



REQUEST FOR QUALIFICATIONS

ENGINEER OF RECORD PROFESSIONAL SERVICES

TOWN OF BELLEAIR, FLORIDA

SUBMITTED TO:

TOWN OF BELLEAIR | 901 PONCE DE LEON BLVD | BELLEAIR, FL
727.588.3769

SUBMITTED BY:

MCKIM & CREED | CLEARWATER, FL
727.442.7196 | MCKIMCREED.COM







May 31, 2017

Keith Bodeker
Construction Project Supervisor
Town of Belleair
901 Ponce de Leon Blvd.
Belleair, FL 33756

RE: REQUEST FOR QUALIFICATIONS ENGINEER OF RECORD - PROFESSIONAL SERVICES

Dear Mr. Bodeker and Members of the Selection Committee:

CLIENT-FOCUSED APPROACH / At McKim & Creed, we always put our client's needs first with our corporate vision of "People Helping People to Achieve their Goals and Dreams." We pursue this vision by striving to understand and address your concerns, challenges and goals. The Town of Belleair has emerging needs ranging from stabilization and erosion control to improvements to the Town's water treatment facility. McKim & Creed has the breadth of experience, professional staff and proximity to help the Town achieve these objectives. We are pleased to offer Mr. Phil Locke, PE, as the services manager on this contractor. Phil will continue to build relationships with the Town staff and will leverage his 23 years of experience working in the Tampa Bay area on a wide variety of municipal projects to provide the Town with creative, cost effective and responsible services on this contract.

UNIQUE QUALIFICATIONS / Our team provides the Town with the unique combination of location, local experience and expertise. We will leverage this qualification to provide the Town with responsive services and cost-effective solutions meeting your budget and schedule for projects and services required for this contract.

Our team provides the Town with a winning combination of location, local experience and expertise.

LOCAL EXPERTISE / We will leverage our long-term relationships and experience working with the City of Clearwater, City of Largo, Pinellas County, the Florida Department of Environmental Protection, the Southwest Florida Water Management District and the Florida Department of Transportation to ensure coordination, permitting and other specific needs are easily addressed. In addition to the 10 engineering assignments we have successfully completed for the Town of Belleair, we have successfully completed 14 assignments for the City of Largo, 241 for the City of Clearwater, and 121 for Pinellas County.

PROACTIVE SOLUTIONS / Our team is familiar with several of the Town's emerging needs, including maintenance improvements for Belleair Creek. We have identified viable locations along the Creek, upstream of Harold's Lake, where an area that is easy to access and maintain can be created to reduce sediment entering into the lake. This approach will reduce the costs and time needed to dredge the lake. Additionally, we have recently worked closely with Town staff to develop a phased approach/pilot study to address the increasing chloride levels in the Town's drinking water supply wells. The Town will benefit from our recent experience with several Reverse Osmosis treatment plants, include two in the City of Clearwater.

PROVEN RECORD OF SUCCESS WITH ENGINEER OF RECORD & GENERAL ENGINEERING CONTRACTS / McKim & Creed has developed a reputation of responsiveness and dependability, as evidenced by the 38 engineer of record/general engineering contracts we currently hold in Florida. Many of these contracts include, but are not limited to, the same services required in this contract: design, administration, general civil/stormwater, construction services, water treatment, water and wastewater utilities, GIS, geotechnical, grant administration and quality assurance/peer review. Of our 38 current GEC contracts, 24 are located right here in West Florida, and many have been renewed time and time again.

We look forward to the opportunity to discuss with the Town our unique qualifications in more detail and to continue working with the Town on your most challenging projects.

Sincerely,
McKim & Creed, Inc.

Phil Locke, PE
Client/Senior Project Manager

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EXHIBIT B QUALIFICATIONS QUESTIONNAIRE

1. FIRM NAME

McKim & Creed, Inc.

2. ESTABLISHED: A. YEAR B. STATE

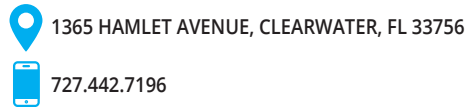
McKim & Creed was established in 1978 by Herbert P. McKim, Jr., PE, and Michael W. Creed, PE in North Carolina. Today, the award-winning company operates 20 offices throughout the US; with nine offices located in Florida (Clearwater, Tampa, Sarasota, Orlando, Fort Myers, Daytona Beach, Palm Coast, DeLand and Jacksonville). McKim & Creed has more than 460 employees, 107 of which are located in our Florida offices. We offer our clients small firm service with large firm resources.

3. FORMER FIRM NAME(S), IF ANY, AND YEARS IN BUSINESS

McKim & Creed, Inc. changed its name from McKim & Creed, PA in 2011. Our firm has been open since 1978, 40 years.

4. OFFICE/BUSINESS ADDRESS AND TELEPHONE NUMBER

Our Clearwater office is only 1.2 miles away from the town, located at:



5. BRANCH OFFICES' BUSINESS ADDRESS AND TELEPHONE NUMBER

LOCATION	ADDRESS	PHONE
Clearwater	1365 Hamlet Avenue, Clearwater, FL 33756	727.442.7196
Daytona Beach	139 Executive Circle, Suite 201, Daytona Beach, FL 32114	986.274.2828
DeLand	505 E. New York Avenue, Suite 3, DeLand, FL 32724	386.873.4517
Fort Myers	5701 Division Drive, Suite A, Fort Myers, FL 33905	239.275.8875
Jacksonville	4720 Salisbury Road, Suite 117, Jacksonville, FL 32256	904.493.6490
Orlando	5748 S. Semoran Blvd., Suite D, Orlando, FL 32822	321.233.9940
Palm Coast	29 Old Kings Road N, Suite 8B, Palm Coast, FL 32137	386.246.6300
Sarasota	551 North Cattlemen Road, Suite 106, Sarasota, FL 34232	941.379.3404
Tampa	3903 Northdale Blvd., Suite 115E, Tampa, FL 33624	813.549.3740
Sugar Hill	4536 Nelson Brogdon Blvd., Building E, Suite 2, Sugar Hill, GA 30518	770.962.4125
Ashville	370 North Louisiana Ave, Suite F-3, Asheville, NC 28806	828.252.8181
Charlotte	8020 Tower Point Dr, Charlotte, NC 28227	704.841.2588
Raleigh	1730 Varsity Dr, Suite 500, Raleigh, NC 27606	919.233.8091
Wilmington	243 N. Front Street, Wilmington, NC 28401	910.343.1048
Pittsburgh	2593 Wexford Bayne Rd, Suite 306, Sewickley, PA 15143	412.385.4132
Austin	8868 Research Blvd, Suite 407, Austin, TX 78758	512.916.0224
Dallas	4275 Kellway Circle, Suite 144, Addison, TX 75001	817.484.5695
Houston	9960 W. Sam Houston Pkwy South, Suite 200, Houston, TX 77099	713.659.0021
Norfolk	2400 Colley Avenue, Norfolk, VA 23517	757.965.2848

6. ASSOCIATES AND PRINCIPALS: NAME - TITLE- SPECIALTIES (ATTACH RESUMES)

Mr. A. Street Lee, PE, ENV SP - Senior Vice President. Mr. Lee is based in our nearby Clearwater office, and will be directly responsible for the overall services provided by McKim & Creed under this contract. He has over 32 years of experience in design and management of municipal projects that have involved multi-discipline service delivery including a wide range of civil engineering, water treatment,

bank stabilization, restoration, structural, mechanical, and electrical engineering, instrumentation & controls, permitting, architectural, landscape architectural, planning and financial consulting. As the project principal for the work assignments under this contract, Mr. Lee commits to be available to Town staff to ensure our services are responsive to your needs.

Mr. Phil Locke, PE - Senior Project Manager. Mr. Locke, based in our local Clearwater office, has provided design and construction administration services for many Tampa Bay area clients. In addition, Mr. Locke provides QA/QC reviews for numerous projects performed out of our Florida offices. As client manager, Mr. Locke will be responsible to ensure McKim & Creed provides responsive and quality service to the Town as we work together to achieve the Town's vision, goals and objectives. In his role, Mr. Locke will assist the Town of Belleair by addressing emerging and unforeseen needs through long term planning, cost effective and creative solutions and responsive quality services.

(Resumes for Mr. Lee and Mr. Locke are located in the resume section, beginning on page 10).

7. TOTAL PERSONNEL OF FIRM: A. PROFESSIONAL, B. NON-PROFESSIONAL, C. OTHER

McKim & Creed has grown to today's staff of 464 professionals; professionals who bring a wealth of knowledge, experience, capability, talent and capacity to assist the Town in your challenges ahead. McKim & Creed employs 275 professionals, 156 non-professionals and 33 individuals who fall in the 'other' category. We see key opportunities for the Town to address the sustainability of your infrastructure and we are prepared to jump in to address these areas.

MCKIM & CREED, INC., HAS 109 EMPLOYEES IN FLORIDA; 52 ARE PROFESSIONALS, 45 NON-PROFESSIONALS AND 12 FALL IN THE 'OTHER' CATEGORY.

8. KEY PERSONNEL TO BE INVOLVED IN THE PROVISION OF THESE SERVICES (NAME, TITLE, SPECIALTIES, DEGREE, REGISTRATION, YEARS EXPERIENCE)

Full resumes for our proposed staff can be found in the Additional Information section of Exhibit B.



STREET LEE, PE, ENV SP
Principal-in-Charge
BS, Civil Engineering
MBA
PE / FL / 49212
32 Years of Experience



PHIL LOCKE, PE
Client/Senior PM / Water Treatment
BS, Civil Engineering
PE / FL / 57527
23 Years of Experience



JOSEPH VICIERE, PE, BCCE
QA/QC & Peer Review
ME, Civil Engineering
PE / FL / 59533
36 Years of Experience



DAVID WEHNER, PE
Water/Wastewater Utilities
BS, Civil Engineering
PE / FL / 59541
19 Years of Experience



MITCH CHIAVAROLI, PE
Water/Wastewater Utilities / Construction Services
BS, Civil Engineering
PE / FL / 56335
30 Years of Experience



TONY PEVEC, PE, BCCE
Water Treatment
BS, Civil Engineering
PE / FL / 66706
17 Years of Experience



ERIC BROWN
Instrumentation and Controls
BSEE, Electrical Engineering
AA, General Studies
N/A
23 Years of Experience



AUBREY HAUDRICOURT, PE
Electrical
BSEE, Electrical Engineering
PE / FL / 66861
21 Years of Experience



CRAIG WELLS, PE, ENV SP

Climate Resiliency/Grants

BS, Civil Engineering

PE / FL / 64161

25 Years of Experience



ROBBIE FUSINATO

GIS

Geospatial Information Systems Specialist

N/A

<1 Years of Experience



CURTIS BURKETT, PE, LEED AP

Civil / Stormwater

BS, Civil Engineering

PE / FL / 41841

37 Years of Experience



JOHN KILGORE, PE

Traffic Engineering

BS, Civil Engineering

PE / FL / 47942

27 Years of Experience



JOE RESENDES, CCCA

Construction Services

Leadership, Management, Communications, US Army Sergeant Major

Certified Construction Contract Administer

38 Years of Experience



WAYNE DRIGGERS, PE

Geotechnical

BS, Civil Engineering

PE / FL / 58013

22 Years of Experience



DIANE ACHINELLI

Construction Services

AS, Architectural Design & Construction Technology

Qualified Stormwater Management Inspector

33 Years of Experience



WESLEY PADOLL

Pavement Management

Certifications: Drafting, ACI Concrete Field and Strength Testing, Aggregate Base Concrete, Asphalt Lab and Mixing, Earthwork & others

N/A

26 Years of Experience



TOM HALSTEAD, PSM

Surveying

BA, Mathematics

AS, Geomatics

PSM / FL / 5770

34 Years of Experience



SAM HOBI, PE

Structural/Restoration

BS, Civil Engineering

MS, Structural Engineering

PE / FL / 59360

29 Years of Experience

Getting the right team for the project is the first step in exceeding your expectations. We have assembled a highly qualified, experienced and local team with expertise in all technical areas included in the Request for Qualifications.

OUR EXPERTISE WITH THE TOWN'S EMERGING NEEDS COMBINED WITH OUR LOCATION WILL PROVIDE THE TOWN WITH SERVICES EXCEEDING YOUR EXPECTATIONS

The McKim & Creed team has the availability to meet all project requests assigned under this contract. Because of our highly skilled work force and location, staff availability can be readily managed to meet any project requirement. The team has decades of experience on hundreds of projects virtually identical to those that will be assigned under this contract as well as the capacity to meet all of the Town's needs.

An organizational chart of the full team is provided on the following page.

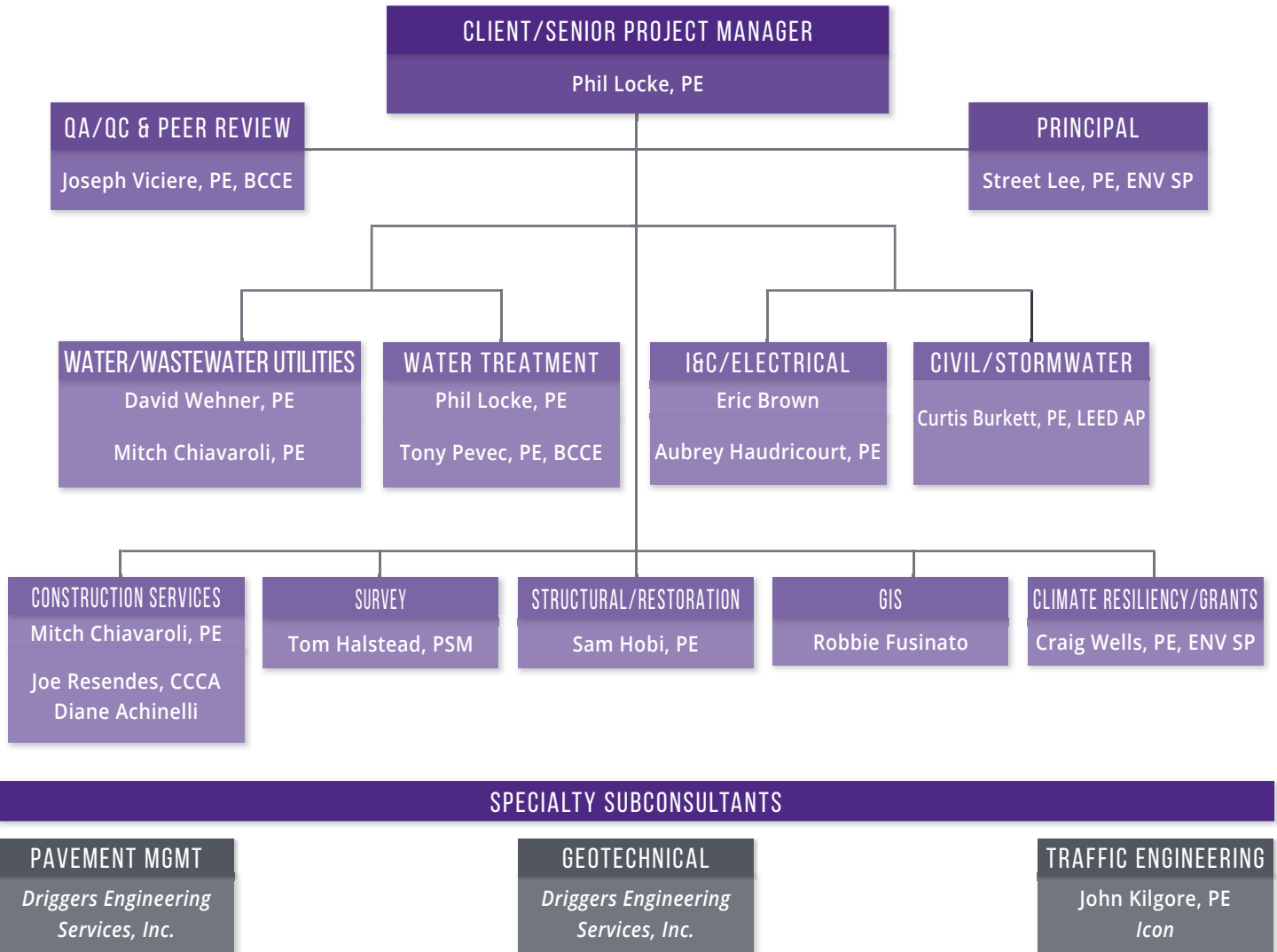
ORGANIZATIONAL CHART



TOWN OF BELLEAIR

KEY

- Key Staff
- Support Disciplines
- Subconsultants



MCKIM & CREED CORE VALUES

- 
 RESPECT FOR PEOPLE
- 
 MANAGEMENT BY FACT
- 
 CUSTOMER SATISFACTION
- 
 CONTINUOUS IMPROVEMENT
- 
 SUSTAINABILITY
- 
 INTEGRITY
- 
 OWNERSHIP
- 
 SAFETY

RESUMES

Getting the right team for the project is the first step in exceeding your expectations. We have assembled a diverse, experienced team with expertise in all technical areas included in the Request for Qualifications. Provided below is a highlight of McKim & Creed's Management Team and Technical Leads that are assigned to this contract.

HISTORY OF WORKING TOGETHER

Our Management Team is regularly engaged in working together on projects in identical capacities.

**THE TEAM DESIGNED
15 PROJECTS
TOGETHER IN THE PAST
TWO YEARS**

We also feel it is vital that both our Project Manager and Project Engineer are from the same firm, providing a level of continuity and congruency to the City that could not be provided if separate firms filled these roles.

EXPERTS IN THEIR FIELD

We have also assigned our top experts in all categories of engineering to provide guidance and support to our management team. These key personnel include:

- 148** COMBINED YEARS OF CONSULTING EXPERIENCE
- ★ **LOCALLY AND INTERNATIONALLY RECOGNIZED PROCESS ENGINEER**
- ★ **LICENSURE IN GENERAL CONTRACTING AND GEOLOGY**
- ★ **FORMERLY LICENSED WWTP OPERATOR**
- ★ **CERTIFICATIONS IN VTSCADA AND WONDERWARE SOFTWARE PLATFORMS**

AVAILABILITY

The McKim & Creed team has the availability to meet all project requests assigned under this contract. Because of our highly skilled work force, staff can be readily managed to meet any project requirement. The team has decades of experience on hundreds of projects virtually identical to those that will be assigned under this contract as well as the capacity to meet all of the Town's needs.

Working alongside Town staff, the Management Team will produce cost-effective and reliable solutions by balancing workload and allocating resources. This will ensure all projects remain:



ON TIME



IN BUDGET

LOCATION

We have dedicated skilled and local staff to serve as the Project Manager and Principal in Charge.

As indicated in previous sections, the Project Manager and Project Engineer both live and work within minutes of the Town of Belleair.

**1.2
MILES**

**MCKIM & CREED
OFFICE**

Phil Locke, PE

CLIENT/SENIOR PROJECT MANAGER/WATER TREATMENT

KEY QUALIFICATIONS

- ✓ Reverse osmosis
- ✓ Engineering design and construction
- ✓ Works only 1.2 miles from Town
- ✓ Extensive knowledge of Town's WTP



Mr. Locke offers 23 years of experience in the planning, design, permitting and construction management of conventional water treatment plants, reverse osmosis water treatment plants, wastewater treatment plants, reclaimed water transmission systems and other associated infrastructure. Mr. Locke has prepared water and reclaimed water master plans for clients, which included hydraulic modeling and forecasting of future flows. He has extensive experience in pumping station design, including experience with sophisticated pumping control systems and variable frequency drives. Mr. Locke

also has over 18 years of construction management experience.

EDUCATION

B.S., Civil Engineering,
University of South Florida

SELECTED PROJECT EXPERIENCE

Water Treatment Plant Biological Treatment Unit Manatee County, FL

Mr. Locke served as the project manager, and lead treatment process engineer providing engineering services for the design, permitting, bidding and construction phase services needed to design and construct six new biological filters. The filters are used to reduce the amount of powered activated carbon (PAC) needed to improve taste and odor at the county's 84 mgd water treatment facility. Specific components of the project included the electrical distribution and control system for six new BTUs, filter backwash pumping system, filter backwash air scour system, filter building for housing the treatment units.

Venice RO Membrane Replacement & SCADA Improvements Project City of Venice, FL

Mr. Locke served as the project manager and lead process engineer. McKim & Creed teamed with the Haskell Company as part of a progressive design-build approach and performed engineering design and construction services associated with the replacement of four 1.1 mgd reverse osmosis (RO) skids for the City of Venice. The RO system is a single-stage design which will operate at 50% recovery, with the ability to expand to a 2-stage, higher recovery system in the future. The project also includes the installation of four new 150 hp vertical turbine can pumps, each with variable frequency drives. Additionally, four new stainless steel, horizontally-mounted cartridge filter vessels are included to replace the existing vertically mounted filters. The new cartridge filter arrangement provides for additional safety and ease of maintenance for filter element replacement.

Myakkahatchee Creek Water Treatment Plant Reverse Osmosis Reliability Project City of North Port, FL

Mr. Locke served as the project manager/lead process engineer for the water supply source analyses, pilot testing, permitting, design and construction services for a new water supply source and a new 1.5 mgd RO water treatment system. The treated water produced by the new RO WTP is blended with the treated water from the existing Myakkahatchee Creek Water Treatment Plant in appropriate ratios necessary to meet regulatory requirements for total dissolved solids and

CONTINUED

sulfates. The design of the project included scheduling and phasing of the new facilities to ensure the ability of the existing plant to produce water during construction. Coordination and other services needed to meet the requirements for obtaining the SWFWMD cooperative funding were also provided as part of this project.

Lift Station 87 Design and Construction Services

City of Sarasota, FL

Mr. Locke served as project engineer, responsible for planning, design, and permitting the replacement of wastewater gravity mains ranging in size from 8 inches to 36 inches in diameter. Permits for the project included FDOT, City of Sarasota, FDEP, and ACOE. Initial tasks included a routing study which evaluated financial, environmental, social, and construction impacts of the project. Detailed MOT plans were developed as part of preliminary engineering to minimize impacts to local residences and businesses during project development (geotechnical and surveying) and ultimately construction activities.

Potable Water System Water Quality Modeling

City of Daytona Beach, FL

Mr. Locke served as the water quality engineer and project manager civil engineer, translating the existing Innovyze H2ONet hydraulic model files to McKim & Creed's FORCEMAIN software to enable extended period simulations and enhanced graphical illustration of results related to the water quality conditions in the water distribution system. McKim & Creed conducted scenario workshops with city staff and evaluated current conditions and possible solutions. After the completion of the scenario modeling and analysis a summary was prepared that outlined the analyses conducted, findings, and provided recommendations for system improvements.

WTP Ion Exchange Project

City of Bunnell, FL

Mr. Locke served as the project manager, and lead process engineer where McKim & Creed provided final design, bidding, construction and post-construction services. Studies and preliminary design services were previously provided by McKim & Creed for an ion exchange water treatment process. The approach is to implement a MIEX plant to remove TOC in order for disinfection byproducts to comply with the required maximum contaminant level. The design also includes an ion exchange softening process, concurrent to the TOC removal, to improve water quality by removing hardness. It is the first time that Orica has attempted a concurrent-removal process. In addition to the ion-exchange process, other design elements include dual media gravity filter, clear well, transfer pumps, chemical feed, and disinfection. **This innovative project has won the following awards: 2015 Excellence in Construction (Associated Builders and Contractors Florida First Coast Chapter), 2015 Honor Award in the Water/Wastewater Category (Design-Build Institute of America Florida Region) and the 2016 FL APWA Project of the Year in the Environmental Under \$5 Million category (FL Region APWA).**

WTP#2 ZLD Design and Construction Phase Services,

City of Palm Coast, FL

Mr. Locke served as the project manager, providing geotechnical investigations, subsurface utility engineering (SUE) locates, surveying, preliminary design, final design, permitting, programming, and construction phase services for the ZLD project. The City of Palm Coast owns and operates Water Treatment Plant No. 2 which has a permitted capacity of 6.384 MGD. The plant is classified as a membrane softening facility where nanofiltration membranes are used primarily to reduce hardness. The dissolved solids that are removed by the nanofiltration membranes are consolidated into a process stream called concentrate. The City had selected Zero Liquid Discharge (ZLD as a concentrate management alternative) for WTP No. 2 which provides for recovery of concentrate along with beneficial reuse of solids removed from the concentrate stream. **This innovative project won the 2015 David W. York Water Reuse Project of the Year Award (Florida Water Environmental Association).**

Street Lee, PE, ENV SP

PRINCIPAL

KEY QUALIFICATIONS

- ✓ Water / wastewater treatment facilities
- ✓ Reclaimed water utilities
- ✓ Planning and design
- ✓ Program/project management

EDUCATION

B.S., Civil Engineering, North Carolina State University

PROFESSIONAL LICENSURE

M.B.A., University of Florida

PE / FL / 49212

Envision Sustainability Professional



As a senior vice president and project manager with 34 years of experience, Mr. Lee oversees a variety of civil engineering and water-oriented projects. His responsibilities include project planning and development, team management, QA/QC, permitting and project execution. He has designed all facets of water systems and wastewater sewer systems, developed stormwater systems, performed hydrology and stormwater studies, and landfill expansions and erosion control systems.

Mr. Lee's strengths are his ability to assemble team members with the right expertise for projects and managing the delivery of engineering services within the clients' schedule and budget. His ability to listen to the clients' needs and follow through with the project team allows McKim & Creed to excel at helping the County to achieve its mission.

SELECTED PROJECT EXPERIENCE

Water Treatment Plant Biological Treatment Unit Manatee County, FL

Mr. Lee served as the principal-in-charge, providing engineering services for the design, permitting, bidding and construction phase services needed for the WTP Biological Treatment Unit (BTU). Specific components of the project included the electrical distribution and control system for six new BTUs, filter backwash pumping system, filter backwash air scour system, and filter building for housing the treatment units. Electrical design called for upgrades and addition to existing medium voltage (MV) plant distribution system with the addition of MV breakers and 2000kVA transformers, new MV feeders to raw water pumping stations, and 1500kVa plant process transformers, motor control centers and switchgear.

North to Southeast Reclaimed Water Transmission Main Manatee County, FL

Mr. Lee served as the principal-in-charge, responsible for the design of 83,000 LF of 30-inch ductile iron pipe reclaimed water main as part of the Manatee Agricultural Reuse System (MARS). The project included the design of 30-inch directional bores under the Manatee River and Gamble Creek. McKim & Creed also provided permitting and bidding phase assistance and construction observation and administration.

North Water Reclamation Facility 11.25 MGD Expansion Manatee County, FL

Mr. Lee served as the principal-in-charge. Manatee County operates the North Water Reclamation Facility (NWRf) that treats wastewater from the county's north wastewater service area. This facility utilizes a Type I oxidation ditch activated sludge biological treatment process including a nitrogen reduction (anoxic) stage, followed by filtration and high-level disinfection to produce Part III effluent suitable for slow-rate public access reuse. In March 2007, McKim & Creed submitted the "North Water Reclamation Facility Basis of Design Report" to the county, which incorporated updated

wastewater flow projections. The Report indicated the plant's current permitted capacity of 7.5 mgd will need to be increased by 2012 to meet projected wastewater flows. In January of 2008, McKim & Creed submitted a Phased Implementation Plan Technical Memorandum for the expansion of the NWRf. The Phased Implementation Plan identified a phased approach to increase the capacity of the NWRf to 15 mgd. In a letter dated April 24, 2008; the county has identified the need for an Oxidation Basin along with the other components required to increase the capacity of the facility to 11.25 mgd.

Backwash Residuals Handling Improvements

Manatee County, FL

Mr. Lee served as the principal-in-Charge. Manatee County operates a 54 mgd conventional surface water treatment facility utilizing sand filtration. Sand filter backwash water is directed to a two-cell backwash holding pond for settling of particulate matter washed from the plant polishing filters. McKim & Creed designed an automated residuals removal system utilizing mechanical sludge removal equipment. Prior to the installation of this equipment, the holding pond required removal of the settled residuals by manual means. In addition to engineering design, McKim & Creed assisted Manatee County with bidding and construction administration services.

East County Wellfield Expansion

Manatee County, FL

Mr. Lee served as principal-in-charge for two new production wells, pump houses, generators, and associated electrical and instrumentation systems in the East County Wellfield. The two new production wells helped address the county's challenges in meeting its potable water demands. Initially, two new wells were proposed to be constructed and it was anticipated that a total of five new wells would be constructed.

Facilities Investment Fee Analysis

Manatee County, FL

Mr. Lee served as the project manager for this engineer-of-record work assignment. This work assignment provided for consulting services to assist Manatee County with an evaluation of the water and wastewater Facilities Investment Fees (FIF) charged by the county as part of its overall fees structure. In addition, an analysis was conducted of the utility rates that promote the full recovery of costs for services provided to customers. New and updated FIF calculation and rate calculation models were developed and provided to the county, along with instruction on the use and scenario planning capability. The evaluation focused on review and update of the level of FIF currently charged to new developments requesting capacity from the county's water and wastewater utility system and used to recover the pro-rate share of the costs associated with new development or system capacity expansion. The review and analysis of rates determined the level and structure of rates appropriate for financing system operation and equitable cost allocations.

Drew and Union Streets Reclaimed Water System

City of Clearwater, FL

Mr. Lee served as the principal for this design of two reclaimed water booster pump stations rated at 13 and 4.6 mgd, approximately 7,700 LF of 24-inch and 9,100 LF of 16-inch RCW transmission and approximately 19,300 LF of 8-, 6- and 4-inch distribution systems to expand reclaimed water service along Drew Street and along Union Street in eastern Clearwater. The expansion along Drew Street allows reclaimed water service to such sites as St. Petersburg Junior College, Carpenter Field and E.C. Moore Park. The extension along Union Street provides service to residential customers in the Elysium subdivision.

Reclaimed Water Interconnect Project

Pinellas County, FL

Mr. Lee served as the principal-in-charge. In order to expand their reclaimed water distribution system, Pinellas County Utilities entered into separate agreements with the cities of Clearwater and Oldsmar for a total of 3.8 mgd of additional reclaimed water. McKim & Creed provided survey, hydraulic modeling, design, bidding and construction phase services for the reclaimed water transmission mains, high service pump station, ground storage tank and installation and programming of SCADA systems necessary to connect the City of Clearwater's northeast water pollution control facility and City of Oldsmar's reclaimed water system to Pinellas County's north region reclaimed water distribution system.

Joe Viciere, PE, BCEE

QA/QC & PEER REVIEW

KEY QUALIFICATIONS

- ✓ Peer review
- ✓ QA/QC
- ✓ Water/wastewater process expertise
- ✓ Value Engineering

EDUCATION

BS, Civil Engineering,
Applied Chemistry, Ecole
Polytechnique, UEH

BS, Applied Chemistry,
Faculte des Sciences, UEH

ME, Civil Engineering,
University of South Florida

PROFESSIONAL LICENSURE

PE / FL / 59533



As southeast technical director for McKim & Creed, Mr. Viciere leverages his 37 years of experience in the water and wastewater industry to lead the firm's overall QA/QC efforts in the design and implementation of wastewater processes, and delivers cost-effective and sustainable water process solutions spanning all aspects of the industry. His areas of expertise include water treatment plant design, process operations definition, and evaluation of system design and performance. He has been involved in plant startup packages, pilot demonstrations and permitting, and has served as a senior technical reviewer

on several wastewater treatment upgrade projects. Mr. Viciere has evaluated complex systems to support process selections that meet regulatory needs, and has provided peer reviews for several publications of the Water Environment Research Foundation.

SELECTED PROJECT EXPERIENCE

Engineering Manager, Operations and Technical Support Pasco County Utilities, FL

Aside from managing the GIS, Mapping, and the Inspection groups of the Utilities' Engineering & Contract Management Department, Mr. Viciere managed all the Engineering Department's wastewater facilities expansion projects. He also served as the asset manager for the Utilities Asset Management Program. Mr. Viciere also supported the Operations & Maintenance (O&M) Department of PCU with its various operations activities.

Wichita Falls Effluent WWTP Reaeration Preliminary Design Wichita, KS

Mr. Viciere was asked to develop an overall concept development (blower sizing, basin configuration, general blower room layout, etc. for a mechanical post- aeration system [not cascade aeration]) following chlorine disinfection and de-chlorination of the plant effluent to meet a minimum DO of 6.0 mg/L at all times.

AOR Calculations for Bristol WWTP Bristol, TN

Mr. Viciere was tasked to review calculations on the impact of the existing trickling filters at the WWTP and the role it plays on the AOR (and subsequent oxygen requirements) in the downstream activated sludge process.

Master Plan for Development of the Ras Al-Khair Industrial City (RIC) Kingdom of Saudi Arabia

Mr. Viciere reviewed this master plan and commented on the appropriateness of its recommendations, especially in the area of using potable water for industrial process in the mining and metal industries.

Stapylton Landfill Leachate Management

Australia

Mr. Viciere reviewed the draft report prepared by CDM Australia on behalf of Gold Coast Waste Management and provided treatment technology options for this landfill and his expert recommendations for the best treatment methods for this leachate.

Wastewater Treatment Plant (WWTP)

Largo, FL

Mr. Viciere led the design study and design services for upgrading the disinfection at the City of Largo Wastewater Treatment Plant. The study phase consisted of developing an effluent testing methodology that led to the selection of a disinfection system that meets the requirements of this facility's NPDES permit for dichlorobromomethane (DCBM). Several alternatives were considered, including ozone, ultraviolet (UV), ferrate, peracetic acid (PAA), etc. Finally, a split flow system with two disinfectants, sodium hypochlorite and PAA, was found to be the most cost-effective for this facility. Mr. Viciere also led the preparation of the mechanical drawings and specifications of the new system. The permitted facility AADF is 18 mgd.

Dale Mabry Advanced Wastewater Treatment Plant

Tampa, Florida

Mr. Viciere provided process evaluation for the replacement of the Dale Mabry Advanced Wastewater Treatment Plant's current brush rotors aeration system with diffused aeration system. He also prepared a preliminary design report for this facility following the process evaluation report.

South County Advanced Wastewater Treatment Plant (AWWTP) Expansion

Hillsborough County, Florida

Mr. Viciere provided technical oversight on the process design for the expansion of this facility from 4.0- to 10-mgd for the process units designed by another consultant. He also led the design of three process units at this facility: the filtration system, the UV disinfection system, and the sodium hypochlorite system.

Northwest Regional Water Reclamation Facility

Hillsborough County

Mr. Viciere has overseen several projects within Hillsborough County's Northwest Regional Water Reclamation Facility. These project include working as the lead engineer for the design of a small pump station to upload sludge from tankers to the facility's WDMAS tank; lead process engineer for the expansion from 4.5- to 10-mgd; and lead design engineer for the preparation of mechanical drawings and specifications to retrofit a UV disinfection system at the existing chlorine contact chamber.

Wastewater Treatment Facility Upgrades

Key West, Florida

Mr. Viciere modeled and designed a diffused aeration system for the City of Key West's 10-mgd AADF Richard A. Heyman Environmental Protection Facility to replace the obsolete surface mechanical aeration system. He also provided assistance during construction and plant startup. The system has been in operation since 2010.

David Wehner, PE

WATER/WASTEWATER UTILITIES

KEY QUALIFICATIONS

- ✓ Pipeline design expertise
- ✓ Reclaimed water system design
- ✓ Wastewater treatment facilities design
- ✓ Utility relocations

EDUCATION

B.S., Civil Engineering,
University of South Florida

PROFESSIONAL LICENSURE

PE / FL / 59541



Mr. Wehner offers more than 18 years of experience as civil engineer providing design and permitting services for municipal utility systems including water supply, transmission and distribution; wastewater master planning, collection, pumping, treatment, disposal and sludge handling; reclaimed water master planning, pumping, transmission and distribution; and utility infrastructure and relocation engineering. As a project engineer, Mr. Wehner has been responsible for planning, preliminary engineering, modeling, final design, estimating, QA/QC reviews, permitting, bidding and construction management and observation services.

SELECTED PROJECT EXPERIENCE

North Water Reclamation Facility - Phase I Improvements

Manatee County, FL

Mr. Wehner served as the project manager, providing preliminary design, final design, permitting, and bidding phase services for the county. The project included the rehabilitation and upgrades to the triplex plant drain pump station, anoxic/aeration basin internal recirculation pump and piping modifications that allowed for improved internal recirculation flows and biological performance; improvements to the lake filtration system, which allowed the county to store reclaimed water and provide low-cost filtration prior to sending out to the reclaimed water system; and provided improvements to the monitoring and control of dissolved oxygen in the aeration basins.

Northwest Water Reclamation Facility Chlorine Contact Basins Concrete Repairs

City of St. Petersburg, FL

Mr. Wehner served as the project manager, providing engineering services to conduct a structural evaluation of the chlorine contact basins (CCB) located at its NWWRF. The evaluation assessed the condition of the tankage, identified structural and mechanical repairs, and recommended specific repairs and coating systems.

MARS Management Improvements

Manatee County, FL

Mr. Wehner served as the project engineer, providing preliminary engineering, final design, permitting, bid documents and bidding assistance, construction services, programming services and RCW management system training to Manatee County for the FY14 Manatee Agricultural Reuse Supply (MARS) Supply Management Improvements project. Scope included the installation of meters between services areas, control valves for remote operation and redirection of flow, adding telemetry and control at the water reclamation facilities and Manatee Agricultural Reuse Supply (MARS) pump stations. McKim & Creed developed a central Supervisory Control and Data Acquisition (SCADA) control network to operate MARS independent of plant operations.

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Meadowcrest Wastewater Treatment Facility Expansion

Hoyle, Tanner & Associates, Inc. | Citrus County, FL

Mr. Wehner served as project manager, providing professional engineering services for the preliminary design, final design and construction administration for the Alline Avenue stormwater pumping station. The \$4.8 million project included the 35 mgd pump station, 36-inch force main and marine outfall, as well as improvements to the stormwater collection system. In Phase 1 of this assignment, McKim & Creed provided preliminary design services including topographic survey; stormwater system development; level of service analysis; and the preparation of a basis of design report. In Phase 2, McKim & Creed prepared construction plans and specifications, assisted the City with obtaining permits, provided bidding phase assistance and construction administration assistance.

Dale Mabry Diversion Force Main and Reclaimed Water (DM to NWRWF); Westra Construction Corporation

Tampa FL

Mr. Wehner served as the project manager, providing process design evaluation, detailed plant design, permitting, and bidding services for the expansion of the existing Meadowcrest Wastewater Treatment Facility (WWTF). A detailed process evaluation was conducted to review biological process options, pre-treatment options and filtration and disinfection options that would minimize capital costs for the County while achieving reuse quality effluent with an expanded capacity from 0.5 mgd to 2.0 mgd. The evaluation included detailed review of Modified Ludwig Ettinger (MLE), Step Feed, and expansion using the existing Bardenpho process. The evaluation concluded that the Step Feed approach could result in substantial savings in required footprint and recycle flow infrastructure. McKim & Creed completed the process design on the facility. The design provided for future expansion from 2.0 mgd to 4.0 mgd in phases. McKim & Creed provided the process design for the prime consultant Hoyle Tanner & Associates, and worked closely with Leggette, Brashears & Graham on the management of reclaimed water from the facility including evaluation of and expansion of the on-site rapid infiltration basins.

82nd Street Water Main Upgrades & Repump Station Removal

Hillsborough County, FL

Mr. Wehner served as a project manager and provided engineering services necessary for the removal of the re-pump station and upgrades for approximately 1,400 feet of associated water main piping. Services provided also included permitting, utility coordination, surveying, and SUE. Water supplies for customers in the vicinity of 82nd St. and Causeway Blvd. were delivered from a City of Tampa master meter on 82nd Street, then through a backflow preventer and inactive re-pump station once used to boost pressure. McKim & Creed removed the re-pump station and upgraded approximately 625-feet of associated water main piping.

Albert Whitted Lift Station 85 Master 30-inch Force Main- Part B

City of St. Petersburg, FL

Mr. Wehner served as project manager and lead engineer for the design of the 11,700 LF of 30-inch force main to be installed beneath the traffic lanes of Martin Luther King Jr. Boulevard and 54th Avenue South. He also developed the technical requirements for traffic control through the work zones which eliminated detours and maintained traffic flow during the duration of the project.

Woodridge Estates/Jasmine Hills Reclaimed Water System

City of New Port Richey, FL

Mr. Wehner served as project manager for this task order, which included services for the design and construction of new reclaimed water distribution mains in the Jasmine Hills and Woodridge Estates neighborhoods. The number of residential customers to be served by this project was estimated to be 328. The objective of this project was to reduce the amount of potable water and groundwater being used for irrigation and other non-potable uses.

Siesta Key to Casey Key Water Main

Sarasota County, FL

Mr. Wehner served as project manager for the preliminary and final design, permitting, easement acquisition assistance, bidding and construction services for approximately 4,100 LF of 6-inch, 8-inch and 10-inch diameter potable water main. The construction included 1,400 LF of pipe installed via open trench and 2,700 LF of 10-inch drainage pipe installed by subaqueous horizontal directional drilling.

Mitch Chiavaroli, PE

WATER/WASTEWATER UTILITIES / CONSTRUCTION SERVICES

KEY QUALIFICATIONS

- ✓ Utility relocations expertise
- ✓ Town of Belleair expertise
- ✓ Collection system design
- ✓ Plant decommissioning and consolidation

EDUCATION

B.S., Civil Engineering,
University of Akron, Ohio

PROFESSIONAL LICENSURE

PE / FL / 56335



Mr. Chiavaroli will have the primary responsibility for wastewater treatment and utility engineering, and leading construction services for this contract. Mr. Chiavaroli has 30 years of experience and has been involved in design and construction for over 100 treatment plant and utility projects, ranging from process improvements to new plant construction. His experience includes design and construction management of water mains, treatment plants, pumping stations, force mains, gravity interceptors and gravity collector sewers, and rehabilitation projects for similar facilities.

SELECTED PROJECT EXPERIENCE

Meadowcrest Wastewater Treatment Facility Expansion

Hoyle, Tanner & Associates, Inc. | Citrus County, FL

Mr. Chiavaroli served as the senior project engineer for the process design evaluation, detailed plant design, permitting, and bidding services for the expansion of the existing Meadowcrest Wastewater Treatment Facility (WWTF). A detailed process evaluation was conducted to review biological process options, pre-treatment options and filtration and disinfection options that would minimize capital costs for the County while achieving reuse quality effluent with an expanded capacity from 0.5 mgd to 2.0 mgd. The evaluation included detailed review of Modified Ludwig Ettinger (MLE), Step Feed, and expansion using the existing Bardenpho process. The evaluation concluded that the Step Feed approach could result in substantial savings in required footprint and recycle flow infrastructure. McKim & Creed completed the process design on the facility. The design provided for future expansion from 2.0 mgd to 4.0 mgd in phases.

MARS Management Improvements

Manatee County, FL

Mr. Chiavaroli served as the project engineer, providing preliminary engineering, final design, permitting, bid documents and bidding assistance, construction services, programming services and RCW management system training to Manatee County for the FY14 Manatee Agricultural Reuse Supply (MARS) Supply Management Improvements project. Scope included the installation of meters between services areas, control valves for remote operation and redirection of flow, adding telemetry and control at the water reclamation facilities and Manatee Agricultural Reuse Supply (MARS) pump stations. McKim & Creed developed a central Supervisory Control and Data Acquisition (SCADA) control network to operate MARS independent of plant operations.

SEWRF 10 MG Storage Tank and High Service Pumps

Manatee County, FL

Mr. Chiavaroli served as the project manager, providing professional engineering services for this project which set up an independent low service (low pressure) system at the SEWRF to distribute effluent from the CCCs to the storage ponds. This effort was implemented to improve MCMRS

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reliability during facility upset conditions and reduce power consumption of the facility to bring down operating costs. Project included installation of new 10 MG GST, high service RCW pumping system, electrical and SCADA system components.

Dale Mabry Diversion Force Main and Reclaimed Water (DM to NWRWRF); Westra Construction Corporation

Tampa, FL

Mr. Chiavaroli served as the project engineer, providing engineering services for the construction of over 67,200 LF of 20-inch to 36-inch wastewater force mains and a 20-inch reclaimed water main from the Dale Mabry Advanced Wastewater Treatment Facility (DMAWTF) to the NWRWRF to transfer raw wastewater and reuse water between the service areas. These pipelines traversed busy residential and arterial roadways, abutted residential neighborhoods, businesses, malls, churches and schools, and traversed dense forested wetlands, creek crossings and overpasses, creating an array of potential public impacts and risks. At the DMAWTF, a 10 mgd (expandable to 15 mgd) wastewater transfer pump station was installed to transfer the raw wastewater to the NWRWRF and a 6 mgd effluent discharge facility conveyed wet weather flows to the existing Brushy Creek outfall.

North Water Reclamation Facility - Phase I Improvements

Manatee County, FL

Mr. Chiavaroli served as project engineer, providing preliminary design, final design, permitting, and bidding phase services for the county. The project included the rehabilitation and upgrades to the triplex plant drain pump station, anoxic/aeration basin internal recirculation pump and piping modifications that allowed for improved internal recirculation flows and biological performance; improvements to the lake filtration system, which allowed the county to store reclaimed water and provide low-cost filtration prior to sending out to the reclaimed water system; and provided improvements to the monitoring and control of dissolved oxygen in the aeration basins.

Skycrest Reclaimed Water System

City of Clearwater, FL

Mr. Chiavaroli served as the project engineer, providing engineering services in the design of the Skycrest Reclaimed Water System. This project encompassed the Skycrest neighborhood, but traverses a large portion of the City of Clearwater incorporating a reclaimed water transmission main that interconnects the city's western and eastern reclaimed water systems and the City's three wastewater treatment plants. The project included the design of approximately 17,300 LF of 24-inch reclaimed transmission piping, a 7.2 mgd reclaimed water booster pump station and 5 MG storage facility, and 52,500 LF of 4- and 8-inch distribution piping. McKim & Creed provided hydraulic modeling, topographic survey, subsurface utility locates, preliminary and final design, permitting, maintenance of traffic plans, bidding and construction engineering management and observation services for this project.

SR 64 and Lena Road Force Main Design

Manatee County, FL

Mr. Chiavaroli served as project engineer for the design and permitting of a new force main system to convey wastewater from new lift stations and proposed developments along SR 64 to the Southeast Regional Wastewater Treatment Plant. The project consisted of approximately 15,700 LF of pipeline.

Lift Station 87 Design and Construction Services

City of Sarasota, FL

Mr. Chiavaroli served as project engineer for the replacement of wastewater gravity mains ranging in size from 8-inches to 36-inches in diameter. Detailed MOT plans were developed as part of preliminary engineering to minimize impacts to local residences and businesses during project development (geotechnical and surveying) and ultimately construction activities. Innovative geotechnical investigations included geophysical surveys to develop bathymetric surveys and to delineate subsurface conditions under the environmentally sensitive Hudson Bayou. Construction techniques evaluated included a combination of open cut, horizontal directional drilling, and microtunneling.

Eric Brown

INSTRUMENTATION & CONTROLS

KEY QUALIFICATIONS

- ✓ SCADA
- ✓ HMI
- ✓ PLC programming
- ✓ Familiarity with Town SCADA

EDUCATION

A.S., Computer & Electrical Engineering, Tampa Technical Community College

B.S.E.E., Electrical Engineering, University of South Florida

A.A., General Studies, St. Petersburg College



Mr. Brown offers 23 years of experience designing, building and installing hardware for SCADA applications for the water/wastewater industry. He is well-versed in PLC programming using Siemens, Emerson (Bristol Babcock), Schneider Electric, GE, Automation Direct and Allen Bradley applications and has experience with numerous SCADA related Human Machine Interface (HMI) software packages including Wonderware, Citect, VTSCADA and Intellution. Mr. Brown is familiar with the Town's WTP and the associated programming.

SELECTED PROJECT EXPERIENCE

I&C Miscellaneous Services

Manatee County, FL

Mr. Brown performed instrumentation & controls engineering services related to the SWWRF, SEWRF, and NWRW. Scope includes providing technical support for SCADA network and SCADA computer maintenance, providing support for software upgrades and replacements for Citect and Plant2Business, assisting in SCADA graphic and database modifications, implementing modifications to PLC programming at the various SCADA panels and remote PLC sites, evaluation of various control methodologies and equipment, and development/presentation of recommendations to the county for improvements, providing assistance on data communications and report generation and providing system integration services for new and expanded instrumentation and controls and monitoring systems.

MARS Management Improvements

Manatee County, FL

Mr. Brown served as the instrumentation & controls designer, providing preliminary engineering, final design, permitting, bid documents and bidding assistance, construction services, programming services and RCW management system training to Manatee County for the FY14 Manatee Agricultural Reuse Supply (MARS) Supply Management Improvements project. Scope included the installation of meters between services areas, control valves for remote operation and redirection of flow, adding telemetry and control at the water reclamation facilities and Manatee Agricultural Reuse Supply (MARS) pump stations. McKim & Creed developed a central Supervisory Control and Data Acquisition (SCADA) control network to operate MARS independent of plant operations.

As-Needed SCADA, Instrumentation and Network Support

City of Clearwater, FL

Mr. Brown served as the instrumentation & controls designer, providing on demand support to the city's water and wastewater systems for instrumentation and control issues as well as HMI/PLC and related systems programming for control modifications, additional features and expansions. Systems are primarily Allen Bradley PLCs and Citect SCADA software. Work was performed under an annual purchase order under the Engineering Services Agreement and requires authorization from department managers.

SCBWRf As-Needed SCADA Support

Pinellas County | Clearwater, FL

Mr. Brown provided SCADA, instrumentation and network design, field services, programming and configuration support, on an as needed basis as directed or requested by the Pinellas County. These as needed services included trouble shooting and diagnosing PLC, SCADA, networking and communication issues; hardware and software, technical support for maintenance of PLC, SCADA, network, and computer systems, developing and conducting training for elements of the system and engineering system integrations related to system modification, improvements or expansions.

Carlton WTP SCADA Upgrade

Sarasota County, FL

Mr. Brown served as the instrumentation & controls engineer for the SCADA configuration and software development related to the conversion of existing legacy Transdyne Dynac SCADA system to Wonderware System Platform architecture. The plant experienced a catastrophic failure of one of the primary computer services. All the plant operations were running on the remaining single aged server computer, with no direct back-up. Remedy of this legacy system was critical to the continued operation of the facility and required a fast tracked schedule to complete. McKim & Creed interrogated the existing server to obtain the information in order to convert the system to the Wonderware System Platform.

WWTP SCADA Programming and Construction Services

Manatee County, FL

Mr. Brown served as the instrumentation and controls designer. Manatee County implemented a new Supervisory Control and Data Acquisition (SCADA) System for its three regional water reclamation facilities. These facilities include operational systems, equipment and treatment processes that required constant monitoring and adjustments, water quality data monitoring and reporting to maintain system reliability and regulatory compliance. This phase of the project included the programming and construction services necessary to complete the implementation of the SCADA system between the three regional water reclamation facilities as well as to other designated county sites. It also involved interconnection of the in-plant SCADA hardware, software and database configurations.

SCADA Centralized Control Center PER

Hillsborough County, FL

Mr. Brown served as instrumentation & controls engineer. Scope included studying existing system documentation and performing on-site investigations and interviews to confirm the capabilities of existing infrastructure. The results of the study were presented in a preliminary engineering report which provided documentation of the current county systems and communication links, and included recommendations for control center systems implementation.

SCADA Historian Consolidation, Water Reclamation Facilities

City of St. Petersburg, FL

Mr. Brown served as the instrumentation & controls designer, providing professional services for the integration of the existing WRF InTouch-based SCADA historian into the newly established Wonderware App-Server-based tiered historian structure, centralized at the WRS facility. The second phase effort associated with consolidating the SCADA data collection and archiving for all the city's SCADA systems included incorporating the water, water reclamation facilities, and collections into a single historian. As part of the previous phase one activities, McKim & Creed established the App-Server-based tiered historian structure and integrated the water systems, including the Cosme, WTPS, and the OPS.

Aubrey Haudricourt, PE

ELECTRICAL

KEY QUALIFICATIONS

- ✓ Treatment plant electrical expertise
- ✓ Familiar with new generator codes
- ✓ Familiar with Town's WTP
- ✓ Controls engineering



Mr. Haudricourt has over 21 years of experience in both electrical and instrumentation engineering. He has designed and overseen the installation of power generation, controls systems, and lighting for large facilities.

Mr. Haudricourt's expertise includes evaluating existing conditions, treatment facility electrical systems, and both electrical and instrumentation systems. He also has been involved in security system assessment and design, and has notable experience in construction related fields.

EDUCATION

B.S.E.E., Electrical Engineering, Old Dominion University

PROFESSIONAL LICENSURE

PE / FL / 66861

PE / GA, VA, AL, TX

SELECTED PROJECT EXPERIENCE

Water Treatment Plant Biological Treatment Unit Manatee County, FL

Mr. Haudricourt served as the electrical engineer for this project. Electrical design called for upgrades and addition to existing medium voltage (MV) plant distribution system with the addition of MV breakers and 2000kVA transformers, new MV feeders to raw water pumping stations, and 1500kVa plant process transformers, motor control centers and switchgear. Arcflash and coordination studies were also performed for this project.

MARS Chlorination at the SWWRF Manatee County, FL

Mr. Haudricourt served as the electrical project engineer, providing engineering services for the design, permitting, bidding and construction phase services needed for the Manatee county chlorination system at the Southwest water reclamation facility. During the course of the project McKim & Creed installed liquid chlorine storage containment and cover, chemical feed pumps, chemical injection, residual monitoring and instrumentation and controls for the chemical system

MARS Management Improvements Manatee County, FL

Mr. Haudricourt served as the electrical engineer, providing preliminary engineering, final design, permitting, bid documents and bidding assistance, construction services, programming services and RCW management system training to Manatee County for the FY14 Manatee Agricultural Reuse Supply (MARS) Supply Management Improvements project. Scope included the installation of meters between services areas, control valves for remote operation and redirection of flow, adding telemetry and control at the water reclamation facilities and Manatee Agricultural Reuse Supply (MARS) pump stations. McKim & Creed developed a central Supervisory Control and Data Acquisition (SCADA) control network to operate MARS independent of plant operations.

Medium Voltage Generator Upgrades

City of Hollywood, FL

Mr. Haudricourt provided a complete load and energy use study of the Hollywood WTP. Out of this study it was determined that engineering services were needed for upgrades to the medium voltage generator system. This included installation of a new 1500kW 13.2kV generator to existing standby system, additions to transfer gear, replacement of fuel day tank system with piping and addition of remote radiator for engine cooling. In addition, this project required the removal of one underground 3,000 gallon bulk tank with piping and all associated FDEP permitting and testing. Responsibilities also included full construction, inspections and startup services. Mr. Haudricourt served as electrical and controls engineer for this project prior to joining McKim & Creed..

SEWRF 10 MG Storage Tank and High Service Pumps

Manatee County, FL

Mr. Haudricourt served as the electrical engineer, providing professional engineering services for this project which set up an independent low service (low pressure) system at the SEWRF to distribute effluent from the CCCs to the storage ponds. This effort was implemented to improve MCMRS reliability during facility upset conditions and reduce power consumption of the facility to bring down operating costs. Project included installation of new 10 MG GST, high service RCW pumping system, electrical and SCADA system components.

Lithia Sulfide Removal Water Treatment Facility

City of Tampa, FL

As part of a 45 mgd Hydrogen Sulfide Ozone removal facility for 17 ground water production wells, Mr. Haudricourt was the lead electrical engineer responsible for the design and construction of the electrical and controls systems for the ozone, side stream pumping, and oxygen systems. This project also included the installation of paralleled 1000kW standby generators, with closed transition transfer to the power company. At the time of completion, the facility was the largest ozone treatment facility in the United States. It currently supplies treated water to the eastern portion of Hillsborough County. Mr. Haudricourt served as electrical and controls engineer for this project prior to joining McKim & Creed.

East Plant and Marshall St. Lab Electrical System Upgrades

City of Clearwater, FL

Mr. Haudricourt provided specifications and review of a coordination study, which included Arc Flash calculations and labeling for the East Plant electrical and generator system upgrades. This project included removal of existing standby system and replacement with new standby generator and transfer system. Training was also provided as part of the project.

MS Lab and East ACPF Generator Improvement Project

City of Clearwater, FL

Mr. Haudricourt served as the electrical engineer for the bidding, construction management and observation services related to the standby generator power at the East Water Reclamation Facility (WRF) and Marshall Street WRF Laboratory. An Arc Flash and coordination study was also performed as part of this project. The first project included demolition of two standby generator systems, and combined into one single standby generator arrangement. As part of this project the generator was elevated above flood stage on a concrete platform, and enclosed in a hurricane rated enclosure. New power ductbanks and distribution switchgear were installed along with four new transfer switches. 6000 gallon bulk fuel with day tank were also part of the project. Controls of these system were a combination of hardwired and Ethernet over a fiber media.

Sam Hobi, PE

STRUCTURAL

KEY QUALIFICATIONS

- ✓ Familiar with Town's WTP
- ✓ Structural rehabilitation
- ✓ Coating system expertise

EDUCATION

M.S., Structural Engineering,
Oklahoma State University

B.S., Civil Engineering,
Northeastern University

PROFESSIONAL LICENSURE

PE / FL / 59360

PE / GA, TX, NC, MI



Mr. Hobi is a specialist in water and wastewater treatment plant/structural engineering with over 25 years of experience. Mr. Hobi has extensive experience as lead engineer responsible for all structural aspects of projects from start to project completion. He has extensive experience in the design and analysis of reinforced concrete, structural steel and reinforced masonry structures, and is skilled in the design and analysis of water and wastewater structures above and below grade with deep or shallow foundations. Particular aspects of his expertise include the design of earth retaining structures

and flood control structures. He has conducted a wealth of design and analysis of metal building foundations analyzed to resist uplift generated by high-velocity wind. Mr. Hobi is skilled in the design and analysis of masonry buildings with precast roof slabs used to house pumps and electrical rooms, as well as all other types of low-rise buildings. He is proficient in the use of various Mathcad-developed design templates for structural design of reinforced concrete, structural steel and reinforced masonry. He has also developed design templates for Army Corps of Engineers' pumping station substructures and a design template for pumping station global stability analysis. Structural analysis and design software he has used includes STAAD, PCA-mats.

SELECTED PROJECT EXPERIENCE

North Water Reclamation Facility, Phase I Improvements

Manatee County, FL

Mr. Hobi served as structural engineer. McKim & Creed provided preliminary design, final design, permitting, and bidding phase services for the county. The project included the rehabilitation and upgrades to the triplex plant drain pump station, anoxic/aeration basin internal recirculation pump and piping modifications that allowed for improved internal recirculation flows and biological performance; improvements to the lake filtration system, which allowed the county to store reclaimed water and provide low-cost filtration prior to sending out to the reclaimed water system; and provided improvements to the monitoring and control of dissolved oxygen in the aeration basins.

Mr. Hobi conducted a structural evaluation of the basins and provided a technical memorandum to the county summarizing the conditions and recommendations for repairs. Working with the contractor, the identified structural deficiencies were addressed prior to placing them back online. Advancements to the reuse storage lake filtration system included the installation of three new coarse screen intake structures, large diameter control valves, and three new gravity disk filters capable of removing particles greater than 25 microns prior to reclaimed distribution.

Kapok Park Wetland and Floodplain Restoration Project

City of Clearwater, FL

Mr. Hobi served as the structural engineer of record for the design, analysis and production of structural drawings for two cast-in-place concrete control structures that included wing walls, prefabricated steel bridge supports and boardwalk.

Joe's Creek Confluence Upgrade

Pinellas Park Water Management District | Pinellas Park, FL

Mr. Hobi provided structural engineering services for the confluence upgrade of Joe's Creek. The improvements to the channel included removal of the existing non-reinforced concrete lining from the northeast bank at the confluence, re-grading and compacting the bank to a 2H:1V slope, installation of vinyl sheet pile and concrete cap, lining the re-graded slope with riprap from the toe of the slope to the top of the bank, and sodding. Other improvements include general site improvements associated with the construction such as dewatering, stormwater turbidity control, maintenance of flow in the channel, tree protection, surface restoration, stormwater monitoring

Dale Mabry Filter Feed Screw Pumps & Grit Classifiers Evaluation

Hillsborough County, FL

Mr. Hobi served as structural engineer for this project. The Dale Mabry WWTP facility provides wastewater treatment for the north central portion of Hillsborough County. The grit classifier and filter feed screw pumps at this facility were experiencing advanced wear and corrosion and the east grit classifier had been placed out of service. A technical report was prepared recommending corrective actions. Work included repair modifications on the east and west grit chambers to address chemical attack from hydrogen sulfide gas. The repair modifications included installing reinforcing bars where exposed rebar degradation was excessive, a repair mortar system and a high build epoxy coating for concrete wall sections, in addition to modifications addressing the existing aluminum beams supporting the cover plate assembly.

North Water Reclamation Facility - Phase I Improvements

Manatee County, FL

Mr. Hobi served as the project engineer, providing preliminary design, final design, permitting, and bidding phase services for the county. The project included the rehabilitation and upgrades to the triplex plant drain pump station, anoxic/aeration basin internal recirculation pump and piping modifications that allowed for improved internal recirculation flows and biological performance; improvements to the lake filtration system, which allowed the county to store reclaimed water and provide low-cost filtration prior to sending out to the reclaimed water system; and provided improvements to the monitoring and control of dissolved oxygen in the aeration basins.

Lift Station 87 Design and Construction Services

City of Sarasota, FL

Mr. Hobi provided structural engineering services for the Lift Station 87 replacement project. Structural elements included the design of wet well modifications to lower the wet well floor elevation to an elevation below the revised gravity main elevation; revised odor control system access; concrete extensions to raise all access hatch openings to an elevation of 13.6 feet; replacement of access hatch covers with new, watertight covers with fall protection grating; details to add entry stairs and landings to all four stair access openings; and 6-inch curb for all ventilation openings. Scope also included designs to repair existing access hatch cover doors and frames and repair a wall leak in the electrical room.

Building Structural Analysis

City of New Port Richey, FL

Mr. Hobi performed structural evaluation of the historic Hacienda Hotel in New Port Richey, Florida. The hotel was in state of disrepair and required major structural rehabilitation to comply with applicable building codes. A report was issued listing structural deficiencies and repair recommendations

Tom Halstead, PSM

SURVEY

KEY QUALIFICATIONS

- ✓ Transportation design
- ✓ Design and construction layout for subdivision developments
- ✓ Municipality surveys

EDUCATION

AS, Vincennes University, Geomatics

BA, Mathematics, Indiana University

PROFESSIONAL LICENSURE

PSM / FL / 5770



Mr. Halstead offers more than 32 years of experience in surveying and mapping. As regional survey manager for the southeastern region of McKim & Creed, his duties include the management of project teams, quality control over projects, client communication, and general management of the survey department. He has managed field crews as well as prepared boundary, land title, topographic, and control surveys; easements, as-builts, construction layouts, route surveys, right-of-way surveys, mean high water location and large retracement surveys.

Possessing a career in diverse survey experience, Mr. Halstead has spent the last decade and a half becoming an expert in managing survey projects for FDOT. A proven leader, Mr. Halstead has effectively executed some of the largest and most complex transportation projects for the Department. His leadership and management skills, combined with his strict dedication to QA/QC, have earned Mr. Halstead a strong reputation for consistently delivering timely, top-quality transportation support.

SELECTED PROJECT EXPERIENCE

Lake Lindsey Road Design Survey

HDR Engineering, Hernando County, FL

Mr. Halstead served as principal-in-charge for this project, which included providing surveying services for the improvements to Lake Lindsey Road including the widening the roadway and drainage upgrades. The section of roadway proposed for widening ran from Old Crystal River Road to Snow Memorial Highway. The scope of this project involved the widening of the roadway to provide 12 foot travel lanes with 4 foot stabilized shoulders.

Clearwater Del Oro Reclaimed Water System

City of Clearwater, FL

Mr. Halstead served as survey project manager for project providing preliminary and final design permitting, survey, SUE and limited construction engineering services for this project. The reclaimed water system extension into the Del Oro Groves area provided 740,000 gallons of reclaimed water per day (gpd) to 600 residential, 20 commercial and two recreational customers. The reclaimed water offsets approximately 370,000 gpd of potable water and groundwater used for irrigation. In order to minimize the impact to the neighborhood and to simplify construction, water mains being replaced under a different City project were incorporated into this work.

The Del Oro Groves project included a total of 57,700 LF of horizontally direction drilled RCW and/or Water transmission and distribution piping.

SR 590 Utility Location

Safety Harbor, FL

Mr. Halstead was project administrator for this specific purpose survey showing underground utility locations along Philippe Parkway (State Road 590) between Fairview Street and State Road 580, a distance of approximately 1.5 miles. These services included; establishment of a horizontal control survey based upon the Florida State Plane Coordinate System, North American Datum of 1983-1990 Adjustment (N.A.D. 83/90) for the West Zone of the State of Florida as specified. All subsequent field survey work was tied to this control survey. McKim & Creed determined and established elevations on underground utility lines as determined by subsurface utility engineering (SUE). All elevations are referenced to the North American Vertical Datum of 1988 (N.A.V.D. 88) adjustment unless otherwise specified. The underground utilities horizontal locations were located as spotted by representatives of the City of Safety Harbor. Subsurface utility engineering (SUE) performed a total of 29 vacuum excavates to provide both horizontal and vertical location.

Drew and Union Streets Reclaimed Water System

City of Clearwater, FL

Mr. Halstead provided project administration and survey services for the project that included the design of new transmission and distribution systems to expand reclaimed water service along Drew Street and along Union Street in eastern Clearwater. The expansion along Drew Street allowed reclaimed water service to such sites as St. Petersburg Junior College, Carpenter Field, and E.C. Moore Park. The extension along Union Street provided service to Sylvan Abbey and residential customers in the Elysium subdivision.

Dunedin Country Club Submerged Land Easements

City of Dunedin, FL

Mr. Halstead served as principal for a topographic survey of four sub-merged land easements in the area(s) surrounding 4 golf cart bridges for the purpose of bridge replacement. All existing topography adjacent to each bridge was located including the existing bridge, buildings, pavement, signs, fences, etc. Spot elevations were taken to establish the desired MHW (Mean High Water) contour line. The banks of Curlew Creek were also located as part of this survey.

Oil Well Road Design Surveying and Mapping Services

CH2M Hill, Immokalee, FL

Mr. Halstead was project administrator for right-of-way and design surveying and mapping services for 11.37 miles of roadway including horizontal and vertical control, topography, and re-establishment of the project alignment. Subsurface Utility Engineering services provided include investigation and vacuum excavation of various utility laterals and crossings at 25 locations in connections with a large expansion to this quickly growing area. We delivered the data within two weeks of our original notice of this assignment.

Design Services for I-75 at Fruitville Road Interchange

ICON Consultant Group, Inc., Sarasota, FL

Mr. Halstead served as principal-in-charge and project surveyor for the major design of Fruitville Road. Services included baseline stakeout, baseline reference, horizontal control, vertical control, wetland locations, wetland survey, section breakdown and retracement, subdivision breakdown and retracement, boring locations and SUE locations.

Joe Resendes, CCCA

CONSTRUCTION SERVICES

KEY QUALIFICATIONS

- ✓ Construction contract administration
- ✓ Construction observation
- ✓ Shop drawing review
- ✓ Construction compliance review

EDUCATION

Leadership, Management, Communication, & Writing, U.S. Army Sergeant Major Academy

Attended, Communication & Management, Bryant College

PROFESSIONAL LICENSURE

Certified Construction Contract Administrator

OSHA 10-Hour Safety Training

Construction Document Technologist



Mr. Resendes offers more than 33 years of construction observation, administration, and inspection experience. He has considerable inspection experience in the installation of structural, electrical, mechanical, instrumentation, SCADA, HVAC systems, pumping stations, force mains, sanitary sewers, water pipelines and roadway improvements. Mr. Resendes' area of expertise includes conducting construction compliance reviews, processing contractor change orders and pay estimates, reviewing shop drawings, conducting project construction status meetings, coordinating meetings and maintaining project

records. Mr. Resendes serves as owner/engineer on site project resident Representative with the contractor, working principally through the Contractor's Superintendent and assisting them in understanding the intent of the contract documents. As requested by owner/engineer, Mr. Resendes has also assisted in obtaining additional details or information when required at the job site for proper execution of the work. Mr. Resendes offers clients a keen ability to define project shortcomings and improvements.

SELECTED PROJECT EXPERIENCE

Water Treatment Plant Biological Treatment Unit

Manatee County, FL

Mr. Resendes served as the construction administrator, providing construction phase services needed for the WTP Biological Treatment Unit (BTU). Specific components of the project included the electrical distribution and control system for six new BTUs, filter backwash pumping system, filter backwash air scour system, filter building for housing the treatment units. Electrical design called for upgrades and addition to existing medium voltage (MV) plant distribution system with the addition of MV breakers and 2000kVA transformers, new MV feeders to raw water pumping stations, and 1500kVa plant process transformers, motor control centers and switchgear. Arcflash and coordination studies were also performed for this project.

North Water Reclamation Facility - Phase I Improvements

Manatee County, FL

Mr. Resendes served as the construction administrator, providing construction phase services for the county. The project included the rehabilitation and upgrades to the triplex plant drain pump station, anoxic/aeration basin internal recirculation pump and piping modifications that allowed for improved internal recirculation flows and biological performance; improvements to the lake filtration system, which allowed the county to store reclaimed water and provide low-cost filtration prior to sending out to the reclaimed water system; and provided improvements to the monitoring and control of dissolved oxygen in the aeration basins.

Alline Avenue Stormwater Pumping Station, Phase I & II

City of Tampa, FL

Mr. Resendes served as construction administrator for the Alline Avenue stormwater pumping station. The \$4.8 million project included the 35 mgd pump station, 36-inch force main and marine outfall, as well as improvements to the stormwater collection system. Mr. Resendes prepared construction plans and specifications, assisted the city with obtaining permits, provided bidding phase assistance and construction administration assistance.

SEWRF RCW Valve Automation

Manatee County, FL

Mr. Resendes served as the construction administrator, construction phase services for the reclaimed water automation improvements at the Southeast Water Reclamation Facility (SEWRF). This project provided for the upgrade and/or installation of pump controls, butterfly valve, automated control valves, motor operators on valves, and flow meters associated with the plant effluent pumping station to provide the connectivity and integration with the current SCADA infrastructure.

Albert Whitted Lift Station 85 Master 30-inch Force Main- Part B

City of St. Petersburg, FL

Mr. Resendes served as the construction administrator. The City of St. Petersburg elected to abandon the Albert Whitted Water Reclamation Facility (AWWRF) and construct a new pump station and ductile iron and/or PVC force main to convey flows to the Southwest Water Reclamation Facility (SWWRF). McKim & Creed was selected to provide design services for Lift Station 85 Albert Whitted Master 30-inch Force Main - Part B.

Dale Mabry Diversion Force Main and Reclaimed Water (DM to NWRWRF); Westra Construction Corporation

Hillsborough County, FL

Mr. Resendes served as the construction administrator, providing engineering services for the construction of over 67,200 LF of 20-inch to 36-inch wastewater force mains and a 20-inch reclaimed water main from the Dale Mabry Advanced Wastewater Treatment Facility (DMAWTF) to the NWRWRF to transfer raw wastewater and reuse water between the service areas. These pipelines traversed busy residential and arterial roadways, abutted residential neighborhoods, businesses, malls, churches and schools, and traversed dense forested wetlands, creek crossings and overpasses, creating an array of potential public impacts and risks. At the DMAWTF, a 10 mgd (expandable to 15mgd) wastewater transfer pump station was installed to transfer the raw wastewater to the NWRWRF and a 6mgd effluent discharge facility conveyed wet weather flows to the existing Brushy Creek outfall.

Biosolids Thermal Dryer Design-Build Construction Phase

Manatee County, FL

Mr. Resendes served on behalf of the county as resident project representative on-site and construction management advisor for this project. Manatee County constructed a new biosolids thermal dryer facility utilizing a design-build approach. The new dryer facility is located at the Southeast Water Reclamation Facility and handles sludge drying for all three of the County's reclamation facilities. McKim & Creed conducted detailed evaluations of alternative processes and available equipment providers for the production of Class AA biosolids for the County. The County selected thermal drying technology as the preferred approach. McKim & Creed assisted the county in the technical aspects of development of a design-build RFQ, assisted in evaluation of proposals, negotiations of the design/build contract, and contract administration and construction oversight for the \$14M dryer project.

Diane Achinelli

CONSTRUCTION SERVICES

KEY QUALIFICATIONS

- ✓ Construction management
- ✓ Cost accounting
- ✓ Administration
- ✓ Regulatory permitting

EDUCATION

A.S., Architectural Design & Construction Technology, St. Petersburg College



Ms. Achinelli's 32 years of experience in the areas of construction administration, project accounting and onsite project administration and inspection adds a depth to our construction services team. As engineering technician for Pinellas County, in addition to supervising the administrative staff, she worked closely with the finance and contracts departments on bid documents for various utility projects. Prior to her working for the county, Ms. Achinelli performed inspection/construction management duties for a private engineering consultant on various water, wastewater, stormwater and environmental

engineering projects. Her current responsibilities include all aspects of project administration (project coordination, conflict resolution, submittal reviews, processing requests for information, writing and reviewing daily field reports, reviewing and processing contractor's pay estimates, attending meetings and producing the minutes, maintaining construction logs and permit closeout). She also assists during design compiling specifications, utility locate letters, assembles final bid documents, assists in issuance of addenda and performs reference checks on project bidders. Ms. Achinelli performs site construction observation working closely with the owners, contractors and subcontractors.

SELECTED PROJECT EXPERIENCE

Water Treatment Plant Biological Treatment Unit

Manatee County, FL

Ms. Achinelli served as the project administrator, providing construction phase services needed for the WTP Biological Treatment Unit (BTU). Specific components of the project included the electrical distribution and control system for six new BTUs, filter backwash pumping system, filter backwash air scour system, filter building for housing the treatment units. Electrical design called for upgrades and addition to existing medium voltage (MV) plant distribution system with the addition of MV breakers and 2000kVA transformers, new MV feeders to raw water pumping stations, and 1500kVa plant process transformers, motor control centers and switchgear. Arcflash and coordination studies were also performed for this project.

SEWRF 10 MG Storage Tank and High Service Pumps

Manatee County, FL

Ms. Achinelli served as the project administrator for this project which set up an independent low service (low pressure) system at the SEWRF to distribute effluent from the CCCs to the storage ponds. This effort was implemented to improve MCMRS reliability during facility upset conditions and reduce power consumption of the facility to bring down operating costs. Project included installation of new 10 MG GST, high service RCW pumping system, electrical and SCADA system components.

MARS Management Improvements

Manatee County, FL

Ms. Achinelli served as the project administrator for the FY14 Manatee Agricultural Reuse Supply (MARS) Supply Management Improvements project. Scope included the installation of meters between services areas, control valves for remote operation and redirection of flow, adding telemetry and control at the water reclamation facilities and Manatee Agricultural Reuse Supply (MARS) pump stations. McKim & Creed developed a central Supervisory Control and Data Acquisition (SCADA) control network to operate MARS independent of plant operations.

North Water Reclamation Facility - Phase I Improvements

Manatee County, FL

Ms. Achinelli served as the administrative coordinator. The project included the rehabilitation and upgrades to the triplex plant drain pump station, anoxic/aeration basin internal recirculation pump and piping modifications that allowed for improved internal recirculation flows and biological performance; improvements to the lake filtration system, which allowed the county to store reclaimed water and provide low-cost filtration prior to sending out to the reclaimed water system; and provided improvements to the monitoring and control of dissolved oxygen in the aeration basins.

Alline Avenue Stormwater Pumping Station, Phase I & II

City of Tampa, FL

Ms. Achinelli served as project administrator for the Alline Avenue stormwater pumping station. The \$4.8 million project included the 35 mgd pump station, 36-inch force main and marine outfall, as well as improvements to the stormwater collection system. Mr. Achinelli assisted with the preparation of construction plans and specifications, assisted the city with obtaining permits, provided bidding phase assistance and construction administration assistance.

Albert Whitted Lift Station 85 Master 30-inch Force Main- Part B

City of St. Petersburg, FL

Ms. Achinelli served as the project administrator. The City of St. Petersburg elected to abandon the Albert Whitted Water Reclamation Facility (AWWRF) and construct a new pump station and ductile iron and/or PVC force main to convey flows to the Southwest Water Reclamation Facility (SWWRF). McKim & Creed was selected to provide design services for Lift Station 85 Albert Whitted Master 30-inch Force Main - Part B.

Skycrest Reclaimed Water System

City of Clearwater, FL

Ms. Achinelli served as the construction inspector and permitting coordinator for approximately 17,300 LF of 24" reclaimed transmission piping and approximately 52,500 LF of 4" and 8" distribution piping. The project also included a 600 foot drill beneath SR 60, the installation of approximately 600 LF of 24" HDPE directional drill beneath environmentally sensitive areas, a 32" jack and bore beneath Belcher Road, a 42" jack and bore beneath Keene Road and a 42" jack and bore beneath CSX ROW.

Venice RO Membrane Replacement & SCADA Improvements

The Haskell Company | Venice, FL

Ms. Achinelli served as the project administrator. McKim & Creed teamed with the Haskell Company as part of a progressive design-build approach and performed engineering design and construction services associated with the replacement of four 1.1 mgd reverse osmosis (RO) skids for the City of Venice. The RO system is a single-stage design which will operate at 50% recovery, with the ability to expand to a 2-stage, higher recovery system in the future. The project also includes the installation of four new 150 hp vertical turbine can pumps, each with variable frequency drives. Additionally, four new stainless steel, horizontally-mounted cartridge filter vessels are included to replace the existing vertically mounted filters. The new cartridge filter arrangement provides for additional safety and ease of maintenance for filter element replacement.

Craig Wells, PE, ENV SP

CLIMATE RESILIENCY/GRANTS

KEY QUALIFICATIONS

- ✓ Diverse planning, permitting, design and funding experience
- ✓ Climate resiliency specialist
- ✓ Remains current on pending and proposed regulatory changes



Mr. Wells offers nearly 25 years of experience providing professional engineering services. He is a designated ENV SP, a professional that has the capability to apply the principals of sustainable design to infrastructure projects. His experience includes managing, planning, design, permitting and construction and bidding phase services for water distribution systems, water booster stations, well and well house design, sanitary sewer collection systems and lift stations, wastewater treatment systems, stormwater management systems, grading plans, road, building pads, soil erosion control, right of way improvements and parking. He has serviced clients in both the public and private sectors, providing detailed scheduling and budgeting for various multi-disciplined projects.

EDUCATION

B.S., Civil Engineering,
Michigan Technological
University

Craig's area of technical expertise is assessing climate vulnerability of infrastructure and creating climate resiliency. He has conducted climate vulnerability assessments for several utilities in coastal Florida and Georgia, and assisted in the planning and design of hardening measures to make those utilities climate resilient. He also has presented on the topic at professional conferences in Florida, Texas, Georgia and South Carolina.

PROFESSIONAL LICENSURE

PE / FL / 64161

PE / MI

Envision Sustainability
Professional

SELECTED PROJECT EXPERIENCE

WWRF Hardening of Biosolids Building/Emergency Operations Center

City of Largo, FL

Mr. Wells provided a climate resilience evaluation for the City of Largo Emergency Operations Center. As part of the evaluation the Category 5 storm surge elevation was calculated out to year 2100 as projected by the NOAA "high sea level rise curve" for the area that the EOC is to be constructed on. The building needs to be operational through its projected life span during all projected storm events up to including a Category 5 storm. Base elevations for critical infrastructure are being set 1.0' above the projected Cat 5 elevation. Design of the structure has begun.

Howard F. Curren WWTP Master Plan

City of Tampa, FL

Mr. Wells provided a climate resilience evaluation for Phase 1 of master planning for this wastewater treatment plant that is permitted to treat 96 mgd with a Type I two-stage, high rate (pure oxygen and fine bubble aeration) activated sludge biological nitrification/denitrification process. During the evaluation the existing the existing facility located on Hillsborough Bay was evaluated for vulnerability to category III, IV and V storm events out to year 2040, 2050, 2060 and 2070. An overall evaluation of plant process vulnerability to future events was then completed. Hardening measures were then coordinated with the overall master plan to insure requisite hardening measures are completed to make sure the facility is resilient over the planned service life of the facility.

CONTINUED

WWRF Operations Building Preliminary Engineering

City of Largo, FL

As Resilience Engineer for this project, Mr. Wells provided a climate resilience evaluation for the City of Largo WWRF, which led to establishing the Category 5 storm surge elevation and future 100 year floodplain evaluation out to year 2100 to be used as the base elevation for hardening of all vulnerable components of the facility. This work began in 2017, the hardening is ongoing, and the evaluation is finished.

Lift Station 87

City of Sarasota, FL

Mr. Wells provided a climate resilience evaluation for the City of Sarasota's Master Lift Station #87. The Sarasota County building code required the building finish floor be set 1.0' above the FEMA 100-year flood elevation of 9.0'. However the category III storm surge elevation, determined during the evaluation for the site in year 2040, calculated with the NOAA high curve for the region showed an elevation of 22.0' was necessary. As a result, critical infrastructure was raised to elevation 23.0' and noncritical infrastructure was placed on the first floor of the structure and designed to operate in a flooded condition. The lift station is currently under construction.

WWTP Climate Resiliency Analysis

City of St. Augustine, FL

Mr. Wells is providing a climate resiliency survey and analysis to assess the vulnerability of the City's wastewater treatment plant (WWTP) to flooding, and to evaluate the impact of storm surge and sea level rise on the facility today and out to the year 2100 with interim assessments at years 2030, 2050 and 2070. To support the City's planning efforts, the analysis also projected future Mean Higher High Water (MHHW) sea level elevations for the area adjacent to the WWTP based on the established MHHW for the St. Augustine region.

Other Climate Resilience Work, Various Clients

Mr. Wells has provided climate resilience evaluations of several other facilities, estimating vulnerability to future storm events. These evaluations include, but are not limited to:

- City of Tampa San Carlos Master WW Pump Station
- City of St. Petersburg NEWRF
- City of Daytona Beach Bethune WWTP
- City of Punta Gorda AWTF
- Brunswick Glynn Joint Water & Sewer Commission
- Master Wastewater Pump Station

Tony Pevec, PE, BCCE

WATER TREATMENT

KEY QUALIFICATIONS

- ✓ Reverse osmosis
- ✓ Groundwater supplies
- Develops detailed designs for construction

EDUCATION

B.S., Civil Engineering,
Cleveland State University

Certification, Board
Certified Environmental
Engineer (BCEE), American
Academy of Environmental
Engineers

PROFESSIONAL LICENSURE

PE / FL / 66706



Mr. Pevec has been actively engaged in civil and environmental engineering for more than 17 years. He will assist with water treatment plant design the efforts for this project and is experienced in the management, permitting, design and construction of wastewater treatment facilities, water treatment facilities, biosolids processing facilities, odor control facilities and pump stations. He is also skilled in plant data analysis, site investigations, alternative delivery, construction management and inspection, facility start-up, acceptance testing, operator training, and quality assurance and quality control reviews.

SELECTED PROJECT EXPERIENCE

Alternative Water Supply City of Tarpon Springs, FL

Mr. Pevec was Project Manager and Construction Manager for the preliminary design, design review, and construction professional services for the City's new 6.4-mgd Reverse Osmosis Water Treatment Plant (RO WTP) and brackish water wellfield. The project included the permitting and preliminary design of the RO WTP, production and monitoring wells, raw water transmission main and concentrate transmission main. Provided owner's representative services during the detailed design, construction, and start-up of these facilities. The chemical storage and feed systems included sulfuric acid, hydrofluosilicic acid, scale inhibitor, slaked lime, and sodium hypochlorite

South Cross Bayou WRF Headworks & Grit Removal System Design Criteria Pinellas County, FL

The McKim & Creed team developed the Design Criteria Package to support Pinellas County's choice to employ a design-build delivery method for its Headworks Structure and Grit Removal Facility Replacement project at the 33.0 mgd South Cross Bayou Water Reclamation Facility.

Design-Build Gateway Expressway Utility Relocation Engineering, BCC Engineering Feathersound, FL

McKim & Creed is teamed with BCC Engineering as sub-engineering consultant to serve as the Engineer of Record for the relocation of utilities owned by Pinellas County, the City of Largo and the City of Pinellas Park to support FDOT's Gateway Expressway Project that includes utility relocations along I-275 from South Gandy Boulevard to north of 4th Street North. The scope of work includes final design, permitting, construction clearances and final project certification and record drawings. The permits acquired include three FDEP permits, FDOT right-of-way (ROW) utilization permit and Pinellas County ROW utilization permit.

Brine Pipeline Design-Build, Produced Water Transfer, LLC

City of Logansport, LA

McKim & Creed is the program manager for the development, permitting, design, construction and commissioning of a new brine pipeline and disposal well network which will transfer up to 165,000 barrels of oil and gas-produced wastewater per day from a truck terminal located in Louisiana to four salt water disposal wells in Texas. The pipeline will convey the wastewater from a centrally located truck & transfer terminal in Louisiana, where oil and miscellaneous solids will be removed. From there, the water will be pumped to a distribution terminal, then on to the disposal wells. The proposed pipeline will cover 2.35 miles across the state of Louisiana, then will be horizontally directionally drilled under the Sabine River into Texas. A controls system will help balance the acceptance of wastewater at the truck terminal and the disposal of the processed wastewater at the wells for the most effective disposal rate.

Venice Gardens WRF Lift Station Rehabilitations

Sarasota County, FL

McKim & Creed is providing design, permitting, and bid and construction administration services to Sarasota County to rehabilitate two pump stations at its Venice Gardens Water Reclamation Facility. Improvements to the County's Main Pump Station include replacement pumps, discharge pipe within the wetwell, guide rails and hangers, wetwell and upstream manhole coating, partial replacement of discharge pipe header and relocation of the electrical panel. The team is adding an ultrasonic level control system, and connectin the wetwell to the headwords odor control system. At the County's Transfer Pump Station, improvements include replacement pumps, guide rails and hangers, control panels, discharge pipe header, wetwell coating, discharge pipe within the wetwell and a new 30-inch bypass pipe that runs from the Main Pump Station upstream manhole to the Transfer Pump Station wetwell. Power conduits and an ultrasonic level control system are also being added to this pump station. The team will also accomplish miscellaneous improvements to both pump station sites.

Alafia Pump Station Modifications Project, Tampa Bay Water

City of Tampa, FL

Mr. Pevec was the design and construction manager for the piping modifications at the Alafia River Pump Station and at the Long Flat Creek Blowoff facilities. The project included hydraulic modeling, modifications to existing piping, design of the carbon steel and stainless steel pipeline, and structural modifications. The project allows Tampa Bay Water to drain its regional reservoir in a more controllable manner during an emergency without the use of temporary piping.

Tampa Bay Water Regional Surface Water Treatment Plant Facility Modification

City of Tampa, FL

Mr. Pevec was the Resident Engineer for the facility modification, which increased treatment capacity from 66 mgd to 120 mgd. The project included construction, testing, and start-up of high-rate ballasted flocculation/sedimentation, ozone treatment, GAC filters, clearwells, chlorine contact chambers, liquid carbon dioxide, liquid oxygen, sulfuric acid, sodium hydroxide, and sodium hypochlorite storage and feed systems, yard piping, electrical and solids handling improvements. He was also the project engineer who designed the solids handling component and dry polymer makedown, storage and feed system. This work included design of three backwash solids clarifiers, a gravity thickener influent mixing chamber, a gravity thickener, a belt filter press dewatering facility, a sludge drying bed, and associated pumping and piping.

Regional Biosolids Facility Design-Build-Operate Design Review and Odor Control Analysis

Pasco County, FL

Mr. Pevec was the project manager and engineer for the County's future 25 DTPD regional biosolids facility utilizing both solar drying and belt drying technologies to create Class AA biosolids. The project consisted of creating construction and services agreements, design criteria, and performance guarantees. Mr. Pevec was the lead engineer for the odor control analysis, which included pilot unit sampling, AERMOD dispersion modeling, and evaluating odor control technology alternatives to optimize treatment and minimize off-site odor impacts.

JOHN W. KILGORE, PE ROADWAY



EXPERIENCE

- 27 Years

EDUCATION

- Bachelor of Science in Civil Engineering, University of Alabama, 1989

REGISTRATION

- Professional Engineer, Florida #47942, 1994

Mr. Kilgore has more than 27 years of experience in transportation/roadway engineering and project management. Mr. Kilgore has gained a great deal of knowledge through his involvement in many design contracts, including Florida Department of Transportation (FDOT) multi-laning, resurfacing, enhancement, and bridge replacement projects. He has also managed several Project Development and Environmental (PD&E) studies for FDOT and has managed numerous contracts for counties and municipalities. In addition, he has managed and designed numerous interstate improvement projects including interchange modifications, capacity improvements and served as Project Manager and Engineer of Record (EOR) on and for many previous complex design build projects.

District Wide Safety Studies & Minor Design, Citrus, Hernando, Hillsborough, Pasco, & Pinellas Counties, Florida – FDOT District Seven. Roadway Quality Control Manager for this task work order driven contract that includes roadside safety measures, lighting justification, intersection improvements, ADA, traffic flow improvements, bike lanes, and sidewalk connectivity – all to reduce the potential for crashes, injuries and fatalities. Additional scope elements include preparing informational/educational materials to provide safety training, providing Roadway Safety Audit (RSA) support, as well as providing Community Traffic Safety Team (CTST)/Local Agency support to assist with identifying municipal Local Agency Program (LAP) projects. In addition, the contract includes a number of independent “study types” encompassing a wide variety of traffic operational tasks including: collecting pedestrian and bicycle counts along various corridors to identify potential mid-block crossing locations, intersection and signal warrant analyses, multiple vehicle/pedestrian/bicycle traffic counts, corridor safety studies, crash analyses and reports, safety outreach and education, training, safety funding concept development, and minor design. Mr. Kilgore is responsible for performing quality control reviews on concepts, design plans and cost estimates for various tasks.

General Engineering Consultant Contract, Citrus, Hernando, Hillsborough, Pasco, and Pinellas Counties, Florida – FDOT District Seven. This contract provides a wide range of engineering, surveying, architectural, landscaping, technical, Geographic Information System (GIS), management, and administrative services as needed to assist in executing projects in the District Seven Work Program. The contract also provides support for operations, maintenance, and construction activities of the State Highway System as required to support transportation development. Focusing on the roadway components, Mr. Kilgore assisted with scope development and man-hour negotiations for the SR 682 project from US 19 to 41st Street. In addition, he performed plan reviews on behalf of the Department for the SR 699 project from SR 682 to SR 693.

Stormwater Engineering Services, Pinellas County, Florida – City of Tarpon Springs. Principal and QA/QC Manager for this continuing services contract. Mr. Kilgore provided oversight of the contract and provided quality assurance reviews for all incremental submittals to the City. He also participated in update meetings with City staff to ensure that progress was on schedule.

Traffic Operations Design/Build Push Button Contract 3, Citrus, Hernando, Hillsborough, Pasco, and Pinellas Counties, Florida – FDOT District Seven. Quality Control Manager for multiple minor design tasks involving signal reconstruction and ADA improvements. Tasks are completed on accelerated schedules with scopes designed to solve specific safety or operational deficiencies. Mr. Kilgore is responsible for performing quality control reviews of design plans and cost estimates.

ICON

Miscellaneous General/Civil Services, Hillsborough County, Florida – Hillsborough County Public Works.: Project Manager for various intersection improvement projects as one of 16 consulting firms that were selected by Hillsborough County Public Works to provide General Civil Engineering services to the County. This contract was developed to support the County's projects to be constructed through the Transportation Task Force funding.

- **Turkey Creek Road at West Trapnell Road.** This project consisted of the production of a Traffic Engineering Report to analyze and recommend level of service improvements for the intersection of Turkey Creek Road at West Trapnell Road. The project included analyzing the projected growth volumes and determining where additional turn lanes were feasible at the intersection. Turkey Creek Road at Sydney Road. This project consisted of the production of a Traffic Engineering Report to analyze and recommend level of service improvements for the intersection of Turkey Creek Road at Sydney Road. The project included analyzing the projected growth volumes and determining where additional turn lanes were feasible at the intersection.
- **Turkey Creek Road at Airport Road.** This project consisted of the production of a Traffic Engineering Report to analyze and recommend level of service improvements for the intersection of Turkey Creek Road at Airport Road. The project included analyzing the projected growth volumes and determining where additional turn lanes were feasible at the intersection.
- **SR 60 at Mulrennan Road.** This project included providing Preliminary Design and Engineering services to Hillsborough County for the proposed improvements on Mulrennan Road at SR 60 east of Brandon. This project provided preliminary conceptual alternatives to upgrade the intersection for additional turn lanes. The team developed preliminary designs, including horizontal and vertical geometry, typical sections, anticipated right-of-way impacts and stormwater management needs.
- **SR 60 at Dover Road.** This project included providing Preliminary Design and Engineering services to Hillsborough County for the proposed improvements on Dover Road at SR 60 east of Brandon. This project provided preliminary conceptual alternatives to upgrade the intersection for additional turn lanes. The team developed preliminary designs, including horizontal and vertical geometry, typical sections, anticipated right-of-way impacts and stormwater management needs.

Dale Mabry Diversion Force Main/Reclaimed Water Transmission Main and Brushy Creek Pump Station Force/Reclaimed Mains Design Build Contract Oversight, Tampa, Florida – Hillsborough County. The Brushy Creek Pump Station replacement, located at the Dale Mabry Advanced Wastewater Treatment Plant, required the installation of a new 20-inch force main from the Dale Mabry Advanced Wastewater

Treatment Plant to the Northwest Regional Wastewater Treatment Plant, a distance of approximately 5.9 miles. Work also included a return 24-inch reclaimed water main to be constructed along the same route. The scope of services for the contract included developing the Design Build Criteria Package and other documents, providing procurement support, providing design and construction support, and assisting with other coordination as necessary for this project that includes an accelerated schedule. Mr. Kilgore served as the Project Manager.

US 19/SR 55 from SE 8th Avenue to Northeast 1st Terrace, Citrus County, Florida – FDOT District Seven. Project Manager for access management improvements, milling, resurfacing, and construction of bike trails for 1.4 miles. Elements of work included roadway, traffic control, RRR report, pavement design, variation and exception reports, specifications, signing and pavement markings, signalization, traffic operations with multi-modal study, stormwater management, permitting, utilities, right-of-way encroachments, and public involvement.

118th Avenue (CR 296) Connector from US 19 to 49th Street, Pinellas County, Florida – FDOT District Seven. Roadway Engineer on this project and coordinated design criteria with Pinellas County and FDOT to maximize design options. The team prepared a Feasibility and PD&E study evaluating appropriate laneage and intersection configurations at major intersections on this 1.5-mile corridor. The project included defining alternatives including intersections at-grade, or grade separated interchanges along 118th Avenue at US 19, 49th Street, and the Roosevelt Connector. The team evaluated regional and local access, provided detailed traffic modeling, conducted an environmental fatal-flaw analysis, evaluated integration with adjacent projects and looked at cost scenarios, including possible staging options. The PD&E continuation of the completed Feasibility Study involved additional environmental assessment, public involvement activities, and refinement of alternatives.

Meres Boulevard Extension, Pinellas County, Florida. Project Manager for this project which involved the one-mile extension of a two-lane roadway in the City of Tarpon Springs. The project is separated into three segments. Work includes the extension of Safford Avenue from Harrison Street to Meres Boulevard Extension. Design services include roadway horizontal and vertical alignments, stormwater management systems, traffic control plans, signing and pavement markings and signalization. Included was an evaluation of design alternatives within the project corridor resulting in a recommendation of an additional westbound signal to accommodate new development. The roadway will function as an east-west collector. Work was coordinated concurrent with the opening of the Meres Crossing shopping plaza.



Wayne S. Driggers, PE
Geotechnical Engineering
Senior Vice President



Years of Experience

22 Years

Education

BS, civil engineering,
 University of Florida
 Masters Studies in
 geotechnical
 Engineering,
 University of Florida

Professional Credentials

Professional Engineer
 FL No. 58013

Overview

Mr. Driggers has 22 years of experience as a geotechnical engineer with Driggers Engineering Services, Inc. He is a graduate of the University of Florida specializing in Geotechnical Engineering. He is responsible for geotechnical project management, including subsurface soil investigations, foundation engineering studies, and coordination of geotechnical testing and evaluation. Experience includes evaluation and foundation design for numerous low and high-rise structures, water and wastewater facilities, medical and educational facilities, substations and transmission lines, bridges and piers, as well as numerous residential developments. Other experience includes evaluations of embankment and cut slope stability.

Project Experience

City of Belleair Beach, Belle Isle and Hibiscus – Provided geotechnical services for an existing retaining wall in need of repair. Reported on soil and groundwater conditions and recommended design soil strength parameters.

Isle of Capri Pump Station, Pinellas County – As a subconsultant to McKim & Creed, conducted Standard Penetration Test and hand auger borings in order to investigate subsurface soil and groundwater conditions and the likely cause of the observed settlement of surrounding sidewalks, curbs and driveways.

Channel 1AW repair, Pinellas Park – As a subconsultant to McKim & Creed, performed Standard Penetration Test borings and hand auger borings/hand cone soundings to provide assessment of foundation conditions for the proposed channel bridge crossing. Provided recommendations for slope protection and control of groundwater and surface water and well as construction considerations.

Albert Whitted Lift Station 85; Master 30” Force Main, Part D, St. Petersburg – Conducted subsurface soils investigation along the alignment of the proposed force main. Provided geotechnical construction considerations and a summary of groundwater depth and elevations.

City of Clearwater Cleveland Street Phase III, Clearwater – Conducted a program of Standard Penetration Test (SPT) borings and hand auger borings along the proposed stormwater baffle boxes and existing culvert crossing. A series of laboratory constant head permeability tests were conducted on undisturbed Shelby tube samples retrieved in order to check potential infiltration characteristics of subgrade soils for proposed drainage areas.

City of Clearwater Lake Bellevue Park Bridge - Standard Penetration Test (SPT) borings conducted for proposed bridge to determine soils classification as well as groundwater information. Recommendations made for foundation requirements and piling evaluation.

City of Clearwater Drainage area study Crest Lake Park, Clearwater - Geotechnical investigation, analysis, reporting and discussion of soils and groundwater levels and for infiltration test for design of drainage facilities

San Salvador Road Drainage Improvements, Dunedin, FL - Senior Geotechnical Engineer for this project which included stormwater pipelines and sewer drains along junctures. The investigation included drilling to nominal depths of 9 to 13.5 feet below the ground surface. Recommendations included dewatering, excavation, fill and backfill and side slope controls.

Third Street South Bridge Over Booker Creek, Bridge #157108, St. Petersburg, FL - Provided geotechnical engineering services and recommendations for the bridge replacement. Foundation alternatives included driven prestressed concrete piling and Drilled shafts (caissons).

Presidents Street Pavement and Drainage Improvements, Dunedin, FL - Senior Geotechnical Engineer responsible for necessary geotechnical investigations for a water treatment unit, a new stormwater pipeline along with associated junction structures and feeder lines to convey stormwater to the outfall structure together with a continuous deflective separation (CDS) or Raintree unit to treat or filter the stormwater prior to reaching the waterway.

Emergency Operations Center, Hillsborough County, FL - Senior Geotechnical Engineer for a one and two-story combined office, storage and vehicle maintenance building. New stormwater management areas, training areas and parking lots and the existing ponds may be expanded or modified. Geotechnical investigation covered all areas for current and potential future development.

City of Oldsmar, Pedestrian Bridge, Oldsmar – Subsurface soil investigation for the planned pedestrian bridge structures. Provided recommendations for inspection and subgrade preparation and construction considerations.

City of Clearwater, Moccasin Lake Nature Park, Proposed Bridge Replacement – Investigation subsurface soil conditions and groundwater levels for the proposed bridge.

City of St. Petersburg, 54th Avenue Bridge, North Bay Trail, St. Petersburg, FL – Conducted soil borings and laboratory testing for the proposed installation of three single span pedestrian bridge structures. Reported on soil and groundwater conditions. Presented compression load details on each foundation element on the respective bridge type. Provided recommendations for subgrade preparation and dewatering considerations.

City of Largo, 10 MG Reclaimed Water Storage Tank; Largo, FL - Senior Geotechnical Engineer responsible for planning, design, execution, analysis and reporting for land and water geotechnical studies for 10 MG Storage Tank

Idlewild Gravity Sanitary Sewer System; Clearwater, FL – Senior Geotechnical Engineer responsible for performing the geotechnical investigation along the alignment of the Idlewild Gravity Sewer System which covered several miles of pipeline and necessitated 67 Standard Penetration Tests along the route, in addition to 102 hand auger borings along 4.25 miles of roadway. Subsurface soils were tested, and geotechnical analyses of findings were conducted. Reporting included description of issues surrounding manhole location, together with recommendations for pavement replacement post-construction.

Channels 3A, IC & IB Improvements, Pinellas Park, FL - Senior Geotechnical Engineer responsible for geotechnical investigation, analysis, reporting and recommendations for slope protection, soil strength parameters, subgrade preparation and recommendations for dewatering and construction inspection and testing.**Roadway Investigations; Priority “A” Roads; City of Clearwater, FL** – Senior Geotechnical Engineer Responsible for conducting field investigation of major roadways in the City of Clearwater which included analysis of groundwater data, subsurface soil conditions, laboratory testing of pavement composition, and determination of pavement design.

Pavement and Utility Evaluation, Trinity, FL – Performed borings throughout the planned roadway alignment to help facilitate the design of the planned utilities. Provided recommendations for subgrade preparation.



Wesley R. Padoll

Construction Services Manager



Years of Experience

26 Years

Education

Northern Virginia
Community College,
Certificate in Drafting

Professional Qualifications

CTQP Certifications:
LBR, Aggregate Base,
Concrete Laboratory &
Sampling; Asphalt
laboratory, Asphalt
mix designer,
Earthwork, ACI
Certification Concrete
Field, Concrete
Strength testing,
Concrete lab level 2,
Aggregate testing level
2, Nuclear
Densitometer Safety &
Use

Overview

Mr. Padoll has 26 years of specialized experience in construction inspection and materials testing. Since joining Driggers Engineering Services, Inc., in 1997, his principal duties have included senior level inspection and testing of all phases of construction. Of special significance is his extensive knowledge of post-tension inspection and drilled shaft foundation inspection. Mr. Padoll's most recent responsibilities include coordination and supervision of all construction inspection and materials testing activities for the Pinellas County office.

Project Experience

- City of Dunedin - Manage field sampling and laboratory testing for City-wide projects
- Pinellas County Asphalt Testing Contract - Manager field sampling and laboratory testing
- Pinellas County Materials Testing Contract - Manage field sampling and laboratory testing
- City of Tampa Asphalt Paving - Field sampling and laboratory testing, including asphalt paving inspections and coring pavement
- The One - 41 Story condominium and 6 level parking garage, St. Petersburg - Manage field and laboratory testing, including drilled shaft foundation and inspection, concrete placement inspection, post tension stressing inspection and floor flatness testing
- Fenway Hotel, Dunedin - Manage field and laboratory testing of soils and concrete including auger cast foundation inspection
- Lakewood Drainage Storm Sewer project, Dunedin - Manage field and laboratory testing of soils, aggregate concrete and asphalt
- Dunedin Pump Station, Dunedin - Manage field sampling and laboratory testing
- Signalization on 22nd Street; Tampa
- 32-Story 400 Beach Drive, St. Petersburg - Drilled Shaft Inspection
- 29 Story Parkshore, St. Petersburg - Drilled Shaft Inspection
- 18-Story Aqualea, Clearwater Beach - Drilled Shaft and Post Tension Inspection
- Seaport Parking Garage, Tampa - Drilled Shaft Inspection
- All Children's Hospital Parking Garage, St. Petersburg - Vibro-Replacement Inspection
- Dulles Airport Main Terminal Expansion, Fairfax, VA - Construction Inspection
- Dunedin Water Main Replacement
- LifeLink Headquarters Building, Tampa - Drilled Shaft Inspection
- 9-Story Raymond James Tower III and 5-Level Parking Garage, Pinellas County - Drilled Shaft Inspection
- 1-Story The Cloisters Condominium, St. Petersburg - Drilled Shaft Inspection
- Osceola Middle School
- City of Seminole Comm. Center - Achometer Testing
- 22-Story Meridian Condominium, Sand Key - Drilled Shaft, Post-Tension and Construction Inspection

Island in the Sun Detention Area Renovation

23-Story Florencia Condominium, St. Petersburg - Drilled Shaft, Post-Tension and Construction Inspection

5-Story All Children's Hospital Total Replacement, St. Petersburg - Drilled Shafts

Twin 16-Story Mandalay Beach Club Condos, Clearwater Beach - Construction Inspection;

Fire Station 45

Twin 13-Story Belle Harbour Condos, Clearwater Beach - Construction Inspection

22-Story Bellamy on Bayshore Condominium, Drilled Shaft, Post Tension and Construction Inspection; Tampa, FL

Pinellas County Highway Department Annual Materials Testing Contract; Pinellas County, FL

Tampa International Airport, Taxiway B, Tampa - QA Construction Inspection and Materials Testing

Vulcan Ica, Tampa - FDOT Limerock Certification

Martin Marietta, Tampa - FDOT Aggregate Certification

Capitol Theatre Demolition

Druid - Corbett Road – Belleair

Indian Rocks City Hall

McKim & Creed understands the importance of addressing the Town’s emerging and future needs and we have selected a local group of experts with a diverse skill set. We will leverage our team’s unique combination of location, expertise and experience with local municipalities to provide the Town with outstanding service, responsiveness and quality. In addition to our unique qualification of having all key disciplines covered in our local Tampa Bay area offices, we have added Drigger’s Engineering Services and ICON Consultant Group, Inc. to our team. With these additions, the Town will benefit from our team’s ability to cover each of the 11 services identified in the RFQ.

TEAM MEMBER	SCOPE OF SERVICES							
	Years of Experience	Stabilization & Erosion Control	Waterway Restoration & Management	Bridge Infrastructure	Seawall Restoration	Water Treatment to reduce Chloride levels	Roadway/Drainage Improvements	Water Utility Improvements
Phil Locke, PE	23	•	•	•		•	•	•
Street Lee, PE, ENV SP	34	•	•	•	•	•	•	•
Joseph Viciere, PE, BCCE	37					•		
David Wehner, PE	18	•		•			•	•
Mitch Chiavaroli, PE	30	•	•	•	•	•	•	•
Tony Pevec, PE, BCCE	17	•				•	•	•
Eric Brown	23					•		
Aubrey Haudricourt, PE	21					•		
Craig Wells, PE, ENV SP	25	•	•	•	•		•	•
Curtis Burkett, PE, LEED AP	40	•	•	•	•		•	•
Joe Resendes, CCCA	33	•	•	•	•		•	•
Diane Achinelli	32	•	•	•	•		•	•
Tom Halstead, PSM	32	•	•	•	•		•	•
Sam Hobi, PE	25	•	•	•	•		•	•
John Kilgore, PE	27	•		•			•	
Robbie Fusinato	1						•	

The following matrix shows our key staff's local experience and expertise. Our familiarity with local municipalities and permitting agencies will assure the Town that our designs will be well-coordinated and easily permitted.

TEAM MEMBER	SCOPE OF SERVICES						
	Town of Belleair	City of Clearwater	City of Largo	Pinellas County	SWFWMD	FDEP	FDOT
Phil Locke, PE	•	•	•	•	•	•	•
Street Lee, PE, ENV SP	•	•	•	•	•	•	•
Joseph Viciere, PE, BCCE			•	•	•	•	
David Wehner, PE		•		•	•	•	•
Mitch Chiavaroli, PE	•	•	•	•	•	•	•
Tony Pevec, PE, BCCE					•	•	•
Eric Brown	•	•	•	•			
Aubrey Haudricourt, PE	•	•	•	•		•	
Craig Wells, PE, ENV SP		•	•		•	•	•
Curtis Burkett, PE, LEED AP			•		•	•	•
Joe Resendes, CCCA		•	•	•		•	•
Diane Achinelli	•	•	•	•	•	•	•
Tom Halstead, PSM		•	•	•			•
Sam Hobi, PE	•	•	•	•	•	•	•



CAPABILITIES

McKim & Creed has the capability to meet all scope items required in this contract. Our project manager, Phil Locke, PE, is stationed in our Clearwater office. By having Phil and his team nearby, we are confident that we will be able to provide timely, efficient, and cost effective service to your team during all phases of the contract.

9. WHAT OUTSIDE ASSOCIATES AND CONSULTANTS DOES YOUR FIRM NORMALLY WORK WITH? INCLUDE: A. NAME AND ADDRESS; B. SPECIFIC SERVICES; C. NAME OF LAST JOINT PROJECT

McKim & Creed works with the following firms on a regular basis and is able to offer the following firms in addition to our services if the EOR contract would call upon a specific skill-set.

A. FIRM NAME	ADDRESS	B.SERVICES	C. LAST JOINT PROJECT
WSP, Inc.	10014 North Dale Mabry Hwy, Suite 205, Tampa, FL 33618	Hydrogeologic Engineering	Manatee County Utility A/E Services Contract
Angie Brewer & Associates, Inc.	9104 58th Drive East, Bradenton, FL 34202	Grant Writing	Manatee County Utility A/E Services Contract
ESA Scheda Ecological Associates, Inc.	5892 East Fowler Avenue, Tampa, FL 33617	Environmental Engineering	Manatee County Utility A/E Services Contract

10. IS IT ANTICIPATED THAT YOUR FIRM WILL SUBCONTRACT ANY ARCHITECTURAL, ENGINEERING, LANDSCAPE DESIGN/ARCHITECTURE, OR OTHER SERVICES WHEN WORKING ON SPECIFIC PROJECTS? IF SO, PLEASE DISCUSS THE NATURE AND EXTENT OF THE ANTICIPATED SUBCONTRACTING, INCLUDING THE USE OF LOCAL BUSINESSES.

Geotechnical/Material Testing/Pavement Management

Driggers Engineering Services, Inc.
 Jamie Driggers, PE
 12220 49th Street North, Clearwater, FL 33762
 Phone (727) 571-1313; Fax (727) 572-4090

McKim & Creed will utilize Driggers Engineering Services, Inc. (DESI) on projects requiring subsurface exploration for foundation considerations and subsurface conditions for utility construction. McKim & Creed has also relied upon the expertise in materials testing offered by DESI on numerous projects where McKim & Creed has provided full construction administration services.

Traffic Engineering

ICON Consultant Group, Inc.
 John Kilgore, PE
 10006 North Dale Mabry Highway, Tampa, FL 33618
 Phone (813) 962-8689; Fax (813) 927-0061



McKim & Creed will utilize ICON for all projects which require traffic engineering. ICON provides traffic engineering solutions for both urban and rural projects, ranging in size and complexity for multiple project types, such as highway design, roadway improvements associated with new developments, pedestrian safety improvements, and intersection improvements. Specific services include design for signalization, signing and pavement marking, lighting, traffic safety, traffic calming, access management, and LAP coordination.

11. PLEASE DESCRIBE THE TYPES OF PROJECTS IN WHICH YOUR FIRM HAS SPECIALIZED. INCLUDE AN EXAMPLE OF A PROJECT WHICH TYPIFIES THE PRODUCT OF YOUR FIRM.

McKim & Creed offers a full range of engineering, surveying and planning services. Core competencies of the firm include water and wastewater planning and design, site/civil engineering, landscape architecture, structural engineering, GIS, and surveying specialties ranging from electronic data collection to hydrographic surveying, aerial photogrammetry, laser scanning and subsurface utility engineering. On projects where applicable, we have also provided start-up assistance and training. Our experience includes facilities and master planning; water production, treatment and distribution; wastewater collection and treatment; reclaimed water storage and distribution;

stormwater conveyance and treatment; infrastructure evaluation and repair; surveying and subsurface utility engineering (SUE). These areas of expertise are where we have the longest history and where we have developed the highest level of success and created the strongest relationships. Our specific project experience is strong in this type of service, as we will demonstrate in this section.

While we have provided these services to many municipal utilities in many areas, for this response we will focus on our work with your neighboring Clearwater utilities. This local focus will allow you to more readily confirm references and in some cases provide you with projects that you have seen being constructed and placed into service. All of our dedicated staff identified in the proposal have directly worked for numerous small communities including Safety Harbor, Zephyrhills, New Port Richey, Venice, North Port, Ormond Beach and others. We believe this local experience is relevant and impressive in demonstrating we can efficiently and quickly transition into being one of your top providers of engineering services.

12. BASED ON YOUR UNDERSTANDING OF THE PROPOSED SCOPE OF SERVICES, PLEASE ATTACH A LIST OF REPRESENTATIVE MUNICIPAL PROJECTS OR ENGINEERING SERVICES IN WHICH YOUR FIRM HAS BEEN

CLEARWATER WATER TREATMENT PLANTS #1 AND #3 WELLFIELD RELOCATION/EXPANSION

CLIENT: CITY OF CLEARWATER, FL
CONTACT: JEREMY BROWN, UTILITIES ENGINEERING MANAGER
JEREMY.BROWN@MYCLEARWATER.COM
(727) 562-4815

The City of Clearwater intended to construct four new wells in the Water Treatment Plant (WTP) No. 3 area, and five new wells in the WTP No. 1 area. Each well is targeted to produce approximately 0.25 million gallons per day. The additional proposed water production will require the modification of the City's existing Water Use Permit issued by the Southwest Florida Water Management District (SWFWMD). Should the expanded capacity not be permitted, new wells will provide the City redundancy and rotational capacity for its groundwater supply. This project included the initial efforts associated with the Water Use Permit data collection, ground water modeling, permit application and response to requests for SWFWMD for additional information. The first phase included design efforts related to the development of nine new wells and the engineering and hydrogeologic services during test well construction and testing.

In the second phase, McKim & Creed provided the work associated with the site reselection for the three wells; design, construction, testing and analysis of the additional new well for WTP No. 3; development of standardized well construction documents for the installation of all new wells; relocation of the four unused permitted; and refurbishment of the existing three; the additional water use permitting, data collection, ground water modeling, permit application and response to requests from the SWFWMD; and design, bidding and construction phase services for the additional raw water piping to interconnect the new wells to the respective water treatment plants.

McKim & Creed has provided engineering, surveying and construction phase services to municipal clients for more than 40 years. We have served, and continue to serve, literally hundreds of local government clients in the areas of:

- Utility/infrastructure systems (water, wastewater, reclaimed water and gas)
- Water and wastewater treatment works
- Stormwater management systems
- Environmental regulatory compliance assistance
- Utility building facilities
- Parks and recreational facilities
- Roads, sidewalks and bridges
- Advanced surveying and mapping



McKim & Creed provided design, construction, testing and analysis of new wells for the City of Clearwater.

INVOLVED IN THE TYPES OF ENGINEERING SERVICES IDENTIFIED IN THIS RFQ, SPECIFICALLY WITHIN THE PAST 10 YEARS. INCLUDE: A. CLIENT; B. CONTACT PERSON AND PHONE NUMBER; C. SERVICES PROVIDED; D. ORIGINAL ESTIMATE OF PROJECT COST; E. ACTUAL PROJECT COST F. ORIGINAL ESTIMATE OF TASK COMPLETION SCHEDULE, E.G., STUDY/ANALYSIS OF NEEDS REPORT, PROJECT DESIGN, CONSTRUCTION, ETC.; G. ACTUAL COMPLETION SCHEDULE

As requested by the RFQ, we have included projects with similar requirements needed by the Town over the next five years, including:

- Stabilization and erosion control of the receding bluff, which is located directly west of Bayview Drive along Hallett Park
- Restoration and management of Belleair Creek, which collects and conveys water in Town
- Maintenance and rebuilding of bridge infrastructure
- Maintenance, management and restoration of seawalls
- Water quality improvement to mitigate the effects of high chloride levels
- Roadway, drainage and water utility improvements along Ponce de Leon Blvd
- Other roadway, drainage and water utility improvements throughout town

The following section provides a listing of our representative projects for this contract:



BISHOP CREEK/RAINBOW FARMS EROSION IMPROVEMENTS

A	CITY OF SAFETY HARBOR 750 MAIN ST., SAFETY HARBOR, FL 34695
B	JOHN POWELL, PE, CITY ENGINEER/CAPITAL PROJECTS MANAGER 727.724.1555 X 1805
C	SERVICES PROVIDED / McKim & Creed provided engineering design and permitting services for improvements to approximately 500 linear feet of Bishop Creek in the City's Rainbow Farms Subdivision. The project included designing permanent erosion improvements along the embankment that had the most significant erosion. Materials used for restoration and improvements included planted cabled concrete mats and seawall along the embankment. Phase 1 of this project included 305 feet of permanent and 200 feet of temporary improvement. Two years in the making, coordination and buy-in with residents was essential for project success and McKim & Creed effectively facilitated public outreach and communications with City residents. Phase 2 of the improvements included design of gabion walls, seawall, and planted cabled concrete mats on improved embankments. Phase 2 continued with the permanent improvements between Rainbow Farms Drive and the Sheriff's Youth Ranch property constructed Phase 1. Work consisted of approximately 225 linear feet of Bishop Creek erosion control improvements from Rainbow Farms Drive to the newly constructed concrete capped seawall. McKim & Creed also provided construction phase services for the duration of both the pre-construction and active construction periods.
D	PROJECT BUDGET / \$1,083,600
E	PROJECT COST / \$1,083,600
F	ESTIMATED / JUNE 2011
G	ACTUAL / JUNE 2011



WELLFIELD RELOCATION/EXPANSION - PHASE 2

A CITY OF CLEARWATER | 1000 S. MYRTLE AVE, CLEARWATER, FL 33755

B LAN-ANH NGUYEN, PE, PROJECT MANAGER | 727.562.4581

C **SERVICES PROVIDED** / Phase II of the WTP No. 1 and 3 wellfield expansion project included the work associated with the site selection for three wells; design, construction, testing and analysis of the additional new well for WTP No. 3; development of standardized well construction documents for the installation of all new wells; relocation of the four unused permitted wells (Wells 51R, 52R, 79 & 80); and refurbishment of the existing three wells (Wells 23, 68 & 69). In addition, McKim & Creed provided the additional water use permitting (WUP), data collection, ground water modeling, permit application and response to requests from the Southwest Florida Water Management District (SWFWMD) for additional information for the new wells. The project also included the design, bidding and construction phase services for the additional raw water piping to interconnect the new wells to the respective water treatment plants. As part of this project, McKim & Creed also developed an integrated wellfield water quality spreadsheet that the City used to manage overall wellfield operations.

D PROJECT BUDGET / **\$ 4,700,000**

E PROJECT COST / **\$3,664,543**

F ESTIMATED / **APRIL 2012** 

G ACTUAL / **JULY 2011** 

CEI SERVICES FOR WASTE TO ENERGY WATER TREATMENT PLANT

A

PINELLAS COUNTY | 315 COURT STREET, CLEARWATER, FL 33756

B

MICHAEL ENGELMANN, SENIOR ENGINEER | 727.464.3377

C

SERVICES PROVIDED / McKim & Creed provided construction administration for the 2.5 mgd reverse osmosis (RO) water treatment plant that was constructed at the Pinellas County Waste to Energy (WTE) facility. The RO plant included a robust ultrafiltration (UF) pretreatment system to extend the RO membrane run time between cleaning intervals. The project encompasses two sites, one adjacent to pond A which includes a new influent structure in pond A, a new influent pump station to pump pond A water to the treatment plant site through an existing forcemain, and a new sodium hypochlorite injection system. The other site is located east of the WTE facility on which the WTP was constructed. The project also included site work, excavation and re-compaction of the existing site, drainage, utilities, concrete walkways, parking, roadway and driveway pavement, site lighting, grading and landscaping, irrigation system, security fencing, and demolition.

D

PROJECT BUDGET /

\$ 14,345,007

E

PROJECT COST /

\$14,345,007

F

ESTIMATED /

**JAN
2013**



G

ACTUAL /

**MAY
2013**





EAST 124TH AVENUE DRAINAGE IMPROVEMENTS

A

HILLSBOROUGH COUNTY | PO BOX 1110, TAMPA, FL 33601

B

ROBBY WISEMAN, PE, TEAM LEADER, ENG DIV/PUBLIC WORKS DEP | 813.307.1801

C

SERVICES PROVIDED / McKim & Creed provided engineering and surveying services for the design of a drainage system to alleviate road flooding on E. 124th Avenue from the CSX Railroad crossing at the intersection of East 124th Avenue and 11th Street to approximately 600 feet to the east. Tasks included review of the Duck Pond watershed master plan, design submittals, permitting and engineers estimate of probable construction cost.

The residents in the neighborhood of the intersection of East 124th Avenue and North 11th Street, located in the northwest area of Hillsborough County, expressed concerns regarding the current level of service and private property flood protection. In order to reduce the effects of these flooding events, it was proposed to convey stormwater runoff through a system of storm drains to Duck Pond to the south. It was proposed to install the storm drain trunk line along the south right-of-way of East 124th Avenue and the east right-of-way of North 11th Street. Stormwater structures were proposed to meet FDOT standards.

Based on the flow distribution pipes were sized to meet four criteria:

- Convey the 5-year storm event
- Provide a velocity of at least 2.5 feet per second (fps)
- Be able to discharge against a downstream tail water condition of 32.44 feet
- Maintain approximately one foot of cover over the proposed pipe

D

PROJECT BUDGET /

\$ 177,740

E

PROJECT COST /

\$177,740

F

ESTIMATED /

DEC 2012



G

ACTUAL /

DEC 2012





RECLAIMED WATER INTERCONNECT PROJECT

A

PINELLAS COUNTY | 14 S. FORT HARRISON AVENUE, CLEARWATER, FL 33756

B

SANDRA MCDONALD, PE, ENGINEERING SUPERVISOR | 727.464.4068

C

SERVICES PROVIDED / As the Pinellas County Utilities expanded their reclaimed water distribution system, the county determined it had a need to augment the source of reclaimed water. The county entered into separate agreements with the cities of Clearwater and Oldsmar for a total of 3.8 mgd of reclaimed water from these two cities.

McKim & Creed provided hydraulic modeling, design, bidding and construction phase services for the reclaimed water transmission mains, high service pump station and ground storage tank necessary to connect the City of Clearwater's Northeast Water Pollution Control Facility and City of Oldsmar's reclaimed water system to Pinellas County's north region reclaimed water distribution system.

The improvements included installation of approximately 5.4 miles of reclaimed water transmission mains, with pipe sizes ranging from 12-inch to 30-inch diameter; construction of a 180 foot diameter, 5 MG prestressed concrete storage tank; and construction of a high service pump station equipped with four 2,640 gpm horizontal split case pumps. Installation of the transmission mains included several segments installed via horizontal directional drilling, several in excess of 1000 feet, and a 24-inch subaqueous crossing of Lake Tarpon Outfall Canal. Construction of the high service pump station included installation and programming of SCADA systems to allow communication between the pump station, the W. E. Dunn Water Reclamation Facility, the Northeast Water Pollution Control Facility, and Oldsmar's wastewater treatment plant.

D

PROJECT BUDGET /

\$ 14,453,800

E

PROJECT COST /

\$14,616,050

F

ESTIMATED /

**DEC
2008**



G

ACTUAL /

**MAY
2008**





4TH AVENUE BRICK REPAVEMENT

A

CITY OF SAFETY HARBOR | 750 MAIN STREET, SAFETY HARBOR, FL 34695

B

JOHN POWELL, PE, CITY ENGINEER/CAPITAL PROJECTS MANAGER | 727.724.1555 X 1805

C

SERVICES PROVIDED /McKim & Creed provided engineering design and surveying services to restore the brick paved roadway and the subsurface utilities within the project area that included water and sanitary sewer line replacement; roadway base restoration; stormwater conveyance evaluation and design of drainage improvements.

The primary area for design was 4th Avenue and an adjacent section of 4th Street, between 4th Avenue and 5th Avenue, where in-service vitrified clay pipe (VCP) sanitary lines and manholes were replaced and designed to connect to an existing sanitary sewer structure. McKim & Creed reviewed with the City potential impacts to residents, traffic flow during construction, parking, pedestrian traffic, safety considerations, aesthetics, landscaping, stormwater conveyance and utility service continuity.

D

PROJECT BUDGET /

\$ 1,000,000

E

PROJECT COST /

\$607,000

F

ESTIMATED /

**JUNE
2008**

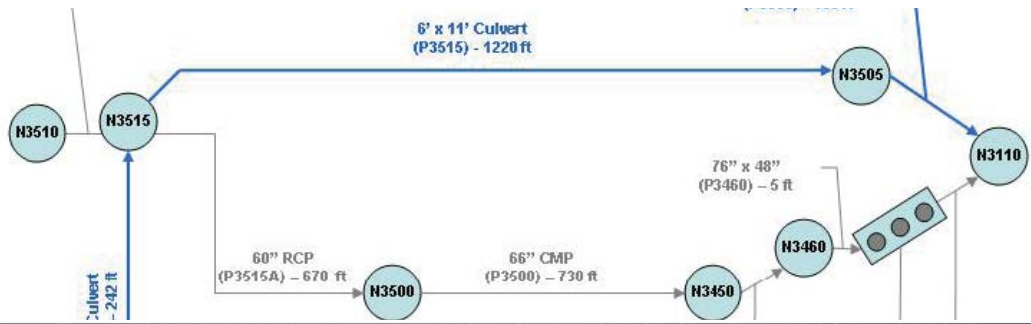


G

ACTUAL /

**MARCH
2008**





TURNER STREET BOX CULVERT DRAINAGE IMPROVEMENTS

A

CITY OF CLEARWATER | 1000 S. MYRTLE AVE, CLEARWATER, FL 33755

B

MELVIN MACIOLEK, PROJECT MANAGER | 727.562.4779

C

SERVICES PROVIDED / McKim & Creed provided preliminary and final design engineering services, permitting, bidding and construction phase services. The project design consisted of upsizing a 54 inch diameter culvert to a 5 foot by 9 foot concrete box culvert, beginning from the existing detention pond located behind an apartment complex eastward to Missouri Avenue. From that location, the box culvert increases in size to 6 foot by 11 foot, and proceeds northward to Turner Street, eastward crossing Missouri Avenue, and terminates at the Glen Oaks Park Stormwater Detention Facility. The total length of the improvements was approximately 1,800 feet. The project was successful and improved long-standing drainage concerns for the local residents.

D

PROJECT BUDGET /

\$ 4,238,757

E

PROJECT COST /

\$4,238,757

F

ESTIMATED /

**AUG
2009**



G

ACTUAL /

**APRIL
2009**





RO WTP NO. 2 WELLS REHABILITATION

A CITY OF CLEARWATER | 100 S. MYRTLE AVENUE, CLEARWATER, FL 33755

B FRED HEMERICK, WATER PRODUCTION COORDINATOR | 727.562.4627

C **SERVICES PROVIDED** /The City of Clearwater constructed 12 new brackish water wells that were commissioned in 2014-2015. The new wells provide the feedwater for the recently commissioned RO Water Treatment Plant No. 2. Due to water quality issues with some of the wells, the City was unable to use two of the wells and a third well could only be used at reduced capacity. To address these issues, the City contracted McKim & Creed provided professional engineering and well rehabilitation services to permit, backplug and recommission three of the existing wells. The project was successful in that water quality, especially turbidity, was significantly improved and the City is now able to use these wells 2-7, 2-8 and 2-9 for production of drinking water for the City's utility customers.

D PROJECT BUDGET / **\$ 119,444**

E PROJECT COST / **\$119,444**

F ESTIMATED / **SEPT 2017** 

G ACTUAL / **JAN 2018** 



REVERSE OSMOSIS WATER TREATMENT PLANT IMPROVEMENTS

A

DUNES COMMUNITY DEVELOPMENT | 101 JUNGLE HUT ROAD, PALM COAST, FL 32137

B

GREG PEUGH, PE, DISTRICT MANAGER | 386.445.9045

C

SERVICES PROVIDED / The Dunes CDD owns and operates the reverse osmosis (RO) water treatment plant (WTP) located in Palm Coast, Florida, which has a permitted production capacity of 0.72 mgd. Based on population growth and projected water demands, the Dunes CDD needed to expand the WTP, doubling the capacity to 1.44 mgd. The design includes stabilization of the finished water and renewal of the National Pollutant Discharge Elimination System (NPDES) Concentrate Discharge Permit. Components of the new facilities included:

- Two new reverse osmosis (RO) skids with cartridge filters and high-pressure RO feed pumps
- High service finished water pump
- New and expanded chemical storage systems for acid; anti-scalant, caustic, corrosion inhibitor, and disinfectant
- New CO2 system to adjust pH for degasification
- New 2-stage degasification system and air scrubber
- Four new chemical feed duplex pumping systems
- New Instrumentation and SCADA System
- New transfer pumping system

The new components included a diesel driven fire protection pump that is monitored by SCADA to operate in the event that the other high service pumps are not able to operate due to a power failure and a generator failure and/or when there is a pressure drop in the distribution system below a predetermined set-point identified by the operations staff.

D

PROJECT BUDGET /

\$ 3,250,000

E

PROJECT COST /

\$ 3,300,000

F

ESTIMATED /

**APRIL
2014**



G

ACTUAL /

**MARCH
2014**





ORANGE AVENUE DESIGN AND PERMITTING SERVICES

A CITY OF DAYTONA BEACH | 950 BELLEVUE AVENUE, DAYTONA BEACH, FL 32115

B JIM NELSON, PE, DESIGN ENGINEER | 386.671.8613

C **SERVICES PROVIDED /** This project included an additional phase of a \$15 million roadway and stormwater infrastructure improvements effort that McKim & Creed completed for the City of Daytona Beach, the most complex that the City has undertaken. This phase involved replacement of all elements within the roadway corridor including features above and below ground – roadway, sidewalks, curbing, stormwater drainage system, potable water, fire and sanitary sewer systems. This included replacing approximately 8,000 LF of 8-inch, 10-inch and 12-inch gravity sewer, 1,200 LF of 16-inch force main, 1,000 LF of 18-inch force main and 10-inch reclaimed water main to be installed by HDD under FDOT right-of-way. Extreme coordination and conflict resolution were critical components to successfully completing the utility system upgrades. These resolutions involved all private utilities along the corridor with overhead lines being brought underground for this project. Upsizing the stormwater system further increased the design efforts since the right-of-way was already full of existing utility systems with established connection and interconnection points. Evaluating the existing system in order to design upgrades that worked with all the surrounding elements required a block-by-block analysis. In addition, in order to maintain existing systems while installing replacements, the project team carefully coordinated the construction sequencing for the improvements, developing detailed maintenance of traffic plans. The team also coordinated permitting through FDEP, FDOT, and USACE agencies.

D PROJECT BUDGET / **\$ 11,400,000**

E PROJECT COST / **\$ 11,396,505**

F ESTIMATED / **NOV 2011** 

G ACTUAL / **JULY 2016** 



ALLINE AVENUE STORMWATER PUMPING STATION, PHASES I & II

A

CITY OF TAMPA | 306 EAST JACKSON STREET 6N, TAMPA, FL 33602

B

AL HOEL, PE, CHIEF ENGINEER, WASTEWATER | 813.274.8462

C

SERVICES PROVIDED / McKim & Creed provided professional engineering services for the preliminary design (Phase I), and final design, permitting, bidding and construction administration (Phase II) for the Alline Avenue stormwater pumping station. The \$4.8 million project included the 35 mgd pump station; 1,200 LF of 36-inch force main installed via open trench, and a marine outfall as well as improvements to the stormwater collection system. The heavily residential area served by the pump station was bounded by MacDill Avenue, Asbury Place, West Bayshore Court, and Bayshore Boulevard. The area had experienced stormwater system overflows not only from runoff during rain events, but also from high tide surges. The stormwater pumping facility alleviated street flooding and moved stormwater more quickly to the outfall. In Phase I of this assignment, McKim & Creed provided preliminary design services including topographic survey; stormwater system development; level of service analysis; and the preparation of a basis of design report. During phase II, we prepared construction plans and specifications, assisted the City with obtaining permits, and provided bidding phase and construction administration support. The McKim & Creed survey division worked in conjunction with the engineering division to provide project control, right-of-way surveys, topographical surveys and the creation of any necessary legal descriptions and sketches for easement recording. In Phase 2, McKim & Creed prepared construction plans and specifications, assisted the City with obtaining permits, public outreach, provided bidding phase assistance and construction administration assistance. The project was designed to blend into the community to positively impact property values. Public outreach included coordinating with adjacent property owners to the 10-foot drainage easement leading to the pump station who had placed landscaping, fencing and other private property within the public easement. The City removed and replaced in like kind any private property disturbed during the construction as a "good neighbor" effort. McKim & Creed also attended a public outreach meeting held at Tampa City Hall to answer questions from the community about the pump station. McKim & Creed provided MOT assistance during design and construction to keep the Bayshore Boulevard Linear Park, the world's longest sidewalk and integral part of the surrounding community, open to the public. The stormwater pumping station has three submersible pumps, each rated at 12,000 gpm. Each pump has a 90 HP motor and an adjustable frequency drive (AFD). The pumping station consists of a wetwell, valve vault and electrical building that contains the motor control center (MCC), AFD, control panels, emergency generator and fuel storage tank. The electrical building was constructed to blend in architecturally with residential homes in the neighborhood. The stormwater force main consists of approximately 1,200 linear feet of 36-inch ductile iron pipe by open cut excavation, an Energy Dissipation Structure, and 80 LF of 10-foot x 3-foot precast concrete box culvert discharging by gravity flow to Hillsborough Bay. Gravity storm drain improvements included 450 LF of 29-inch by 45-inch elliptical RCP, 475 LF of 24-inch RCP, manholes, catch basins and two nutrient separation baffle boxes and associated road reconstruction. The work also includes replacement of about 1,020 LF of 8-inch VCP sanitary sewers with 8-inch PVC sanitary sewers.

D

PROJECT BUDGET /

\$ 4,821,600

F

ESTIMATED /

DEC 2012



E

PROJECT COST /

\$ 4,821,289

G

ACTUAL /

JAN 2013



As shown, we have included some of our relevant projects with similar requirements that the Town may need under this contract. The following matrix provides a summary illustrating the relevancy of our projects with the emerging needs of the Town as identified in the RFQ.

PROJECT	SCOPE OF SERVICES						
	Stabilization & Erosion Control	Waterway Restoration & Management	Bridge Infrastructure	Seawall Restoration	Water Treatment to reduce Chloride levels	Roadway/Drainage Improvements	Water Utility Improvements
Clearwater WTPs #1 & #3 Wellfield Expansion					•		•
Bishop Creek/Rainbow Farms Erosion Imp.	•	•	•	•		•	
Clearwater Wellfield Relocation/Expansion-Ph2					•		•
Pinellas County Waste to Energy WTP					•		•
Pinellas County Reclaimed Water Interconnect							•
4th Avenue Brick Repavement	•					•	•
Dunes Reverse Osmosis WTP Improvements					•		•
Orange Avenue Design and Permitting	•		•			•	•
Alline Avenue Stormwater Pumping Station	•	•				•	•

Additionally, our team provides the Town with unsurpassed local experience and expertise as evidenced below:

Town of Belleair: **10** assignments

City of Clearwater: **241** assignments

City of Largo: **14** assignments

Pinellas County: **121** assignments

13. DISCUSS HOW YOUR FIRM WILL RESPOND QUICKLY TO TOWN NEEDS. HOW WILL YOU MAINTAIN CLOSE EFFECTIVE COMMUNICATIONS WITH TOWN STAFF?

McKim & Creed's local office is just 1.2 miles from the Town Hall and less than 1 mile from the Town's Public Works Department.

WE WILL LEVERAGE OUR LOCATION AND UNIQUE EXPERTISE TO PROVIDE THE TOWN WITH TIMELY AND CONCISE RESPONSES TO ANY QUESTIONS OR CONCERNS UNDER THIS CONTRACT.

McKim & Creed's local office is just 1.2 miles from the Town Hall and less than 1 mile from the Town's Public Works Department. The Town's primary point of contact is Mr. Phil Locke, PE who works out of our local Clearwater office with several of our key disciplines - including our local instrumentation and electrical staff who are familiar with the Town's Water Treatment Plant and other infrastructure. Phil and our key staff will work closely with the Town to understand specific needs and concerns so that we successfully complete each task assigned under this Contract. Leveraging our location, we are available to meet with the Town on short notice to address any questions or concerns.

During the course of this contract, we recommend that regular status meetings be held with key Town staff to review active projects and discuss other needs on the horizon. This status meeting will be in addition the project specific status meetings, whose frequency will depend on the specific project. We prefer face-to-face meetings or telephone calls for critical issues or concerns and will also utilize e-mail and other electronic means of communication. Our main focus will be to provide the Town with responsive, concise and proactive communications throughout the duration of any project administer under this contract.

OUR UNIQUE LOCATION AND PROACTIVE COMMUNICATIONS PLAN WILL PROVIDE THE TOWN WITH UNSURPASSED RESPONSIVENESS AND A LEVEL OF CONFIDENCE TO THE TOWN THAT OTHERS CANNOT PROVIDE.

14. PROVIDE A DISCUSSION OF YOUR FIRM'S FAMILIARITY WITH TYPICAL PROBLEMS WHICH MIGHT ARISE WITH THE PROVISION OF ENGINEERING SERVICES IN THE MANNER DESCRIBED IN THE RFQ.

The McKim & Creed team has performed over 1,000 engineering assignments for municipal clients in the Tampa Bay area with projects similar to the projects required as the Engineer of

Record for the Town of Belleair. We are always striving to improve our performance and make a regular practice of soliciting feedback from our clients so we continually improve. Our team brings to the table the knowledge and experience required to provide the full-range of engineering services to assist the town's needs. Our history working with municipalities during the planning, design, permitting and construction phases of a variety of public works projects will be beneficial to the Town in the development of long-term, sustainable solutions to maintain and improve on the services provided to the Town's residents. Our experience also provides familiarity with the potential issues associated with these types of projects. Only by anticipating these issues and addressing them early in the project can these issues be resolved before they become problems. Examples of typical challenges and our team's means of proactively addressing these challenges are as follows:

END PRODUCT DOES NOT MEET THE TOWN'S GOALS AND EXPECTATIONS.

Maintaining communication with all stakeholders throughout the project is the key. At the beginning of every project, McKim & Creed will meet with the Town's assigned staff to understand and refine the project goals. With this information established, a schedule for performing the work will be developed and provided to the Town for review and concurrence. As necessary, periodic project status meetings will be scheduled to review project progress and address questions that may arise during the life of the project.

PROJECT IS NOT COMPLETED ON SCHEDULE.

After meeting with the Town of Belleair to refine the project scope and understanding, a project schedule will be developed and provided to the Town for review and concurrence. Interim milestones will be identified with their respective submittal dates established. The project schedule will also reflect review times anticipated for the Town's review, as well as other regulatory agencies (i.e., FDOT, FDEP, SWFWMD, etc.). Should issues arise that could impact schedule, they will be communicated to the Town, along with our recommendations to maintain the project schedule and/or bring the project back onto schedule.

CONSTRUCTION COST OVERRUNS.

Construction costs overruns are typically the result of incomplete or insufficient construction contract documents or unforeseen conditions. McKim & Creed's QA/QC policy requires an independent review of each deliverable. And while it is the reviewer's responsibility to check construction plans and specifications, it is also the reviewer's responsibility to ensure the design meets the intent of the project. On many projects, McKim & Creed will also have a senior construction administrator review the 90% design for constructability. Having this person review the construction documents often results in fewer issues arising in the field and also provides ideas for reducing project costs based on their past experiences. Furthermore, leverage our relationships with several local contractors, as necessary, to McKim & Creed will review the drawings and specifications to get their insight into any issues/concerns they see in the design.

UTILITY CONFLICTS. The majority of the projects anticipated under the Engineer of Record contract will involve design and/or construction within public right-of-way. With so many utilities, both public and private competing for the limited space, potential utility conflicts can be anticipated. However, the number of these conflicts and their impact to a project can be minimized through up front planning and investigation. McKim & Creed has worked with all the private and public utilities throughout the area. We will continue to work with these utilities during the initial design to accurately reflect their location on construction plans. McKim & Creed also has in-house surveying and subsurface utility engineering (SUE) capabilities to enhance our ability to identify utility conflicts in the early design stage of a project.

PERMIT DELAYS. Again, communication is the key. McKim & Creed has developed relationships with, and have extensive experience in local, state, and federal permitting and regulatory needs. Based on our experience, we have found it advantageous to conduct a preliminary application meeting with the permitting authority to understand their potential concerns and to open up the lines of communication at the initiation of the design phase services. Furthermore, by keeping the regulatory agency informed throughout the design and construction process, changes in regulations can be understood and potential permitting hurdles can be circumvented. This simple effort enhances our existing relationships with regulatory staff and helps to avoid permitting delays and reduces the potential for extensive and time consuming redesigns needed for regulatory compliance.

PUBLIC INCONVENIENCE AND COMPLAINTS DUE TO CONSTRUCTION. Most, if not all construction projects performed under the Engineer of Record contract will at some time impact a sector of the general public. With this in mind, the way to minimize this impact and ensure public safety, is to include the public's input into the planning and design phases of the project. At the Town's request, McKim & Creed will assist in conducting public meetings to discuss the project and receive their input. With this information, the project can proceed in such a way that their concerns are addressed. Concern for the public does not stop with the design. Once a project goes to construction,

McKim & Creed's construction management team will work with the contractor, within the terms of the contract, to ensure that impacts to area residents and the traveling public are minimized and that required maintenance of traffic and erosion control measures are in place and maintained throughout the construction.

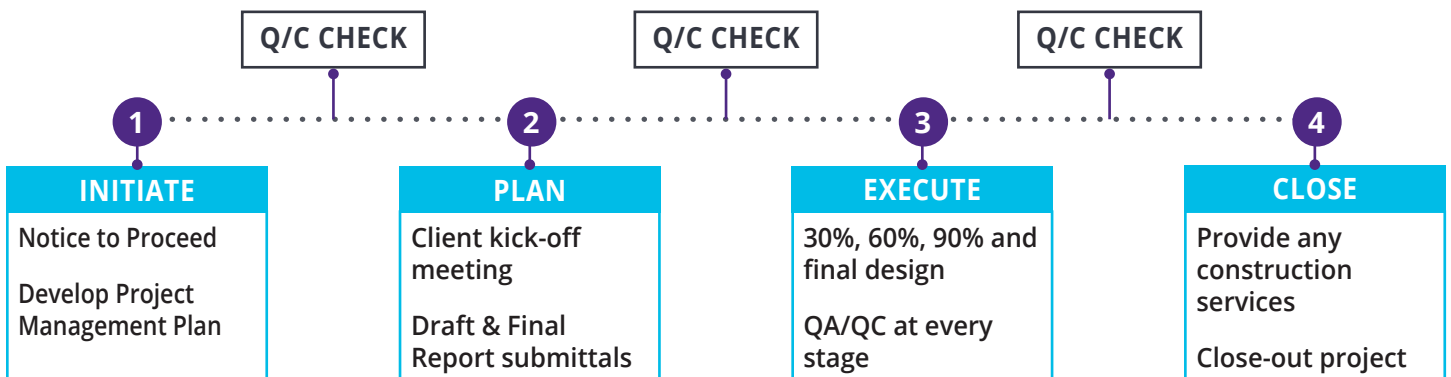
15. DOCUMENT YOUR FIRM'S ABILITY TO PROVIDE A HIGH QUALITY SERVICE ON SCHEDULE AND WITHIN BUDGET. DISCUSS THE CONTROL SYSTEMS YOU WILL UTILIZE TO EFFECTIVELY MANAGE PROJECTS.

QUALITY CONTROL PLAN

McKim & Creed's quality approach has evolved over time with the Total Quality Management philosophy providing the guidance on everyday activities that are so important to delivering quality designs. We do not rely simply on checking drawings and documents once they are complete – we believe quality assurance begins before the first computer is turned on. Quality assurance means we develop a clear understanding of the goals and objectives of the project with the Town and the potential team members, before we develop the final scope of work. We then identify the most qualified individuals to assign to the project team to ensure the project has the best possible chance to succeed. The project team members are involved in the development and refinement of the final scope of work, project schedule and budget. This early involvement in the project planning by the technical people who are knowledgeable in specific project related issues improves the quality of the final product.

In order to ensure the Town of Belleair is satisfied with McKim & Creed's services, and to provide true cost-effectiveness, the quality of the work we perform must meet or exceed industry standards. Every employee participates in our effort to provide quality services through taking responsibility for the quality of his/her individual work effort. Each project work plan includes specifically scheduled quality assurance reviews to enable us to produce products that attain a high standard of quality. Our Quality Assurance/Control program has developed over time is

PROJECT MANAGEMENT APPROACH AND QA/QC PROCEDURES



and summarized in our Quality Procedure 72, which is described below.

QUALITY PROCEDURE 72 – QUALITY ASSURANCE

McKim & Creed's Quality Control program is defined by our Quality Procedure 72 – Quality Assurance plan. Quality Procedure (QP) 72 frames our quality control process and results in specific deliverables to the Town. We have established a Director of Quality Assurance (QA) who is in responsible charge of overseeing our effort with QP 72. During the course of any project, quality checks are performed independent of the normal quality reviews done by the project team. These independent quality checks shall occur at each submittal. Project checks may include but are not limited to:

- ▶ Schematic design checks
- ▶ Final design checks
- ▶ Geomatics document/data checks
- ▶ Study/Report checks

Each quality assurance reviewer conducting a quality check review completes a QA Audit Form. Different QA Audit Forms are completed for different projects. The various QA Audit Forms and their contents are summarized below:

SCHEMATIC DESIGN QA AUDIT FORM:

A review of the documented project scope including all change orders.

A review of the proposed engineering solution to answer the questions "does the proposed solution address the client objectives", "does the proposed solution conform to the stated scope"?

FINAL DESIGN QA AUDIT FORM:

- ✔ A review of the project documents to compare the final design with the schematic concepts and written scope of work.
- ✔ A review of the individual discipline plans for completeness and accuracy.
- ✔ A review of the project plans for coordination between disciplines.
- ✔ A review of the project specifications for concurrence with the project plans and project intent.
- ✔ Review of project calculations as a part of the discipline review.
- ✔ Review of permits required for the project and the status of each.

STUDY/REPORT QA AUDIT FORM:

A review of the project scope and client objective to determine if these are adequately addressed.

- Review for conformance to accepted practices for the particular type of study or report.
- Review the document for accuracy and completeness.

A quality review takes place approximately one week prior to

a submittal. The quality assurance reviewer will conduct their review with the work product, including any subconsultant work, and will make comments within the document. Once the quality assurance review is complete, the design team including sub-consultants will receive the comments and must provide a response to the quality assurance reviewer. Responses range from agreeing with the comment and making the change to no agreement and providing the reason. The quality assurance reviewer must approve any non-agreement response from the design team and if necessary, the director of QA or the project manager may assist in facilitating a final resolution on a comment. In addition to our internal program, client review comments are responded to in a similar manner. Both writing and verbal comments are collected and noted in a comment review form. A response is generated for each comment and returned to the Town for review. Similar to our internal process, McKim & Creed will review all non-agreement responses with the Town.

McKim & Creed coordinates the review process, including the comment response process, with our sub-consultants prior to scope and fee development. Upon execution of an assignment, each of our sub-consultants are aware of our QP 72 process. Both Town of Belleair and McKim & Creed quality assurance review comments are submitted to a sub-consultant for a response. The sub-consultant is required to respond to each comment and return to the project manager. All non-agreement responses are reviewed between McKim & Creed and the sub-consultant for a final determination.

UNLESS OTHERWISE DIRECTED, MCKIM & CREED WILL SUBMIT ALL WORK PRODUCTS INCLUDING QUALITY ASSURANCE REVIEW COMMENTS TO THE TOWN'S PROJECT MANAGER.

16. PROVIDE A LIST OF MUNICIPAL, STATE, AND FEDERAL REFERENCES WHICH CAN BE CONTACTED.

Our client references can provide additional perspective on the design strength and experience of McKim & Creed's team. Our mission at McKim & Creed is to consistently meet the requirements of our clients'. We have built our organization on satisfying our customers' requirements, and as a result, we have a large volume of repeat business and a growing number of new clients. We care about the quality of the product which we deliver, and we constantly strive to achieve a higher standard of service. We have included below a listing of client references. These clients can testify to our commitment to quality and exceptional service. We invite you to contact them.

McKim & Creed's key project manager and proposed team members all have extensive experience providing services to clients in Florida. With this knowledge throughout Florida and beyond, our firm provides the Town of Belleair with the most qualified team that will deliver cost effective, practical solutions for the continuing services contract.



OWNER:

Manatee County, Florida

CONTACT:

Mr. Jeff Streitmatter, PE

Project Management Division Manager

e. jeff.streitmatter@mymanatee.org

p. 941.708.7450 x7335



OWNER:

City of Saint Petersburg, Florida

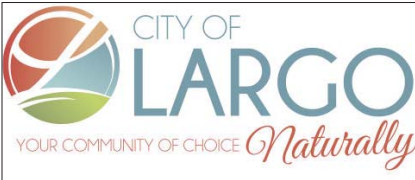
CONTACT:

Mr. David Abbaspour, PE

Senior Project Engineer

e. david.abbaspour@stpete.org

p. 727.892.5382



OWNER:

City of Largo, Florida

CONTACT:

Mr. Chuck Mura, PE

Engineer III

e. cmura@largo.com

p. 727.587.6713 x4414



OWNER:

Pinellas County, Florida

CONTACT:

Mr. Jeremy Waugh, PE, ENV SP

Section Manager, Pinellas County Utilities

e. jwaugh@pinellascounty.org

p. 727.453.3005



OWNER:

City of Clearwater, Florida

CONTACT:

Mr. David Porter

Public Utilities Director

e. david.porter@myclearwater.com

p. 727.562.4042



OWNER:

City of Safety Harbor, Florida

CONTACT:

Mr. John Powell, PE, LEED AP

City Engineer

e. JPowell@cityofsafetyharbor.com

p. 727.724.1555 x 1805

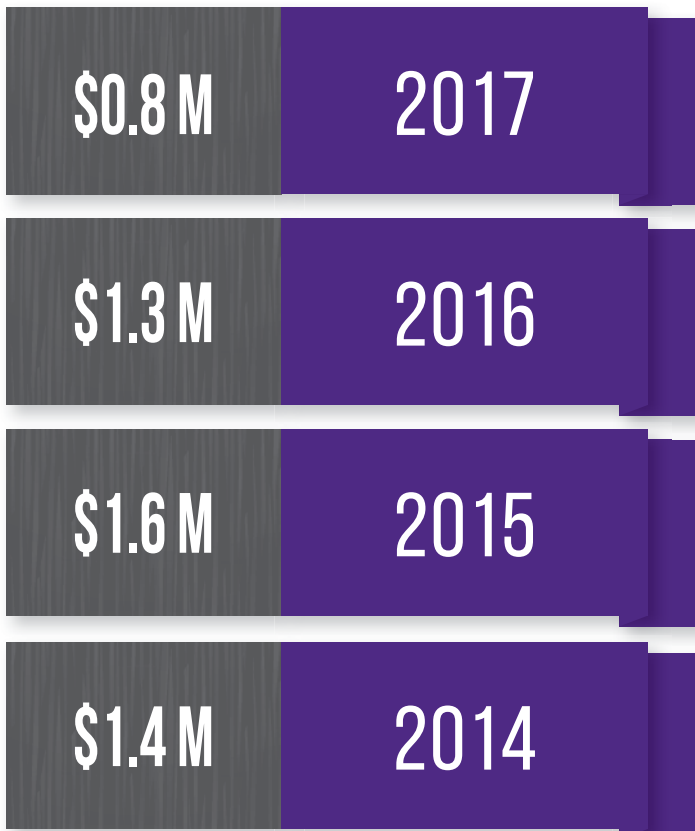
17. DISCUSS YOUR FIRM'S AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY PRACTICES.

McKim & Creed is an equal opportunity employer and will not discriminate against any applicant or employee on the basis of his or her race, color, religion, sex, national origin, age, disability, veteran status, or other legally protected status. In an effort to further our policy of equal employment opportunity, we will ensure that qualified applicants are employed and qualified employees are treated during employment without regard to race, color, religion, sex, national origin, age, disability, veteran status, or other legally protected status. This policy extends to all terms, conditions, and privileges of employment, as well as the use McKim & Creed facilities and participation in all activities sponsored by McKim & Creed.

McKim & Creed also does not discriminate or take adverse action against any individual who is a member or applies to become a member of a uniformed service, performs or applies to perform uniformed service, or has an obligation to perform uniformed service and will not deny such an individual initial employment, re-employment, retention in employment, promotion, or any benefit of employment on the basis of this status.

To further the principles of equal employment opportunity and in accordance with applicable law, McKim & Creed has developed affirmative action plans for women and minorities, and for individuals with disabilities and Vietnam-era and special disabled veterans.

Below is the dollar amount of MBE participation of goods and services outsourced within the last few years.



18. PLEASE INDICATE IF YOU ARE AWARE OF ANY PERSONAL OR ORGANIZATIONAL CONFLICTS OF INTERESTS. PROVIDE AN EXPLANATION OF YOUR FIRM'S INVOLVEMENT IN ONGOING OR PENDING LITIGATION, CLAIMS, SUITS AGAINST THE TOWN OF BELLEAIR, IF ANY.

McKim & Creed has never been the subject of an investigation conducted by a regulatory agency or professional licensing board.

McKim & Creed is not currently, nor has been previously, involved in legal claims, suits or ongoing or pending litigations against the Town of Belleair. For the protection of McKim & Creed and its clients, McKim & Creed always maintains a comprehensive insurance program which includes professional liability, workers' compensation, comprehensive general liability, automobile and umbrella policies, with limits sufficient to cover the defense and payment of all outstanding claims against McKim & Creed.

McKim & Creed does not have any ongoing or pending, nor have we ever had litigation, claims, or suits against the Town of Belleair.

19. PROVIDE ANY ADDITIONAL INFORMATION WHICH YOU FEEL MAY BE PERTINENT TO THE PROVISION OF THESE SERVICES, BUT NOT SPECIFICALLY REQUIRED ELSEWHERE IN THE RFQ.

McKim & Creed, Inc. has developed a solid, consistent approach to delivering engineering designs that achieve the county's goals. Our approach has consistently lead to successful project outcomes. Attributes of our approach include:

- ✓ On time completion
- ✓ Clear and concise construction documents
- ✓ Competitive pricing on bid documents
- ✓ Minimal changes during construction

Our approach to each assignment starts with the selection of our project team members and continues through to the completion of the constructed project including the start-up and commissioning. As you know, we also continue to provide support to the Town from an operations and regulatory compliance perspective after the project is constructed and is operational. McKim & Creed will hit the ground running and will continue to be integrally involved with the Town's Public Works and Utilities staff to help the Town develop a sustainable future.

OFFICE LOCATION

McKim & Creed's Clearwater office is a mere 1.2 miles from Town Hall, staffed with our client/senior project manager, Phil Locke, PE; principal-in-charge, Street Lee, PE; Instrumentation & Controls engineer, Eric Brown; climate resiliency and grants expert, Craig Wells, PE; water/wastewater utilities engineer Mitch Chiavaroli, PE; in addition to other key support staff. This local team can be at your offices, on-site at your facilities or on project sites within minutes. The Clearwater office with 32 engineers, technicians, instrumentation & controls team and construction managers will be the primary location for the completion of work for the Town of Belleair projects. The employees at this location live in the area and take great pride in providing professional services in the community where they live and play. McKim & Creed's nearby Tampa and Sarasota and Tampa offices will provide additional support as needed and are both just over 50 miles from the Town of Belleair, or about an hour drive.

Our key personnel, including all of our proposed project engineers are stationed within the local area. This is how we have served clients in the area for the last 21 years. We have a proven track record of demonstrating how we can be efficient and effective utilizing our local staff to support the needs of our clients in Pinellas County and surrounding areas.

We, from time to time, have required specialty expertise from our locations outside of the local area to support the projects. Again, we have demonstrated, even when utilizing these resources, we are timely and cost effective in providing these services to our local clients.

PROJECT UNDERSTANDING

As Engineer of Record, McKim & Creed's role will be to assist the Town of Belleair by providing the professional engineering services and technical guidance necessary to develop long-term, sustainable solutions to maintain and improve the Town's infrastructure. The scope of services McKim & Creed will provide under the Engineer of Record contract includes:

- Planning, design & permitting
- Construction and Inspections Phase Services
- Project Administration
- General Civil/Stormwater Engineering
- Traffic Engineering
- Water/Wastewater Engineering
- Geotechnical Engineering
- Pavement Management
- GIS
- Grant Administration
- General Engineering Consulting/Peer Review/Quality Assurance Review

The type of projects for which the Town of Belleair seeks assistance from the Engineer of Record include:

- Stabilization and erosion control of the receding bluff, which is located directly west of Bayview Drive along Hallett Park

- Restoration and management of Belleair Creek, which collects and conveys water in town
- Maintenance and rebuilding of bridge infrastructure
- Maintenance, management and restoration of seawalls
- Water quality improvement to mitigate the effects of high chloride levels
- Roadway, drainage and water utility improvements along Ponce de Leon Blvd
- Other roadway, drainage and water utility improvements throughout Town

McKim & Creed will leverage our 20 years of experience working with the Town along with our 23 years of experience working with local municipalities to provide unsurpassed local expertise.

GENERAL PROJECT MANAGEMENT AND TASK EXECUTION

McKim & Creed will continue to provide responsive and dependable service to the Town of Belleair. Our approach to each assignment starts with the selection of our project team members and continues through to the completion of the constructed project, including start-up and commissioning.

PROJECT TEAM SELECTION

Each project we are assigned will be managed by the identified project manager from the local area. With our ongoing experience and staff involvement over the last 23 years, we will provide a project team with the most superior and pertinent experience with all the tasks required to complete the Town of Belleair's EOR projects assigned to McKim & Creed.

When a project is assigned by the Town to McKim & Creed, Mr. Locke will work with Town staff to identify the specific needs of each work assignment and will involve the necessary expertise to exceed your expectations. Once the scope is fully understood, Mr. Locke and the management team will select the McKim & Creed project manager that is best suited for the assignment. Once the project manager is selected, they will work together to select the appropriate team members to best suit the project requirements. Once assigned, it is our philosophy to maintain the project manager and team from "cradle to grave" to develop a sense of responsibility, ownership and pride in the project and final product provided to the Town.

When necessary, we will involve key subcontractors to support our project team to address specialty situations or project assignments. Each subcontractor has been hand picked by McKim & Creed based on the county's potential project needs, McKim & Creed and the county's historical working relationships, and based on their ability to enhance our service to the Town. Prior to each task order development, the proposed

subcontractor(s) will be discussed with the Town for final approval.

PROJECT INITIATION

At the start of every project, McKim & Creed will develop a project-specific project management plan (PMP) that is tailored to the complexity of the work to ensure the critical success factors are identified, clearly understood, and communicated to the entire project team and the Town. The McKim & Creed PMP will include the following information:

- TOWN PROJECT NUMBER**
- PROJECT VISION/SCOPE OF SERVICES/TASK BREAKDOWN**
- PROJECT SCHEDULE/KEY DELIVERABLES**
- KEY TEAM MEMBER CONTACT INFORMATION**
- TEAM MEMBER ROLES AND RESPONSIBILITIES**
- DESIGN/CAD REQUIREMENTS**
- CORRESPONDENCE/DOCUMENT DISTRIBUTION**
- FILING PROCEDURES**
- INVOICING PROCEDURES**
- QUALITY ASSURANCE/QUALITY CONTROL PLAN**

PROJECT SET-UP/TRACKING

As part of our standard project management protocol, McKim & Creed has adopted PlanTrax® to develop the scope of work and establish the project tasks, budgets and schedule. PlanTrax® is a project management software that uses the earned-value approach to assess the status of a project. Once the task, schedule and budget information are entered, each month it is updated by the project manager with input from the project team to assess the level of completion for the project. The program compares the monthly updates to the original project schedule and budget to show whether the project is ahead or behind schedule and over or under budget. This report can be utilized to provide the Town with earned value information reflecting percent earned, percent complete, and days ahead or behind schedule to be included with the monthly status updates.

The McKim & Creed team has the capability to perform all major disciplines requested by the county using our in-house employees. This unique benefit allows us to serve as a “one stop shop” for responsive services.

McKim & Creed then enters the project specific milestones used in developing the PlanTrax® report into a “master” project schedule that incorporates all major project milestones for all active projects currently being worked on in our Tampa Bay area offices. At a minimum, these milestones include:

NOTICE TO PROCEED

INTERNAL QA/QC MILESTONES

30%, 60%, 90% AND FINAL DESIGN



From the master schedule, a “Four Week Look Ahead” (FWLA) matrix of all projects is developed to highlight all the upcoming submittal milestones. This information is reviewed with all project team members each week to ensure full awareness and commitment of staff members to achieve your schedule requirements. At this meeting, decisions are made with management to adjust work flow to ensure all projects are completed on time or ahead of schedule. With this tool, the management team can continuously monitor work progress on all projects and quickly address any activities that may require adjustment. Using this project management approach further ensures deliverable deadlines are met on a consistent basis.

PROJECT KICK-OFF MEETING

Once the preliminary project set-up is complete, McKim & Creed will conduct a kick-off meeting to introduce and integrate the McKim & Creed team's key staff with the Town's key staff and to outline the specifics of the project. As part of this critical process, we will discuss the project scope, schedule, critical success factors; distribute contact information and request initial technical informational needs. The goal of this meeting is to initiate or expand on existing relationships to create a comfort level to enhance project communications, establish the project guidelines, and assure that everyone on the project team understands the intent of the project and the scope of the work to be performed to ensure the project meets or exceeds the Town's needs and is delivered on time and within budget.

PLANNING / PRELIMINARY DESIGN / REPORT PHASE SERVICES

During this phase of the work, McKim & Creed will take the opportunity to look at the Town's future needs so that plans are developed which consider the Town's long-term goals and

are synchronized with other Town-planned improvements and operations. The McKim & Creed team will work closely with the Town during the preliminary design phase of the project to evaluate alternatives and construction project schedules to provide the best solutions which address the Town's needs.

Quality work, schedule and budget control are what keeps our clients coming back.

FINAL DESIGN PHASE SERVICES

The final design phases of the projects will proceed after receiving written notice from the Town approving the recommendations in the preliminary report/design phase services. Detailed design will be conducted using information and direction established in the previous steps of the design process. Detailed plans and specifications based on the Town's standard specifications will be prepared and reviewed for constructability prior to submittal. Review meetings will be conducted to receive comments and input from Town staff at each milestone, or more regularly if necessary on larger projects. Updated estimates will be prepared for review with the Town as the project progresses. Specific deliverables will be made at the following key milestones on design projects:

- ✓ 30 Percent Submittal
- ✓ 60 Percent Submittal
- ✓ 90 Percent Submittal
- ✓ 100 Percent Submittal – (Issued for Bid)

BIDDING/AWARD

McKim & Creed will prepare and submit plans and specifications to the Town for project bid. McKim & Creed will assist the Town with preparing an advertisement for bid and coordinate distribution of contract documents for bidding to all Town pre-qualified bidders and plan houses.

During the bidding process, McKim & Creed will attend the pre-bid conference to assist the Town with contractor questions. If contractor questions necessitate, McKim & Creed will prepare addenda and distribute to the planholders.

Once the bids have been received, McKim & Creed will assist the Town with the review of bidder qualifications and bid proposals and prepare a letter of recommendation for the Town's approval. If necessary, we will attend commission meetings to support the recommendation.

CONSTRUCTION PHASE SERVICES

McKim & Creed has provided varying levels of construction phase services related to Town projects, from a minimal role in supporting the Town's staff by responding to RFI's and conducting final inspections, through full construction observation, oversight and administration. The McKim & Creed team has the expertise to assist the Town to whatever level of service is necessary.

For comprehensive service assignments, our designated project administrator will be responsible for daily coordination,

documentation flow and processing of communications from and to the contractor and the county. The project administrator will coordinate technical support from the team members as necessary throughout the project. The project manager is kept informed of the progress on a weekly basis. Our project manager and/or lead project engineer will attend progress meetings during construction to ensure any clarifications of the contract documents are made in an efficient manner. If there are questions related to the intent of the design, we will answer those questions.

If unforeseen field conditions arise during construction resulting in conflicts, we will assist the Town in resolving these conflicts. McKim & Creed will conduct shop drawing review and other submittals as required by the contract documents.



Our field engineers and inspectors will ensure the contractor implements their respective quality control program and that permanent work is constructed and equipment is installed in accordance with contract requirements. Daily “look-ahead” reviews of the plans and construction tasks will be conducted to anticipate problems, mitigate delays and minimize rework.

Our field-staff review the work for quality and workmanship and thoroughly document the construction activities through preparation of daily construction reports and logs. The daily reports are maintained in a computer database for easy reference. Throughout the course of construction, comprehensive photographic records will also be maintained. These photographs will serve to document the work and to transmit information when working to resolve conflicts or differing site conditions.

The goal of a successful technical approach is to achieve the desired end result in an efficient, cost-effective and reliable manner. Since there will be a wide variety of assignments as part of this contract, the specifics of the technical approaches will also vary to meet each work order’s needs. We will gain an understanding of your budget constraints for any project and we will keep you apprised of probable costs during the course of the project. In general, the typical technical approach will include the following principal elements, which have successfully been used on other significant project by our team:

GENERAL PROJECT APPROACH

PRELIMINARY ENGINEERING ACTIVITIES

- ✓ Preparation of a project performance plan
- ✓ Aerial and/or land survey
- ✓ Accumulation and review of existing and proposed utility data
- ✓ Evaluation of alternative project materials, equipment and processes
- ✓ Preliminary estimate of construction cost
- ✓ Evaluation of non-economical impacts
- ✓ Progress reporting and meetings
- ✓ Geotechnical and hydro-geological investigations, as warranted
- ✓ Recommendation of the best alternative
- ✓ Preliminary design report
- ✓ Easement and property acquisition requirements
- ✓ Development and evaluations of alternative project solutions and costs
- ✓ Coordination with the county's master plans
- ✓ Basis of design report with review by the Town

FINAL DESIGN ACTIVITIES

- ✓ Preparation of the plans and specifications
- ✓ Progress reporting to the Town project manager
- ✓ 30%, 60%, 90% and 100% review meetings with the Town staff, as necessary
- ✓ Project performance plan updates
- ✓ Updated estimates of construction cost at each stage of completion
- ✓ Preparation of permit applications
- ✓ Maintenance of traffic plans, if applicable
- ✓ Coordination with other utilities, departments and developments
- ✓ Land acquisition assistance

BIDDING ASSISTANCE

- ✓ Conducting the pre-bid conference
- ✓ Review of bids
- ✓ Investigations of low bidder qualifications
- ✓ Investigation of bid irregularities
- ✓ Preparation of addenda
- ✓ Report on bid and recommendation for awareness

CONSTRUCTION ENGINEERING AND OBSERVATION

- ✓ Assistance in awarding the contract
- ✓ Providing advice and consultation
- ✓ Maintaining construction records
- ✓ Reviewing shop drawings and other submittals
- ✓ Scheduling and conducting monthly progress meetings
- ✓ Test verification
- ✓ Problem solving
- ✓ Final inspection and punch list
- ✓ Certification of completion
- ✓ Full-time construction observation if needed
- ✓ Rejecting defective materials
- ✓ Issuing supplemental drawings
- ✓ Record drawings
- ✓ Conducting the preconstruction conference
- ✓ Reviewing and approving partial pay requests

ADDITIONAL INFORMATION

The McKim & Creed team is uniquely qualified to provide the requested scope of services listed in the RFQ and serve as the Town's EOR contract:

- 1 Comprehensive local management, design and support disciplines
- 2 Extensive knowledge of Town systems and procedures
- 3 National utility renewal and replacement expertise to address aging infrastructure
- 4 Extensive utility relocation experience for FDOT roadway improvements
- 5 Local water treatment expertise for plant evaluations and expansions
- 6 Resident hydraulic modeling proficiency for system, planning and design
- 7 Exhaustive utility planning, design, installation and management capabilities
- 8 Local trenchless technology expertise for environmental and congested installations
- 9 Water treatment operational assistance
- 10 Local instrumentation and control and SCADA programming capabilities
- 11 Broad regulatory knowledge and strong relationships
- 12 Local seasoned construction management and observation staff

COMPLETE, IN-HOUSE CAPABILITIES

In addition to the core competencies of civil, water distribution, sanitary, mechanical, construction management, structural and electrical engineering services offered by McKim & Creed, we have a number of complimentary, niche services available to the county, including:

R&R CAPABILITIES

Wastewater infrastructure in the United States serves 190 million people through more than 16,000 plants and 600,000 miles of pipeline. But much of that infrastructure is in disrepair and/or in need of replacement. McKim & Creed's renewal and replacement (R&R) specialists can help you address your aging infrastructure issues, from a triage approach that identifies and treats the most critical areas of concern, to full-system R&R that restores structural integrity, reduces I/I situations, and reinstates system efficiency, effectiveness and regulatory compliance.

Services Include:

- Inflow/Infiltration (I/I) Analysis
- Flow Monitoring
- Hydraulic Modeling
- Sewer System Evaluation Surveys (SSES)
- CCTV Pipeline Inspection
- GPS Location
- Subsurface Utility Engineering (SUE)
- Infrastructure Rehabilitation Design
- Construction Administration

McKim & Creed owns CCTV equipment, flow monitoring equipment including data hosting facilities, smoke and dye testing equipment, and state-of-the-art field data collection devices and software to provide full in-house analysis and design.



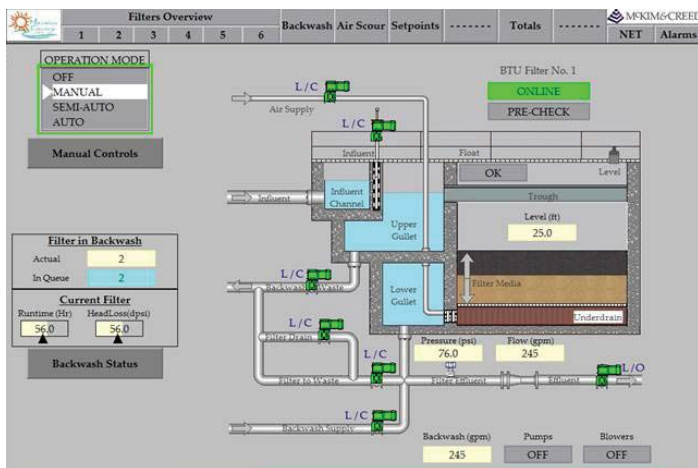
McKim & Creed provides both temporary and permanent flow monitoring solutions for both open channel and side pressure pipe measurement as well as conduction inflow/infiltration analysis and hydraulic modeling.

INSTRUMENTATION AND CONTROLS

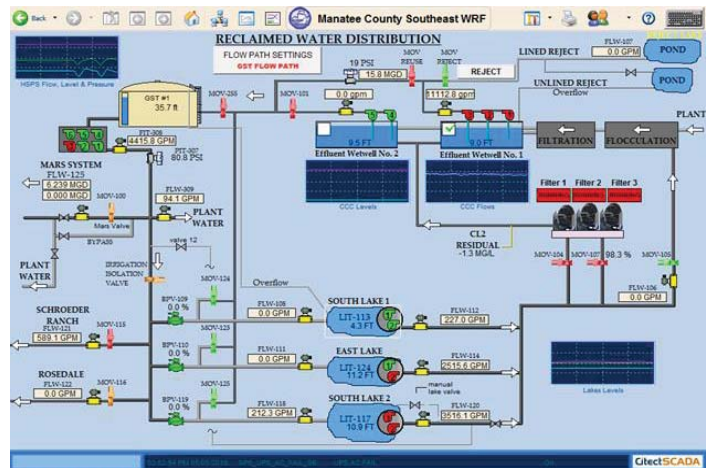
McKim & Creed's process control engineering, information technology and programming competencies ensure turnkey services for all I&C and SCADA applications. Our team specializes in supervisory control and data acquisition (SCADA) systems, computer networks, programmable logic controller (PLC) systems, telemetry, instrumentation and variable frequency drive and motor control center installations. The company specializes in water and wastewater treatment applications, with extensive experience in a wide variety of industrial applications including custom Visual Basic and Microsoft SQL Server development to provide sophisticated automatic process control and reporting. Our team can provide any mix of the following I&C-related services:

- Consulting
- Design Assistance
- Engineered Shop Drawings
- Fabrication
- Programming
- Construction Management
- Installation Supervision
- Testing
- Startup
- Field Service
- Training
- O&M Manual Preparation

McKim & Creed has a highly experienced group of engineers and technicians. We currently have programmers/engineers for SCADA, PLC and telemetry systems, designers, field service and instrument calibration specialists on staff. Our ability to outperform our competitors by efficient and hard work from our dedicated engineers, with vast experience in the specific hardware and software technologies used in this market, makes us uniquely qualified to provide the county with effective and quality services.



Above is a screenshot of the new Biological Treatment Unit "Filter Overview Screen". The project is currently under construction and we are the PLC Programming and the Operator Interface Programming.



This screen capture is from the SEWRF 10 MG Storage Tank and Interconnection project. We added the 10 MG storage tank, we did the PLC programming and SCADA work.

The McKim & Creed team offers more than 100 years of collective experience in SCADA and information systems design and review, integration and implementation, recommendation of improvements, optimization, and construction management.

Our knowledge of these systems and their implementation, coupled with our understanding of operational needs and requirements, will greatly benefit the Town in the execution of these services.

Our team's experience will ensure solid and well thought-out system designs and implementations that will carry the Town well into the future. Our team's ability to out-perform our competitors providing efficient systems, fresh ideas and hard work from our dedicated staff is proven.

Up-front planning and continued communication eliminates guess work, improves efficiency and contributes to a reduction in project costs. This is McKim & Creed's project management standard, which has resulted in design excellence, reduced costs, increased schedule adherence and client satisfaction - **as evidenced by our 95% repeat client ratio.**

PLC expertise includes:

- Allen Bradley
- Schneider/Modicon
- Data Flow Systems (DFS)
- Siemens

SCADA expertise includes:

- Wonderware
- Trihedral/VTSCADA
- Citect
- Intellution
- Siemens
- Rockwell

MODAC MOBILE DATA COLLECTION® AND MOBILE SCANNING

Because of its safety, quality, accuracy and efficiency, mobile scanning technology has revolutionized the way accurate pavement data is captured in the field for design purposes. MoDaC Mobile Data Collection® is McKim & Creed's state-of-the-art mobile scanning system, and makes McKim & Creed one of the few firms on the East Coast and in Texas to offer turnkey mobile scanning services.

MOBILE SCANNING IS BEST FOR PROJECTS THAT:

require normal design accuracies (less than 1/2-inch tolerance)

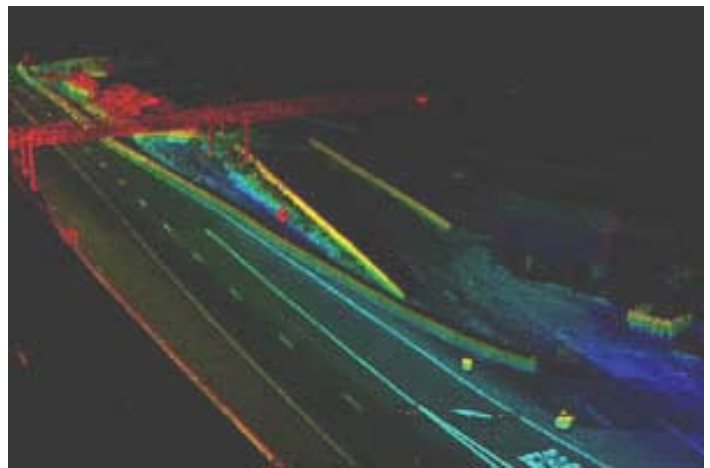
have extremely tight deadlines

involve heavily traveled or potentially dangerous areas

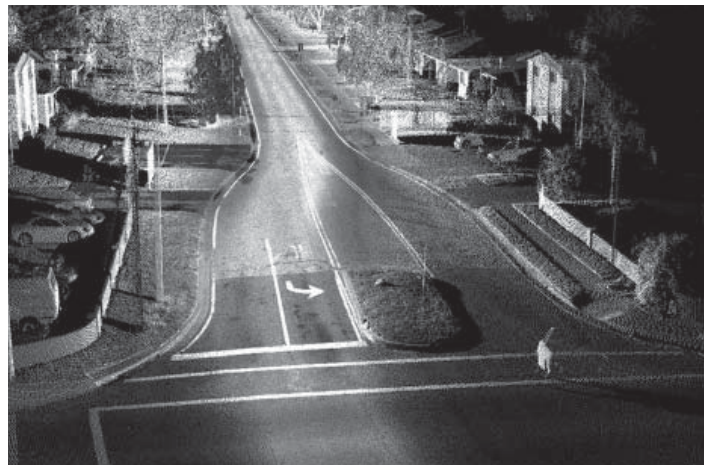
can benefit from the addition of video imagery for feature collection and presentation purposes

Mobile scanning combines 3-D laser scanning, GPS, inertial measurement and video technologies. Multiple scanners are mounted on an SUV, a rail truck or a survey vessel. These scanners collect dense and accurate 360-degree data while the vehicle travels at posted speeds. The data is used for design, modeling and simulation in 2-D, 3-D and 4-D formats.

Massive amounts of data can be collected while traveling at posted speeds, and surveyors can collect up to 400,000 points per second, as compared to one point every few seconds with traditional surveying. With fewer personnel working beside busy roadways, mobile scanning creates a safer job site. The likelihood of bad-weather delays is reduced due to shortened data collection time. Because the data is collected from a moving vehicle, mobile scanning does not impede traffic flow. And the dense data that is collected lends itself to future data extraction without additional field visits.



Shown here is a point cloud of a roadway scan in Tampa, FL.



Shown above are scans of various intersections.

Mobile scanning offers considerable benefits. It is more cost effective than many traditional surveying technologies, and data collection is much faster.



McKim & Creed's MoDaC Mobile Data Collection system can be used on roadways, in the field, and on the water.

SEA LEVEL RISE

Since 1880, sea level has risen eight inches worldwide. And it continues to rise. The question is not if sea level will rise, but how much it will rise, and how it will impact our critical water infrastructure.

Of the top 10 cities that can expect to have a significant economic impact in the U.S., eight are located in Florida. Yet Florida is ground zero for sea level rise. Median projections estimate another eight inches of rise in the mean sea level in Florida by 2030, and an additional 24 inches by 2060. By 2100, 9% of the total land area of Florida is likely to be submerged at normal high tide.

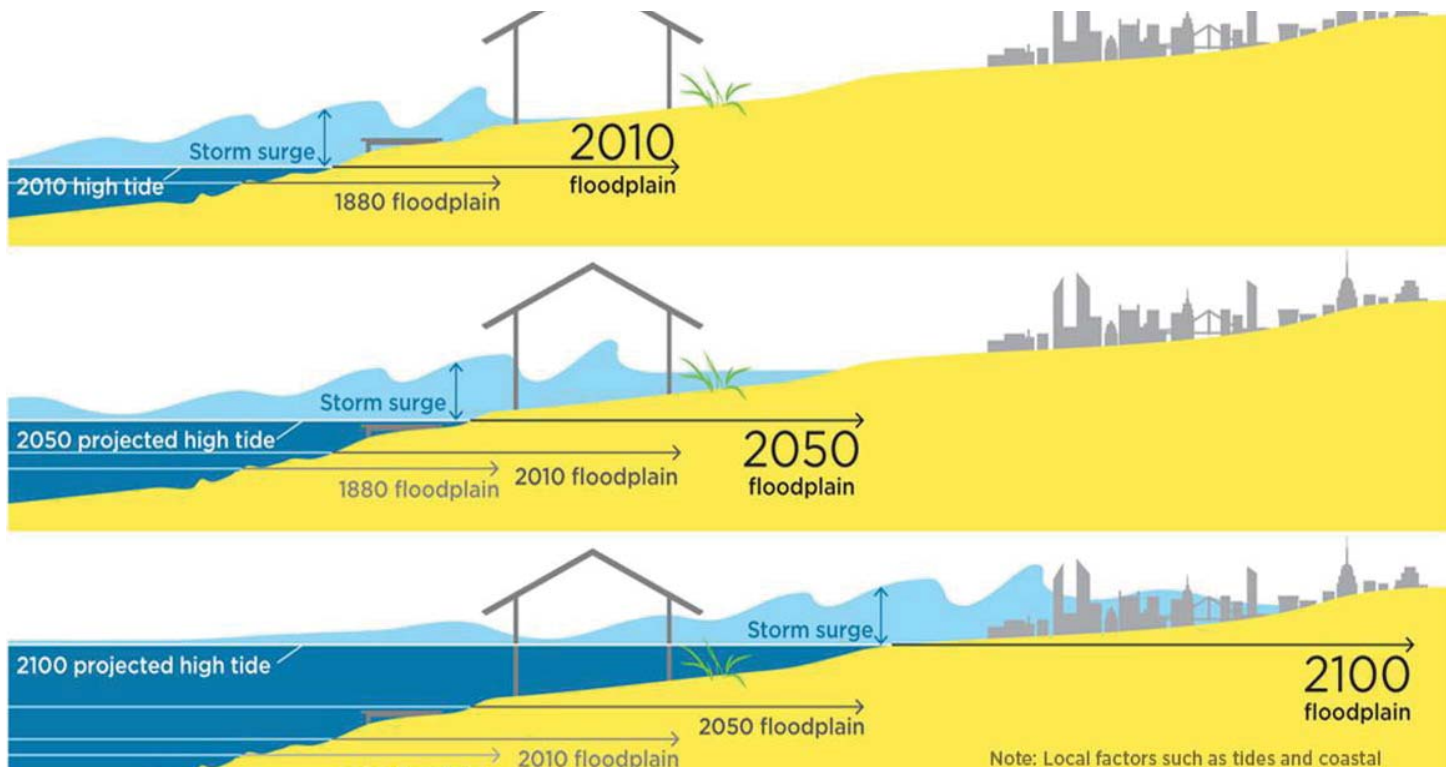
The impacts of sea level rise on critical infrastructure include:

- Increased flooding frequency.
- Salt water intrusion/contamination into fresh water aquifers that have been the traditional source of drinking water in the state. Continued growth and increased demand will only exacerbate the problem.
- Rising sea levels near the coast that will cause fresh water aquifers to become more saline and will increase ground water elevations. This will lead to failure of existing individual septic systems that no longer have adequate ground-to-water distance to treat the wastewater, thereby creating contamination issues of the ground water.
- Increased flooding at low-lying wastewater treatment facilities, leading to public health issues associated with the same.
- Increased infiltration of salt water into wastewater collection systems/pump stations, creating capacity and treatment issues for the facility servicing the collection system.
- Decreased access to critical infrastructure facilities due to flooding.

IMPACT OF SEA LEVEL RISE ON WATER INFRASTRUCTURE

- Interruption of service
- Reduced stormwater system capacity
- Reduced effectiveness/failure of onsite WW treatment systems
- Increased risk of infiltration into water/wastewater infrastructure
- Increased overflow of partially treated and untreated wastewater
- Saltwater intrusion into fresh water aquifers and surface waters
- Increased rate of deterioration of piping systems

The good news is that the cost of making infrastructure resilient to sea level rise is estimated to be seven to 10 times less expensive than the corresponding damage that could result from the impact of sea level rise.



Impact of Sea Level Rise on Storm Surge

ENERGY EFFICIENCY

McKim & Creed offers unparalleled expertise in power distribution and energy usage. Our designs incorporate the latest in power monitoring and specialized control systems, which provide for efficient plant operations. Our proven experience and expertise in these types of projects are known throughout the United States and Florida. It is what sets us apart from our engineering peers.

Energy managers responsible for meeting utility reduction goals often lack the financial and staffing resources to successfully meet their goals. But, these goals can be met with minimal capital expense by targeting the best opportunities in a building. Typically these opportunities hinge around how our buildings operate. By focusing on efforts that have rapid payback and often very low capital expense, the returns on investment are often seen in less than one year.

Most facilities will show substantial savings by ensuring the major components on air handling units are functioning properly, adding some minor control optimization strategies and implementing occupancy schedules.

The challenge is in finding the expertise to: know what to do, how to do it, and in monitoring the performance over time to sustain the benefits.

Consider the missed opportunity when not capturing the money that is paying the extra 25% of energy consumption in your facilities. By capturing energy savings *now*, the financial savings are immediately available for reinvestment in other needed improvements and more capital projects.

McKim & Creed's energy management services include:

- Energy efficient LEED designs
- Lighting projects
- Energy modeling
- Commissioning
- Renewable energy design



An example of renewable energy design.

LEED CERTIFICATION

McKim & Creed has **14 LEED AP CERTIFIED EMPLOYEES**. We have experience with the process of obtaining LEED ratings on both new and existing buildings. Many of our design decisions are based on LEED principles even if the project does not have LEED certification requirements.

McKim & Creed also has experience with getting the necessary energy performance to obtain Energy Star rated buildings, which is a requirement for LEED Existing Building (EB) certification.

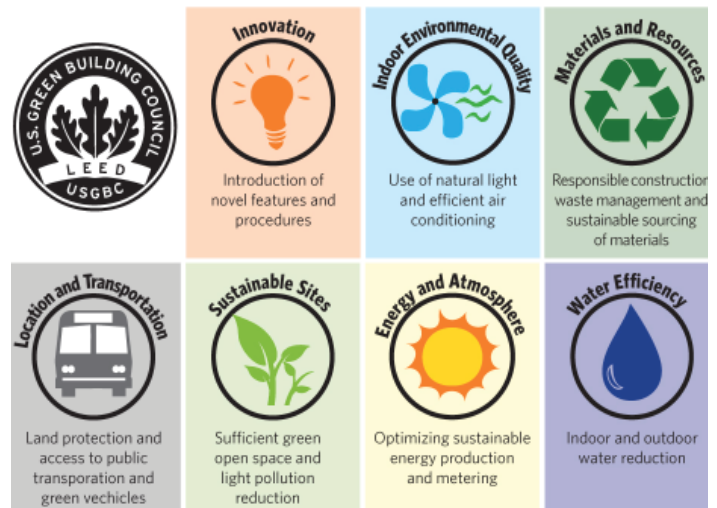
McKim & Creed provides energy management services for the design and commissioning of central energy plants (chillers, boilers, emergency generators, co-generation), space lighting controls, air and water side economizers, steam utilization, heat recovery plus many other systems. In addition to our design services, we monitor the progress of the construction on behalf of the design team and owner.

BENEFITS OF CERTIFICATION - WHY LEED?

- Lead to the transformation of the built environment
- Built as designed and perform as expected
- Have lower operation costs and increased asset value
- Healthy and comfortable for their occupants
- Reduce waste sent to landfills
- Conserve energy and water
- Reduce harmful greenhouse gas emissions

LEED CERTIFICATION REQUIREMENTS

In order to achieve LEED certification, projects must earn points in these categories:



Source: www.usgbc.com

ENVISION™ CERTIFICATION

PURPOSE OF ENVISION™

The purpose of Envision™ is to foster a dramatic and necessary improvement in the performance and resiliency of our physical infrastructure across the full dimensions of sustainability. Envision™ provides the framework and incentives needed to initiate this systemic change. As a planning and design guidance tool, Envision™ is meant to provide industry-wide sustainability metrics for all infrastructural types - an approach similar to its vertical facility counterpart, LEED®

OVERVIEW

- Designed as a project assessment tool and to offer guidance for sustainable infrastructure design
- Can be used as a decision-making tool or to document processes, decisions and design to apply for a third-party verified Envision™ award
- Objective framework of criteria and performance achievement that helps identify ways to which sustainable approaches can be used to plan, design, construct and operate infrastructure projects

BENEFITS

Infrastructure investments with:

- Longer-term viability
- Lower cost
- Fewer negative impacts on the community
- Potential to save owners money over time
- Credibility of a third party rating system

PROFESSIONALS INVOLVED IN ENVISION™

Envision™ Sustainability Professional (ENV SP) - credentialed practitioner trained to use the Envision™ rating system as a guide to address the triple bottom line sustainability dimensions in the design, construction and operation of an infrastructure project; to qualify for an Envision™ Project award, at least one person on the project team must be an ENV SP.



Currently McKim & Creed has four Envision™ Sustainability Professionals and our ENV SP list continues to grow.

THE ENVISION™ RATING SYSTEM



SUSTAINABILITY PROJECTS

THE WATERHUB AT EMORY

The WaterHub at Emory is an on-site ecological water reclamation treatment facility at Emory University capable of reclaiming ~400,000 gpd, displacing 40% of campus water needs and reducing overall demand on water-stressed Metro Atlanta. The first system of its kind installed in the US, WaterHub mines wastewater from the campus sewer system and repurposes it for beneficial reuse using hydroponic reactors (with submerged fixed-film) and reciprocating wetlands. The system is capable of displacing up to 146 MG of potable water with recycled wastewater annually, nearly 40% of total campus water demand. The project has won numerous awards, including a Grand Award for Engineering Excellence from the American Council of Engineering Companies, the 2015 WaterReuse Innovative Project of the Year award, and Metro Atlanta Chamber's Atlanta E3 award (liquid assets category), to name a few. Emory University also received a 2016 US Water Prize for the WaterHub project.



Gina McCarthy, administrator of the US Environmental Protection Agency, toured the WaterHub at Emory last year, calling it "a model for us all."

COMMERCE PARK WWTP

Acme Smoked Fish (Acme) of Brooklyn, New York, selected Commerce Park as the site of its new regional fish processing facility. This selection was due, in part, to Pender County's commitment to constructing a new WWTP capable of accommodating the high-strength wastewater generated from the proposed fish processing facility. The county contracted McKim & Creed to design the WWTP, which would effectively eliminate the need for Acme to pre-treat its wastewater prior to discharging it to the county treatment system. To accommodate Acme's high-strength waste stream and provide a unique and sustainable facility, McKim & Creed designed an adaptive ecosystem using hydroponics, moving bed bioreactors, and a greenhouse. This innovative treatment approach, unlike anything used at conventional municipal treatment plants, positioned Pender County as a leader in sustainable wastewater treatment.

ALTERNATIVE PROJECT DELIVERY

Selecting the most appropriate project delivery method is one of the most important project decisions you will make. While design-bid-build has dominated the construction industry for many years, one delivery method doesn't necessarily meet the needs of every project and every owner. One size doesn't fit all, and selecting the best delivery method for your project depends on many factors, such as overall goals, project requirements, schedule, budget, complexity, potential challenges and risk considerations, among others.

Alternative project delivery methods each have advantages and disadvantages, and McKim & Creed welcomes the opportunity to explore the possibilities of each and work with our clients to select the best delivery system for their projects.

Our services include:



DESIGN-BUILD TEAM

- Direct Selection - Industrial Wastewater
- Progressive Design-Build - Water, Wastewater
- Competitive Negotiation/Fixed Price (GMP) - Water, Wastewater
- Construction Management at Risk

OWNER REPRESENTATIVE

- Design Criteria Package
- Best Value Evaluations (Qualifications, GMP)
- Procurement Alternatives
- Value Engineering
- Cost/Schedule Monitoring
- Risk Management

ADDED VALUE

- Building Information Modeling (BIM)
- Sustainable Planning - Envision® Certified Professionals
- Owner Training



McKim & Creed teamed with Mears on a challenging, fast-track design-build project to replace aging utility lines serving Sunset Key, a privately owned island approximately 1,800 feet off-shore from the west end of Key West.



As part of a progressive design-build approach, McKim & Creed teamed with The Haskell Company and performed engineering design and construction services associated with the replacement of four 1.1-mgd reverse osmosis skids for the City of Venice.



As part of this design-build project, McKim & Creed teamed with Cieszko Construction Company and Hydro International to design the replacement grit removal system for one of the primary sanitary sewer lift stations at Marine Corps Air Station Cherry Point.



AWARD-WINNING PROJECTS

McKim & Creed has received many accolades from our outstanding design work. The following projects are representative of a sampling of the work McKim & Creed has accomplished

McKim & Creed's wealth of experience on similar contracts puts us in a unique position to practically and successfully address any task order the Town of Belleair may assign and we are committed to assessing all tasks to offer an innovative approach, or a traditional, tried-and-true approach where applicable. Both our firm and proposed technical staff have implemented these methodologies successfully resulting in a variety of award-winning projects.



WTP Ion Exchange Project

City of Bunnell, Florida

2015 Excellence in Construction, Associated Builders and Contractors
2015 Honor Award (Water/Wastewater Category), Design-Build Institute of America Florida Region
2016 FL APWA Project of the Year (Environmental Under \$5 Million), FL APWA

The City of Bunnell received an FDEP consent order due to the failure to meet the maximum contaminant levels required for disinfection byproducts, specifically TTHMs. McKim & Creed performed screening analyses for various treatment technologies, pilot testing, preliminary design, final design and permitting. Additionally, McKim & Creed provided bidding, construction and post-construction services. Initial screening analyses and preliminary design indicated the most effective option for the city was an ion exchange water treatment process. The approach was to implement an ion exchange plant to remove TOC in order for disinfection byproducts to comply with regulatory requirements. The design also included an ion exchange softening process, concurrent with the TOC removal, to improve water quality by reducing hardness. In addition to the ion exchange process, other design elements included dual media gravity filter, clear well, transfer pumps, chemical feed and disinfection. McKim & Creed also provided assistance to the city for both USDA Rural Grant and SRF funding for the project.

"Thank you to you all and let this project remind us that it's not about the bricks and mortar... it's the people that make the difference."

- Fernand J. Tiblier, PE | Former Director of Public Works and Engineering



Siesta Key to Casey Key Water Main Design

Sarasota County, Florida

2013 Project of the Year - Emergency Repair Category ,APWA - Florida Chapter

Sarasota County's potable water distribution main between Siesta Key and Casey Key failed within a marine preserve. As such, the main had to be isolated and the system loop broken. This resulted in dead ends on both keys, causing reduced water quality and fire flow to these areas. In the interest of correcting this situation, the county commissioned an engineering evaluation to look for opportunities to reconnect the system. This study concluded that the main could not be directionally drilled and would have to traverse the environmental lands or beach, which were not viable options to the county, so they retained McKim & Creed to take another look at it. After some preliminary calculations it was determined that the crossing could be drilled as long as the pipe was flooded and placed on rollers during pullback, but many other hurdles had to be resolved.

"When things got challenging, as we knew they would, you stayed focused on the task at hand - completing the project without delay or excess cost to the county or the contractor."

- Fernand J. "Tib" Tiblier, Jr., PE

AWARD-WINNING PROJECTS



The Waterhub at Emory

Emory University, Georgia

2016 US Water Prize, US Water Alliance, Emory University RCW System

2016 Engineering Excellence Grand Award, American Council of Engineering Companies, Emory University RCW System

2016 Engineering Excellence Grand Award, American Council of Engineering Companies, Emory University RCW System

McKim & Creed provided professional engineering services for the preliminary design (Phase I), and final design, permitting, bidding and construction administration (Phase II) for the Alline Avenue stormwater pumping station. The \$4.8 million project included the 35 mgd pump station, 36-inch force main and marine outfall, as well as improvements to the stormwater collection system. This heavily residential area served by the pump station is bounded by MacDill Avenue, Asbury Place, West Bayshore Court, and Bayshore Boulevard. This area has experienced stormwater system overflows not only from runoff during rain events, but also from high tide surges. The stormwater pumping facility alleviates street flooding and moves stormwater more quickly to the outfall. In Phase 1 of this assignment, McKim & Creed provided preliminary design services including topographic survey; stormwater system development; level of service analysis; and the preparation of a basis of design report.

The McKim & Creed survey division worked in conjunction with the engineering division to provide project control, right-of-way surveys, topographical surveys and the creation of any necessary legal descriptions and sketches for easement recording.

"Thank you to you all a With this facility, we're taking a major step forward in becoming one of the first in the nation with this technology for cleaning our own wastewater, which will make it possible for Emory to save tens of millions of gallons of potable water every year. and let this project remind us that it's not about the bricks and mortar...it's the people that make the difference."

- Matthew Early, Vice President for Campus Services, Emory University



Alline Avenue Stormwater Pumping Station, Phase I and II

City of Tampa, Florida

2013 Outstanding Contribution to the Community (Infrastructure Category) Hillsborough Planning Commission

McKim & Creed provided professional engineering services for the preliminary design (Phase I), and final design, permitting, bidding and construction administration (Phase II) for the Alline Avenue stormwater pumping station. The \$4.8 million project included the 35 mgd pump station, 36-inch force main and marine outfall, as well as improvements to the stormwater collection system. This heavily residential area served by the pump station is bounded by MacDill Avenue, Asbury Place, West Bayshore Court, and Bayshore Boulevard. This area has experienced stormwater system overflows not only from runoff during rain events, but also from high tide surges. The stormwater pumping facility alleviates street flooding and moves stormwater more quickly to the outfall. In Phase 1 of this assignment, McKim & Creed provided preliminary design services including topographic survey; stormwater system development; level of service analysis; and the preparation of a basis of design report.

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AWARD-WINNING PROJECTS

At McKim & Creed, we help provide reliable and cost-effective solutions to our clients' real world challenges. Many of these solutions have been recognized for their high-level of achievement, value and ingenuity by our peer associations. Here is a sampling of our award-winning projects in Florida:

Excellence in Construction

Associated Builders and Contractors, Florida First Coast Chapter (2015)
WTP Ion Exchange Project

Honor Award (Water/Wastewater)
Design-Build Institute of America (2015)
WTP Ion Exchange Project

David W. York Water Reuse Project of the Year
Florida Water Environment Association (2015)
WTP#2 ZLD Design and Construction Phase Services

Top 25 Engineering Firms
Tampa Bay Business Journal (Ranked No. 12) (2014-2015)

Consultant of the Year, Wastewater and Water Category
Florida Chapter, American Public Works Association (2014)

Regional Award for Excellence in Environmental Stewardship
City of Palm Coast Fire Department (2014)
WTP#2 ZLD Design and Construction Phase Services

Award of Outstanding Contribution to Our Community
Hillsborough County Planning Commission (2013)
Alline Avenue Area Drainage Improvements

Project of the Year, Emergency Repair, Projects Under \$5 million
American Public Works Association Florida Chapter (2013)
Siesta Key to Casey Key Water Main

Engineering Excellence Grand Award
Florida Institute of Consulting Engineers (2010)
Lake Manatee Water Treatment Plant Pilot Plant Study

Future of the Region Honorable Mention
Tampa Bay Regional Council (2009)
Manatee County Biosolids Thermal Dryer

Future of the Region Certificate of Excellence

Tampa Bay Regional Council (2009)
Bishop Creek Erosion Control/Water Quality Improvement

Future of the Region Award
Tampa Bay Regional Planning Council (2008)
Biosolids Thermal Dryer Design/ Build Construction Phase

David W. York Reuse Water Award, Reuse System of the Year >15 mgd
Florida Water Environment Association (2006)
MARS Operational Protocol Development

Engineering Excellence Honor Award
Florida Institute of Consulting Engineers (FICE) (2004)
Wellfield Optimization and Water Treatment Plant No. 1
Excellence in Construction Award
Florida Gulf Coast Chapter, Associated Builders and Contractors, Inc. (2001)
Westside Regional Wastewater Treatment Plant Upgrade/ Expansion

Engineering Excellence Honorable Mention
Florida Institute of Consulting Engineers (2001)
Bethune Point Wastewater Treatment Plant Expansion

Wastewater Consultant of the Year
Florida Chapter, American Public Works Association (2000)
Westside Regional Wastewater Treatment Plant Upgrade/ Expansion

Engineering Excellence Grand Award
Florida Institute of Consulting Engineers (2000)
Westside Regional Wastewater Treatment Plant Upgrade/ Expansion

Engineering Excellence Honorable Mention
Florida Institute of Consulting Engineers (1999)
Clearwater Island Estates Reclaimed Water System - Contract 1

Engineering Excellence Honorable Mention
Florida Institute of Consulting Engineers (1997)
Volusia County Solid Waste Transfer Station



ADDENDUM 1
FOR REQUEST FOR QUALIFICATIONS
ADM18-1: ENGINEER OF RECORD

The ADM18-1 ADDENDUM 1 is issued by the Town of Belleair through the Town's Website. The ADDENDUM SHALL BE MADE A PART OF THE BID DOCUMENTS AND SPECIFICATIONS.

ADDENDUM 1
ADDENDUM COVERING CHANGE IN SPECIFICATIONS AND/OR SCOPE OF
SERVICES

Date Issued: May 23, 2018

Addendum No.: 1

RFQ Number: ADM18-1: ENGINEER OF RECORD

Procurement Officer: Keith Bodeker

INTENT

1. Issuance of this addendum is intended to modify Request for Qualifications (RFQ) No. ADM18-1.
2. Questions and Answers are enclosed.

Addendum 1: Request for Qualifications ADM 18-1 Questions and Answers

Q1: Our understanding of requirement #11 is that you would like proposers to provide a final product of a past project as an example of our quality/type of work. Is this correct? If yes, in which format would you like the final product – as a hard copy or electronic (jump drive or CD)?

A1: As described on page 4 the consultant is to provide five hard copies and one electronic format. The example of the project would be included in the submittal. The format and manner in which “the project that typifies the product of your firm” is presented is at the discretion of the applicant.

Q2: Is the Town’s intent to select one or multiple firms?

A2: The Engineer(s) of Record may vary between disciplines depending on the outcome of the selection process.

Q3: If multiple, how many per type of work?

A3: Undetermined.

Q4: What are the points associated with the evaluation criteria (sections VII, page 10 of 16)?

A4: The scoring used at all stages in the process will be based on the same criteria listed in section VII. There will be a maximum of 100 points to be allocated from the following maximum scores for each criterion:

A: 5 points

B: 15 points

C: 15 points

D: 25 points

E: 10 points

F: 5 points

G: 15 points

H: 5 points

I: 5 points

Q5: Is there any page limitation for the response?

A5: There is no page limitation.

Q6: How many consultants is the Town of Belleair planning to select for this RFQ?

A6: Unknown at this time

Q7: Is it the Town’s desire for all submittals to cover all the disciplines listed in the RFQ?

A7: It is not required.

Q8: Who is/are the incumbent firm(s) on this multi-year service agreement?

A8: Bayside Engineering, Cardno Engineering, CPH, Deuel & Associates, DKS Associates, DRMP Inc., HSW Engineering, Mckim & Creed, PSI Engineering, RS & H, VHB, Wade Trim.

Please Indicate the Types of Work for which your firm is submitting its qualifications by marking an X in the box to its left (Please mark X for all that apply)

Mark X

Mark X

X	A. Design Phase	X	B. Construction and Inspection Phase Services
X	C. Project Administration	X	D. General Civil/Stormwater Engineering
X	E. Traffic Engineering	X	F. Water/Wastewater Engineering
X	G. Geotechnical Engineering	X	H. Pavement Management
X	I. Geographic Information Systems Services (GIS)	X	J. Grant Administration
X	K. General Engineering Consultation / Peer Review / Quality Assurance Review		



SUBMITTED BY:

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