov er all policy terms & conditions	10/01/2024	10/01/2025	Each State Aggregate
DESCRIPTION OF OPERATION / LOCATIONS / VEHICLES (ACORD 101. Additional Remarks Schedule, may be attached if more space is required) Proof of coverage					
CERTIFICATE HOLDER Tetra Tech, Inc. 4001 Sheridan St, Ste 212 Hollwood Pl. 33021 USA			CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 		

Holder Certificate # : 179

Certificate No. : 57010839077

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ACORD 25 (2016/03)

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DIVISION of
CORPORATIONS
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Detail by Entity Name

Foreign Profit Corporation
TETRA TECH, INC.

[Filing Information](#)

Document Number	P19034
FEVEIN Number	95-4148514
Date Filed	04/28/1988
State	DE
Status	ACTIVE
Last Event	CORPORATE MERGER
Event Date Filed	12/30/2003
Event Effective Date	01/02/2004

[Principal Address](#)

3475 E. FOOTHILL BLVD.,
PASADENA, CA 91107

Changed: 07/14/2003

[Mailing Address](#)

3475 E. FOOTHILL BLVD.,
PASADENA, CA 91107

Changed: 07/14/2003

[Registered Agent Name & Address](#)

CT CORPORATION SYSTEM
1200 S. PINE ISLAND ROAD
PLANTATION, FL 33324

Name Changed: 03/18/1992

Address Changed: 03/18/1992

[Officer/Director Detail](#)

Name & Address

Title Senior Vice President, Chief Engineer

TAB D

**ORGANIZATIONAL PROFILE
AND PROJECT TEAM
QUALIFICATIONS**



TETRA TECH

ORGANIZATIONAL PROFILE AND PROJECT TEAM QUALIFICATIONS



COMMITMENT TO THE CITY

Tetra Tech is committed to continuing to provide the City of Hollywood with the most qualified staff to complete the projects under this contract.

In the following pages, we will demonstrate that our team is structured to provide effective, efficient, and seamless service to the City of Hollywood as we have done on previous projects.

A PROVEN HISTORY OF DELIVERING LARGE, COMPLEX PUMP STATION PROJECTS

Tetra Tech has completed projects at hundreds of treatment plants throughout the United States. We have delivered projects including large pump stations, both new and rehabilitated.

Our multi-disciplinary team can provide all of the services necessary to successfully complete this project. We have planned, designed, permitted, and overseen the construction of numerous pump station and treatment plant projects in Florida and throughout the Country. Our team includes subconsultants known to the City and have previously provided services to the City successfully.

N | V | 5



GIBBS | LAND SURVEYORS

Red Design Group

DEPTH OF RESOURCES TO DELIVER

Our team is positioned to dedicate resources to the City to immediately implement City projects. From our Miami office and from the more than 500 professionals located throughout the state of Florida, we are ready to deliver any size project to meet the City's needs. Our Principal and Project Manager will ensure that the team meets or exceeds the City's expectations.

The team presented in the following submittal represents more than 300 years of continuing consultant contract experience in the state of Florida, serving as an extension of staff. As will be demonstrated within this submittal, Tetra Tech has the capabilities to provide the wastewater infrastructure services requested by the City.

Our team's organizational structure is provided on the following page and supplemented by an overview of our key personnel.

HOLLYWOOD AND SOUTH FLORIDA-BASED SUBCONTRACTORS

For this project, we will partner with trusted subconsultants, including EDEC for environmental and engineering expertise, NV5 for multidisciplinary consulting in infrastructure and environmental compliance, Gibbs Land Surveyors for precise land surveying in South Florida, and Red Design Group for architectural and design consulting. Together, these Hollywood and South Florida-based firms bring specialized skills to ensure a successful and well-rounded project delivery.

ORGANIZATIONAL CHART

The organizational chart below identifies the names and responsibilities of the project staff and depicts our proposed management structure. Tech Tech and our subconsultant partners presents a team of professionals with a strong history of related **project experience**, **technical expertise**, and **personalized client service** ready and available to serve the City of Hollywood. Key staff resumes are included; some staff resumes were omitted due to page limitations but can be provided upon further request.



Ken Caban, PE
Principal



Diana Santander, PE
Project Manager



Jennifer Ribotti, PE
Technical Design
Manager



Michael Schmidt, PE
Technical Advisor



John Toomey, PE
QA/QC

Strategic Teaming Partners (Legend)

- ① Gibbs Land Surveyors - Surveying
- ② NV5 - Geotechnical
- ③ EDEC, Inc. - Electrical
- ④ Red Design Group - Architectural

Engineering Disciplines

BASIS OF DESIGN/FLOW EVALUATION

Kevin Roe, PE
Justin Voss, PE

ELECTRICAL, INSTRUMENTATION, & CONTROLS

Alec Zaychik, PE ③
Melinda Tam, PE

PLUMBING & HVAC

Michael Sutherland, PE
Carlo Ramos, PE

SURVEY

Stephen Seeley, PSM ①
Eddie Jenkins, PSM

MECHANICAL PUMP/PIPING

Kevin Friedman, PE
Charan Tanneru, PhD, PE

CIVIL / SITE

James Warner, PE
Rod Cashe, PE

PUMP STATION RESILIENCY

Jake Oldenburger, PE
Diana Santander, PE

CONSTRUCTION MANAGEMENT

Chris Zavatsky, PE
Bertha Rueda

ARCHITECTURAL

Eddie Muhiña, RA ④

REAL-TIME CONTROLS

Diana Tao, Eng. M Eng
Simon Tremblay, Eng.

GRANT MANAGEMENT

Alberto Abarca, PE
Sky Powers, EI

STRUCTURAL

Jason Burkett, PE, SE
Albert Hernandez Davila, EIT, CDT

LARGE DIAMETER PIPING

Jeremy Jardell, PE
Maria Arenas, PE

GEOTECHNICAL

Alfredo Budik, PE ②

Principal

KEN CABAN, PE, LEED AP



Mr. Caban has almost three decades of experience with water infrastructure, including wastewater treatment plant projects and pump stations. His experience spans all aspects of engineering including planning, design, permitting, bidding, and construction phase services. His experience includes work at some of the largest treatment plants in Florida, such as the initial condition assessments and development of rehabilitation programs and capital improvement plans. Mr. Caban has served as project principal to the City of Hollywood for over 14 years, ensuring the successful delivery of countless projects successfully.

Name of Firm:

Tetra Tech, Inc.

Title:

Principal

Education:

MS, Environmental
Engineering, Florida
International University

BS, Civil Engineering,
Florida International
University

**Registrations/
Certifications:**

Professional Engineer,
Florida, No. 59276

Leadership in Energy and
Environmental Design
Accredited Professional

Professional Affiliations:

American Water Works
Association

Office:

Miami, FL

**Percentage of Time to be
Assigned Full-Time to this
Project:**

50%

Years of Experience:

29

Years with Tetra Tech:

14

Mr. Caban has served clients on similar projects throughout South Florida. Below is a selection of work from recent years:

Wastewater Treatment Plant Projects:

- MDWASD South District WWTP Nutrient Removal
- MDWASD Treatment Plant Renewal and Replacement
- MDWASD Treatment Plant Condition Assessment Update and Interim Master Plan
- MDWASD Treatment Plant Renewal and Replacement
- Palm Beach County Water Utilities Department Water and Wastewater Treatment Plants Assessments
- Fort Lauderdale George T Loehmeyer Wastewater Treatment Plant
- City of North Miami Treatment Plant Rehabilitation
- City of North Miami Beach Treatment Plant Upgrades
- Pompano Beach Treatment Plant Hardening

Pump Station Projects:

- MDWASD Commercial Corridors Pump Stations
- SFWMD I-95/Hallandale Beach Blvd. Pump Station
- Palm Beach County Water Utilities Department Regional Pump Stations Assessment
- City of Fort Lauderdale Pump Station A-7
- City of Fort Lauderdale Pump Station D 10-11
- DNER Pump Station Assessment and Resiliency
- City of Hollywood Coolidge Street Lift Station
- City of Hollywood Lift Station E-9



DIANA SANTANDER, PE

Ms. Santander has built a strong local reputation during her 25-year career delivering a wide range of more than 70 South Florida projects from diverse programs involving complex improvements in highly urbanized areas to small municipal infrastructure improvements. A defining characteristic for Ms. Santander is her local in-depth experience coordinating with Miami-Dade Department of Regulatory and Economic Resources (RER), South Florida Water Management District (SFWMD), Florida Department of Health (DOH), Florida Department of Transportation (FDOT), and Florida Department of Environmental Protection (FDEP).

Name of Firm:

Tetra Tech, Inc.

Title:

Project Manager

Education:

MS, Civil Engineering,
Louisiana State University,

BS, Civil Engineering,
Pontifical Xaverian University

Registrations/ Certifications:

Professional Engineer,
Florida, No. 65854

Professional Affiliations:

American Society of Civil
Engineers (ASCE)

American Water Works
Association (AWWA)

American Association of
Colombian Engineers
(AACE)

Office:

Miami, FL

Percentage of Time to be Assigned Full-Time to this Project:

75%

Years of Experience:

27

Years with Tetra Tech:

9

Harbor Islands 16-Inch Force Main Emergency Replacement, City of Hollywood, FL.

Managed the design, permitting and replacement, under an emergency scenario, of a ruptured 16-inch force main. The project was successfully designed and permitted in an expeditious manner, and was successfully constructed and put into operation. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to repair the broken force main.

Stirling Road Water Main Extension, City of Hollywood, FL. Managed the design, permitting, bidding and construction oversight, under expedited conditions, of the extension of an 8-inch water main along Stirling Road. The project was necessary due to an impending development requiring water from the City. The project was quickly designed, permitted, and bid for construction. The water main was successfully constructed and put into operation. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to construct the water main prior to construction of the new development.

Freedom Street Force Main Repair Permitting, City of Hollywood, FL.

Managed the development of design drawings and permitting, after an emergency scenario, of a ruptured force main. The project was successfully designed and permitted in an expeditious manner. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to obtain the after-the-fact permits.

Taylor Street Force Main Repair Permitting, City of Hollywood, FL.

Managed the development of design drawings and permitting, after an emergency scenario, of a ruptured force main. The project was successfully designed and permitted in an expeditious manner. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to obtain the after-the-fact permits.

Water Main on A1A and Sheridan Street Repair Permitting, City of Hollywood, FL.

Managed the development of design drawings and permitting, after an emergency scenario, of a ruptured water main. The project was successfully designed and permitted in an expeditious manner. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to obtain the after-the-fact permits.

Emergency Repair at 400 N Ocean Drive, City of Hollywood, FL. Managed the development of design drawings and permitting, after an emergency scenario, of a ruptured force main. The project was successfully designed and permitted in an expeditious manner. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to obtain the after-the-fact permits.

Emergency Repair at 2308 N Ocean Drive, City of Hollywood, FL. Managed the development of design drawings and permitting, after an emergency scenario, of a ruptured force main. The project was successfully designed and permitted in an expeditious manner. Extensive on-site meetings with the City and Contractor and extensive regulatory coordination occurred to obtain the after-the-fact permits.

PortMiami Cargo Gates Improvements Design, Permitting, and Construction Phase Services, Miami, FL. Project Manager. Ms. Santander serves as the project manager for this \$18M project that consists of the design and construction of improvements to the PortMiami cargo gates. The project includes 5,000 linear feet of road, five new structures, telecommunications for a 70-acre site, paving, grading, markings, and traffic management improvements. The project includes structural, electrical, communications and lighting upgrades as well as technology improvements such as new software, scales, induction loops, sensors, RFID readers, and other collection point sources in the truck lanes and along the routing.

Basis of Design Report for NW 22nd Avenue and NW 95th Street Water Distribution and Wastewater Collection and Transmission Systems Expansion (Project D2-C), Miami-Dade County, Miami, FL. Project Manager. Prepared a Basis of Design Report (BODR) for the installation of a new sewer collection system to a commercial corridor along NW 22nd Avenue and NW 95th Street, part of the North Central Urban Area District. While water mains currently serve the commercial and industrial parcels, new water mains were recommended for pipes less than 12 inches in diameter. A few challenges encountered on the project included a large diameter drainage pipe, exfiltration trenches, and horizontal limitations to a single planned pump station. The BODR included the plan layout alternatives, hydraulic modeling, construction cost estimating, evaluation, and recommendations for design, permitting, and construction.

William Lehman Center, Chilled Water Plant Replacement, Miami Dade Department of Transportation and Public Works, Miami-Dade County, FL. The project consists of a total replacement of the chilled water plant serving the facility with a new, energy-efficient chilled water plant. The chiller plant upgrades include two new 125-ton magnetic bearing centrifugal chillers, three new base-mounted chilled water pumps, as well as two new exterior mounted redundant condenser water pumps. The existing two cooling towers are to be refurbished with this project and the entire construction process will be phased to allow 24/7 operation of the facility. Other Improvements

included the design of a new chilled water plant control system, new refrigeration detection and removal system, air conditioning for the mechanical room, and electrical upgrades needed to support the facility upgrades. Add in construction services.

Douglas Building Chiller and Cooling Tower Upgrade, Miami-Dade Water and Sewer Department, Miami, FL. Tetra Tech will provide engineering design, permitting, bidding support, and engineering services during construction for the upgrade of the existing Cooling towers, Chiller Equipment, and booster pumps to achieve 100% redundancy. Comprehensive replacement and upgrade of two existing Water-Cooled Chillers, two Cooling Towers, three chilled water pumps, three condenser water pumps, and other additional upgrades required including mechanical, electrical, and structural. Tetra Tech will be responsible for management and oversight of the services, including coordination with team members maintaining the project schedule, and the preparation of monthly project status reports.

Richard E Gerstein Justice Building, Chilled Water Plant Replacement, Miami Dade Internal Services Department, Miami-Dade County, FL. The project consists of a total replacement of the chilled water plant serving the facility with a new, energy-efficient chilled water plant. The chiller plant upgrades include 3 new 400-ton magnetic bearing centrifugal chillers, 4 new base-mounted chilled water pumps, as well as 3 new base-mounted condenser water pumps. The existing 2 cooling towers are to be removed and replaced with 2 new FRP multicell cooling towers and the entire construction process will be phased to allow 24/7 operation of the facility. Other Improvements included the design of a new chilled water plant control system, new refrigeration detection and removal system, 12 rooftop exhaust fans, 4 garage exhaust fans, installation of carbon monoxide sensors, and electrical upgrades needed to support the facility upgrades.



JENNIFER RIBOTTI, PE

Ms. Ribotti is highly qualified in wastewater treatment, wastewater reuse treatment, facility pumping and hydraulics, membrane treatment technology and pilot and demonstration design and operation. Her experience includes assisting in the planning, design, and construction administration of drinking water treatment facilities, with emphasis on membrane treatment technologies for chemical feed systems, transmission mains, water quality characterization and testing, wastewater lift stations, and gravity sewer systems.

Name of Firm:

Tetra Tech, Inc.

Title:

Technical Design Manager

Education:

MS, Environmental Engineering, University of Central Florida

BS, Environmental Engineering, University of Central Florida

Registrations/ Certifications:

Professional Engineer,
Florida, No. 81226

Professional Affiliations:

Chair, Florida Water
Environment Association

Florida Section American
Water Works Association

Young Professional
Committee, WaterReuse
Association

Office:

Orlando, FL

Percentage of Time to be Assigned Full-Time to this Project:

85%

Years of Experience:

12

Years with Tetra Tech:

12

Potable Reuse Demonstration Testing System – Final Design, Bidding, and Construction Services, City of Daytona Beach, Daytona Beach, FL.

Project Manager. Engineering final design, regulatory agency coordination, bidding, and construction assistance for the City's Demonstration Testing System, a 0.2 million gallons per day (MGD) treated advanced reuse demonstration facility at the City's wastewater treatment facility. Design tasks included preparation of a basis of design memorandum, development of 75- and 100-percent contract documents for procurement and construction of the system, opinion of probable construction costs, bidding assistance, construction assistance with shop drawing and request for information (RFI) coordination, management, and review. Managed and attended project coordination meetings during design as well as preconstruction and progress meetings with City and Contractor during construction. Provided engineering construction, startup, and testing support.

Lift Stations 1 and 7, City of Orlando, Orlando, FL.

Project Engineer. Reconstruction of Lift Stations No. 1 and 7, both triplex wet-pit/dry-pit pumping stations with a current combined capacity of 20.8 million gallons per day (MGD). These stations are located in the same site and are capable of pumping to two different wastewater treatment plants owned by the City. Services included survey, evaluation of actual and future wastewater flows, hydraulic analysis and modeling, design, permitting and construction engineering services for this contract. The proposed improvements consist of total rehabilitation of these stations into one station capable of pumping to both treatment plants. The proposed pump station consists of a dual chambered wet well, six submersible pumps, odor control, standby power with redundant standby power, and miscellaneous appurtenances. Gravity Sewer Rehabilitation/Replacement, Toho Water Authority, Kissimmee, FL. Project Engineer. Provided support on the evaluation and recommendations of Toho Water Authority's existing gravity sewer system in areas previously prioritized based on risk of failure. Evaluated several closed circuit television video (CCTV) inspections of piping for the existing condition and material of piping segments.

Lift Stations 16, 17, 52 & 57, City of Orlando, Orlando, FL.

Project Engineer. Engineering support for converting four duplex wet pit/dry pit can lift stations to submersible lift stations. The improvements increased station reliability and eliminated confined space risks associated with maintenance. Services included survey, preliminary design, final design, permitting, construction administration, and inspection. Improvements to these stations generally included new submersible pumps, control panels, remote terminal unit, valves, piping, standby power, building repairs, site improvements, and bypass planning. In addition, replaced approximately 1,000 linear feet of 12-inch gravity sewer along Appian Way via open trench and pipe bursting. These improvements were completed on an accelerated schedule to meet state revolving fund (SRF) funding deadlines.

Parkway Water Reclamation Facility Bar Screen Replacement, Toho Water Authority, Kissimmee, FL. Project Manager. The project included final design and construction administration services for the replacement of the mechanical influent bar screen at the Parkway Water Reclamation Facility. Services included investigative tasks, construction document preparation, and limited bidding and construction administration.

Elkcam Boulevard Pump Station and Force Main Improvements, City of Deltona, Deltona, FL. Project Engineer. Design, hydraulic modeling, permitting, specification preparation and construction management services. The project includes replacement of the duplex pump station with a triplex pump station with 88 hp pumps, telemetry, and standby power with replacement of 20,000 linear feet of deteriorating 10-inch asbestos-cement force main with a new 16-inch PVC main. Performed a hydraulic analysis of the wastewater system to determine the new force main sizing and additional pump stations requiring pump upgrades.

Group 5A Master Pump Stations, Orange County Utilities, Orlando, FL. Project Engineer. Provided engineering support for the preliminary engineering phase of Orange County Utilities' (OCU) rehabilitation and replacement program, including four existing master pumping facilities. The project included field inspection, assessment of flow rerouting study, real estate review, pump/equipment selection, odor control analysis, and a comprehensive preliminary design report including the recommended improvements and preliminary estimates of costs. OCU proceeded into final design with two of the pump stations: Destination Parkway Pump Station (PS) No. 3245 (2.9 million gallons per day (MGD)) and Peabody PS No. 3336 (2.3 MGD). Provided final design, permitting, and construction administration of the improvements including: replacement of submersible pumps, above grade discharge piping, fiberglass liner in wet wells, odor control (biofilter and hydroxyl mist), above-grade flow meters, a concrete masonry unit screen wall with aluminum gates, standby generators, refurbishment of 350 linear feet of 18-inch gravity sewer with cured in place pipe, and bypass pumping. Ballast concrete was removed from wet well of PS No. 3245 to increase working depth, and a buoyancy compensating ring was designed to compensate the ballast concrete removal.

SR 415 Lift Station, City of Deltona, Deltona, FL. Project Engineer. Design of a master lift station along State Road (SR) 415 in Deltona, Florida. Provided assistance on developing design calculations for the construction of a new wet duplex wet well, gravity sewer placement and design, and site development design.

Provided engineering support on the development of design drawings.

Pine Island Wastewater Treatment Plant Effluent Pump Station Replacement, Lee County, FL.

Project Engineer. Provided engineering design for the rehabilitation of an existing eight-foot diameter wastewater effluent pump station that deteriorated over time due to existing harsh conditions and previous design issues with the disinfection system. Engineering design included the review of historical flow data, chemical feed pumps, and electrical and control panels for analyzing the existing components to control the chlorine feed rate. Engineering design also included the basis of design directly to 60 percent, followed by a 100-percent completion stage. Permitting services were also provided to the County.

Skyview Wastewater Project, Lakeland Utilities, Lakeland, FL. Project Engineer. Provided engineering support on the development of a Preliminary Engineering Opinion of Probable Cost on approximately 10,000 linear feet of gravity sewer, replacement and/or rehabilitation of eight existing lift stations, approximately 4,500 linear feet of new six-inch diameter force main, approximately 7,000 linear feet of new six-inch diameter water main and associated fire hydrants and valves, and demolition of the existing Skyview Wastewater Treatment Plant.

Orange County Task Authorization 24, Pump Station Project, Orange County Utilities, Orlando, FL. Project Engineer. Pump Station inspection, condition assessment, and preliminary engineering on 10 pump stations in Orange County, Florida. The project consisted of the development of data summaries, condition assessments, the development of alternative site layout evaluations, and a preliminary and final design report for each pump station. Two site alternatives were developed for each pump station (if existing condition necessitated upgrading), as well as order of magnitude cost comparisons of each conceptual site alternative. Considered wet well storage volumes, appropriate Orange County Standards, and generally accepted engineering practices to ascertain the ability of the existing wet wells to accommodate proposed design flows. Designed the diameter and slopes of the gravity sewer immediately upstream of the pump station to establish the hydraulic capacity of the pump station.

MICHAEL SCHMIDT, PE, DBIA

Mr. Schmidt has extensive experience in planning, design, operations, and construction management on a wide variety of water, wastewater, residuals management, and stormwater projects. In addition to being a registered professional engineer in ten states, he is a certified wastewater operator in Tennessee and a DBIA Design-Build Professional™. During his 32 year career, Mr. Schmidt has successfully delivered piping, pumping, and treatment solutions to some of the largest municipal agencies in the country, including NYCDEP, HRSD, Huntsville, Kansas City, San Antonio Water, Miami-Dade County, Hillsborough County, Gwinnett County, Palm Beach County, and the South Florida Water Management District.

Name of Firm:

Tetra Tech, Inc.

Title:

Technical Advisor

Education:

MS, Environmental Systems Engineering, Clemson University

BS, Chemical and Biomedical Engineering (Summa Cum Laude), Vanderbilt University

Advanced Pretreatment Training Course, WEF-EPA

Registrations/ Certifications:

Professional Engineer, Florida, No. 51503

Professional Affiliations:

Water Environment Federation

Office:

Atlanta, GA

Percentage of Time to be Assigned Full-Time to this Project:

25%

Years of Experience:

32

Years with Tetra Tech:

17

Brooks Road Pump Station Improvements, Gwinnett County Department of Water Resources, GA.

Design Manager. Civil/Mechanical, electrical, and instrumentation and control improvements to 10.5-MGD pump station. Improvements included Eastside force main model development, replacement and addition of pumps, addition of grinders, replacement of 4160V electrical system with 480V, addition of a new 2,000KW generator, controls upgrade, and miscellaneous civil and structural.

Nansemond Treatment Plant Advanced Nutrient Reduction Improvements, Phase II Design-Build, Hampton Roads Sanitation District, Suffolk, VA.

Design Team Lead/Engineer of Record. Design, permitting, funding assistance, construction, testing, start-up, and training services to increase plant capacity from 30.0 to 50.0 MGD to treat combined wastewater flows from two service areas and meet Sustainable Water initiative for Tomorrow (SWIFT) influent water quality targets for future work. Expansion includes a new influent distribution box, primary clarifier, primary effluent equalization tanks, aeration basins and blowers, secondary clarifiers, return activated sludge and nitrate recycle pumping, chlorine contact tank, primary gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control systems. Improvements include five-stage BNR treatment trains, methanol feed system, sodium hypochlorite feed system, dewatered solids storage and loadout, non-potable water pumping, plant drain pumping, and the effluent pump station. Design includes process improvements to implement Partial Denitrification Anammox for shortcut nitrogen removal. Electrical scope includes replacement of medium voltage switchgear and distribution system and modifications to generator paralleling switchgear. Design-build delivery method and receiving federal funding from Water Infrastructure Finance and Innovation Act and state funding from the Virginia Water Quality Improvement Fund.

Evaluation and Development of Local Limits, Miami-Dade County Regulatory and Economic Resources Department, Miami, FL.

Lead Engineer. Evaluation and development of Local Limits related to the Industrial Pretreatment Program for Miami-Dade County, needed for preparation of technically defensible Local Limits to update current limits. Reevaluation of the Local Limits based on USEPA's Local Limits Development Guidance and permits for county's 143-MGD Central District WWTP, 120-MGD North District WWTP, and 112.5-MGD South District WWTP. Evaluation includes development of a Plan of Study (POS) for review and approval by the FDEP; implementation of approved POS, including sample collection and analysis at three WWTPs and one representative residential pump station; and calculation of allowable headworks loading and uniform local limits using FDEP's Local Limits Information and Development System. Compared most restrictive local limit with local limits and proposed new local limits for adoption by county.

Palm Beach County Integrated Utility Master Plan, Palm Beach County Water Utilities Department, FL.

Wastewater and Reclaimed Water Lead. Development of an Integrated Utility Master Plan for existing and proposed service areas for water, wastewater, and reclaimed water over next 30-year horizon. Plan helps to guide utility decisions, budgets, and project delivery schedules. Potential expansion and improvement needs examined and planned as an integrated system. Plan includes growth and other drivers (upcoming regulatory requirements, risk factors, and aging infrastructure) affecting levels of service.

Pumpkinvine WRF Progressive Design-Build, Paulding County, GA.

QA/QC. Upgraded an existing 3 MGD Water Reclamation Facility to a capacity of 7 MGD. The immediate needs are for the design of a new headworks, the installation of new membranes, upgrading of the blowers and new RAS pumps. The expansion and future build out will add an addition capacity of 4 MDG consisting of a new activated sludge bioreactor and membrane basins together with the upgrading of all yard pump stations and piping, sludge holding and dewatering, disinfection, electrical equipment and instrumentation and controls. Allowance has also been made for phased permitting. The existing 1 MGD reuse facility will not be extended.

PS-324 Canal Street Pump Station Reconstruction, New York City Department of Environmental Protection, NY.

Engineering Design Manager. Upgrades to Canal Street pump station, a sanitary pump station in Manhattan, with a design flow of 2.2 MGD. Existing station replaced with a new pump station including a new wet well with three new submersible pumps; new forebay, valve vault and by-pass chamber; all new electrical and controls in a watertight below grade electrical vault; a new 10-inch force main; relocation of a 48-inch combined sewer; relocation of 18-inch and 3'-6 x 2'-4" sanitary sewers; additional utility relocations for water, power, and communications; and demolition and abandonment of existing pump station.

C-43 West Basin Storage Reservoir Alum Injection Improvements, South Florida Water Management District, Everglades, FL.

Lead Engineer. Evaluation and design of an alum storage, pumping, and injection system for the Caloosahatchee River (C-43) West Basin Storage Reservoir (WBSR). C-43 WBSR designed to capture and store water from Lake Okeechobee and C-43 basin during the rainy season, retaining excess water during the wet season to minimize high flows which cause freshwater flushing in the estuary. Construction of an alum storage, pumping, and injection system at the S-470 pump station to reduce nutrients

and improve quality of water leaving C-43 WBSR to the Caloosahatchee River and its downstream estuary. Alum system consists of five 13,800-gallon storage tanks and four alum feed pumps on a covered pad with four injection pumps/mixers in inlet channels of S-470 pump station. System designed to deliver an average required alum dose of 0.6 mg/L at peak projected pump station influent flow of 1,500 cfs.

Fort Wayne Hill Water Resources Center Dewatering Pumping and Polymer System Improvements, Gwinnett County Department of Water Resources, Lawrenceville, GA.

QA/QC. Dewatering pumping and polymer system improvements include mechanical, electrical, and instrumentation and control upgrades as required to replace digested sludge feed pumps with six new 500-GPM feed pumps, grinders, and VFDs; replacement of chemical thickened feed pumps with six new 50-GPM feed pumps, grinders, and VFDs; replacement of dewatering polymer make down units with four new upsized units; and replacement of dewatering centrifuge polymer feed pumps with six new upsized feed pumps with VFDs.

Middlesex Interceptor System Program Phase II, Hampton Roads Sanitation District, Middlesex, VA.

Project Manager. Design of two new submersible pump stations to replace package WWTPs in Urbanna and Central Middlesex; de-commissioning two WWTPs and two stations in Urbanna; modifications to Cooks Corner submersible pump station; upgrades to County Line and Beaver Dam booster pump stations; and electrical and control upgrades to three additional pump stations (Hartfield, Locust Hill, and Gloucester).

WRF Equalization Basin Improvements, City of Rockledge, FL.

QA/QC. Design of a new influent equalization basin and other upgrades and operation adjustments at the city's WRF. Equalization basin allows city to feed secondary treatment process at a constant controlled flow rate and provide more consistent loadings to downstream unit processes, increasing nutrient uptake in downstream treatment process and improving overall effluent quality and plant performance. Equalization basin sized to equalize influent flows at a projected 30-year future wastewater annual average daily flow of 3.5 MGD.

JOHN TOOMEY, PE

Mr. Toomey has more than 40 years of responsible engineering experience in planning, design, and construction administration of various water and wastewater projects. He currently serves as the technical lead of wastewater infrastructure projects and provides technical oversight on Tetra Tech's most critical projects. Mr. Toomey has a thorough knowledge of the City of Orlando's wastewater system and was involved in the Lift Station 1/7 Replacement, Water Conserv I WRF Consolidation Study and the Downtown District Sewer Master Plan.

Name of Firm:

Tetra Tech, Inc.

Title:

QA/QC

Education:

BS, Environmental Engineering, University of Central Florida

Registrations/ Certifications:

Professional Engineer,
Florida, No. 40264

Office:

Orlando, FL

Percentage of Time to be Assigned Full-Time to this Project:

25%

Years of Experience:

45

Years with Tetra Tech:

25

Harvest Power Biosolids Dewatering Facility and Food Waste Transfer Station Improvements, Reedy Creek Energy Services / Reedy Creek Improvement District, Lake Buena Vista, FL.

Project Manager. Tetra Tech performed a facility assessment at the Harvest Power Waste to Energy Facility by conducting reliability and criticality assessments, condition assessments, and reviewing load ratings of all unit processes and equipment at the facility. During typical park operations, RCES manages up to 55 tons per day of food waste material. This material volume is expected to increase to a maximum of 75 tons per day in the future. For the Biosolids Dewatering Facility, Tetra Tech provided designs for the rehabilitation of the former reception facility, installed new electrical equipment in the existing electrical building, and replaced the existing dewatering facility. For the Food Waste Transfer Station, Tetra Tech expanded the solid waste transfer station, relocated the existing trailer parking, and created a new stormwater pond.

Nansemond Treatment Plant Advanced Nutrient Reduction Improvements, Phase II Design-Build, Hampton Roads Sanitation District, Suffolk, VA.

Design QA/QC Lead. Project includes design, permitting, funding assistance, construction, testing, start-up, and training services to increase the treatment plant capacity from 30.0 to 50.0 MGD to treat combined wastewater flows from two service areas and meet the client's Sustainable Water initiative for Tomorrow (SWIFT) influent water quality targets for future work. The expansion includes a new influent distribution box, primary clarifier, primary effluent equalization tanks, aeration basins and blowers, secondary clarifiers, return activated sludge and nitrate recycle pumping, chlorine contact tank, primary gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control systems. Improvements include the existing 5-stage Biological Nutrient Removal (BNR) treatment trains, methanol feed system, sodium hypochlorite feed system, dewatered solids storage and loadout, non-potable water pumping, plant drain pumping, and the effluent pump station. Design includes process improvements to implement Partial Denitrification Annamox (PdNA) for shortcut nitrogen removal. Electrical scope includes replacement of the medium voltage switchgear and distribution system and modifications to the existing generator paralleling switchgear. The project uses the design-build delivery method and receives federal funding from the Water Infrastructure Finance and Innovation Act (WIFIA) and state funding from the Virginia Water Quality Improvement Fund.

Continuing Services Contract (Pump Station A-7 Rehabilitation), Fort Lauderdale, FL.

Project Engineer. Tetra Tech performed a wastewater flow analysis due to increased land use densities for Downtown Fort Lauderdale's largest wastewater pump station. Tetra Tech also completed an evaluation of existing

triplex pump station and upstream influent manholes for rehabilitation or replacement for one of the City's largest pump stations. Tetra Tech prepared a preliminary design memorandum that included findings and recommendations for rehabilitation and replacement and associated costs, and survey, design, permitting, and construction administration services for the rehabilitation and removal and replacement of existing infrastructure in disrepair. The existing pump station has a 16-inch force main (FMs), a portion of which is also to be replaced. Tetra Tech assisted with design, permitting, and is currently assisting during construction.

Walnut Water Reclamation Facility Decommissioning Pump Station Modifications, Toho Water Authority, Kissimmee, FL. Project Manager. Responsible for resource allocation, technical guidance, and client communication. Tetra Tech performed hydraulic evaluations and developed a concept for decommissioning the 0.85 MGD Walnut Water Reclamation Facility (WRF) and transferring its flow to the Cypress West WRF. This concept includes using a basin at the WRF as a flow equalization and pump facility, various pump station improvements, and minor pipeline construction. Tetra Tech is designing the flow equalization and pumping improvements.

Conserv II Water Reclamation Facility Hydraulic Improvements, City of Orlando, FL. Project Manager. Design, bidding assistance, and construction administration to replace four existing hydraulic gates, eliminate dead ends, and install stop logs. The City of Orlando (City) owns and operates the Conserv II Water Reclamation Facility (WRF), which has a design capacity of 25 MGD. The City had observed hydraulic constraints with the existing aeration basin channels that had resulted in operational concerns. Specifically, water levels in the basin influent channels rise during high flow periods resulting in unacceptable freeboard. The City also intends to increase the capacity of the WRF in the future, which would exacerbate the situation. To address the hydraulic constraints and make provisions for rerating, the City retained Tetra Tech to replace four existing 5-foot wide hydraulic gates in the aeration basin influent channels with 10-foot wide units. Dead ends at the ends of the Aeration Basin Nos. 1 - 4 influent channel were also eliminated and stop logs were installed at the secondary clarifier splitter box.

Donax Water Reclamation Facility Expansion & Improvements, City of Sanibel, FL. QA/QC Reviewer. Evaluation of alternatives to assist with nutrient removal (nitrogen and phosphorous) as well as to address the need for replacement of the existing flow equalization basin and ultimately the expansion of the facility from 2.375 to 3.0 MGD. The evaluation included

the use of the modified Ludzack-Ettinger (MLE) process, denitrification filters and the change to a five-stage Bardenpho process with use of membrane bioreactors (MBR). The five-stage process with MBR was selected for design and implementation.

Eastern Water Reclamation Facility Expansion, City of Deltona, FL. Project Manager. Responsible for resource allocation, technical guidance, and client communication. Tetra Tech provided design, permitting, bidding, and construction administration services for the Eastern Water Reclamation Facility Expansion. The existing facility included a dual-train membrane bioreactor structure that only contained equipment in one train. This project will install pumping and mixing equipment within the unoccupied process train. Improvements include internal recycle pumps, mixers, diffused aeration equipment, membrane cassettes, miscellaneous piping and electrical improvements, and sludge feed pump piping modifications.

Parkway Water Reclamation Facility Decommissioning Hydraulics, Toho Water Authority, Kissimmee, FL. Project Manager. The 1.5 MGD Parkway Water Reclamation Facility (WRF) is an activated sludge facility featuring partial denitrification and filtration. The current AADF is approximately 0.90 MGD. Future development within the service area does not appear to be significant. This factor along with wet-weather effluent disposal challenges, and the economics associated with staffing a small WRF, have caused Toho Water Authority to consider decommissioning the facility and consolidation treatment at the South Bermuda WRF. Tetra Tech investigated options to direct wastewater flows within the Parkway WRF service area to the South Bermuda WRF as well as address options for serving reclaimed water customers within the Parkway service area if the WRF is removed from service.

Northside Wastewater Treatment Plant Headworks Rehabilitation, City of Lakeland, FL. Project Manager. Responsible for resource allocation, technical guidance, and client communication. The project includes the design and engineering services for the rehabilitation of the existing headworks structure at the Northside Wastewater Treatment Plant, an activated sludge facility with a permitted design capacity of 8.0 MGD. The preliminary treatment structure (headworks) includes screening, grit removal, and flow splitting. Tetra Tech evaluated and provided replacement alternatives for the bar screens to the age and condition of the existing equipment. Long term exposure of the western channel walls to gases generated from the raw wastewater has caused deterioration of the existing concrete substrate. The project also includes structural engineering services to arrest and repair this deterioration.

KEVIN ROE, PE, CFM

Mr. Roe is a project engineer and hydraulic modeler with diverse experience in the study, planning, design, and construction of water, wastewater, stormwater, and general civil/site projects for municipal and industrial clients. As a hydraulic modeler, he plays an integral role in analyzing water, wastewater, and stormwater systems and facilities and recommending infrastructure improvement alternatives.

Name of Firm:

Tetra Tech, Inc.

Title:

Basis of Design/Flow
Evaluations

Education:

BS, Civil Engineering,
Arizona State University

Registrations/ Certifications:

Professional Engineer,
Georgia, No. PE039494

Certified Floodplain
Manager No. US-18-10285

NCEES Record No. 68028

Professional Affiliations:

Georgia Association of
Water Professionals

Georgia Association of
Floodplain Management

Office:

Atlanta, GA

Percentage of Time to be Assigned Full-Time to this Project:

50%

Years of Experience:

16

Years with Tetra Tech:

12

North Beach Wastewater Improvements, City of Hollywood Beach,

FL. Lead Hydraulic Modeler. Evaluated proposed improvements to the City's wastewater system, including upgrades to two lift stations and replacement of 7,000 LF feet of 8-inch force main with 12-inch force main.

Brooks Road Pump Station Improvements, Gwinnett County Department of Water Resources, Gwinnett County, GA.

Hydraulic Modeler. Model development, calibration, and analysis of the Eastside Force Main System under normal operating conditions and transient wave conditions using InfoWater and InfoSurge. System includes three primary wastewater pump stations and two booster pump stations that tie into the same force main network. Performed modeling in conjunction with a wastewater pump station upgrade design project and included system analysis under several scenarios simulating various pumping conditions. Continued hydraulic modeling support included an evaluation of the bypass pumping system used during construction of the pump station upgrades.

North Brevard Wastewater Model, Brevard County, FL.

Lead Hydraulic Modeler. Technical lead for the hydraulic model development, model calibration, existing system evaluation, and future improvements recommendations for the North Brevard County wastewater system. The wastewater model includes over 2 miles of gravity mains ranging in size from 4- to 12-inches, 11 miles of force mains from 4- to 14-inches, and 17 lift stations. The system conveys wastewater to the North Brevard Wastewater Treatment Plant. Wastewater system modeling was performed using SewerGEMS modeling software.

City of Tamarac Wastewater Master Plan Update, Tamarac, FL.

Lead Hydraulic Modeler. Technical lead for the hydraulic model development, model calibration, existing system evaluation, and future improvements recommendations as part of the capital improvements program for the Tamarac wastewater system. The wastewater model includes over 33 miles of force mains ranging in size from 3- to 30-inches and 60 lift stations. The system conveys wastewater to both the Broward County and Fort Lauderdale wastewater systems. Wastewater system modeling was performed using InfoWater Pro modeling software.

MPS 309 Force Main to Western Interconnect Design through Construction Services, Collier County, FL.

Civil Engineer. Provided professional engineering design, permitting, and related services in support of developing a wastewater collection system and wastewater force main pumping system for Unit No. 1 of the Port LaBelle Utility System. In addition, upgrades to MPS 309 or replacement with an in-line pump station (ILPS) will be required. Also, consideration was given to a second ILPS further downstream and a new force main (which will connect to the Western Interconnect).

Nansemond SWIFT Design-Build, Hampton Roads Sanitation District, VA. Lead Hydraulic Modeler. Project includes design, permitting, funding assistance, construction, testing, start-up, and training services for the 34 MGD new greenfield advanced water treatment plant. This facility will receive treated effluent from the Nansemond Treatment Plant and use treatment technologies such as biofiltration, granular activated carbon (GAC) adsorption, ion exchange, UV disinfection, and chlorination to produce high-quality SWIFT Water™, which will be injected into the Potomac Aquifer through 19 managed aquifer recharge wells. This process will help replenish the aquifer, mitigate land subsidence, and prevent saltwater intrusion, ensuring a reliable water source for the region. Services provided include process design, electrical, mechanical, structural, architectural, SCADA/I&C, site/civil, and permitting as well as assistance with funding, construction, testing, start-up, and training services. The project uses the design-build delivery method and receives federal funding from the Water Infrastructure Finance and Innovation Act (WIFIA) and state funding from the Virginia Water Quality Improvement Fund.

Nansemond Treatment Plant Advanced Nutrient Reduction Improvements, Phase II Design-Build, Hampton Roads Sanitation District, Suffolk, VA. Lead Hydraulic Modeler. Project includes design, permitting, funding assistance, construction, testing, start-up, and training services to increase the treatment plant capacity from 30.0 to 50.0 MGD to treat combined wastewater flows from two service areas and meet the client's Sustainable Water initiative for Tomorrow (SWIFT) influent water quality targets for future work. The expansion includes a new influent distribution box, primary clarifier, primary effluent equalization tanks, aeration basins and blowers, secondary clarifiers, return activated sludge and nitrate recycle pumping, chlorine contact tank, primary gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control systems. Improvements include the existing 5-stage Biological Nutrient Removal (BNR) treatment trains, methanol feed system, sodium hypochlorite feed system, dewatered solids storage and loadout, non-potable water pumping, plant drain pumping, and the effluent pump station. The project uses the design-build delivery method and receives federal funding from the Water Infrastructure Finance and Innovation Act (WIFIA) and state funding from the Virginia Water Quality Improvement Fund. Updated and evaluated non-potable water system model for the plant as part of the design of the advanced nutrient reduction

improvements. Updated model demands, piping, and pumps for conditions and various alternatives for proposed conditions. Modeling involved coordination with another consultant to account for other ongoing plant improvements and maintaining established level of service for pressure and fire flows. Hydraulic modeling performed using InfoWater.

Broadway East Utility Extension Plan, Village of Estero, FL. Lead Hydraulic Modeler. Updated the Lee County wastewater system hydraulic models to include proposed system extensions to provide utility service to existing residents within the Village. Evaluated and selected proposed lift station pump sizes and force mains based on projected flows and Lee County design standards. Hydraulic modeling was performed using InfoWater modeling software.

Big Cypress Lift Station and Force Mains, Seminole Tribe, Davie, FL. Hydraulic Modeler. Design, permitting, and construction services for plans to construct a second master lift station and new force mains within the Big Cypress Seminole Indian Reservation. Infrastructure includes the roads, potable water distribution system, wastewater collection and transmission system, and the Big Cypress WWTP. The existing collection system consists of 20 lift stations, multiple grinder pump stations, and approximately 23,244 feet of gravity main and 93,428 feet of force main. New planned developments at the Big Cypress Reservation are anticipated to generate additional load to the existing collection system and Cypress Lane MLS. This project will also include the construction of a portion of a new gravity sewer collection system. Providing technical support and review for model analysis of proposed lift station and force main. Hydraulic modeling is being performed using InfoSWMM software.

Sanibel-Captiva Wastewater Analysis, City of Sanibel, FL. Lead Hydraulic Modeler. Evaluated proposed improvements to the western region of the City's wastewater system for conveying additional peak flows of up to 2 MGD from the neighboring City of Captiva. Proposed improvements involve a phased approach for increasing capacity of force mains and lift stations conveying flow east to the City's Donax Water Reclamation Facility, currently permitted for an annual average flow of 2.4 MGD.

JUSTIN VOSS, PE

Mr. Voss has 19 years of hydraulic modeling and design experience including wastewater, stormwater, and combined sewer collection systems, water distribution, open channel hydraulics and scour evaluation and mitigation, coastal hydraulics, and several hydraulic sub-disciplines. His water distribution hydraulics experience includes flow and pressure data collection, asset management, water reliability studies, master planning, hydraulic model calibration and analysis, water quality simulations, waterhammer assessment and mitigation, system optimization, and pump evaluation. He is familiar with EPANET, InfoWater/InfoWater Pro, InfoSurge, and WaterGEMS software.

Name of Firm:

Tetra Tech, Inc.

Title:

Basis of Design/Flow
Evaluations

Education:

MSE, Civil Engineering,
University of Michigan

BSE, Civil Engineering,
University of Michigan

Registrations/ Certifications:

Professional Engineer,
Florida, No. 87245

Office:

East Lansing, MI

Percentage of Time to be Assigned Full-Time to this Project:

50%

Years of Experience:

19

Years with Tetra Tech:

19

Nine Mile Pump Station, Macomb County Public Works Office, MI.

Lead Hydraulics Engineer. Hydraulic support for design of a 600-cfs pump station at downstream end of Nine Mile Sewer at Chapaton RTB. Variable lake levels were a key constraint in pump station and sewer design. Oversaw updates to county's SWMM model to match design and assessed system impacts. Performed hydraulic analyses for a modified stormwater drainage system from RTB roof impacted by proposed pump station and baffle flushing and wet well flushing systems. Provided hydraulic support to allow for the abandonment of an RTB emergency bypass in poor condition.

LS 10 Replacement, New Smyrna Beach, FL.

Lead Hydraulics Engineer. Hydraulic evaluation for replacement and downsizing of largest wastewater lift station to 3.3 MGD. Downsizing required as outlying areas of tributary area had been redirected to other lift stations. A large range of TDH values were critical constraint in pump selection based on city's hydraulic model. Improved hydraulic model to provide accurate system representation and model interpretation, narrowing TDH value ranges and improved pump selection.

North 1 Utilities Extension Program, City of Cape Coral, FL.

Lead Hydraulics Engineer. Utilized City's InfoWater force main model to design force main network and identify pump operating conditions for 16 local lift stations and 2 master lift stations for more than 4 square miles North 1 UEP area. Largest lift station had design discharge of 4.75 MGD and pumped water nearly 11 miles to the City's WRRF. Design required identifying full range of current and possible future operating conditions for two master lift stations.

West Hickman Wet Weather Storage and Plant Reliability Improvements, Lexington Fayette Urban County Government, KY.

Hydraulic Engineer. Completed an analysis of the potential for hydraulic transients for a new 80 MGD wet weather sanitary pump station with a 60-inch diameter, 1,000-foot-long force main in InfoSurge. Hydraulic transients were found to be relatively mild during a rapid shutdown of the pumps, but vapor pressure was approached on the low side of the pressure wave. A vacuum-relief valve on its own reduced the risk of vapor pressure but created higher than desired maximum pressures, so the effects of the waterhammer were mitigated with a combination air-vacuum relief valve. The air-vacuum relief valve was predicted by the model to maintain atmospheric pressure throughout the force main and limit high pressures to 110 psi (working pressure plus the waterhammer pressure). Model instabilities were resolved by reducing the default check valve closing time settings in InfoSurge.

Wekiwa Springs Lift Station Evaluation and Design, Orange County, FL.

QA/QC. Provided guidance and reviewed hydraulics for design of five new lift stations to be connected to a force main system.

Bay, Beechwood, and Front Street Pump Stations Evaluation, Traverse City, MI.

Lead Hydraulics Engineer. Evaluated capacity and hydraulic performance of three pump stations, including Front Street Pump Station, city's largest pump station located on a small downtown site that forms a retaining wall along Boardman River. Evaluated wet weather flow projections using flow monitoring data collected by city without use of a hydraulic model, allowing them to invest in other project aspects including a detailed condition evaluation. To provide a level of comfort with flow projection, performed a statistical analysis to evaluate median and 95 percent confidence limits for peak flow rate during 25-year, 24-hour design storm.

Allen Road Pump Station District Concept Plan, Kimball Township, MI.

Quality Review. Reviewed recommendations to improve collection system operation and reduce the risk of sanitary sewer overflows upstream and downstream of the Allen Road Pump Station.

Westside Sewer Hydraulic Transient Evaluation, Sapulpa Municipal Authority, OK.

Lead Hydraulic Engineer. Led the assessment of the evaluation and mitigation of hydraulic transients for a 27,000-foot-long force main with an ultimate buildout flow of 700 GPM. The hydraulic modeling used InfoSurge. Recommendations to mitigate surge included combination air-vacuum relief valves and a surge tank.

Andelina Farms Utility Expansion Sanitary Sewer Routing, Saline, MI.

Hydraulic Engineer. Developed a 4,500-foot conceptual route to convey wastewater from a proposed 117-acre / 270-unit subdivision to an existing sanitary lift station. The most significant constraint on the route was crossing a 30-foot-deep ravine without pumps or an inverted siphon while still matching the elevation of the sewer downstream of the ravine. The recommended solution placed the sanitary sewer within the fill of a proposed roadway crossing the ravine. Lift station's ability to operate with the added flows was assessed and included a review of the pump and system curves and cycle time. Recommended plan at the lift station included larger pumps, a larger wet well, and a parallel force main.

WWTP Storage and Capacity Analysis, Northfield Township, MI.

Hydraulic Engineer. Optimized size of detention for wet weather flows at the Township's WWTP for existing conditions and to accommodate expected growth from four special assessment districts and a neighboring township. Additional detention had been a long-term goal of the Township to reduce costs related to expansion of treatment process. Past

studies based on extrapolation of flow records to the 25-year, 24-hour design storm recommended 1.7 MG of storage to accommodate current wet weather flows on top of the projected 1,000 REUs of growth. To reduce the recommended storage volume while still meeting the State's SSO Policy, a long-term simulation was developed in EPA-SWMM using unit hydrographs developed from the available data and 54 years of hourly rainfall records. The long-term simulation showed that the basin size could be decreased to 1.3 MG for the same wet weather flows and level of growth reducing construction costs to the Township.

Wastewater Asset Management Plan, City of Adrian, MI.

Hydraulic Engineer. Led a 4-month flow monitoring program with 10 flow meters and two rain gauges to measure flow rates and depths in the City's sanitary and combined sewers and correlate the collection system response to rainfall. The model, built in InfoSWMM from the City's GIS database, included 23 miles of interceptors and trunk sewers (12 inches or larger). It also included a CSO basin that required real-time controls to be entered into the model to properly store and release flows into the City's sanitary sewer interceptor. Model hydrology was calibrated using SSOAP and validated with the model. During the flow monitoring period, a 3.9-inch rainfall occurred during a 24-hour period, which made it similar to the 25-year, 24-hour design storm required for wastewater conveyance in the State of Michigan. This event was not of use for calibration because of flooding from the sanitary sewer that was known to have occurred, but it was used to validate the model and confirm its ability to represent the design condition. Model predicted flooding at a major pump station and six locations that were observed by City staff to have flooded to the surface during the event. Model predicted a few additional locations of flooding that were not observed, so alternatives were prioritized based on model results and observations during the large events. System limitations for the 25-year, 24-hour design storm were identified. Flow monitoring, modeling, and analysis were incorporated into a report.

AirGlades Force Main Feasibility Study, Hendry County, FL.

Hydraulic Engineer. Developed an InfoWater model to identify acceptable alternatives for nearly 10 miles of new force main connecting the AirGlades Airport to the City of Clewiston's WWTP. Study needed to include a solution that worked for current and projected 2025 and 2055 flows for the airport and surrounding potential development areas that could potentially connect to the force main. Recommended solution was a dual force main system with a minimum of two intermediate pump stations to limit pressures to no more than 150 psi.

KEVIN FRIEDMAN, PE

Mr. Friedman has 21 years of experience as an environmental engineer planning and designing wastewater treatment systems in Florida. He has experience working at each of the City's treatment facilities. His wide range of experience includes water and wastewater treatment facilities, residuals processing, wastewater collection, pump stations, transmission mains, water supply, and utility master planning.. He is knowledgeable in FDEP regulations and has experience in designing both conventional and innovative treatment solutions.

Name of Firm:

Tetra Tech, Inc.

Title:

Mechanical Pump/Piping

Education:

BS, Environmental
Engineering Sciences,
University of Florida

**Registrations/
Certifications:**

Professional Engineer,
Florida, No. 69852

Professional Affiliations:

Florida Water Environment
Association

Engineers Without Borders
South Central Florida
Chapter

Office:

Orlando, FL

**Percentage of Time to be
Assigned Full-Time to this
Project:**

75%

Years of Experience:

21

Years with Tetra Tech:

9

Golden Gate Wastewater Engineer of Record, Collier County, FL. Sr

Engineer. Tetra Tech was selected as the wastewater Engineer of Record for Golden Gate City within Collier County, FL. This project consists of several tasks, including conversion of an existing extended air wastewater plant to high-level disinfection; preparation of a 20-year wastewater master plan; design of a new 8.0 MGD Membrane Bioreactor (MBR) wastewater treatment plant; and collection and transmission system improvements, including rehabilitation of over 36 miles of sewer mains, 28 lift stations, and 437 manholes

Northwest Regional Water Reclamation Facility Expansion Design-Build, Hillsborough County, FL. Project Manager.

Led the team for improvements that included increasing capacity from 10.0 to 30.0 MGD on an AADF basis. The expansion included new headworks, inline flow equalization and influent flow distribution box; retrofit of biological nutrient removal (BNR) basins and additional 5-stage BNR treatment trains; additional odor control systems; additional clarifier flow splitter box and secondary clarifiers; new sodium hypochlorite storage tanks and associated chemical feed pumps; additional RAS pump station; additional deep bed filters; additional chlorine contact basins; additional effluent transfer pumps and new reclaimed water pumps; additional pre-stressed concrete reject water storage tank and additional prestressed concrete reclaimed water storage tanks; new power feed to the site and additional standby power facilities; and electrical and instrumentation improvements.

Donax Water Reclamation Facility Expansion & Improvements, City of Sanibel, FL. Project Engineer.

Evaluation of alternatives to assist with nutrient removal (nitrogen and phosphorous) as well as to address the need for replacement of the existing flow equalization basin and ultimately the expansion of the facility from 2.375 to 3.0 MGD. The evaluation included the use of the modified Ludzack-Ettinger (MLE) process, denitrification filters and the change to a five-stage Bardenpho process with use of membrane bioreactors (MBR). The five-stage process with MBR was selected for design and implementation.

Harmony Wastewater Treatment Plant Expansion, Toho Water Authority, City of Kissimmee, FL. Project Engineer.

Design and construction of the Harmony WWTP Expansion to increase the permitted capacity from 0.130 mgd to 0.180 mgd ADF. Project scope included adding flow meters and VFDs to the flow equalization pumps, replacing diffusers within existing equalization, process, and sludge holding tanks, aeration system improvements including adding additional blowers dedicated to the biological treatment process and blower controls to enhance biological nitrogen removal, and replacing the effluent pumps. The project also involved preliminary, final and construction phase services for construction of a new 0.5 mgd ADF treatment facility with ultimate plans to expand to 2.6 mgd. The plant is designed for nitrogen removal and high level disinfection for public access

reuse. The facility consists of flow equalization, a two-stage nitrification facility, secondary clarifiers, disk filters, chlorine disinfection with new storage a feed building and miscellaneous water and solids handling pumps. The project includes converting the existing plant in to reject storage and pumping facilities.

Western Reuse Storage and Pumping Facility, Toho Water Authority, FL. Project Manager. Design and construction phase services for the construction of a new remote storage and repumping facility to increase storage and improve the flexibility in serving the western reuse service area. The new facilities included two 4.0 MG ground storage tanks, high service pumps, yard piping (including directional drilling underneath wetlands), standby power, electrical and instrumentation systems, and site civil improvements.

Cypress West WRF Upgrade, Toho Water Authority, FL. Project Engineer. Upgrade and expansion of an existing 3.0 MGD SBR facility to provide a capacity of 6.0 MGD via implementation of the MLE process with conventional settling, filtration, and disinfection unit operations. Several years ago improvements to the preliminary treatment system were implemented in conjunction with conversion to the MLE Process and construction of external clarifiers. At the time of these improvements TWA intended to subsequently expand the plant capacity to 6.00 MGD via construction of filtration, chlorine contact, effluent storage, and reclaimed water pumping improvements. The existing preliminary treatment, biological nutrient removal, and settling structures are designed for a capacity of 6.00 MGD on an AADF basis; the following are the various equipment additions necessary in conjunction with entirely new facilities and modifications to existing unit operations to obtain the desired permitted capacity of 6.00 MGD: Installation of one additional process aeration blowers.

- Installation of two additional internal recycle pumps.
- Construction of two new cloth filtration facilities.
- Construction of a new dual-chamber chlorine contact tank with effluent transfer pumps.
- Installation of new sodium hypochlorite storage and feed facilities including a shelter to house the chemical and effluent monitoring equipment.
- Construction of two 7.50 million gallon wet-weather storage tanks.
- Construction of a new reclaimed water pumping facility.
- Installation of blowers and coarse bubble aeration systems to convert two (2) existing package treatment structures into aerated sludge holding basins.
- Construction of various appurtenant facilities such as an electrical building and standby power system.

The WRF improvements will meet Class I Reliability Criteria pursuant to FAC Chapter 62-610. Standby power systems are provided. This project was delivered via CMAR. Phase B Part 1 was completed in 2018. Phase B Part 2 (the dewatering facilities) was completed in 2019.

Conserv II WRF Filter Study, City of Orlando, FL.

2015–2016. Project Engineer. The City's Water Conserv II Water Reclamation Facility (WRF) has a permitted design capacity of 21 MGD on an annual average daily flow (AADF) basis. The City planned to stress test the facility and expected to increase the permitted capacity to 25 MGD. The existing filtration at the Water Conserv II WRF consisted of six travelling bridge sand filters that had been in service for approximately 30 years. Due to the age and condition of the filters, as well as performance considerations, the City wanted to replace the traveling bridge sand filters with deep bed sand filters similar to those installed at the City's Iron Bridge Regional WRF. The City retained Tetra Tech to identify acceptable approaches to address the challenges associated with this concept (space constraints, hydraulic profile considerations, maintenance of treatment during construction, and potential presence of soils unsuitable for support of the proposed structures) and to establish a capital budget for implementation of the proposed improvements. The scope of services was divided into two steps: an initial evaluation to develop the basis of design, sizing of the filters, and filter layout location, followed by development of the feasibility study, which included conceptual drawings, piping layout, construction sequencing and cost.

Iron Bridge Regional WRF, City of Orlando, FL.

Deputy Project Manager. Design and permitting for the construction of a new 37.5 MGD pump station, new aluminum covers for the deep bed filters and south chlorine contact basin, a new electrical building, and improvements at wetlands transmission main and Eastern Regional Reclaimed Water Distribution System Interconnect.

Parkway WRF Clarifier No 2 Rehabilitation, Toho Water Authority, FL.

Project Manager. Professional engineering services for the design and construction of a replacement sludge collection mechanism for Clarifier No. 2 and minor structural repairs to address cracking, spalling or other issues.

CHARAN TANNERU, PHD, PE

Dr. Charan Tanneru is a registered professional engineer, bringing a decade of expertise to water and wastewater treatment design, pipelines, pump stations, and project consulting services. His comprehensive experience extends to providing construction support and delivering crucial components for major infrastructure projects at both state and local levels. His commitment to ongoing research and innovation positions him at the forefront of the field, enabling the integration of cutting-edge technologies into water and wastewater project designs and contributing significantly to efficient and sustainable water resource management.

Name of Firm:

Tetra Tech, Inc.

Title:

Mechanical Pump/Piping

Education:

PhD, Environmental Engineering, University of Houston

MS, Environmental Engineering, Virginia Tech

BS, Civil Engineering, Osmania University (India)

Registrations/ Certifications:

Professional Engineer, Texas, No. 129768

Professional Affiliations:

American Water Works Association
Water Environment Federation

Office:

Miami, FL

Percentage of Time to be Assigned Full-Time to this Project:

50%

Years of Experience:

10

Years with Tetra Tech:

3

Nansemond Treatment Plant Advanced Nutrient Reduction Improvements, Phase II Design-Build, Hampton Roads Sanitation District, Suffolk, VA.

Assistant Design Manager. Project includes design, permitting, funding assistance, construction, testing, start-up, and training services to increase the treatment plant capacity from 30.0 to 50.0 MGD to treat combined wastewater flows from two service areas and meet the client's Sustainable Water initiative for Tomorrow (SWIFT) influent water quality targets for future work. The expansion includes a new influent distribution box, primary clarifier, primary effluent equalization tanks, aeration basins and blowers, secondary clarifiers, return activated sludge and nitrate recycle pumping, chlorine contact tank, primary gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control systems. Improvements include the existing 5-stage Biological Nutrient Removal (BNR) treatment trains, methanol feed system, sodium hypochlorite feed system, dewatered solids storage and loadout, non-potable water pumping, plant drain pumping, and the effluent pump station. Design includes process improvements to implement Partial Denitrification Annamox (PdNA) for shortcut nitrogen removal. Electrical scope includes replacement of the medium voltage switchgear and distribution system and modifications to the existing generator paralleling switchgear. The project uses the design-build delivery method and receives federal funding from the Water Infrastructure Finance and Innovation Act (WIFIA) and state funding from the Virginia Water Quality Improvement Fund.

Owner's Engineer for Wastewater Treatment Plant Aeration Design-Build, Eagle Pass Water Works, Eagle Pass, TX.

Project Manager. Served as Owner's Engineer for the wastewater treatment plant aeration improvement design-build project. Preliminary development phase included assisting the client with conceptual planning of the WWTP and funding procurement.

Oak Ridge National Laboratory Sewage Treatment Plant Modernization Design-Build, Garney Federal, UT-Battelle, LCC, Department of Energy, Oak Ridge, TN.

Lead Process Engineer and Assistant Design Manager. Tetra Tech and Garney Federal, Inc (Garney), were selected as the design-build team for this Sewage Treatment Plant (STP) project for the Oak Ridge National Laboratory (ORNL), a government owned facility, managed by UT-Battelle, LCC, for the Department of Energy (DOE), in Oak Ridge, TN. The STP primarily receives and treats domestic sewage from the staff working at ORNL facilities. Improvements to modernize the STP include replacing and upsizing the pumps in the existing pump station and associated force main, two sequencing batch reactor tanks, post equalization basin, aerobic digester, tertiary disk filter system, new ultraviolet disinfection system, new effluent flow monitoring station, plant drain pump station, electrical building, other electrical equipment, and yard piping improvements.

Sanitary Sewer Improvements Work Order Contract, City of Houston, Houston, TX.

Project Manager. For the North Street Sanitary Sewer Project, Tetra Tech completed the preliminary and final design of the abandonment of approximately 472 feet of 8-inch sewer line, 548 feet of 24-inch sewer line, and 1,500 feet of 36-inch sewer line between North Street and Wrightwood Street, and construction of approximately 900 feet of new 8-inch sewer line along North Street between Mainford Street and North Main Street. For the Southlea Street Sanitary Sewer Project, Tetra Tech completed the design of approximately 1,175 lf of new 8-inch and 12-inch sewer line along Southlea Street between Crestville Street and Crestmont Street. Dr. Tanneru currently serving as project manager for the construction administration services for both projects.

San Felipe and Silver Lake WWTPs Assessment and Improvements, City of Del Rio, TX.

Project Manager. Assessment and improvements for the 3.8-MGD San Felipe and 2.76-MGD Silver Lake WWTPs, including project and Texas Water Development Board program management and administration, capacity evaluation and condition assessment study of each WWTP, engineering feasibility report, capital improvement program with 20- and 50-year planning horizons, and supplemental design services.

Northside Sewer Line, City of Del Rio, TX. 2019–Ongoing. Project Manager. Program management of design, bid, and construction phase services for replacement of 39,100 LF of undersized wastewater line that runs along Cienegas Creek. Project includes wastewater line from the Edwards Creek Lift Station to the Silver Lake WWTP.

Middlesex Interceptor System Program Phase II, Hampton Roads Sanitation District, VA.

Lead Project Engineer. Scope includes design and rehabilitation of five lift stations in the Middlesex County to improve the county's collection system. Dr. Tanneru is currently serving as a lead project engineer for the project.

Wastewater Treatment Kingwood Wastewater Facilities Consolidation, City of Houston, TX

***.** WWTP Lead. Scope included consolidation of Kingwood area wastewater treatment facilities by constructing a new 7 MGD Kingwood Central WWTP. In addition, scope included rerouting of wastewater flow from two other WWTPs to Kingwood Central WWTP. The estimated project construction cost was \$250 million. Dr. Tanneru served as process mechanical engineer of record for the wastewater treatment plant portion of the project WWTP included preliminary treatment, secondary treatment and tertiary treatment processes.

Dewatering Improvements, Fort Bend WCID #2, TX*.

Project Manager. Dr. Tanneru served as a project manager and design lead for this project. Dr. Tanneru was responsible for leading the design, managing the schedule and budget for the project. Specific engineering tasks include process mechanical design of belt filter presses, conveyors, polymer system, developing technical specifications and drawings.

Construction of 0.45 MGD Wastewater Treatment Plant, Harris County MUD 149, Harris County, TX*.

Project Engineer. Scope includes construction of new 0.45 MGD wastewater treatment plant including construction on new lift station, headworks, aeration basins, clarifiers, chlorine contact basins, and aerobic digesters. Dr. Tanneru served as lead project engineer for the project.

Water Treatment Plant Improvements, US Air Force, Misawa Air Force Base, Japan.

Project Engineer. The project includes an assessment of the surface water treatment plant (WTP) at the Misawa Air Base, Japan. The assessment will inspect and evaluate the WTP and make recommendations for repair and replacement. The recommendations will be presented in a Planning Charette Report and estimated costs included in an Economic Assessment (EA) for Repair/Renovate Water Treatment Plant. IEW will provide water treatment process, building mechanical, electrical instrumentation and controls (EIC), communications, and cyber support.

Bitters Ground Storage Tank Replacement, San Antonio Water System, San Antonio, TX.

Senior Project Engineer. Demolition of the steel ground storage tank and design/construction of a new 5-MG pre-stressed concrete ground storage tank. Performed improvements to site grading and drainage, replacement of the security perimeter fence, installation of new switchgears, and replacement of discharge piping for high service pumps.

Projects marked with an asterisk "" are not Tetra Tech projects*

DIANA TAO, ENG. M. ENG.

Ms. Tao has over 25 years of experience in the fields of wastewater, water resources, water quality and environment across North America. She specializes in the evaluation and optimization of sanitary and combined sewer systems for the control of overflows, inflow and infiltration, and sewer backups. As a senior hydraulic specialist, she masters the application of most hydrological and hydraulic software, such as InfoWorks, PCSWMM, XPSWMM, Mike Urban, etc. Over the years, she has participated in many sewer and real time control (RTC) studies, the design of flow control structures and the implementation of RTC for large-scale collection systems in several major cities.

Name of Firm:

Tetra Tech, Inc.

Title:

Real-Time Controls

Education:

Master's Degree in Civil Engineering and Applied Mechanics, McGill University

Bachelor of Applied Sciences, University of British Columbia

Office:

Montreal, CA

Percentage of Time to be Assigned Full-Time to this Project:

30%

Years of Experience:

25

Years with Tetra Tech:

25

In-System Storage Devices Design, Macomb County Public Works,

MI. Technical Lead for the modeling, study and design of in-system storage for the 8½ Mile Relief Drain Drainage District within Macomb County. The project involves PCSWMM modeling, development of filling and dewatering control strategy, device design, survey, and transient analysis.

Sewer Storm Drain System Sensor Deployment Program, Boston Water and Sewer Commission (BWSC), MA.

Technical Advisor. The project involves the development of a flexible and scalable “smart sewer system” for the BWSC to enable the Commission to continuously monitor and efficiently manage its sewer and storm drain systems, particularly during wet weather events.

Interceptors Real Time Control Implementation, City of Toronto,

Ontario. Project Manager. The project involves conditional assessment, modeling, development control strategies, design and implementation of RTC for the 10 flow regulation chambers along the mid-Toronto interceptor, as well as services during construction and post-construction. The objectives are to improve operational efficiencies and reduce overflows.

Drinking Water Network Optimization Pilot Project, City of Montreal,

QC. Technical Advisor. Tetra Tech developed an action plan, designed and modeled the hydraulic system, and supervised the work necessary for the implementation of a monitoring and optimization system for water distribution. This system includes the deployment of a network of 150 to 180 district metered areas (DMAs), which include 75 to 90 pressure management areas (PMAs), as well as the construction of some 600 measurement and regulation chambers and network supervision and controls (SCADA). She provided technical assistance in the definition of a pilot project with the ACQUIS software from the AVEVA Group in order to control, different sectors of the city's distribution system in real-time.

CSO Reduction Program Support Services, Seattle Public Utilities,

WA. Operation management Lead. This project supports the completion of SPU CSO reduction program to meet the consent decree objectives by 2030. She supports SPU operation managers and provides direction and oversight of task leads to develop and implement task orders, such as system optimization, real time control and compliance planning, I&C and SCADA master plan, operation plan, operation resource planning, job classification, risk identification, coordination with King County, modeling QA/QC etc. RTC facilities include in-line and offline storage.

Real Time Control Implementation Assistance, Louisville Metropolitan Sewer District, Kentucky.

Project Manager. The project provides RTC strategy development, RTC design, multi-phased implementation and integration of additional flow control and treatment facilities for total system optimization

and CSO reduction. Tetra Tech provides continuous technical support to MSD for the improvement of existing RTC system as well as integrating efficient operation and optimizing the design of future Integrated Overflow Abatement Plan facilities into the global, optimal and predictive RTC. Provided real time control modeling of the flow control structures and control rules in InfoWorks CS, IW RTC modeling training and annual system performance evaluations. Managed and coordinated the implementation of RTC facilities which include multiple in-line storage, CSO and stormwater storage basins, flow diversions, high rate treatment, combined and sanitary WWTP and pump stations.

The MDC, Hartford, Connecticut; Technical Coordination and Project QA/QC for the Real Time Control and SCADA Master Plan. The project objectives were to find innovative solutions for reducing the cost of the existing Clean Water Project and to provide conceptual design of the RTC solution. A series of recommendations were made to the District with significant cost savings without compromising system performance. Project role consisted of defining client needs, peer review of RTC strategies, tunnel and consolidation realignment alternatives, preparation of final report, and clarification of approach.

Goldbar Wastewater Treatment Plant Influent Control and Flow Equalization, EPCOR, AB. (2016-now). Technical advisor. Project involved the optimization of influent gate controls and WWTP inflow equalization using inline storage gates within the collection system.

Implementation of a Real Time Control Program for the Management of Wet Weather Flows, City of Hamilton, Ontario. Technical Advisor for phase 1 implementation of local reactive control sites for flow interception and storage. Phase 2 involves modification of gate control rules to better utilize storage basins. Project role consisted of work plan development and QA/QC on RTC design.

Real-time Decision Support for Griffith and Sunnydale Pump Stations, San Francisco Public Utilities Commission Wastewater Enterprise, California. Project Manager. The project involved the implementation of decision support using the InfoWorks CS model and rainfall forecasting that optimizes pumping strategies based on real-time data to improve utilization of storage in existing facilities at Sunnydale and Yosemite transport storage boxes to help reduce combined sewer discharge volumes in the Islais Creek basin and maximize wet weather flows receiving full treatment.

Real Time Control Performance Review and Technical Assistance, City of Edmonton, Alberta. Technical advisor for coordinated RTC strategy development for sewer collection system and stormwater management, providing technical assistance as needed by client. Project role also includes QA/QC for reports and presentations.

DWW Control Center Value Planning Study, Seattle Public Utilities, WA. Acting as the RTC specialist of the Value Planning Team, reviewed the Draft Drainage Wastewater Control Center Options Analysis Report, rated and optimized alternatives based upon their overall performance characteristics and ability to incorporate RTC into a single control center while optimizing SPU expenditures over a 50-year life cycle period.

Planning, and Engineering Services for Central Bayside System Improvement Project, San Francisco Public Utilities Commission Wastewater Enterprise, California. Technical Task Leader for RTC. The project is aimed at providing the City with a compliant, reliable, resilient and flexible system that can respond to catastrophic events, adapt to climate change, and minimize flooding. Project role includes developing alternatives for tunnel operation, modeling and analysis of alternatives in InfoWorks ICM.

Optimization of the Sewer Network Using Real Time Control, City of Wilmington, Delaware. Technical Advisor and Task Leader. This project involved hydraulic analysis, RTC modeling, assessment and validation of the RTC potential during the preliminary design phase, and technical support and coordination for the engineering, implementation and commissioning of the RTC system which included inline storage, flow interception, storage basin, and pump station management. She assisted the City with presentations and negotiations with the USEPA and DENRCS for CSO and TMDL objectives. She is also the technical advisor for the Update of the Hydraulic Model for the Collection System (2008-2011). Project role consisted of defining client needs to enhance model prediction accuracy, and facilitate future modeling developments, and evaluate project approach to address localized flooding.

SIMON TREMBLAY, ENG.

Mr. Tremblay specializes in instrumentation, control and automation, and holds a bachelor's degree in automated production. He has over 20 years of experience in water, wastewater, power, industrial and commercial applications. He is also in charge of system integration of control sequences and user interfaces, command logics and process control narratives, as well as system sequence start-ups. He has participated in many real time control (RTC) studies, project engineering, construction, commissioning, and system follow-up activities with clients. He brings a wealth of design, implementation, and optimization experience for the operation of pump stations, storage basins, diversions and other control facilities within water and wastewater systems.

Name of Firm:

Tetra Tech, Inc.

Title:

Real-Time Controls

Education:

Bachelor's degree in Automated production engineering, École de Technologie Supérieure, Université du Québec

Office:

Quebec City, CA

Percentage of Time to be Assigned Full-Time to this Project:

30%

Years of Experience:

28

Years with Tetra Tech:

23

City of Toronto, Ontario Interceptors Real Time Control

Implementation. Project engineer. The project consists in assessing the condition of the Mid-Toronto Interceptor's ten main gate chambers for the purpose of implementing real time control for the conveyance of wastewater to the treatment plants to mitigate overflows in Lake Ontario. Tasks included the inspection of the gate chambers, development of control strategy, selection of actuators and other equipment, coordination of all electrical and mechanical design, and providing support to tender, system integration, and during construction and post-construction services.

Seattle Public Utilities, WA CSO Reduction Program Support Services.

Project Engineer for system optimization and control. This project supports the completion of SPU CSO reduction program to meet consent decree objectives by 2030. He provided operation strategy review, improvements recommendation of existing in-line and offline storage sites, technical assistance for factory acceptance testing (FAT) and programming, as well as performance evaluation. He also provides updates of design guidelines with regards to pump stations parametrization, and programmable logic controller (PLC) proportional, integral, and derivative (PID) instruction and tuning.

City of Bordeaux, France, Integration of Real Time Control for Flood and Pollution Control in Wet Weather.

Project Engineer. Duties included the design of site process narratives and hydraulic flow schematic. He also provides recommendation for new instruments installation and commissioning, produces the start-up manual and test procedures. More importantly, he provides on-site support to local staff during the project implementation phase and calibrated control loops.

City of Wilmington, Delaware; Combined Sewer Overflow Control Plan To Optimize The Sewer Network In Real Time.

Project Engineer in instrumentation and control. His main functions were to perform detailed I&C engineering, including the integration and programming of HMIs and PLCs, commissioning activities (2009-2011), detailed engineering (2007-2008), the inspection of electric panels and site supervision.

City of Edmonton, Alberta; Global Control Analysis Of The Two Gate Chambers.

Project Engineer in Instrumentation and Control. The purpose of this project was to take advantage of in-line retention to reduce combined sewer overflows during small rainfall events. Mr. Tremblay designed and evaluated the cost of a SCADA system in order to incorporate a real time control computer system.

Electrical, Instrumentation, & Controls

ALEC ZAYCHIK, PE

Mr. Zaychik is experienced in power distribution, instrumentation, and controls, Alec Zaychik has successfully led over 400 design projects in the Water and Wastewater Treatment industry. He specializes in electrical system design for key wastewater processes, including pump stations, headworks, fine screens, and chemical treatment systems. Mr. Zaychik was involved in numerous Municipal projects with Henry, Houston, DeKalb, Rockdale, Gwinnett, Hall, Forsyth, Fulton, Cobb, Cherokee, Dawson Counties, the City of Atlanta, and many other Water/Wastewater Authorities in Florida, Georgia, and Alabama.

Name of Firm:

EDEC, Inc.

Title:Electrical, Instrumentation,
& Controls**Education:**M.S.E.E. Electrical
Engineering, Belarussian
Polytechnical InstituteEngineering Classes:
Georgia Institute of
Technology**Registrations/
Certifications:**Professional Engineer,
Florida, No. 67196**Professional Affiliations:**National Council of
Examiners
for Engineering and
Surveying (NCEES)**Office:**

Duluth, GA

**Percentage of Time to be
Assigned Full-Time to this
Project:**

60%

Years of Experience:

35

Years with EDEC:

20

Key Expertise:

- Power Systems: Extensive experience in electrical power distribution, including emergency generator systems (single/multi-unit with syncing gear), multi-power source configurations, and UPS systems.
- Instrumentation & Controls: Proficient in designing SCADA-integrated control systems, ranging from standalone units to multi-node networks, with expertise in PLC/HMI platforms like Allen-Bradley, Modicon, and Siemens.
- Construction Support: Development of electrical, controls, and instrumentation construction documents (power, controls, lighting, grounding), along with construction administration, start-ups, and inspections.

Relevant Experience:

- ◆ DeKalb County Regional Sewage Pump Station, Lithonia, GA
- ◆ Binderholz Wood Processing plant and pump station, Live Oak, FL
- ◆ I-20 Booster Pump Station Upgrade, Newton County, GA
- ◆ Bailey Sewage Lift Station, Newton County, GA
- ◆ Shakerag WRF Fine Screens and Compactor Replacement, Forsyth County, GA
- ◆ Douglas WWTP, City of Douglas
- ◆ Pumpkinvine WWTP Expansion, Paulding County, GA
- ◆ Cornelia WWTP, City of Cornelia
- ◆ Bainbridge WWTP Improvements, Bainbridge, GA
- ◆ Stockbridge WWTP Pole Barn, Stockbridge, GA
- ◆ Auburn WTP, City of Auburn
- ◆ Thomson WWTP Improvements, Thomson, GA
- ◆ Blue Ridge WPCP Improvements, City of Blue Ridge, GA
- ◆ Moultrie WWTP Screen Addition, City of Moultrie
- ◆ Summerville WTP Upgrades, City of Summerville
- ◆ Augusta WTP Upgrades, City of Thomson
- ◆ Forsyth County WTP Ozone Generators Replacement, Forsyth County, GA

JAMES WARNER, PE

Mr. Warner has been employed in the engineering field since 1989. He has worked from the ground level up as a CAD production specialist to his current position as a Civil South Chief Engineer. He has a broad range of design, permitting, and management experience in federal, state, and private civil engineering projects. His experience ranges several states but primarily in the state of Florida. His experience includes roadways (from local, rural sections to urban, sections); stormwater master drainage systems; commercial, industrial, military and residential developments; utility systems (water mains, force mains, gravity sanitary sewer systems, and reclaimed water mains); and numerous small site development plans.

Name of Firm:

Tetra Tech, Inc.

Title:

Civil/Site

Education:

BS, Civil Engineering,
University of Central Florida

AS, Drafting and Design,
Valencia Community
College

Registrations/ Certifications:

Professional Engineer,
Florida, No. 61871

Professional Affiliations:

Florida Engineers Society
National Society of
Professional
Engineers

Office:

Orlando, FL

Percentage of Time to be Assigned Full-Time to this Project:

40%

Years of Experience:

35

Years with Tetra Tech:

32

Northwest Regional Water Reclamation Facility Expansion Design-Build, Hillsborough County, FL.

Quality Control Civil/Site Engineer. Provided improvements to increase the permitted capacity from 10.0 MGD to 30.0 MGD on an annual average daily flow basis. The expansion included a new headworks (screening and degritting), inline flow equalization and influent flow distribution box; retrofit of existing biological nutrient removal (BNR) basins to enhance nitrogen removal and six additional 5-stage BNR treatment trains, odor control systems, additional clarifier flow splitter box and secondary clarifiers, new sodium hypochlorite storage tanks and associated chemical feed pumps, new sodium bisulfite storage and feed system for de-chlorination, new RAS pump stations, additional deep bed filters, additional chlorine contact basins, additional effluent transfer pumps and a new reclaimed water pump station, additional reclaimed water storage tanks (pre-stressed concrete and steel), new power feed to the site and additional standby power facilities, and electrical and instrumentation improvements.

Pulp and Paper Mill WWTF Modifications, Effluent Pump Station, and Outfall Design-Build, Confidential Client, Southeastern United States.

Lead Civil Engineer. Led the civil engineering services for the north project for permitting and civil related site work. Civil Design for a new clarifier and pump system, cooling tower, process dewatering system, and associated pipe extensions to change the treatment discharge process from industrial wastewater. State required modifications to reduce pollutant loading from the industrial process. Permitting included State environmental protection, City R/W, water, and reuse extension.

Cypress West Wastewater Treatment Plant, Poinciana, Toho Water Authority, FL.

Lead Civil Engineer. Led the civil engineering services to increase permitted capacity to 6.0 MGD. Responsible for the design and permitting for the conditional use application, Osceola County Site Development Permit, and Florida Department of Environmental Protection Environmental Resource Permit. The project consisted of design, permitting, bidding, and construction services for the expansion of an existing wastewater treatment plant.

Apopka WRF Plant Expansion, Apopka, FL. Lead Civil/Site Engineer for the plant expansion from a permitted 4.5 to 8.0 MGD on an annual average daily flow. Responsible for the site, geometry and stormwater design, and permitting. Permits included Florida Department of Environmental Protection and City review.

Dayton Lime Reclamation Improvements, Dayton, OH. Civil Engineering and site planning support. To the City of Dayton to support the design of a 125 dtpd lime processing facility with scales to improve material handling on site and receive wet and deliver dry lime efficiently.

Cypress Lake Alternative Water Supply Facility, Tohopekaliga Water Authority, FL. Civil Engineer Design. Concepts and provide permitting input to the site plan and development needs for the water treatment facility. Provide input and coordination for the preliminary design report for the civil and site planning aspects of the project.

Poinciana Wastewater Treatment Plant #2, Tohopekaliga Water Authority, FL. Project Engineer. Responsible for the conditional use application and County, Florida Department of Environmental Protection (FDEP) stormwater, and county engineering permitting. The project consisted of design, permitting, bidding and construction services for the expansion of an existing 3.0 MGD wastewater treatment plant to provide a capacity of 6.00 MGD.

Perry Wastewater Treatment Plant Phase 2 Expansion, Perry, GA. Civil Drawing Review. Independent Technical Review. Review 905 drawings for submittal to client.

6.0 MGD Advanced Wastewater Treatment Plant, Utilities Commission, City of New Smyrna Beach, FL. Site/Civil Engineer for improvements. To the UCCNSB's wastewater transmission system consisted of permitting, design, and construction of two 15.0 MGD pump stations, and various improvements to existing stations throughout the service area. Development of the new wastewater treatment plant (WWTP) site consisted of site selection, ecological assessments, and resolution of various site zoning issues. The WWTP included permitting and design of a pretreatment structure (fine screening and grit removal), a 5-stage biological nutrient removal system (fermentation, first anoxic, aeration, second anoxic and re-aeration basins), secondary clarifiers, continuous backwash deep bed filters and high-level disinfection. The requirements of the WWTP were to provide advanced levels of treatment due to the requirements for wet weather discharge into the Indian River Lagoon. The WWTP also included Class B lime sludge stabilization facilities that could be upgraded to produce a Class A product.

Camelot Water Reclamation Facility Expansion Study, Toho Water Authority, FL. Senior Civil Engineer. Tetra Tech developed an expansion plan to provide a total plant capacity of 6.5 MGD on an annual average daily flow (AADF) basis, up from the existing 5.0 MGD. The project included examination of flow trends, influent characteristics, unit process loadings, hydraulics, and historical performance. performance as well as modelling and evaluation of

alternatives. Significant effort was directed towards evaluating operations during construction, maintenance of acceptable levels of treatment during construction, and minimization of bypass pumping and temporary facilities. Additionally, the project included developing a significant reclaimed water storage and repumping concept to improve system pressures and delivery and maximize reuse potential.

Camelot Water Reclamation Facility Expansion, Toho Water Authority, FL. Senior Civil Engineer. Based on a 2020 study also conducted by Tetra Tech, our firm developed an expansion plan to provide a total plant capacity of 6.5 MGD up from the existing 5.0 MGD. Tetra Tech developed an expansion plan to provide a total plant capacity of 6.5 MGD on an annual average daily flow (AADF) basis. Expansion improvements include structural rehabilitation of the existing headworks and influent pump station, influent pump replacement, BNR process structure modifications, new internal recycle pumps, additional blowers, three new clarifiers with splitter box and RAS pumping facilities, additional disc filters effluent pumping improvements, off-site reclaimed water storage and pumping facilities, 20-30-inch reclaimed water transmission mains, and civil, stormwater, electrical, standby power, and instrumentation and control improvements. Additionally, the project included developing a significant reclaimed water storage and repumping concept to improve system pressures and delivery and maximize reuse potential. Construction Value: \$37,000,000 (estimate).

Estero Boulevard Water Main Improvements Phases 2-4, Town of Fort Myers Beach, FL. Sr. Civil Engineer. Design and permitting for segments 2-4. As part of the Fort Myers Beach refresh program, the Town and Lee County are providing water, sewer, and streetscape improvements along Estero Boulevard. As a consultant for the Town for stormwater improvements, multiple joint outfalls were modeled, designed, and constructed to provide relief for runoff collected on Estero Boulevard. In total, more than 15 outfalls will provide a connection to Estero Bay to improve the nuisance flooding conditions within the County and Town right-of-way, increase water quality discharged into the Bay, and prevent tidal backflow into the streets.

ALBERTO ABARCA, PE

Mr. Abarca has seven years of experience in utility engineering. He has provided engineering support as project engineer for scoping, utility coordination, design, permitting, construction administration, inspections and certifications for numerous public sector projects, including water main, raw water main, reclaimed water main, force main, lift station and gravity sewer projects. He has trenchless experience including directional drills and jack and bores under railways, major roadway crossings, subaqueous crossings and others.

Name of Firm:

Tetra Tech, Inc.

Title:

Grant Management

Education:

MS, Environmental/
Environmental Health
Engineering,
Florida International
University

BS, Industrial Engineering,
Universidad Rafael
Urdaneta, Maracaibo,
Venezuela

Registrations/ Certifications:

Professional Engineer,
Florida, No. 94299

Professional Affiliations:

American Water Works
Association

American Society of Civil
Engineers

Office:

Orlando, FL

Percentage of Time to be Assigned Full-Time to this Project:

60%

Years of Experience:

7

Years with Tetra Tech:

7

Grant Management Services; City of Hollywood, FL. The Grant Management Services project for the City of Hollywood involves providing comprehensive support to ensure effective oversight and coordination throughout the entire grant process. This includes coordinating meetings, reviewing grant timelines and requirements, scheduling, and facilitating attendance at key meetings with both the City and the awarding agency. The project will assist in obtaining and preparing additional documentation necessary for grant applications, including responding to any agency requests for further information. Support will also be provided in the preparation of figures, tables, charts, cost breakdowns, and other supporting materials to strengthen grant applications or revisions. Additionally, the project will assist with managing the workflow and executing the grant plan, including writing narratives and gathering data for the applications. Grant applications will be prepared and submitted to the appropriate agency with all required supporting documentation. The project will also involve ongoing evaluation, monitoring, and administration of the grant on behalf of the City, as well as coordination with subcontractors and City financial staff to ensure proper monitoring and compliance. Furthermore, assistance will be provided with reimbursement requests, time extensions, and any necessary work plan modifications to ensure the success of the grant.

Stormwater Pump Station Condition Assessment, City of Hollywood, FL. Civil Engineer. Prepared a technical memorandum of the City's 10 stormwater pump stations ranging in size and capacity between 10 HP to 60 HP and 400 GPM to 21,200 GPM. Performed a pump station discharge analysis, computed the stormwater runoff volume for the sub-basins contribution to each of the pump stations, converted City's existing stormwater model ICPR to version 4, and modeled year 2020 and 2050 for five of the pump stations. Studied multiple model runs under normal groundwater and King Tide conditions for the two different years and performed model runs incrementing the pump's capacity by 10-, 20-, and 30-percent. Provided two alternatives for pump stations SW-06 and SW-08, which need to improve the discharge piping configuration.

Replacement of Hallandale Beach Force Main and Large User Meter 07 (LUM-07), City of Hollywood, Hollywood, FL. Project Engineer. Provided engineering support for the construction of approximately 3,600 LF of 16-inch DR-18 PVC force main; 620 LF of 20-inch DR-11 HDPE force main installed via horizontal directional drill (HDD); line stops; plug valves; air release valves; LUM-07 site improvements, including complete demolition and reconstruction; installing new 10-inch meter; bypass system; associated improvements; and other miscellaneous appurtenances. Complexity of the project involved trenchless Florida Department of Transportation right-of-way (ROW) crossing and coordination with another municipality (City of Hallandale Beach). Deliverables and tasks

included development of a technical memorandum to properly size the new force main and analyze multiple routes; completion of accelerated design plans and specifications for 90 percent and bid set submittals; internal coordination with other engineering disciplines for structural and electrical engineering support, especially for LUM-07 site improvements; coordination with subconsultants; and review of survey, geotechnical, and subsurface utility exploration reports; utility coordination; securing construction permits with Broward County/Florida Department of Environmental Protection (FDEP) and ROW use permit with FDOT; bid support, including review of low bidder's qualifications; providing recommendation of award letter; assisting engineer-of-record with multiple construction administration tasks, including pre-construction meetings, shop drawings, requests for information, change orders, and pay application review, as-built drawing review, record drawings preparation, and clearance permit with Broward County/FDEP.

18-inch Force Main Replacement along NE 135th St between Biscayne Blvd and NE 16th Ave, City of North Miami, FL. Project Engineer. Provided engineering support for the design, permitting, bidding and construction administration and observations for the construction of approximately 1,830 LF of 18" DR-18 PVC, 200 LF of 10" DR-18 PVC FM, 143 LF 20" DR-11 HDPE w/36" steel casing FM via Jack and Bore under FEC railroads, 10"-18" plug valves, line stops, utility conflict structure, air release valves, fittings, and other appurtenances. Tasks included, utility coordination, design markups, plans and specifications, permitting with multiple agencies including FDEP, Miami-Dade RER, FEC, SFWMD, City of North Miami Building Permit, bid support including bids tabulation and review, recommendation of award package, construction administration services including shop drawings review.

Royal Poinciana Sewer Expansion, City of Hollywood, FL. Project Engineer for septic to sanitary conversion project from Sheridan Boulevard to Taft Street and from Federal Highway (US1) to N. 21st Avenue. Project included three preliminary sanitary sewer system design layouts for addition of a new lift station location on Coolidge Street, evaluation of the existing E-22 lift station at the current location, and a split-flow plan for flows being directed to a lift station at both E-22 and Coolidge Street. Assisted in the preparation of a preliminary routing and flow evaluation technical memo for approval prior to the final design layout and lift station siting. The project consisted of approximately 26,000 feet of new gravity sewer piping ranging from 8- to 12-inches in diameter, over 90 new manholes, laterals to each parcel for future connections and abandonment of the existing septic

tanks, abandonment of four (4) existing lift stations with associated tie-ins to the new gravity sewer system, abandonment and placing out of service existing force main piping, conflict resolution and soft digs due to the heavily congested corridors with existing utilities and duct banks, and relocation of water mains where necessary. In addition, the project included lift station siting, new duplex lift station design to handle the area's wastewater flows, and new control panel and electrical, mechanical, and structural system design. Permitting includes Broward County Environmental Protection and Growth Management (EPGMD) and City of Hollywood Building Department permitting for the wastewater system and Broward County right-of-way use for facilities located on N. 21st Avenue. Services included bidding services and evaluations with recommendation of award and construction administration services including monthly progress meetings, field inspections, review and approval of shop drawings, requests for information responses, record drawing production, substantial and final completions, and certifications.

Pump Station R/R Package 40, 47 and 48 Improvement (Multiple Ongoing Projects), Orange County Utilities (OCU), FL. Project Engineer. Providing engineering support for preliminary design report revisions and construction documents for multiple pumps station rehabilitation/reconstruction projects. Tasks include assisting engineer-of-record with updates to design as existing conditions and Owner's determinations are made based on new reports or economical and technical feasibility. Tasks for package 40 include construction administration tasks such as shop drawings/submittals review. Tasks for package 47 include revisions to pumps selection, coordination with vendors, revisions to wet well design based on updated OCU standards and specifications, conceptual design for proposed gravity sewer relocation, and coordination with odor control subconsultant. Tasks for package 48 include assisting engineer-of-record with plans for 60 percent submittal based on approved preliminary design report and updated OCU standard details.

MICHAEL SUTHERLAND, PE, CEM, LEED AP BD+C

Mr. Sutherland has 15 years of engineering and management experience in building mechanical systems for municipal, federal, commercial, and industrial clients. His specific design experience includes heating, ventilation, and air conditioning (HVAC), plumbing design, fire protection design, LEED design submission, drafting, and construction administration for water and wastewater treatment plants and various other projects. He has experience with several codes and standards, including the International Building Code; American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standards.

Name of Firm:

Tetra Tech, Inc.

Title:

Plumbing & HVAC

Education:

BS, Mechanical Engineering, University of Central Florida

Registrations/ Certifications:

Professional Engineer,
Florida, No. 78587

Certified Energy Manager
(CEM), No. 25193

Leadership in Energy and
Environmental Design
Accredited Professional,
Building Design &
Construction (LEED AP
BD+C), No. 1080419

Office:

Miami, FL

Percentage of Time to be Assigned Full-Time to this Project:

60%

Years of Experience:

10

Years with Tetra Tech:

3

Nansemond Treatment Plant Advanced Nutrient Reduction Improvements, Phase II Design-Build, Hampton Roads Sanitation District, Suffolk, VA.

Mechanical Engineer. Project includes design, permitting, funding assistance, construction, testing, start-up, and training services to increase the treatment plant capacity from 30.0 to 50.0 MGD to treat combined wastewater flows from two service areas and meet the client's Sustainable Water initiative for Tomorrow (SWIFT) influent water quality targets for future work. The expansion includes a new influent distribution box, primary clarifier, primary effluent equalization tanks, aeration basins and blowers, secondary clarifiers, return activated sludge and nitrate recycle pumping, chlorine contact tank, primary gravity thickeners with integrated fermentation, primary solids screening, dewatering centrifuges, and odor control systems. Improvements include the existing five-stage Biological Nutrient Removal (BNR) treatment trains, methanol feed system, sodium hypochlorite feed system, dewatered solids storage and loadout, non-potable water pumping, plant drain pumping, and the effluent pump station. Design includes process improvements to implement Partial Denitrification Annamox (PdNA) for shortcut nitrogen removal. Electrical scope includes replacement of the medium voltage switchgear and distribution system and modifications to the existing generator paralleling switchgear. The project uses the design-build delivery method and receives federal funding from the Water Infrastructure Finance and Innovation Act (WIFIA) and state funding from the Virginia Water Quality Improvement Fund.

Lift Station No 10 Rehabilitation Improvements, New Smyrna Beach Utilities, City of New Smyrna Beach, FL.

Mechanical Engineer. Rehabilitation of an existing master lift station to convert to a triplex lift station (3-100 hp pumps) with a design flow of 3,220 gallons per minute (GPM) to replace many of the lift station components as they were beyond their useful life. Project included a permanent site generator and fuel tank, as well as major structural improvements, including a crane hoist for servicing pumps at the lift station. Preparing construction documents, as well as permitting, bidding procurement, and construction administration services

Renewable Energy Facility 2, Solid Waste Authority of Palm Beach County, Palm Beach County, FL.

Mechanical Engineer. Mr. Sutherland served as the lead mechanical engineer for the \$120 million portion of the design and construction of the new \$672 million, 3,000-tons per day (TPD) WTE facility. The project included HVAC, plumbing, and fueling design for the tipping floor building, the refuse pit building, air pollution control building, the boiler building, the ash handling building, the maintenance/warehouse building, a Platinum LEED®-certified administration building/visitor center, Sky Bridge, and a fuel dispensing facility. The project also included the design and construction of one of the largest rainwater harvest systems in the United States comprising of a rainwater collection

system from 7 acres of roof area. Construction Cost: \$672M.

Lift Station 1 and 7, City of Orlando, FL. Mechanical Engineer QC. Provided quality control for the project, involving the reconstruction of master lift station No. 001 & 007, both triplex wet-pit/dry-pit pumping stations in the same site and are capable to pump to two different wastewater treatment plants owned by the City of Orlando. Due to the age and condition of the existing facilities, and to address corrosion and confined space concerns, the City teamed with Tetra Tech to install a new 20 MGD lift station on a new site nearby. In addition, Mr. Sutherland provided construction administration assistance for the odor control system through start-up.

Golden Gate Wastewater Engineer of Record, Collier County, FL. Project Engineer. Tetra Tech was selected as the wastewater Engineer of Record for Golden Gate City within Collier County, FL. This project consists of several tasks, including conversion of an existing extended air wastewater plant to high-level disinfection; preparation of a 20-year wastewater master plan; design of a new 8.0 MGD Membrane Bioreactor (MBR) wastewater treatment plant; and collection and transmission system improvements, including rehabilitation of over 36 miles of sewer mains, 28 lift stations, and 437 manholes.

Golden Gate Wastewater Treatment Plant Expansion, Collier County, FL. Mechanical Engineer. Expansion of the existing 1.5 MGD AADF complete mix activated sludge wastewater treatment facility to 4.0 MGD AADF. The design of the facility includes HVAC systems for multiple buildings on the site including a split system variable air volume system for the administration building, split system cooling for multiple electrical buildings, and general ventilation for other facilities. The mechanical design included industrial ventilation systems for the blower/generator rooms, dedicated split system units for electrical rooms, and a variable air volume split system HVAC system with an energy recovery ventilator for the control building. The project also included the design of toilet ventilation systems and plumbing water and sanitary systems for the control building and a performance-based wet pipe sprinkler system. A new fuel system was included for the two new Tier-4 generators located under a canopy next to the generator room. The fuel system included two aboveground diesel storage tanks, interior day tanks with transfer pumps, a fuel filtration/management system, and an onsite leak/level detection system with SCADA readout. Also included is a diesel exhaust fluid tank and transfer system with interconnection into the tier 4 generator carbon emissions module.

Lift Station No 3 Rehabilitation Improvements, New Smyrna Beach Utilities, City of New Smyrna Beach, FL. Mechanical Engineer. Rehabilitation of an existing master lift station to convert to a triplex lift station (3-15 hp pumps) with a design flow of 2,028 gallons per minute (GPM) to replace many of the lift station components as they were beyond their useful life. Project included 1,600 linear feet of wastewater force main improvements from lift station No. 4, as well as a permanent site generator and fuel tank, and major structural improvements, including a crane hoist for servicing pumps at both lift station No. 3 and lift station No. 2.

Lift Station 28, 54, 60 and 67 Improvements, City of Orlando, FL. Mechanical Engineer. Engineer of Record for the fuel system design and supported construction administration services. The project involved rehabilitation of four existing lift stations within the service area during the bid and construction phases, which included addressing City comments, coordinating with sub-consultants, and services during construction such as shop drawing review and responses to requests for information. Mr. Sutherland served as the Mechanical Engineer of Record for the fuel system design and supported construction administration services.

Town Center and South Central Master Pump Stations Improvements, Orange County, FL. Mechanical Engineer. Design and construction management services for completely renovating the Town Center Master Pump Station (MPS) and replacing the South Central MPS. The Town Center MPS is a triplex station, and the improvements included removal of all equipment and facilities except the wet well, which was rehabilitated and coated, new odor control system, standby power generation, and three 90 hp submersible pumps. This station will have a capacity of 5.5 MGD. The new South Central MPS will replace the existing 26-year-old station. The South Central MPS includes dual wet wells, odor control, standby power, electrical building and six 140 hp submersible pumps. This station will have a pumping capacity of 26.1 MGD. Mr. Sutherland provided the design and construction services for the electrical buildings and the emergency generator fuel systems at both sites.

JAKE OLDENBURGER, PE, CFM, ENV SP

Mr. Oldenburger has over 16 years of experience in civil engineering, stormwater management, land development, and construction. His expertise lies in flood resiliency design and feasibility studies, hydraulic analyses and calculations, stormwater management reports, flood studies, soil erosion and sediment control designs and reports, site grading and earthwork analyses, survey, construction coordination and inspections. Over the past few years, he has specialized in resiliency and flood mitigation planning in response to hurricanes in New York, Texas, and Florida.

Name of Firm:

Tetra Tech, Inc.

Title:

Pump Station Resiliency

Education:

ME, Civil Engineering,
Stevens Institute of
Technology

BS, Civil Engineering,
Rensselaer Polytechnic
Institute

Registrations/ Certifications:

Professional Engineer,
Florida, No. 89161

Certified Floodplain
Manager (CFM)

Envision Sustainable
Professional (ENV SP)

Office:

New York, NY

Percentage of Time to be Assigned Full-Time to this Project:

25%

Years of Experience:

16

Years with Tetra Tech:

7

Design Criteria Professional for Brickell Bay Drive Improvements, City of Miami, FL.

Certified Flood Plain Manager. Preparation of a design criteria package for Brickell Bay Drive from SE 14th Street to SE 15th Road. The purpose of this signature project is to adapt Brickell Bay Drive and protect it from future storm surge and sea level rise while encouraging waterfront connectivity, creating open space, and improving the natural environment and the local ecosystem. Creating a long-term stewardship structure that protects and enhances quality of life and public and private investments is essential to keeping the Brickell Bay Drive waterfront area a functional, long-term resilient and adaptable asset.

NYC Department of Design and Construction, Red Hook Coastal Resiliency, Brooklyn, NY.

Mr. Oldenburger is the Project Manager on a consultant team that is designing the flood protection improvements for this \$100 million coastal resiliency project, which is partially funded by a FEMA's Hazard Mitigation Grant Program. Red Hook area of Brooklyn is categorized as a low-lying, coastal area with the greatest risk of flooding in hurricane-strength storms. Tetra Tech is leading the detailed analysis of the interior drainage system, which is comprised of combine sewers and major interceptors. Because the project is receiving FEMA funding Tetra Tech is leading the benefit-cost analysis, which required a detailed evaluation of finish floor elevations of approximately 1,000 structures.

NYC Department of Environmental Protection, Onsite Green Infrastructure, Schools, Brooklyn/Queens, NY.

Mr. Oldenburger is the Project Manager leading the planning and design of approximately \$15 million in green infrastructure improvements at eight New York City public schools in Brooklyn and Queens. The project includes subsurface storage chambers, porous paving and other various site improvements. The sites range in size from 1 to 15 acres and are numerous constraints to work around. Planning efforts included a detailed site visit and geotechnical investigation to characterize soil conditions and determine infiltration rates. The design of the green infrastructure is in accordance with the NYCDEP On-site Design Manual. The Green Infrastructure Program is part of the city's CSO consent order to manage stormwater and reduce combined sewer overflows. The goal of the program is to manage the equivalent of one inch of precipitation on 10% impervious surfaces thereby improvements the water quality and promoting sustainability.

NYS Governor's Office of Storm Recovery, East Rockaway High School Green Infrastructure Retrofit / East Rockaway, NY.

Mr. Oldenburger was the Project Manager for the planning and design of approximately \$4.1 million in green infrastructure improvements at East Rockaway High School on Long Island. The project includes subsurface storage chambers, synthetic turf, porous paving, and rain gardens. The existing site is constrained on all four sides by school buildings and the Mill River resulting in very limited work areas. The project

included a detailed site investigation walk through with a review of existing conditions and a geotechnical investigation (boring) plan and geotechnical testing to determine field and laboratory soil characteristics, soil permeability rates, and depths to groundwater table. The final improvements include five (5) new rain gardens, improvements to the school's turf fields, parking lot improvements, and retrofitting of the existing failing subsurface drain system. Storm surge mitigation improvements are also incorporated into the design that include backflow prevention devices and an elevated bulkhead.

PS 324, Canal Street Pumping Station, NYCDEP, Manhattan, NY.

Lead Civil Engineer. Design and design services during construction for the reconstruction of the Canal Street combined sewer pumping station with a dry weather flow of 0.31 MGD and a total station capacity of 2.2 MGD. The Canal Street Pump Station is located within a travel lane and pedestrian sidewalk along Canal Street, approaching the Holland Tunnel. The facility is located within the 500-year flood plain requiring the need to also address flood mitigation and resiliency measures. The scope of work includes the construction of a new pump station on Sullivan Street approximately 800 feet from the existing pump station on Canal Street, which is in between MTA Subway Lines 1 and A, C, E. The services include the full detailed design submittals (45%, 90%, and Final), bidding services, and design services during construction. Permitting required Bureau of Wastewater Treatment; Bureau of Engineering, Design, and Construction; and Bureau of Water and Sewer Operations coordination and collaboration as well as Community Board, Public Design Commission, Department of Buildings, MTA, New York City Department of Transportation approvals.

PS 313, 235th Street Pumping Station, NYCDEP, Bronx, NY.

Project Engineer. Facility planning, design and DSDC for the complete overhaul of the 235th Street combined sewer pumping station with a dry weather flow of 1.5 MGD and a total station capacity of 3.5 MGD. The previous 1960's design included two belt-driven pumps with a bypass to handle wet weather flow exceeding pump station capacity. The improvement project for BWT included upgrading outdated equipment and the physical structure which are both in poor condition. Installation of a new 1,100 LF 24-inch force main and 6-inch water main is also included. The services included the preparation of a Facilities Plan Assessment, Engineer's Basis of Design Report, full detailed design submittals (30%, 60%, 90%, and Final), bidding services, and DSDC. Permitting required BWT, BEDC, and BWSO coordination and collaboration as

well as Community Board, PDC, DOB, NYCDOT, and NYC Parks approvals.

Rockaway/Nameoke Pumping Station, NYCDEP, Queens, NY.

Project Engineer. Facility planning and design services on BWT's behalf for the Nameoke Pumping Station drainage area. The improvements were part of the evaluation to increase station capacity resulting from the Downtown Far Rockaway Urban Renewal Plan (Plan) and DEP's state of good repair program. The proposed Plan focused on investing in the area's existing infrastructure, as well as supporting new commercial and residential developments, to strengthen and revitalize the community. The Plan included a \$91M revitalization investment with sewer and road infrastructure improvements. The Nameoke Pumping Station is located immediately adjacent to the Plan's Urban Renewal Area but was not in operation and for all practical purposes abandoned. DEP initiated the Facility Planning process to determine the scope of work to address the community's needs for the Nameoke Pumping Station.

JFK International Airport Storm Surge Flood Mitigation (17 Outfalls), PANYNJ, Jamaica, NY.

Assistant Engineer for Stage I, III, and IV design services for improvements to JFK's drainage system to mitigate damages from storm surge events. The improvements include storm surge devices at 17 different locations around the airport ranging from single 24"x24" flapgate up to triple 16'x18' flapgates. Close coordination and evaluation throughout the design process with the Engineering Department, Storm Mitigation and Resilience Office (SMRO), and JFK international staff was a key piece to the project's success to date.

Port Newark Fire Protection Building 111 Resiliency Improvements, PANYNJ, Newark, NJ.

Project Engineer for Stage I, III, and IV services for the facility improvements to protect the high service and fire protection building electrical and mechanical equipment for Port Newark. Tetra Tech was selected by the Port Authority of NY & NJ to investigate means and methods to improve the resiliency of Building 111 to significant coastal storm surge events, such as Hurricane Sandy. Tetra Tech will perform design analysis to investigate pragmatic and cost-effective measures to fully protect the building from water damage due to Hurricane Sandy-type storm surge. Electrical, fire/plumbing, HVAC equipment, and appurtenances will be replaced, relocated, or installed. These include, but are not limited to pumps, controls, conductors, panels, and other appurtenances. Multiple disciplines such as architectural, civil, structural, mechanical, and fire suppression were included in the design.

JASON BURKETT, PE, SE

Mr. Burkett is a senior structural engineer who is experienced with many structural systems including: reinforced concrete, steel framing, composite steel, masonry, prestressed/precast concrete, tilt-up concrete panels, light-gage steel, timber, and aluminum. He leads several groups of structural engineers within Tetra Tech throughout the nation to ensure that quality standards are maintained for project deliverables. His attention to detail and wide variety of experience brings valuable perspective to each project he reviews or designs.

Name of Firm:

Tetra Tech, Inc.

Title:

Structural

Education:

MS, Civil Engineering
(Structures and
Foundations), University of
Central Florida

BS, Civil Engineering
(Structures Emphasis),
University of Central Florida

Registrations/ Certifications:

Professional Engineer,
Florida, No. 69879

Professional Affiliations:

American Institute of Steel
Construction

American Concrete Institute

Office:

Louisville, KY

Percentage of Time to be Assigned Full-Time to this Project:

75%

Years of Experience:

19

Years with Tetra Tech:

13

Lift Station No 12 Replacement Improvements, New Smyrna Beach Utilities, City of New Smyrna Beach, FL.

Structural Engineer. Design of a new duplex lift station (2-10 hp pumps) with a design flow of 500 gallons per minute to replace the existing lift station which was beyond its useful life. Project included 700 linear feet of wastewater force main improvements, and a manifold to the existing 24-inch force main along Mary Avenue to bypass a secondary gravity system.

Lift Station No 5 Replacement Improvements, New Smyrna Beach Utilities, City of New Smyrna Beach, FL.

Structural Engineer. Design of a new duplex lift station (2-5 hp pumps) with a design flow of 226 gallons per minute to replace the existing lift station which was beyond its useful life. Removed lift station No. 35 from service, which was upstream of lift station No. 5, and designed approximately 2,300 linear feet of gravity wastewater improvements to discharge to the new lift station No. 5.

North 1 Utilities Extension Project (UEP), City of Cape Coral, Cape Coral, FL.

Senior Structural Engineer. The City of Cape Coral has extended utility services to its residents through its Utility Extension Program (UEP). Tetra Tech was selected to be the design engineer for the North 1 UEP. This UEP extends the City's potable water, irrigation, wastewater, and stormwater systems throughout a five square mile area within the City. The project includes surveying, hydraulic modeling, preliminary and final design, environmental services, funding assistance, permitting, and bidding services. Future phases of the project include construction management and CEI services for the nearly 8,000 new service connections. Total improvements include over 68 miles of potable water system piping; 73 miles of irrigation piping; 13 miles of wastewater force mains; 68 miles of gravity collection piping; 12 of stormwater piping; 19 new wastewater lift stations (including 2 master stations); a new dual-site potable and irrigation water storage and repump station; and 65 miles of new road construction. Estimated construction cost is expected to be \$300M.

Northwest Regional Water Reclamation Facility Expansion Design-Build, Hillsborough County, FL.

Lead Structural. The improvements included all requisite facilities necessary to increase the permitted capacity from 10.0 MGD to 30.0 MGD on an average annual daily flow (AADF) basis. The expansion included a new headworks (screening and degritting), inline flow equalization and influent flow distribution box, retrofit of existing biological nutrient removal (BNR) basins to enhance nitrogen removal and six additional 5-stage BNR treatment trains, odor control systems, additional clarifier flow splitter box and secondary clarifiers, new sodium hypochlorite storage tanks and associated chemical feed pumps, new sodium bisulfite storage and feed system for de-chlorination, new return activated sludge pump stations, additional deep bed filters, additional chlorine contact basins, additional effluent transfer pumps and a new reclaimed water pump station, additional reclaimed water storage tanks (pre-stressed concrete and steel),