REQUEST FOR QUALIFICATIONS

WATER TREATMENT PLANT AND WASTEWATER TREATMENT PLANT PROJECTS

RFQ-041-23-JJ | FEBRUARY 28, 2023

TAB A.

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TAB A. Table of Contents

EVALUATION CRITERIA REFERENCE

CATEGORY	POINTS	DESCRIPTION/CRITERIA	LOCATION IN THE PACKAGE AND COMMENTS
Firm Qualifications and Experience	25	Overall approach, similar project experience and project management	**TAB C,** Pages 15 - 32
Organizational Profile and Project Team Qualifications	25	Professional experience and qualifications of team members, including standing as State of Florida or Broward County CBE	**TAB D,** Pages 34 - 72
Approach to Scope of Work	25	Overview of proposed vision, ideas, and methodology, as it relates to meeting typical discipline project scope, budget and time-line	**TAB E,** Pages 74 - 80
Past Performance References	15	Three references, preferably from government entities, for completed projects with similar scope contained in this RFQ	**TAB F.** Pages 82 - 85
Volume of Work	5	Volume of Work Total Fees / Points $0 to $200,000 — 5 $200,001 to $600,000 — 4 $600,001 to $1,000,000 — 3 $1,000,001+ — 2	Stantec has received less than $200k in fees in the last 5-years
Office Location	5	Location of Office / Points Within 35 miles from WWTP — 5 Within 35 to 60 miles from WWTP — 4 Within 60 to 90 miles from WWTP — 3 More than 90 miles from WWTP — 2	**TAB B,** Page 11 Stantec's Deerfield Beach Office is located within 24 miles of the City's WWTP

Stantec

February 28, 2023

Stantec Consulting Services Inc.
800 Fairway Drive, Suite 195
Deerfield Beach, Florida 33441
stantec.com

City of Hollywood
Request for Qualifications
RFQ-041-23-JJ

Water Treatment Plant
and Wastewater Treatment
Plant Projects

Attention:
Jean Joinville
Senior Purchasing Agent

Colin Devitt, PE
Senior Project Manager
Direct: 786-437-6681, Ext. 2257
Mobile: 708-204-1262
colin.devitt@stantec.com

Dear Ms. Jean Joinville and Selection Committee Members,

Stantec Consulting Services Inc. (Stantec) is pleased to submit the proposal for the City of Hollywood RFQ-041-23-JJ, Water Treatment Plant and Wastewater Treatment Plant Projects. This contract is a critical step in maintaining the reliability of the City's water supply, water treatment, and wastewater treatment facilities to provide dependable services for the City's residents and businesses.

Stantec and our project team members are very committed to the City of Hollywood, and we appreciate your consideration of our qualifications for the following categories:

- **Service Area 1 – Wastewater Treatment Plant Projects**
- **Service Area 2 – Water Supply and Treatment Projects**
- **Service Area 4 – Quality Assurance, Quality Control and Value Engineering Services**

The Stantec Team is committed to performing the activities outlined in this solicitation, and to achieving the City of Hollywood's goal of being a leader in the stewardship of water and wastewater treatment resources. The City's Department of Public Utilities 5-year 2023 Capital Improvement Plan is designed to maintain and preserve the City's water and wastewater assets through repair and rehabilitation of aged facilities, system reliability improvements, sustainable and resilient solutions and modernization of treatment facilities to meet regulatory requirements. If selected, Stantec's approach is to partner with the City to carry out priority projects pursuant to your plan.

As designers of water and wastewater treatment plants around the world, and as the #1 ranked water consultant (ENR 2022), our experience and commitment will maximize the community's investment as we provide value-oriented service to meet your needs. Stantec brings cutting edge technology we develop in one part of the world and share it across the globe. It is with this same drive and passion that we will approach each project and every aspect of your needs. **We believe that our local familiarity, blended with our national and international expertise provides the City of Hollywood with the value and trust you desire in a consultant.**

To this end, Stantec is responding with a team that offers a strong local presence in Florida. Our team is augmented by surveyors and mappers, geotechnical, water & wastewater, and structural engineering firms. C Solutions, Metco Southeast, Pangeo Consultants, and Stoner & Associates will supplement Stantec's extensive qualifications resulting in a powerful project team. **Together, we believe that our team brings some differentiators that are unique and will greatly benefit the City:**

Our Team's Water and Wastewater Treatment Experience within South Florida:
Collectively, the Stantec team has aided clients with water and wastewater treatment plant upgrades, process improvements, regulatory compliance, permitting, condition assessments, resiliency upgrades and quality issues. For 50+ years we have worked and continue to serve many utilities in the region including Miami-Dade, Broward, Palm Beach, and Hillsborough Counties, Fort Lauderdale, Hallandale Beach, Sunrise, West Palm Beach, Tampa, Pompano Beach, North Port, and others.

HOW WE STACK UP

1 Top 25 International Design Firms - Environment - Water Treatment

1 Top 25 International Design Firms - Environment - Wastewater Treatment

5 Top 10 Environmental Firms by Type of Work - Engineering/Design

6 Top 20 Environmental Firms by Market Segment - Water Treatment/Supply

8 Top 50 International Design Firms - Sewer/ Waste

9 Top 500 Design Firms

11 Top 150 Global Design Firms

Engineering News Record (ENR), 2022

To learn more about Stantec, scan the QR code above.

Our project team has worked together on numerous projects over the past 25 years and have created a unified team approach to all of our projects, which we will bring to the City of Hollywood.

A Deep Bench of Local Experience: We are leaders in hydrogeology, treatment plant design, permitting and construction in the Tri-County area. Stantec is the prime consultant for the Miami-Dade Water and Sewer Department (MDWASD) $1.9B Consent Decree where we are the Engineer of Record for improvements to the three (3) largest wastewater treatment plants in Florida. Stantec is also the prime consultant for the historic 50MGD surface water treatment plant for the City of West Palm Beach. We are the pioneers for water reuse, having designed the first reuse plant in Broward County for the City of Pompano Beach, "Our Alternative Supply Irrigation System" (OASIS).

Strong Local Regulatory Experience in Southeast Florida: Among the challenges facing the City is the task of complying with current and future water regulations. Stringent requirements imposed by future regulations, such as polyfluoroalkyl substances (PFAs), may have a profound effect on current treatment and monitoring practices and operational protocol for utilities. Therefore, it is imperative to thoroughly comprehend specific regulatory requirements and understand their impact on water and wastewater systems. Our project team member, Mr. Ryan Capelle, can provide expertise in PFAs and assist the City with evaluating technologies to reduce PFAs and other contaminants.

Stantec maintains a group of professionals whose sole purpose is to review all pending and current environmental legislation so that our clients can be properly advised and positioned to address these regulatory issues.

Our long-term South Florida presence and extensive project experience across Florida has helped us forge sound professional relationships with the state and local government agencies. These relationships have enabled us to efficiently permit numerous wastewater collection, treatment, and disposal facilities throughout the state. We have aided utilities through compliance, expansion, and wastewater quality issues. Our knowledge of Florida Department of Environmental Protection (FDEP) procedures and policies on Florida's east coast allows us to efficiently deal with permit preparation and compliance tasks.

With our qualifications highlighted above and the details within the proposal, Stantec is enthusiastic about this contract and sincerely appreciates the opportunity to present our qualifications for your review.

We look forward to the opportunity to present our ideas for assisting the City with the challenges you face and ultimately helping you better serve your customers. If you have any questions about this submittal, please do not hesitate to contact me at 708-204-1262, or via email at colin.devitt@stantec.com

Sincerely,

Stantec Consulting Services Inc.

Ramon Castella, PE, ENV SP, LEED AP
Vice President, Principal in Charge

Colin Devitt, PE
Senior Project Manager

TAB B.

Executive Summary

TAB B. Executive Summary

Who We Are

Stantec Consulting Services Inc. (Stantec), in business for the past 67 years, provides professional consulting services in planning, engineering, architecture, landscape architecture, environmental sciences, project management, and project economics for infrastructure and facilities projects. We are a publicly owned company, supporting public and private sector clients in a diverse range of markets, at every project stage, from initial concept and financial feasibility, to project completion and beyond. Our services are offered through more than 28,000 employees operating out of more than 400 locations. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

Stantec is one of the world's leading firms for capital improvements and rehabilitation projects with experience in the water, sewer, reuse, stormwater, and wastewater sectors. Our team has unmatched qualifications in water resources, having planned and implemented projects including groundwater supply development for surficial and Floridan aquifers, water treatment, storage tanks, high service pump stations, collection, distribution, and transmission systems, pump stations, wastewater treatment, reclaimed water treatment, and effluent disposal projects.

Service Area 1 - Wastewater Treatment Plant

Stantec engineers are experienced in the evaluation and design of conventional and state-of-the-art processes for wastewater treatment, biosolids processing, and reclaimed water. In addition, quite often our clients need to increase the capacity of their wastewater treatment plant as quickly and economically as possible. Stantec has developed an unmatched reputation for utilizing the BioWin™ simulation modeling technique to identify and capitalize on existing treatment capacity to provide the required increase, without the need of building any new structures.

We have experience in all phases of wastewater engineering. On the treatment side, we have significant expertise in all facets of wastewater liquid stream and solids stream treatment ranging from single process and compliance evaluations to turnkey delivery of completely operational facilities. In summary, our staff's wastewater experience includes:

- **Wastewater Treatment**
  - Pretreatment (screening/grit removal)
  - Advanced Secondary Treatment
  - Biological Nutrient Removal
  - Effluent Filtration (conventional sand, membranes, etc.)
  - Disinfection (chlorine, UV, etc.)
  - Membrane Bioreactors (MBR)
- **Odor Control Containment and Control**
- **Biosolids Processing and Handling**
  - Thickening and Dewatering
  - Class A and B Stabilization Technologies
  - Sludge Drying
  - Biogas Utilization and Management
- **Effluent Management**
  - Public Reclaimed Water
  - Deep Well Injection
  - Aquifer Storage and Recovery
- **Facility Process Modeling**
- **Telemetry/SCADA**
  - Process Control
  - SCADA System Applications
  - Telemetry Systems
- **Operational Optimization**
  - Energy Reduction Studies
  - Chemical Cost Optimization
  - Biowin Modeling

Service Area 2 - Water Supply and Treatment

Stantec has continued to emphasize work in the field of Water Treatment, with the design of more than 1,000 water treatment plants ranging in capacity from 0.25MGD to over 1 billion gallons per day and in treatment processes from conventional treatment to membrane filtration to ozonation. We have also conducted well over 100 pilot studies of a variety of treatment processes. Stantec is a global leader in water treatment, with extensive experience in all water treatment technologies and unit processes including:

- Advance Treatment
- Automation/Information Management
- Construction Administration and Commissioning
- Membrane Filtration
- Lime Softening
- Operation and Management Evaluations
- Operations Control/SCADA
- Operations Optimization
- Permanent Monitoring Stations
- Pilot and Treatability Studies
- Process Review and Optimization
- Residual Management
- Water Quality Assessment
- Water Source Development

Stantec's water treatment local, national and global qualifications are impressive. Our Florida water treatment experience includes lime softening, nano filtration, MIEX, and reverse osmosis plants.

Service Area 4 - QA/QC & Value Engineering

Stantec uses state-of-the-art technology and includes the latest field-proven approach to water and wastewater treatment configurations. We provide a full spectrum of services from planning through preliminary and final design, including Civil 3D CAD, Building Information Management (BIM) via BIM 360 and Revit, and services during construction and start-up.

Stantec delivers solutions for conveyance, wastewater treatment, water treatment, and water resources projects that minimize cost and maximize the sustainability of the resource. Working throughout the hydrologic cycle, our team optimizes all of a community's water interactions. We use natural processes to our clients' advantage, and seek opportunities to provide added value.

As designers of water and wastewater treatment plants around the world, our experience and commitment to excellence maximizes the value of a community's investment by providing the best overall value for your specific situation. With water and wastewater treatment reaching levels of complexity and regulatory scrutiny warranting specialized oversight and facility performance measured constantly, it's important to have the most appropriate, cost-effective solution the first time, every time. We evaluate and optimize by minimizing consumption and discharge, characterizing process streams, addressing hydraulic loading and variability, and troubleshooting process problems while identifying pollution prevention alternatives and sustainable technologies.

Resiliency

At Stantec, our team delivers innovative solutions for coastal communities understanding the regional impacts of climate change in the City of Hollywood and South Florida. Climate change brings forward issues impacting the planning for future supply and treatment infrastructure. We partner with our clients to design solutions that address their communities' unique needs, such as hardening and elevating critical infrastructure based on the latest Southeast Florida Unified Sea Level Rise projections, and become more resilient.

We lead the industry with our innovative approach, balancing technological innovation with environmental, regulatory, and economic needs. Our design professionals partner with our climate and environmental scientists, digital solutions developers, project economists, funding specialists, and members of our industry-leading Innovation Office to deliver integrated climate change solutions that are informed by systems thinking.

Our One Water focus also covers the management of fresh water, wastewater, stormwater, and groundwater as a collective resource. By viewing water as an integrated system, Stantec delivers solutions to conveyance, wet weather flow and urban stormwater, wastewater treatment, water treatment, and water resources projects that minimize cost and maximize the sustainability of the resource. We deliver award-winning, integrated design and engineering with every solution getting water to where it's needed, at the best value for our clients and their communities.

Stantec is not only aware of and has the know-how of addressing climate change impacts but also has designed and constructed large number of projects for local municipalities to address forecasted climate change impacts. For MDWASD, Stantec completed designs to elevate all new electrical equipment for their three WWTPs in order to protect critical equipment from projected storm surge.

Our Team

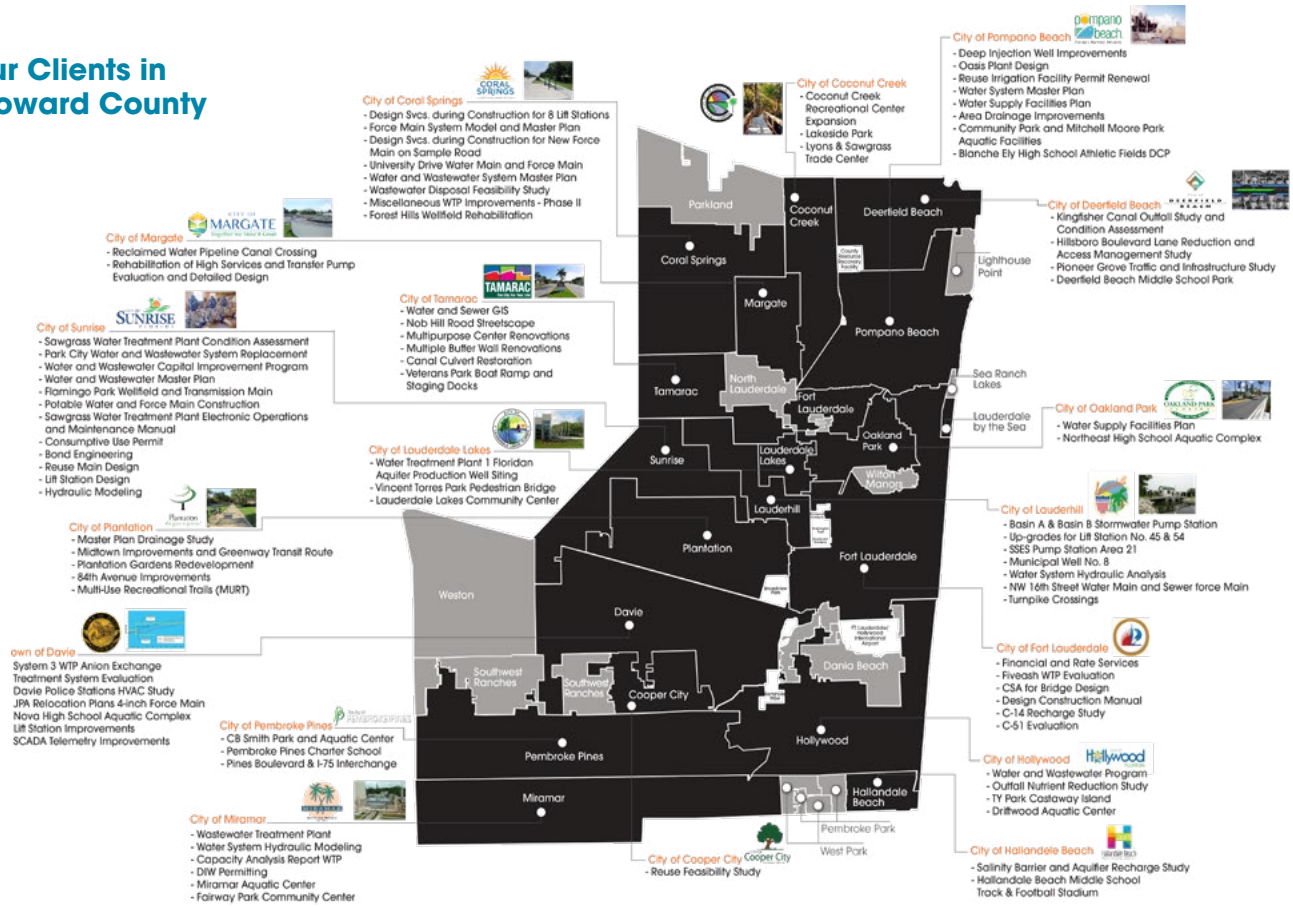
Stantec offers the City a professional and efficient team experienced in the development and delivery of water and wastewater projects for public infrastructure improvements. **Our team has the right experience to perform any work efficiently and effectively, and has the ability to devote their energies to its success. Stantec is very excited about the opportunity to collaborate with the City of Hollywood on this contract.** We have the technical expertise, knowledge, and resources to work closely with you in executing a successful project as we have done countless times in the past with our other clients. Our collective project knowledge and experience is the strength behind our organization and the reason we deliver successful projects.

As designers of projects around the world, we maximize a community's investment by providing experience and ideas that have long-term value. Whether projects call for planners, designers, construction managers, or facility operators, we have put together a team who will provide creative, yet practical, water solutions, and apply cost-effective strategies that help protect the health of people and the environment. In the end, we make sure the appropriate quality and quantity of water is where it should be and available when it's needed.

We believe Stantec presents a professional consulting team second to none in terms of depth of resources available, the historical development and understanding of the requirements of this contract, and possesses the technical expertise and management team to deliver a successful project, on time and on budget. Our firm is able to offer comprehensive, rapid, cost-effective and local delivery of all disciplines necessary to complete any project assigned to us. Our proposed contract manager has tremendous relevant experience, supported by very strong corporate experience in all of the aspects required to help the success of our project managers and the team, Stantec has a very strong inter-office communications plan which focuses on direct contact either in person or by phone as the primary means of communication and notification of the receipt of important project related information.

Our team is diverse in talent and truly multidisciplinary with services provided for all architectural and engineering services. Because of that, we are aware of the needs of each discipline and how they interact with each other on a project. Project management is not just talked about but is truly implemented on each and every task. In fact, most of our projects are led by the civil engineers because our experience has produced managers that are knowledgeable in all fields of design and permitting including the occasional building facility projects.

Our Clients in Broward County



THIS IS OUR TEAM

KEY INDIVIDUAL	ROLE	YEARS OF EXPERIENCE	OFFICE LOCATION
Colin Devitt, PE	Senior Project Manager	14	Deerfield Beach FL
Sussette Irizarry	Deputy Project Manager	10	Coral Gables, FL
Ramon Castella, PE, ENV SP	Principal in Charge	37	Coral Gables, FL
Tracy Anderson, PE	QA/QC Technical Advisor	30	Sarasota, FL
Andrea Crumpacker	Resiliency Technical Advisor	22	Sarasota, FL
Hal Schmidt, PE, BCEE	Wastewater Systems Technical Advisor/ QA-QC Peer Reviewer	41	Tampa, FL
Becky Hachenburg, PE, PMP	Water Treatment Systems Technical Advisor	27	Atlanta, GA
Manuel Moncholi, PhD, PE	Wastewater Treatment Lead	20	Coral Gables, FL
Zuhal Ozturk, PhD, PE	Regulatory Compliance Lead	15	Deerfield Beach, FL
Oscar Bello, PE	Wastewater Collection and Reuse Lead	25	Deerfield Beach, FL
Heath Wintz, PE	Water Supply & Treatment Lead/ Water QA/QC	23	West Palm Beach, FL
Simon Meikle, PE	Disinfection Systems Lead	13	Tampa, FL
Dave Clarke, PE, CFM	Water Transmission & Distribution Lead	20	Coral Gables, FL
Paul DeKeyser, PE	Value Engineering Lead	43	Fairfax, VA
Jeovanni Ayala-Lugo, PE	Process Design Engineer	22	Tampa, FL
Craig Kaltenbach, PE	Structural Engineer	27	Tampa, FL
Neil Johnson, PG, MP	Supply & Disposal Well Professional	30	West Palm Beach, FL
Rick Cowles, PG	Supply & Disposal Well Professional	31	Sarasota, FL
Ben Quartermaine, PE	Stormwater Engineer	27	Sarasota, FL
Ryan Capelle, PE	Water Treatment Lead	26	Minneapolis, MN
Sean Compel, PE, ENV SP	Construction Engineer	20	Coral Gables, FL
Carl C Chan, PE	Modeling Engineer	23	Indianapolis, IN
Diane Quigley, AICP, CFM	Funding & Grant Assistance	36	Tallahassee, FL
Bill Marriott, PE	Lead Copper Rule	26	Plano, Texas

Office location

We are local. Our project manager will provide Primary Project Management out of our Deerfield Beach, Florida office. Our staff will be ready and available to the City for anything you may need. As shown in the graphic below, we have nearly two dozen offices statewide. We can provide over 130 local specialists for this contract if needed. These offices specialize in local municipal engineering services.

The map indicates the Florida locations for Stantec and our subconsulting partners.

Our staff will be ready and available to the City for anything you may need. Our team will be led by Senior Project Manager Colin Devitt, PE. He will provide responsive service and will be available to the City immediately once a request is made.

Contact Information

Stantec Consulting Services Inc.

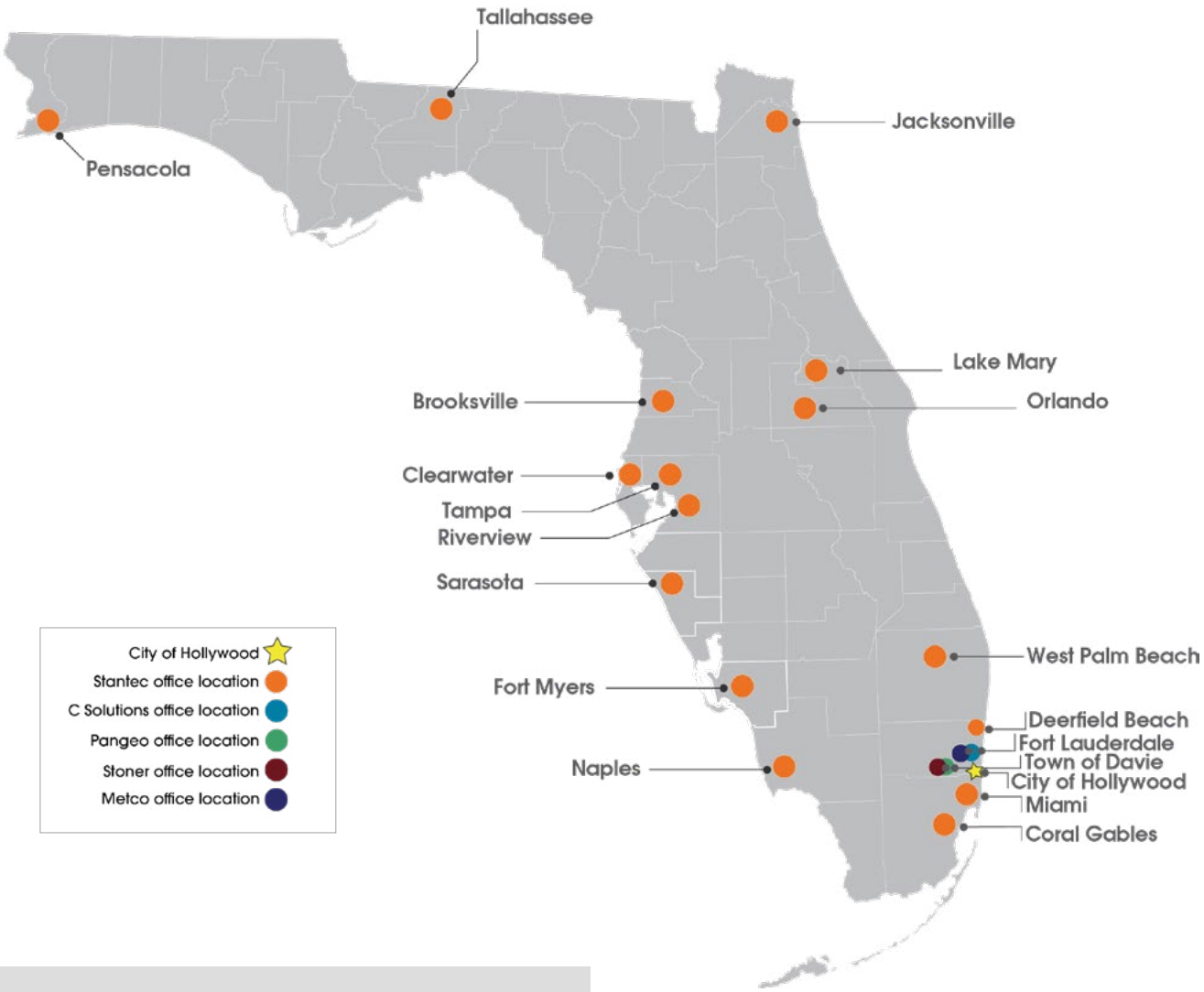
Colin Devitt, PE, Senior Project Manager
colin.devitt@stantec.com
Direct: 786-437-6681, Ext. 2257
Mobile: 708-204-1262

Primary Project Management Location

800 Fairway Drive, Suite 195
Deerfield Beach, Florida 33441

Stantec Headquarters

400-10220-103 Avenue NW
Edmonton AB CAN T5J 0K4



Our Stantec office is only 24 miles drive to the City of Hollywood Utilities Department.

Key Elements of Proposal

Having provided water and wastewater treatment plant engineering services to many south Florida utilities, we are familiar with the type of projects and needs that can arise. We have reviewed the scope of work provided with the RFQ and clearly understand the City's needs. Tasks to be completed under this contract can be grouped as follows:

- **Planning and Support Services:** This includes reviewing budgets and capital improvement plans, performing condition assessments, providing maintenance support, lifecycle cost analysis, feasibility studies, review regulatory/compliance changes, permitting, provide meeting and City Commission support, and evaluate client change resiliency measures.
- **Design Services:** Provide complete design packages for improvements to water and wastewater treatment plants, replacement of membrane treatment skids, modifications or improvements to existing chemical processes, and rehabilitation designs including all required engineering disciplines, exhibits, and artist's renderings to communicate with public.
- **Quality Assurance, Quality Control & Value Engineering:** This includes generating value, optimizing performance and costs systematically, and performing constructability, quality assurance/control reviews of projects.
- **Construction Management and Inspection:** Provide inspection services to oversee construction progress and adherence to contract documents.
- **Operational and Maintenance Consulting:** This includes troubleshooting treatment plants and the collections system, evaluating existing treatment processes, conduct process optimization studies, perform bench scale and pilot studies, model system hydraulics, and conduct energy and conservation audits.
- **Grant Application, Management and Outreach:** Includes review of grant opportunities, application submittal and tracking.
- **Field Investigations and Mapping Services:** Survey, aerial photo, drafting, mapping, geotechnical, and testing.

Stantec recognizes the difficulties in providing staff, experience, approach and capabilities in a single Statement of Qualifications for multi-disciplinary RFQ's. In the interest of highlighting personnel and projects demonstrating our capabilities, we specifically targeted projects typical of task order assigned projects under continuing service agreements. It is important to recognize the fact that each firm that submits to the City can show some very high profile projects. But our submittal includes those projects assigned to us under similar type contracts.

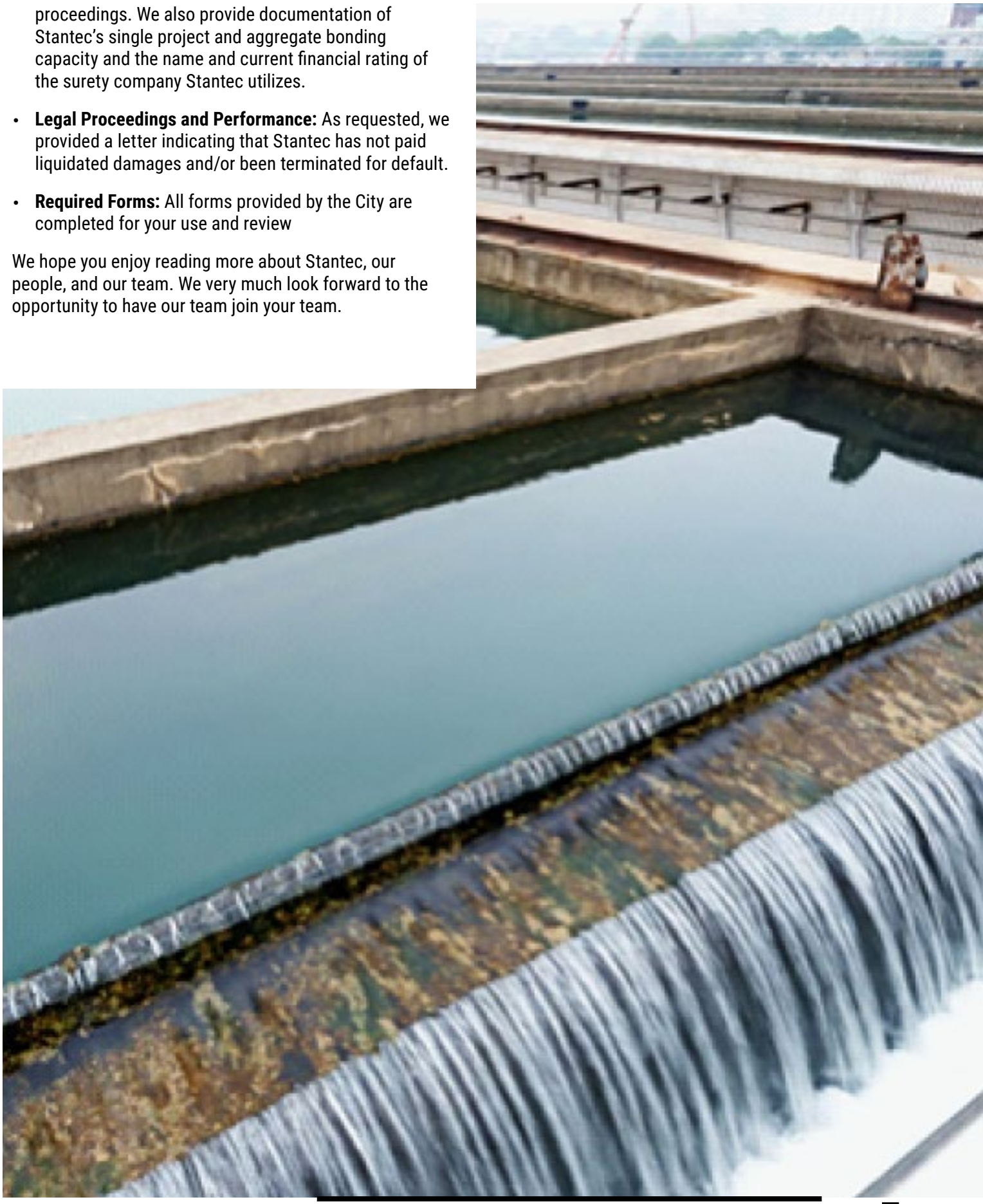
In this submittal, please find the following:

- **Firm Qualifications and Experience:** In this section we highlight the depth of relevant experience Stantec has been providing for similar services in South Florida and the deep bench of global resources that support our local staff. We introduce our project manager, Colin Devitt. We also provide an overview of the variety of services we offer as requested in the RFQ Scope of Services and marry these proposed services against a list of some of our recent projects.
- **Organizational Profile and Project Team Qualifications:** In this section we introduce our organization structure, key personnel and subconsultant teaming partners. A resume is included for our key personnel that reviews their education, experience, licensure, role on this project, and past relevant experience.
- **Approach to Scope of Work:** In this section we have provided a concise narrative outlining our understanding of the City's infrastructure, needs, and goals. We have provided our approach to both managing projects under a General Engineering Services contract. We have also provided our initial thoughts on project implementation and sequencing, and the capabilities our firm has to help the City meet its objectives. Our team is available to perform the work as required and we have provided information on our current workload.
- **References:** At Stantec we are very proud of the work we do and are pleased to provide project references that are relevant to this contract. We welcome you to reach out to our clients to get more information on our performance.
- **Subconsultant Information:** We have four subconsultant firms who have joined our team: C Solutions, Metco Southeast, Pangeo Consultants, and Stoner & Associates. In this section we provide background on each firm and the role they will play on our team. We have worked with each of these firms before, bringing a proven team to the City.
- **Financial Resources:** We have provided a financial summary statement, stating the present financial condition of Stantec, and disclosing information as to Stantec's involvement in any prior or current bankruptcy

proceedings. We also provide documentation of Stantec's single project and aggregate bonding capacity and the name and current financial rating of the surety company Stantec utilizes.

- **Legal Proceedings and Performance:** As requested, we provided a letter indicating that Stantec has not paid liquidated damages and/or been terminated for default.
- **Required Forms:** All forms provided by the City are completed for your use and review

We hope you enjoy reading more about Stantec, our people, and our team. We very much look forward to the opportunity to have our team join your team.



TAB C.

Firm Qualifications and Experience

TAB C. Firm Qualifications and Experience

Our Firm

Stantec, found in 1954, provides professional consulting services in planning, engineering, architecture, landscape architecture, environmental sciences, project management, construction engineering inspections, construction management and project economics for water, wastewater, and reclaimed water infrastructure and facilities related projects. Continually striving to balance economic, environmental, and social responsibilities, we are recognized as a world-class leader and innovator in the delivery of sustainable solutions.

Stantec has over 28,000 people in more than 400 locations worldwide, with 200 offices and 10,000+ staff in the United States. More specifically, we have 17 offices within the State of Florida including our local Deerfield Beach office to aid in this contract. Our Deerfield Beach office shall be supported by staff from Coral Gables, West Palm Beach, and Naples as needed for any task work order requiring specialized experience and talent. Stantec's strong commitment to client satisfaction is the foundation of our service to you. We have a long history of serving municipal and county clients throughout the state.

We support our public and private sector clients at every stage of project development, from initial concept and financial feasibility to project completion and beyond. We hold a fundamental belief in collaboration with the client and users during the entire design process. As integral members of the team, our clients contribute greatly to the energy and enthusiasm that produce the highest quality work. A characteristic of Stantec's work is the uniqueness of each design solution, achieved by beginning each design process without preconceptions.

Our Experience

We have over 500 years of combined experience within our water/wastewater team, and have developed dependable, tested, and proven processes and procedures. Our core business includes water and wastewater treatment plants from preliminary design through detailed design, bidding and award, construction, and startup.

Due to our large and diverse skilled local team, our strong relationships with permitting agencies, and a deep bench of staff company-wide, Stantec has successfully completed all of our delivery commitments over the past five years, and have met and exceeded client expectations for our projects locally.

We have included our Continuing Engineering Services experience in Florida on the following page, and highlighted our team's experience with relevant projects.

We selected these projects to show you the breadth and complexity of our water and wastewater treatment designs and value engineering services. **We will be able to provide you the best-in-class service, supported by our technical team, ranked both as the #1 Water Treatment and Wastewater Treatment design firm (ENR-2022).**

Contact Information

For this contract, our Senior Project Manager, Colin Devitt, PE (708-204-1262 / colin.devitt@stantec.com), will be the conduit for all communications between the City and Stantec, and will bear ultimate responsibility for the performance of the in-house team and sub-consultants, if any. Formal documentation and contact with the City will be through Colin. On a day-to-day basis, all client/consultant team members may be in contact for various reasons; any such communication will be recorded and filed with the Project Manager to ensure management accountability to the City of Hollywood. Colin is authorized to manage all aspects of this work as well as to make representations for Stantec. Colin is located in our Deerfield Beach office located at 800 Fairway Drive, Suite 195, Deerfield Beach, Florida 33441.

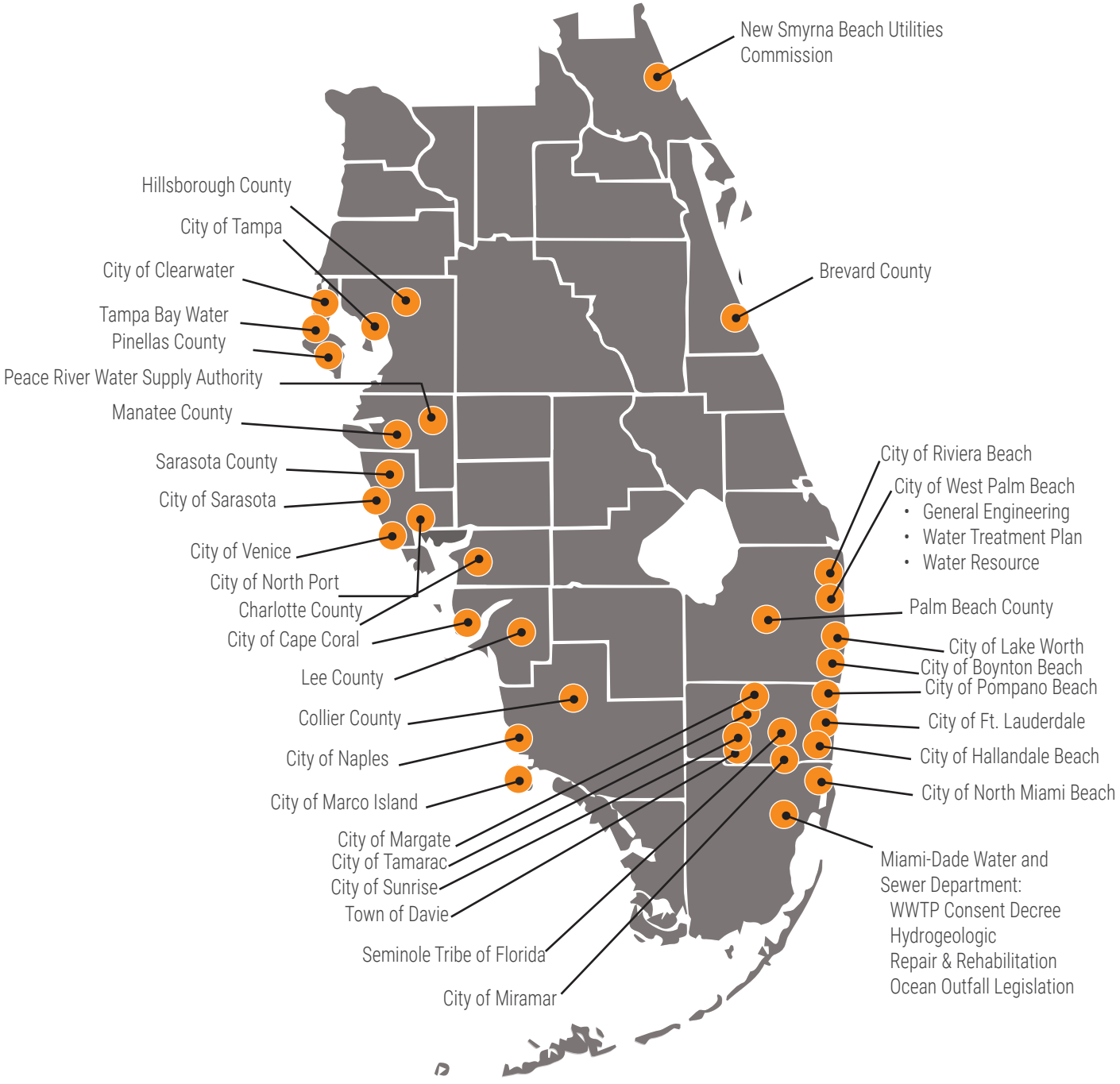
Licenses

Stantec is a Corporation certified in the State of Florida under document number: F01000005948. Stantec is authorized to practice engineering, architecture, landscape architecture, geology, and surveying through the State of Florida Department of Business and Professional Regulation and is current with all our certifications.

Please see copy of our licenses and certifications attached under Tab J. Required Forms.

OUR WATER, WASTEWATER, AND REUSE RECLAIMED WATER CONTINUING SERVICES CONTRACT EXPERIENCE		
PROJECT NAME	**OWNER**	**END DATE**
Continuing Services Agreement 18-05-24	City of Miramar	Ongoing
Continuing Services Agreement, Utilities Engineering Services	City of Sunrise	Ongoing
Continuing Professional Services Agreement	City of Hallandale Beach	Ongoing
Miscellaneous Professional Engineering and Landscape Architectural Services	Town of Davie	Ongoing
Continuing Services Agreement, Civil Engineering Services	City of Tamarac	Ongoing
Agreement for Professional/Consulting Services	City of Pompano Beach	Ongoing
Infrastructure Consultant Engineering Services	Seminole Tribe of Florida	Ongoing
Continuing Architectural and Engineering Services for Various Projects	Town of Hillsboro Beach	Ongoing
Engineering Services for Water and Wastewater Services	City of Miami Beach	Ongoing
Continuing Services Agreement for Architectural/Engineering	City of North Miami Beach	Ongoing
Financial Services	City of Hollywood	Ongoing
Professional Engineering Continuing Services - Various Disciplines	City of Hollywood	Ongoing
Professional Services Agreement, Hydrogeological Services	City of Lake Worth Beach	Ongoing
Program Management Services	City of Sunrse	2015
General Engineering Services	City of Sunrise	2010
Engineering and Construction Services Owner's Advisor Project	Palm Beach County	Ongoing
Water Treatment Plant Improvements	City of West Palm Beach	Ongoing
Non-Exclusive Professional Services Agreement Hydrogeologic and Engineering Services for Disposal, Water Supply, Monitoring Wells and Aquifer Storage and Recovery Wells	Miami Dade Water and Sewer Department	2021
Non-Exclusive Professional Services Agreement For Design Services for Wastewater Treatment Plants Related To Consent Decree Projects	Miami Dade Water and Sewer Department	Ongoing
Non-Exclusive Professional Services Agreement For Design Services for Large Diameter Pipeline Related to Ocean Outfall Program	Miami Dade Water and Sewer Department	Ongoing
Pump Station Improvement Program (PSIP)	Miami Dade Water and Sewer Department	Ongoing
Agreement For Professional Services RSQ 15-19-Water Systems Operational Assessment and Optimization Plan	City of New Smyrna Beach	Ongoing
Construction Management at Risk Program	City of Cape Coral	2014
As-Needed Professional Engineering Services	City of Tampa	Ongoing
As-Needed Professional Services Agreement	Tampa Bay Water	2016
Misc. Engineering Services, Water, Wastewater and Reclaimed Water	Hillsborough County	2017
General Engineering Services	City of Venice	Ongoing
Misc. Water and Wastewater Engineering Services	City of North Port	Ongoing
Continuing Professional Services and Misc. Construction Management Services	Sarasota County	Ongoing
City of Clearwater Public Utilities Department	City of Clearwater	Ongoing
Hydrogeologic Services Contract	Palm Beach County	Ongoing
General Consulting Services	City of Boynton Beach	2017
Construction Administration Services	City of Miami Beach	Ongoing

Our Water, Wastewater, and Reuse Reclaimed Water Continuing Services Contract Experience



Service Area #1. Wastewater Treatment Plant

Service Area #4. QA/QC & Value Engineering

Design Services for Wastewater Treatment Plant Related to Consent Decree Projects

Miami, Florida

PROJECT DETAILS

OWNER	Miami-Dade County Water and Sewer Department
CONTACT	Marisela Aranguiz-Cueto, PE Deputy Director 786-552-8894 marisela.aranguiz@miamidade.gov
PROFESSIONAL FEES	$60,000,000
COMPLETION DATE	Ongoing

Stantec serves as Prime Consultant, providing engineering services related to the Consent Decree (CD) Projects at the three WWTP for Water and Sewer Department (WASD). **The services entail option evaluation, alternative analysis, cost estimating, basis of design development, detail design, permit assistance, bid assistance and engineering services during construction.** Process ranges from master pump station, headworks, screenings, grit removal, odor control, oxygenation improvements, contact stabilization for activated sludge, RAS pipe and pump upgrades, WAS upgrades, clarifier improvements, thickening, dewatering, biosolids digestion, cogeneration, effluent pump stations, electrical building upgrades, and substation replacement. The project entails CD related improvements to the three largest WWTP in Florida encompassing a combined 360 MG of annual average day flow. Designs were performed using Autodesk Revit modeling. Revit is Building Information Modeling (BIM) software that allows designs to be performed in three-dimension. Multiple disciplines are able to work on different building elements at the same time allowing for better clash detection and reduction of potential conflicts. The models were used to perform client review and obtain input where client was able to visualize end product prior to construction of commencement. The models were used to obtain buy-in and to perform real time decision making.

Additionally, Sea Level Rise (SLR) was incorporated into all design and construction activities of critical equipment. Electrical buildings were elevated to 20.3 feet floor height. Provisions were made to harden the existing buildings. New buildings were designed to incorporate hinged double doors with an exterior roll up door for hurricane protection. Wide exterior platforms were provided with removable handrails to provide for removal of equipment for maintenance and replacement in future.

Over 25 projects have been conducted as part of this contract. Most projects are performed using conventional delivery approach of design-bid-build while few are performed using alternate delivery approach of design-build.

Some of these tasks are listed below:

North District Wastewater Treatment Plant (NDWWTP) Primary and Secondary Clarifiers Upgrades (CD 3.02/3.05): The existing primary and secondary clarifiers were highly corroded, reached the end of their service life, and needed rehabilitation. Stantec prepared a detailed design which included upgrades to clarifier structures, piping and associated electrical components and piping. Sea level rise was incorporated as a design criteria to ensure all new construction was hardened. Stantec performed permitting services, including permits from FDEP, Miami-Dade County RER, and the City of North Miami Building Department.

Central District Wastewater Treatment Plant (CDWWTP) Oxygen Production Facilities (2.27): Detailed design, permitting, bidding support and engineering services during construction were provided for the installation of new vacuum pressure swing adsorption (VPSA) oxygen production equipment to support the pure oxygen activated sludge treatment process at the facility. **The equipment was installed in a new hardened structure with all electrical equipment above the Design Flood Elevation (DFE) established by MDWASD for new facilities to protect against future storm and flood events.**

Wastewater Treatment Plant Headwork Upgrades (CD 2.03/2.04): This project consisted of a retrofit of the existing 360MGD peak flow capacity headworks with fine screens, washer/compactor, and conveyor to enhance the operability and reliability of the

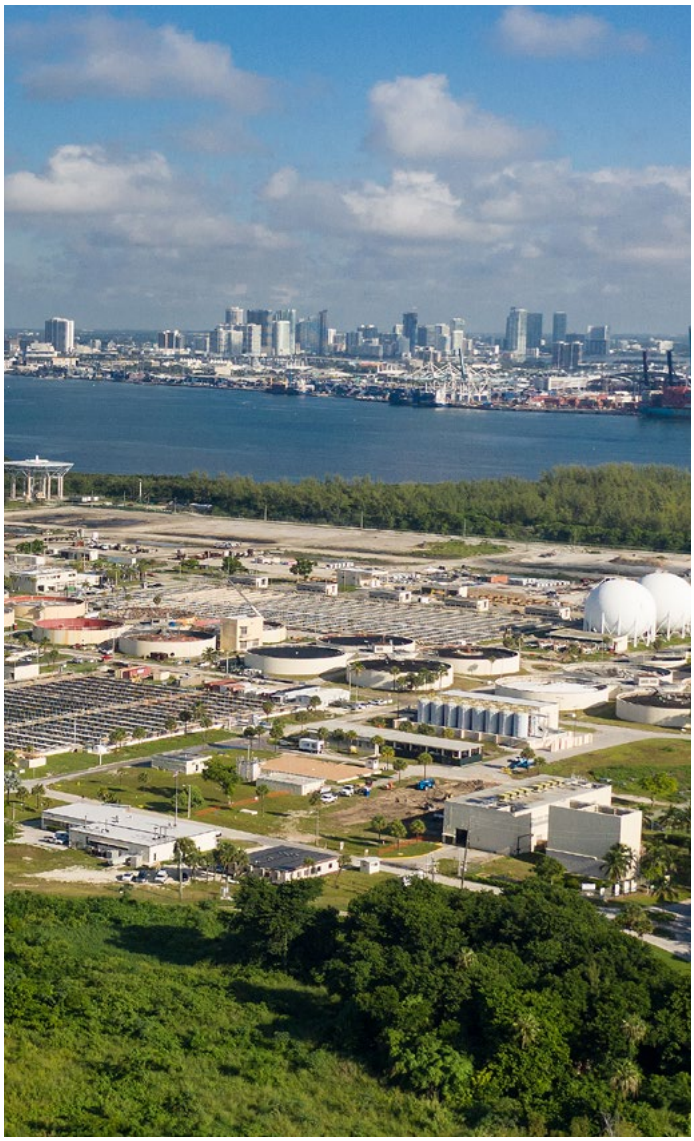
Design Services for Wastewater Treatment Plant Related to Consent Decree Projects

Miami, Florida *(Continued)*

downstream system. Cost estimates were prepared in the preliminary design phase for alternative evaluation and analysis. **The use of existing facilities with some hydraulic improvement recommendations resulted in a cost savings of $20M.** Stantec provided design, permitting, engineering and construction management services.

Central District Wastewater Treatment Plant (CDWWTP) Chlorination Facilities (CD 2.17): Detailed design, permitting, bidding support, and engineering services during construction were provided for the replacement of an existing elemental gas chlorination system with a new liquid sodium hypochlorite storage and feed system. The potential adverse effects associated with chlorine gas posed a health and safety risk to operations personnel and the surrounding community. The new liquid hypochlorite facilities are designed to provide the required levels of chlorine to properly disinfect the treated wastewater prior to discharge outside of the WWTP, as well as support internal plant processes.

South District Wastewater Treatment Plant (SDWWTP) General Electrical Upgrades (CD 1.11): Detailed design, permitting, bidding support, and engineering services during construction were provided to address the replacement of all electrical distribution equipment within various substation electrical buildings at the facility. This included new 13.2KV-480V transformers, new 480V switchgears, new feeders and dedicated breakers for a standby generator docking station to be used during plant power outages.



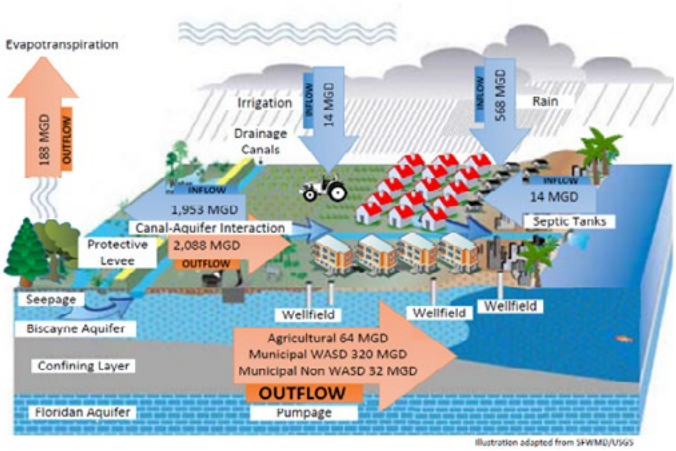
PROJECT RELEVANCE

- Wastewater Treatment Plant
- Value Engineering
- Reliability & Resiliency
- Condition Assessments
- Asset Management
- Alternative Analysis
- Permitting & Regulatory Compliance
- Hydraulic Modeling

Service Area #1. Wastewater Treatment Plant

Miami-Dade County Hydrogeological Services

Miami, Florida



PROJECT DETAILS

OWNER	Miami-Dade County Water and Sewer Department
CONTACT	Virginia Walsh, PhD, PG 786-552-8266 walshv@miamidade.gov
PROFESSIONAL FEES	$331,000
COMPLETION DATE	2019

Stantec was selected to perform hydrogeologic/geologic services and consultation related to WASD's Wellfields, Injection Wells and Aquifer Storage and Recovery (ASR) Wells, which included geochemical studies, groundwater modeling, monitoring, testing, permitting, design, specialized hydrogeologic oversight during construction and other services as needed. Injection wells refer to Underground Injection Control (UIC) Class I or Class V Exploratory wells that are drilled into the Lower Floridan Aquifer, including the Boulder Zone and Cretaceous formations beneath the Lower Floridan Aquifer. Stantec also provided hydrogeologic services to WASD by planning and optimizing use of current and future Class I and Class V injection and ASR well systems in the County.

Stantec provided planning, design, permitting, and technical oversight services for 16 new Class I Injection Wells at the North, Central, South, and future West District Wastewater Treatment Plants. Work was required to support WASD in addressing the 2008 Ocean Outfall Legislation (OOL) requirements to cease using ocean outfalls by 2025. WASD increased their injection well capacity by 280MGD as part of the OOL program. FDEP UIC has already issued the construction permit for 7 Class I and 4 dual-zone monitoring wells at the Central District Plant.

WASD along with the USGS, developed a countywide integrated surface water/groundwater model, published in 2013, and used to evaluate travel times and capture zones around WASD's wellfields. This information was used to guide the County on revising wellfield protection areas. To address the stakeholders' concerns, the Miami-Dade County Board of County Commissioners directed county staff to consider the stakeholders concerns and to conduct further scientific investigations of the proposed revised wellfield protection areas. In fulfillment of the directive from the Board, Miami-Dade County Department of Environmental Resources Management (DERM) established a technical work group (TWG) to evaluate the stakeholder concerns with respect to the USGS modeling effort and make recommendations to address the stakeholders' concerns. Of particular concern was contaminant travel time within rock mine pit excavations which was not specifically modeled in the USGS effort. The Stantec team was contracted by WASD to implement the TWG's recommendations. The Stantec team was also contracted by WASD to conduct peer review of WASD's surface water/groundwater modeling efforts to support their proposed SFWMD Water Use Permit modification.

Stantec's team also supported the WASD modeling staff determining the feasibility of utilizing the C-51 Reservoir Project to increase the Biscayne Aquifer WUP permit allocation.

PROJECT RELEVANCE

- Wastewater Treatment Plant
- Permitting & Regulatory Compliance

Service Area #1. Wastewater Treatment Plant

Service Area #4. QA/QC & Value Engineering

Howard F. Curren Advanced Wastewater Treatment Plant Upgrades

Tampa, Florida

PROJECT DETAILS

OWNER	City of Tampa Utilities Department
CONTACT	Karloren Guzman Project Manager 813-274-7045 karloren.guzman@tampagov.net
PROFESSIONAL FEES	$2,940,000
COMPLETION DATE	In Progress (2023)

The Howard F. Curren Advanced Wastewater Treatment Plant has not had a major upgrade since the 1990s, and many major components are nearing the end of their useful life, resulting in more frequent maintenance and repairs. The City embarked on a Master Facility Plan that identified critical projects to improve the operations and efficiency of the HFC AWTP through the use of improved technology and work practices. The Master Plan identified 47 individual projects as part of this upgrade. These projects cover all areas and processes within the plant, including new facilities, rehabilitation of existing facilities, and plant-wide improvements to systems. **The proposed improvements are intended to meet the City's goals of:**

- **Maintaining system reliability**
- **Addressing current and potential regulatory requirements**
- **Enhancing plant performance to reduce operational costs and incorporate process upgrades**

The project has an estimated project cost of approximately $350 million, and will be constructed using a progressive design-build approach with a team led by two large wastewater Design-Build firms (Wharton-Smith and Garney) and two large national engineering firms (Stantec and Hazen).

Stantec's role is to develop the design of the improvements of the tertiary treatment area of the facility that included upgrades to the liquid train tertiary treatment facilities that were identified as part of the required upgrades during a Master Plan recently completed. Additionally, Stantec is responsible for the structural modifications associated with all projects within this program, and providing multi-discipline design support in other key areas of the plant. The project is currently into the second year of progress out of an estimated total of 7 years, and Stantec's process design work to date has been primarily focused on the design of the upgrades for the main pump station (300MGD firm capacity), the deep bed denitrification filters and the plant-wide reclaimed water distribution system.

PROJECT RELEVANCE

- Wastewater Treatment Plant
- Value Engineering
- Condition Assessments
- Permitting & Regulatory Compliance
- Process Modeling

Service Area #1. Wastewater Treatment Plant

Service Area #4. QA/QC & Value Engineering

City of North Port On-Call Engineering – Water Reclamation Biosolids Upgrades

North Port, Florida

PROJECT DETAILS

OWNER	City of North Port
CONTACT	Michael Acosta Utilities Engineering Manager 941-240-8013 macosta@cityofnorthport.com
PROFESSIONAL FEES	$855,000
COMPLETION DATE	2017

The City of North Port is one of the fastest growing communities in southwest Florida. Faced with this unprecedented growth, the City embarked on a comprehensive and extensive wastewater program to have the necessary facilities in place for future growth in the City. Stantec served as the program and design manager for this wastewater expansion program. Goals were set for each of the projects completed at the facility, which included:

- Reducing the costs to the ratepayers by implementing energy efficient processes and optimize treatment processes
- Increasing the use of reclaimed water within the service area
- Reducing the load of nitrogen in the effluent
- Reducing the operating costs associated with sludge management

The first phase included the expansion of the City's Water Reclamation Facility (WRF from 3.1MGD to 7.0MGD) and upgrades to the City's liquid treatment processes at the WRF, and included:

- Two new mechanical screens (1/8-inch openings) and odor control (bio-scrubber and carbon)
- Conversion of the conventional activated sludge system to a MLE process to reduce the nitrogen in the effluent. The existing aeration system was converted from coarse bubble aeration to fine bubble aeration and included both DO and nutrient monitoring to control aeration equipment
- A fourth secondary clarifier, improved flow splitting upgrades to the RAS and WAS pumping facilities, including variable frequency drives (VFDs)
- Effluent filtration using deep bed filters
- Reclaimed water reuse storage (2.5 MG) and high service pumping system upgrades
- Wet weather effluent pumping system improvements to increase capacity and add VFDs
- New SCADA system to control and monitor the entire facility, and generate monitoring reports, maintenance logs, etc.

An important design concept that was included in the design was the ability to meet lower effluent nutrient levels with minimal capital costs.

The second phase of the upgrades to the City's WRF included upgrades to the solids handling facilities, and this work included:

- Conversion of the old on-site reclaimed water storage tank to an aerated sludge holding tank to provide additional sludge storage (300,000 gallons) and additional volatile solids destruction
- A new centrifuge dewatering system (chemical storage/feed, centrifuge and dewatered sludge conveyance facilities)

Both projects resulted in the City meeting the goals set to reduce power and sludge handling costs, reduce the nitrogen in the effluent and increase the usage of reclaimed water produced at this facility for beneficial uses.

PROJECT RELEVANCE

- Wastewater Treatment Plant
- Quality Assurance & Quality Control

Service Area #1. Wastewater Treatment Plant
Service Area #2. Water Supply & Treatment Plant

Palm Beach County General Engineering Services

Palm Beach County, Florida

PROJECT DETAILS

OWNER	Palm Beach County Water Utilities Department
CONTACT	Krystin Berntsen, PE / Diana Rivera, PE Deputy Director / Project Manager 561-493-6082 / 561-493-6117 kberntsen@pbcwater.com / drivera@pbcwater.com
PROFESSIONAL FEES	$2,470,696
COMPLETION DATE	2017

Stantec, as Prime Consultant for this contract, performed the following task orders:

New Water Treatment Plant 2, 3, and 8 Production Wells (Continuing Service Agreement (CSA) #5 and #10): Palm Beach County Water Utilities Department (PBCWUD) identified the need to expand its existing wellfields to provide additional rotational well capacity. This project includes two new raw water supply wells and associated raw water piping at Water Treatment Plant (WTP) No. 2, two new production wells for WTP No. 3 located within an existing housing development, and four new production wells for WTP No. 8 located within a County park. In addition to the technical activities outlined below, Stantec expended considerable effort coordinating the test well drilling and final well locations within the Greystone of Boynton Beach development and coordination with the Homeowner's Association for public communication and site access. Also, the well locations at the WTP 2 site required coordination with the PBCWUD's landscape coordinator as the proposed sites were within an existing landscape buffer. Lastly, the new wells proposed for WTP 8 are located at Haverhill Park and required coordination with both County Parks and Recreation and the Town of Haverhill.

Water Treatment Plant 8 Wells Rehabilitation and Replacement (CSA #6 and #11): In order to maintain additional rotational well capacity, the PBCWUD has constructed an extensive wellfield system to deliver raw water to WTP 8.

Over time, some of the wells serving this system have shown signs of deterioration and repair or replacement is needed to maintain the integrity of the system. PBCWUD identified two existing WTP 8 raw water supply wells and associated raw water piping to be replaced (8W-4 and 8W-21) and three existing WTP 8 raw water supply wells requiring rehabilitation (8W-1, 8W-2, 8W-3) and contracted with Stantec for the design, permitting, construction, and testing of these wells. The rehabilitations and replacements were all successfully completed, expanding the utility's raw water supply and reliability.

Lake Region WTP Floridan Aquifer Production Well No. 8 (CSA #7): PBCWUD operates seven Floridan aquifer production wells at the Lake Region Water Treatment Plant. PBCWUD constructed an eighth well to provide additional well rotation capacity and increase the distance between wells to reduce drawdown and well interference. The Lake Region wellfield has experienced a decline in water quality greater than anticipated.

Pahokee Wastewater Treatment Facility Deep Injection Lower Zone Monitor Well Rehabilitation (CSA#8 and #9): The Pahokee Wastewater Treatment Facility utilizes deep well injection to dispose of treated effluent. Leaks and plugging were detected in the tubing of the facility's dual-zone monitoring well. Negotiations were held with FDEP to determine if a new lower monitoring zone would be required or if the existing well could be rehabilitated. Rehabilitation was approved by the FDEP in October 2012.

PROJECT RELEVANCE

- Wastewater Treatment Plant
- Water Supply & Treatment Plant
- Permitting & Regulatory Compliance

Service Area #1. Wastewater Treatment Plant

Service Area #2. Water Supply & Treatment Plant

Service Area #4. QA/QC & Value Engineering

Utilities System Optimization Study

Smyrna Beach, Florida

PROJECT DETAILS

OWNER	City of New Smyrna Beach Utilities Commission
CONTACT	Julie A. Couillard, PE Director of Engineering 386-566-3231 jcouillard@nsbufl.com
PROFESSIONAL FEES	$290,308
COMPLETION DATE	2020

The Utilities Commission of New Smyrna Beach (UCNSB) operates a 10.3MGD Water Treatment Plant (WTP) and 7MGD Water Reclamation Facility (WRF) that provides utility service throughout their 70-square mile service territory. The system reuses 100% of the wastewater treated for beneficial uses. Stantec conducted the Utility System Optimization Study to evaluate UCNSB operations at their water and wastewater systems to improve, re-rate capacity, and prioritize capital expenditures. **Regulatory and permitting strategies were developed for their water and wastewater facilities to improve operations and minimize sanitary sewer overflows.** The work also included hydraulic evaluation of their piping networks and process modeling of their treatment facilities, preliminary planning and incorporation of SMART technologies to better manage the utility system and consolidation of operational staffing.

A condition assessment of their utility facilities (WTP, WRF, 102 lift stations, and three off-site potable water storage/booster pump stations) was performed to develop an Replacement and Rehabilitation (R&R) program. The report included a capital improvements plan for the overall utility system through FY2025. A pilot study was conducted to determine the effectiveness of pellet softening to replace the lime softening process. **This pilot study resulted in a 20-year net present worth savings of nearly $14-million.**

Some of the projects that resulted from the outcome of this study included a new bio-solids handling facility, energy improvements at the WRF, augmenting their reclaimed water supply with stormwater, management of their reclaimed water storage to expand service, and pellet softening for their finished water supply.

PROJECT RELEVANCE

- Wastewater Treatment Plant
- Water Supply & Treatment Plant
- Value Engineering
- Condition Assessments
- Pilot Study
- Operations Evaluation
- Permitting & Regulatory Compliance
- Hydraulic & Process Modeling

Service Area #2. Water Supply & Treatment Plant

City of Sunrise Utility SCADA System Assessment

Sunrise, Florida

PROJECT DETAILS

OWNER	City of Sunrise
CONTACT	Allan Miller SCADA Manager 954-888-6050 amiller@sunrisefl.gov
PROFESSIONAL FEES	$263,680
COMPLETION DATE	In Progress

The City of Sunrise provides water treatment and distribution, and wastewater collection and treatment services for customers within its service area. In support of this service, the City operates various facilities that are monitored and controlled by PLC-based SCADA systems. **In 2021 the City selected Stantec to conduct a comprehensive control system assessment taking into account the control system elements and control/ communication networks of the area facilities and reaching across to the business network to examine shared interests.**

As part of the first phase of this assessment, Stantec was tasked with field investigation of the utility sewage collection system (including representative remote lift stations, pumping stations and gas monitoring stations) to support development of an area assessment report. Typical work performed by Stantec on the project includes:

- Visual inspection and configuration evaluation of existing RTUs, associated server network, and overall SCADA infrastructure
- Assessment of system physical and cyber accessibility
- Evaluation of applied wireless communication technologies
- Assessment of system reliability and resiliency to fault (as it concerns the City's capacity to maintain operability of sewage collection and conveyance services)
- Review of overall approach to system controls and system response to communication-loss or power-loss
- Review of historical data management and revision control practices along with subsequent report generation
- Evaluation of emergency preparedness (flood detection and mitigation, imminent hazardous weather preparation)
- Interview of City personnel to support the above endeavors including Operations, Maintenance, SCADA, and IT representatives

PROJECT RELEVANCE

- Water Supply & Treatment Plant
- Reliability & Resiliency
- Condition Assessments

Service Area #2. Water Supply & Treatment Plant

Fiveash Water Treatment Plant Evaluation and GAC Pilot Testing

Fort Lauderdale, Florida

PROJECT DETAILS

OWNER	City of Fort Lauderdale
CONTACT	Omar Castello, PE, ENV SP Chief Engineer 954-828-5064 ocastellon@fortlaudedale.gov
PROFESSIONAL FEES	$555,000
COMPLETION DATE	2020

The City of Fort Lauderdale selected our team for the Granular Activated Carbon (GAC) Pilot and Plant Evaluation at the Fiveash WTP. The primary objectives of this effort was to perform an investigation into the use of GAC for water color control at the existing 50MGD Fiveash WTP, and evaluate options for the future of the overall Fiveash water treatment system. We performed the following services:

- **Existing Facility Status Confirming Condition Assessment.** A team of Stantec's discipline engineers including hydrogeologist, civil, mechanical, process, structural, electrical and instrumentation and control engineers performed site visits to Prospect wellfield and Fiveash WTP to perform high level condition assessment to confirm the findings of the CUSMP 2017.
- **Alternate Facility Location Study.** The feasibility of locating a treatment facility on property at the Prospect Wellfield locale was investigated as an alternative to constructing a new facility at the existing Fiveash WTP site. This investigation included an overview of existing zoning requirements and site conditions and identified three potential sites within the Prospect Wellfield property that could accommodate any of the three shortlisted alternatives.
- **Water Supply Investigation.** This evaluation consisted of a review and investigation into the current water supply sources, alternative water supply sources, water use allocations per the existing South Florida Water Management District (SFWMD) water use permit (WUP), and subsequent raw water needs based on identified treatment technologies.
- **C-51 Reservoir Water Supply versus Florida Aquifer Water Supply Comparison.** Water supply needs associated with future potable water requirements beyond 2035 will likely need to be met from a source that is in addition to what is currently provided in the existing SFWMD WUP. **The team compared the options of obtaining water from the C-51 Reservoir System versus water obtained from the Floridan Aquifer and determined that the C-51 water supply option was more cost effective.**
- **WTP Facility Siting.** The team determined conceptual size requirements for each of the three shortlisted water treatment processes. These size requirements were overlaid on corresponding areas at the Fiveash and Prospect Wellfield sites to determine if adequate space was available for facility implementation.
- **Conceptual Capital, Operations/Maintenance Costs, and Net Present Worth Determinations.** Conceptual costs to construct, and operate and maintain were estimated. A net present value comparison was conducted for the three treatment process alternatives.

The recommended alternative utilizes a technology of which the City is familiar, along with an additional technology that results in a robust treatment system. These technologies are highly automated requiring less manual operation and best meet the City's desire for color elimination and other specific project goals. Further, this recommended alternative is best suited to minimize the potential impacts of future uncertainties including future regulated contaminants and treatment system byproduct disposal.

PROJECT RELEVANCE

- Water Supply & Treatment Plant
- Value Engineering
- Condition Assessments
- Feasibility Study
- Permitting & Regulatory Compliance

Service Area #2. Water Supply & Treatment Plant

General Engineering Services for Water Treatment Plant Improvements

West Palm Beach, Florida

PROJECT DETAILS

OWNER	City of West Palm Beach
CONTACT	Poonam Kalkat Utilities Director 561-822-2284 pkalkat@wpb.org
PROFESSIONAL FEES	$450,000
COMPLETION DATE	2018

Stantec completed nearly 30 individual work authorizations (WA) under this master contract to plan, design, permit, and provide construction management services for these vital system improvements. Some of these authorizations are highlighted below:

Treatment Process Selection - Bench and Pilot Testing (WA-1 & WA-31): Bench testing was performed to provide a screening of potential treatment processes and on-site pilot testing was done to determine fouling characteristics of the membranes.

Dual Media Filter Rehabilitation (WA-27 and WA-30): Evaluated condition of dual media sand FAC filters. Inspected media surfaces for defects and conducted targeted evaluations of selected filters for coring. Media samples were collected for lab analysis including mass spectroscopy, x-ray diffraction and rapid small scale column test (RSSCT) to determine the remaining life of the GAS media. Based on these investigations, and air-scour operational issues, the City decided to move forward with rehabilitation of 32 filters. As part of this project, concrete structures, and underdrains were repaired and rebar was replaced prior to air-scour lateral welding and re-installation. A number of clay tile filter underdrains were also replaced with new HDPE underdrain block featuring integrated air-scour wash systems.

Powder Activated Carbon (PAC) Treatment System (WA-28): Stantec designed a Powdered Activated Carbon (PAC) contact basin rated for 50MGD and modified the existing feed system to dose up to 45 mg/L. Replacement of aging, below-grade influent flow meters with new magnetic flow meters which could be more easily maintained was performed. As part of this design, hydraulic evaluation revealed one of six raw water pumps would require replacement to avoid cavitation. This project also presented the opportunity to install isolating slide gates on the settled water flume bypass channel, allowing the City to use an existing bypass to their filters. Stantec provided detailed design, bidding and engineering services during construction.

Magnetic Ion-Exchange Resin Combined with Ultrafiltration (MIEX/UF) Preliminary Design: The process treatment plant enhancements with MIEX, UF, and GAC were designed through preliminary design. These documents were utilized for permit application to the Palm Beach County Department of Health to construct the project which was approved.

New Electrical Generator and Switchgear Building (WA-16 & WA-23): Inspection of electrical assets identified serious deficiencies in electrical systems including single point of failure, switchgear at end of useful life, obsolete equipment, and under sized indoor generators. Stantec designed the new system with two independent 13.2 kV FPL feeders and two City owned 5MVa (Mega Volt Ampere) primary unit substation transformers to complement the double-ended 5kV main switchgear with split bus system to eliminate the single point failure scenario.

New Chemical Feed Systems (WA 11, WA 13, & WA 15): Stantec designed and provided construction management of the new sodium hypochlorite, aqua ammonia, and fluoride chemical storage and feed facilities. The work included the demolition of existing chemical facilities, new bulk tanks, transfer pumps, day tank, and metering pumps; a temporary storage and dosing facility and civil, mechanical, electrical, and instrumentation and control work.

Treatment Process Selection - Bench and Pilot Testing (WA-1 & WA-31): Bench testing was performed to provide a screening of potential treatment processes and on-site pilot testing was done to determine fouling characteristics of the membranes.

UV System and Related Infrastructure (WA-33): Stantec conducted alternative evaluation involving Powdered Activated Carbon, UV, Actiflow and Actiflow+Carb to provide cryptosporidium, giardia, taste & odor removal. Following

General Engineering Services for Water Treatment Plant Improvements

West Palm Beach, Florida *(Continued)*

this evaluation, Stantec piloted and designed a 50MGD UV disinfection process and related infrastructure improvements. Location of UV building next to historic pump station required careful architectural considerations. Construction sequencing required demolition of structures built between 1926 to 1947 and arterial bypass of filtered water under demanding shut down time requirements. Provided pilot testing, detail design, permitting, bidding, and construction services.

Existing WTP Condition Assessment for Structural, Mechanical, Electrical, and Controls: Investigated plant structural, mechanical, electrical and instrumentation and control assets to evaluate the physical and operating conditions for improvements based on long term WTP needs.

Finished Water Mixing and Metering Header (WA-14): Stantec designed an above grade mixing and metering header pipe to enable the Water Treatment Plant to flow pace their disinfection chemicals. CM services included shop drawing review; review of the temporary bypass system; overseeing installation, testing, and disinfection of the bypass system

PROJECT RELEVANCE

- Water Supply & Treatment Plant
- Condition Assessment
- Permitting & Regulatory Compliance
- Pilot Testing

Service Area #2. Water Supply & Treatment Plant

Utility-Wide Systems Reliability and Vulnerability Assessment

West Palm Beach, Florida

PROJECT DETAILS

OWNER	City of West Palm Beach
CONTACT	Darren Hollifield Assistant Director of Public Utilities/ Poonam Kalkat, Utility Director 561-517-6035 / 561-822-2284 dhollifield@wpb.org / pkalkat@wpb.org
PROFESSIONAL FEES	$197,000
COMPLETION DATE	2019

The City of West Palm Beach operates a 4MGD conventional lime softening surface WTP. The City selected Stantec to master plan, design, permit, and provide construction management (CM) services for the upgrade of its 47MGD surface WTP to meet regulatory requirements.

Stantec conducted water supply planning, condition assessment, and operational evaluation to develop project needs. Criticality analysis was also conducted for the assets. These tasks were prepared such that continuous input was received from the City. Organizational assessment and recommendations were also provided to the City. A Capital Improvement Plan was developed by Stantec with subsequent financial planning to implement these projects.

Stantec engineers were engaged by the City of West Palm Beach to conduct a comprehensive system reliability and vulnerability assessment of the existing SCADA system and control network as currently implemented for the existing water treatment facilities, raw water collection systems, potable water distribution systems, wastewater collection systems, and storm water management systems. The assessment also reached across to the business network to examine shared interests such as: internet access, application data sharing, domain definition, user group management, machine level trusts and gateway security. The work was split into two phases:

Phase 1: System Assessment
Following field investigation of each area, Stantec produced a summary assessment report detailing:

- Access Vulnerabilities
- Operational Reliability Concerns
- As-Found Network Diagrams
- Tabularized Risk Probabilities and Impact Ratings
- Initial Area-Level Recommendations Summary

Further to the discovery effort, Stantec chaired a series of workshops with the City's SCADA support teams, plant operations and management personnel, and the IT Department leads. Meeting outcomes were captured and incorporated into a Consolidated Utility Assessment Report. The report content included:

- Prioritized work summary tables with Class 4 design-build cost estimate per task
- Tabularized representation of Utility-level security vulnerabilities and operational reliability concerns with risk probability and impact rating
- Proposed Utility Network Architecture Concept Diagram

Phase 2: Implementation
Phase I prioritized work tasks self-performed by City staff or incorporated into existing City construction contracts with periodic engineer consultation.

The field investigation scope included a review of all major facilities and representative review of common purpose remote sites with focus on system reliability and resiliency to fault specifically related to the City's capacity to maintain operability of key services such as potable water treatment and distribution, wastewater collection and treatment and storm water management. With this emphasis, the investigation targeted:

- Visual inspection and configuration evaluation of the existing control networks and SCADA infrastructure
- Assessment of system accessibility – physical access, cyber access and social hacking vulnerabilities across the City's primary networks including:

General Engineering Services for Water Treatment Plant Improvements

West Palm Beach, Florida *(Continued)*

- Control Network
- Access Control and CCTV Network
- Remote Access
- Business Network Gateways

- Assessment of control system and supporting networks reliability and resiliency to fault
- Review of overall approach to system controls and system response to power-loss
- Review of data management and revision control practices
- Surety of regulatory agency report generation
- Evaluation of emergency preparedness (chemical leak handling, hazardous weather warnings and plant physical or cyber security breach)

PROJECT RELEVANCE

- Water Supply & Treatment Plant
- Condition Assessment
- Permitting & Regulatory Compliance
- Pilot Testing

Service Area #1. Wastewater Treatment Plant

Service Area #2. Water Supply & Treatment Plant

Service Area #4. QA/QC & Value Engineering

City of Sunrise Capital Improvement Program (CIP)

Sunrise, Florida

PROJECT DETAILS

OWNER	City of Sunrise
CONTACT	Tim Welch, PE Utility Director 954-888-6000 twelch@sunrisefl.gov
PROFESSIONAL FEES	$750,000
COMPLETION DATE	2016

In 2010, the City of Sunrise selected Stantec to provide planning, engineering, consulting and program/project management services to Implement the Capital Improvement Program as developed in 2008 Master Plan.

As the City's program manager, Stantec managed five engineering consulting firms in addition to providing support staff of various levels and skills. The program consisted of over 50 projects in various life cycle ranging from concept level planning to construction closeout phase.

Stantec provided the City with planning, scoping, coordination and quality reviews during execution, permitting, consultant oversight, technical reviews, schedule management, value engineering, delivery method recommendations, and budget controls for a $110 M 5-year CIP.

A full range of professional engineering services was provided to support the City's Utilities Department and to assist the City staff in refinement and implementation of the 2008 Master Plan, future studies and alternative evaluations, technical reviews of designs, engineering support for financial planning and related engineering duties necessary to support the day to day operations of the utility.

Stantec performed various types of planning and review efforts including:

- Portfolio and Project Management staff, including budget and schedule controls and monitoring
- Performed project justifications with business cases and project prioritization, assisted in preparation of annual CIP
- Performed project validation and developed scope definition ranging from supply, treatment process evaluation, pilot testing support, detail design reviews, permitting assistance, bidding assistance, construction management
- Concept level evaluations and life cycle cost analysis of alternatives for reuse treatment technologies, systemwide phased implementation at Sawgrass WWTP
- Assisted in evaluation of UF, MBR or conventional tertiary treatment to produce reuse for irrigation
- Represented City with regulatory agencies including Broward County, FDEP, SFWMD, and UIC
- Pump Station performance review in older part of the system to determine SSES and I/I prioritization

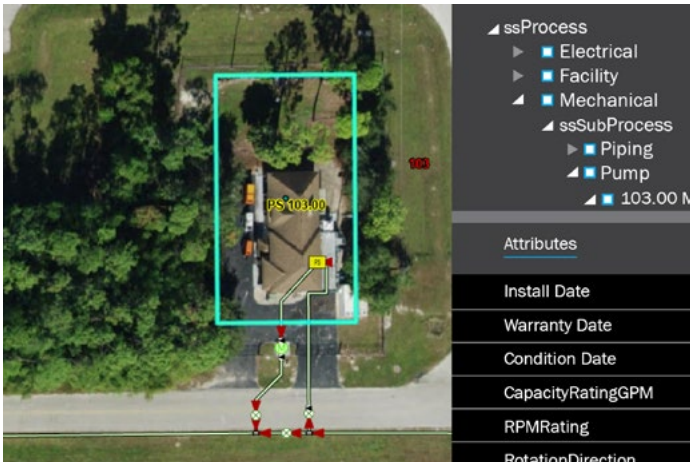
PROJECT RELEVANCE

- Wastewater Treatment Plant
- Water Supply & Treatment Plant
- Value Engineering
- Permitting & Regulatory Compliance

Service Area #4. QA/QC & Value Engineering

Public Utilities Cityworks Enterprise Asset Management GIS Implementation

Collier County, Florida



PROJECT DETAILS

OWNER	Collier County Public Utilities
CONTACT	Tom Chmelik Project Manager 239-252-8836 tomchmelik@colliergov.net
PROFESSIONAL FEES	$650,000
COMPLETION DATE	2019

Collier County Public Utilities Department (PUD) was in the process of implementing an asset management system based on Cityworks with the intent of using several existing applications and databases including Antero and existing GIS to get it up and running. PUD's existing GIS and staffing levels could not support the timeline and schedule required of the Cityworks project so Stantec was asked to assist by providing GIS Program Management, GIS Database design services, and data loading / converting services.

Stantec took the lead to act as the EAM GIS Program Manager and provided the following services to the client:

- **Vision and Mission Statement:** assisted the client with defining and stating their goals
- **EAM/GIS Governance:** Developed this document to define policy and data management
- **Organizational Chart, Roles and Functional Descriptions:** Stantec assisted the client by defining required skill-sets, functional roles, and requirements for maintaining and managing into the future the Cityworks EAM system. This was used to develop further the governance documents, and also as a guide for the staffing and training of personnel to maintain the system in perpetuity
- **Stakeholder Facilitation:** Provided direct engagement with all stakeholders (internal Utility Departments, IT, GIS), lead discussions on implementation efforts, and coordinated all parties to ensure successful implementation
- **Change Management Process Design:** Designed and assisted the client with the implementation of a change management strategy to reduce risk of downtime, increase QA/QC, and allow for Stakeholder feedback in changes; this was a necessity due to the interdependent application environment
- **Primary Key Design Options:** The primary key to identify assets are unique across the asset or database, and are critical as every maintenance, work order, and other record types link back to this. Stantec conducted research, interviewed operations, and wrote a white paper documenting the existing system and presenting options for the client to choose from
- **Information Technology Liaison:** Stantec staff is cross-disciplinary, and several of the GIS team members have strong backgrounds in information technology and enterprise IT systems including networks, servers, and virtualization.

In addition to Program Management, Stantec's GIS expertise and resources were leveraged to help the client meet their goals and milestones in preparing their GIS, data, and systems for the Cityworks implementation. This included processing and converting data from Antero and existing ESRI geodatabases to formats and structures usable by Cityworks, in addition to:

- Database Design Supporting Asset Hierarchy
- Antero Data Import
- Utility and Billing Data Support

Because of these efforts, the Client has successfully rolled out a Cityworks-based enterprise asset management system, a strengthened and robust GIS system to support it, and an engaged and supportive user base. As a result, the client is now using Cityworks AMS to manage a utility system with over $1.8 billion in assets.

PROJECT RELEVANCE

- Cityworks Asset Management
- Quality Assurance & Quality Control

TAB D.

Organizational Profile and Project Team Qualifications

TAB D. Organizational Profile and Project Team Qualifications

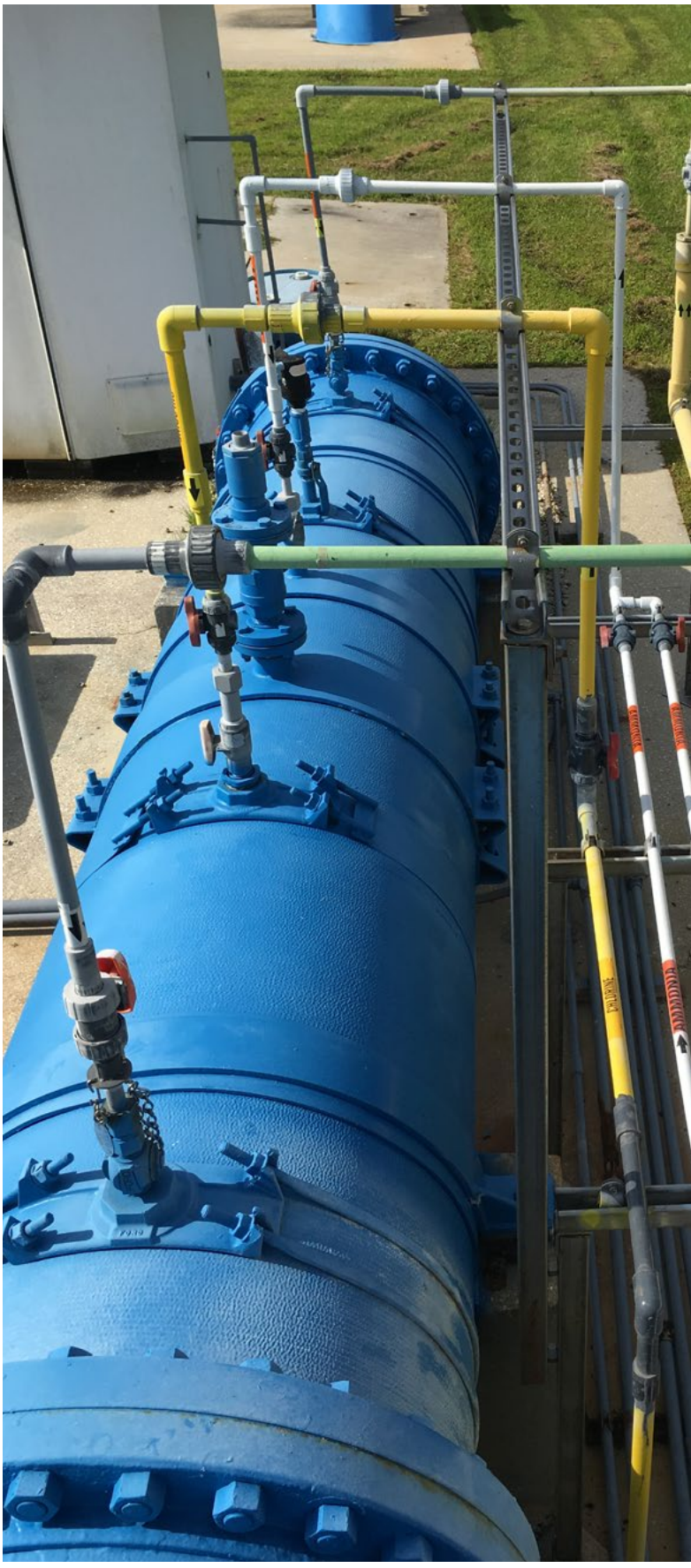
Our team has the depth of experience and expertise to perform work in any scope area efficiently and effectively. Stantec is very excited about the opportunity to collaborate with the City of Hollywood on this contract. We have technical expertise, knowledge, and resources to work closely with you in executing a successful project as we have done countless times in the past. Our collective project knowledge and experience is the strength behind our organization and the reason we deliver successful projects.

The key members of our team bring a diverse background and experience related to professional services. This combination of our unique strengths and passions, knowledge, and experience makes it possible for us to deliver successful projects and advance the quality of life in our community. We are very proud of our staff, who bring their collective knowledge, experience, and imagination to every project.

Stantec's team offers the City of Hollywood a project team skilled and efficient in providing the professional and technical expertise required for public water, wastewater, and wastewater reuse projects. **The Project Manager, Colin Devitt, PE, will be personally responsible for the delivery of the professional services for Water and Wastewater Treatment Plant projects. As a Florida registered Professional Engineer (PE), Colin has 14 years experience. Prior to working at Stantec, Colin worked as a project and construction manager for the Metropolitan Water Reclamation District of Chicago, managing both wastewater treatment and stormwater management projects. His experience on wastewater treatment projects includes odor control, nutrient removal, effluent pump station, sludge thickening, centrifuge replacement, and wastewater facility rehabilitation projects.** He will be leading a team of a highly qualified professional staff, including our sub consultants C Solutions, Metco Southeast, Pangeo Consultants, and Stoner & Associates.

Our team is comprised of one main point of contact, overall project manager, supported by various local leads based on the type of project. Our proposed team has technical advisors and independent quality management team comprised of subject matter experts. This leadership team will be supported by technical experts and resources as identified in the organizational chart. Since the RFQ is broad in scope, various resources are proposed.

Please see the following pages for details about our key individuals' experience.



KEY INDIVIDUALS DIRECTLY INVOLVED WITH THE WORK

KEY INDIVIDUAL	ROLE	YEARS OF EXPERIENCE	YEARS WITH THE FIRM	% OF TIME TO BE ASSIGNED TO THIS PROJECT
Colin Devitt, PE	Senior Project Manager	14	1	75%
Sussette Irizarry	Deputy Project Manager	10	6	55%
Ramon Castella, PE, ENV SP	Principal in Charge	37	34	15%
Tracy Anderson, PE	QA/QC Technical Advisor	30	26	40%
Andrea Crumpacker	Resiliency Technical Advisor	22	1	35%
Hal Schmidt, PE, BCEE	Wastewater Systems Technical Advisor/ QA-QC Peer Reviewer	41	15	35%
Becky Hachenburg, PE, PMP	Water Treatment Systems Technical Advisor	27	27	30%
Manuel Moncholi, PhD, PE	Wastewater Treatment Lead	20	1	50%
Zuhal Ozturk, PhD, PE	Regulatory Compliance Lead	15	3	45%
Oscar Bello, PE	Wastewater Collection and Reuse Lead	25	2	55%
Heath Wintz, PE	Water Supply & Treatment Lead/Water QA/QC	23	10	50%
Simon Meikle, PE	Disinfection Systems Lead	13	13	45%
Dave Clarke, PE, CFM	Water Transmission & Distribution Lead	20	20	55%
Paul DeKeyser, PE	Value Engineering Lead	43	8	45%
Jeovanni Ayala-Lugo, PE	Process Design Engineer	22	20	50%
Craig Kaltenbach, PE	Structural Engineer	27	20	55%
Neil Johnson, PG, MP	Supply & Disposal Well Professional	30	23	55%
Rick Cowles, PG	Supply & Disposal Well Professional	31	6	35%
Ben Quartermaine, PE	Stormwater Engineer	27	4	40%
Ryan Capelle, PE	PFAs Lead	26	26	55%
Sean Compel, PE, ENV SP	Construction Engineer	20	20	35%
Carl C Chan, PE	Modeling Engineer	23	6	30%
Diane Quigley, AICP, CFM	Funding & Grant Assistance	36	1	30%
Bill Marriott, PE	Lead Copper Rule	26	1	35%

This is our team

(1) - Stantec Consulting Services Inc.
(2) - C Solutions, Inc. *(CBE)*
(3) - Metco Southeast LLC *(CBE)*
(4) - Pangeo Consultants, LLC *(CBE)*
(5) - Stoner & Associates, Inc. *(CBE)*

CITY OF Hollywood FLORIDA

SENIOR PROJECT MANAGER
Colin Devitt PE (1)

PRINCIPAL IN CHARGE
Ramon Castella PE, ENV SP (1)

DEPUTY PROJECT MANAGER
Sussette Irizarry (1)

TECHNICAL ADVISORS
Tracy Anderson PE (1)
QA/QC
Andrea Crumpacker (1)
Resiliency
Hal Schmidt PE, BCEE (1)
Wastewater Systems
Becky Hachenburg PE, PMP (1)
Water Treatment Systems

SERVICE AREA 1. WASTEWATER TREATMENT PLANT
Manuel Moncholi PhD, PE (1)
Wastewater Treatment Lead and Regional Biosolids Leader
Zuhal Ozturk PhD, PE (1)
Regulatory Compliance Lead
Oscar Bello PE (1)
Wastewater Collection and Reuse Lead

SERVICE AREA 2. WATER SUPPLY & TREATMENT
Heath Wintz PE (1)
Water Supply & Treatment Lead
Simon Meikle P.Eng. (1)
Disinfection Systems Lead
Dave Clarke PE, CFM (1)
Water Transmission & Distribution Lead

SERVICE AREA 4. QA/QC & VALUE ENGINEERING
Hal Schmidt PE, BCEE (1)
QA/QC and Peer Reviewer
Manuel Moncholi PE, CFM (1)
Wastewater QA/QC
Heath Wintz PE (1)
Water QA/QC
Paul DeKeyser PE (1)
Value Engineering Lead

TECHNICAL SUPPORT TEAM

PROCESS DESIGN	INSTRUMENTATION & CONTROL	STRUCTURAL	CIVIL	PUMP STATION HYDRAULICS
Jeovanni Ayala-Lugo PE (1) David Socha PE, PMP (1)	David Steffes PE (1)	Craig Kaltenbach PE (1)	William Weber PE, ENV SP, LEED AP (1)	Fangbiao Lin PhD, PE (1)
SUPPLY & DISPOSAL WELLS	**ELECTRICAL**	**ARCHITECTURAL**	**STORMWATER**	**BIM**
Neil Johnson PG, PMP (1) Rick Cowles PG (1)	Rajaram Vijayendran PE (3)	Shana Wygonik AIA, LEED AP (1)	Ben Quartermaine PE (1)	Luis Catturini (1)
GEOTECHNICAL	**CONSTRUCTION ENGINEERING**	**PERMITTING**	**PFAs**	**FUNDING & GRANT ASSISTANCE**
Paul Catledge PE (4)	Sean Compel PE, ENV SP (1)	Ricardo Versace (1)	Ryan Capelle PE (1)	Diane Quigley (1)
SURVEYING	**WATER & WASTEWATER**	**LEAD COPPER RULE**	**MODELING**	
James Stoner PSM (5)	Felipe Martinez PE (2)	Bill Marriott, PE (1)	Carl C Chan PE (1)	

COLIN DEVITT

PE

TITLE: Senior Project Manager

EDUCATION

- Master of Science in Project Management, Northwestern University, Evanston, Illinois, 2017
- Bachelor of Science in Civil Engineering, Marquette University, Milwaukee, Wisconsin, 2008

REGISTRATIONS

- Florida Professional Engineer #94325
- Illinois Professional Engineer #062065635

Colin has 14 years of experience as a project/construction manager and civil engineer in the planning, design, construction, management and commissioning of wastewater and stormwater infrastructure.

Prior to joining Stantec, Colin worked as a Senior Civil Engineer at an internationally recognized leader in wastewater treatment and stormwater management at the Metropolitan Water Reclamation District of Chicago. Colin has administered and managed the construction of various projects, including sewer rehabilitation, nutrient removal, sludge thickening, conveyance systems and reservoir expansion. His skills include project planning, constructability reviews, scheduling, construction administration/inspection, commissioning, and risk management.

RELEVANT EXPERIENCE

Miami-Dade CDWWTP Plant 2 Digester Cluster 1 - CD 2.15(1), Miami, Florida - Colin has served as project manager for CD 2.15(1) since August 2022. Colin is responsible for managing the scope, schedule and budget on the project. He has coordinated development of record drawings, provided on-site technical guidance and coordinated the review of digester process data throughout start-up of Digester Cluster 1. Colin has also provided on-site technical assistance with the start-up and commissioning of Digester Cluster 1, providing both troubleshooting and technical guidance to the client and PMCM.

Miami-Dade SDWWTP Acid Phase Digesters, Digester Cluster 1 and 2 Upgrades, and Substation 7 and 8 - CD 1.07, Miami, Florida - Colin, as Technical Contributor for this contract, has provided start-up/commissioning assistance for Digester Cluster 1 and Acid Phase upgrades. This included attending project coordination meetings, resolution of technical issues and providing technical guidance to the PMCM and WASD during start-up. His role included on-site assistance in the identification, troubleshooting and resolution of start-up issues with both systems.

Gwinnett County Department of Water Resources, Magnesium Hydroxide Specification, Gwinnett County, Georgia - Colin served as a technical contributor, reviewing GCDWR's specification for Liquid Magnesium Hydroxide. Colin updated GCDWR's specification to simplify the comparison of submitted products and ease the procurement selection.

Melvina Ditch Reservoir Improvements (Contract 14-263-3F), Cicero, Illinois - As a Senior Civil Engineer for the Metropolitan Water Reclamation District of Greater Chicago, Colin administered the construction contract as the lead project representative, managing the removal, rehabilitation and re-installation of 30,000GPM vertical turbine pumps. He performed site investigations and engineering surveys to identify erosion and water conveyance issues. Colin was responsible for recommending various solutions to resolve erosion issues at intake structures, access roadways, reservoir embankments, etc. He was also responsible for analyzing and resolving several contract time extensions and claims resulting from impacts to construction.

Conversion of Old GCTs to Waste Activated Sludge Stripping to Remove Internal Phosphorous Process, Stickney Water Reclamation Plant (Contract 15-120-3P), Cicero, Illinois - As an Associate Civil Engineer with the Metropolitan Water Reclamation District of Greater Chicago, Colin administered the construction contract as the lead construction representative from 70% through contract completion. He developed the start-up procedure and coordinated the start-up of the

WASSTRIP process. During commissioning, Colin troubleshot pumping and conveyance issues and resolved impacts from unscreened sludge.

Installation of Mechanical Mixers, SWRP (Contract 19-157-3P), Cicero, Illinois - As a Senior Civil Engineer for the Metropolitan Water Reclamation District of Greater Chicago, Colin administered the construction contract as the lead project representative, inspecting, testing and commissioning 96 mixers. He reviewed project schedules, payment applications, submittals, change order quotations, non-conformance matters, and performed field inspections of construction activities, workmanship and materials and enforced conformity with plans and specifications. In collaboration with the Contractor and plant operations, mixers were placed into service ahead of schedule. This assisted the facility in meeting phosphorous and nitrogen effluent permits.

Hanover Park and Kirie Water Reclamation Plants (Contract 17-844-3P), Cicero, Illinois - As a Senior Civil Engineer for the Metropolitan Water Reclamation District of Greater Chicago, Colin supervised construction at the Hanover Park and Kirie Water Reclamation Plants for Contract 17-844-3P, Furnish and Install Odor Control System at CWRP, HPWRP and KWRP.

Sludge Thickening Facilities, Stickney Water Reclamation Plant (Contact 09-176-3P), Cicero, Illinois - As an Associate Civil Engineer for the Metropolitan Water Reclamation District of Greater Chicago, Colin performed site observation, inspection and testing of the construction of over 40,000 LF sanitary, sludge, effluent/city water, steam, condensate and various other underground systems. He commissioned effluent water pumps, sludge thickening pumps, centrifuges, sludge thickening tanks, etc. Colin coordinated with plant operations staff to perform testing and modify equipment parameters for optimal operation. Colin was responsible for documenting as-built conditions and drafting as-builts for architectural, structural, mechanical and civil drawings. Colin initiated a procedure for staff to update plant underground drawings to document undocumented, abandoned and new underground utilities. This assisted plant staff in the operation and maintenance of plant facilities.

Stormwater Retrofits for Real Time Controls and Rainwater Harvesting System at Dearborn Homes (Contract 14-113-5F), Chicago, Illinois - As an Associate Civil Engineer for the Metropolitan Water Reclamation District of Greater Chicago, Colin administered the construction contract as the lead construction representative from commencement until contract closure. He reviewed and tested the existing irrigation system of the Chicago Housing Authority. During testing Colin identified existing maintenance and operation issues that impacted the viability of the contract, and identified that without repair the contract.

Salt Creek Intercepting Sewer 2 Rehabilitation (Contract 06-155-3S), Illinois - As a Senior Civil Engineer for the Metropolitan Water Reclamation District of Greater Chicago, Colin administered the construction contract from approximately 85% complete through completion. Colin worked with sewer operations staff and the contractor to initiate sewer bypasses to complete sewer and manhole re-lining and mitigate impacts to the public.

SUSSETTE IRIZARRY

TITLE: Deputy Project Manager

EDUCATION

- Master of Sciences, Environmental Policy and Management, Florida International University, Miami, Florida, 2016
- Bachelors of Sciences in Environmental Engineering, Florida International University, Miami, Florida, 2011

Sussette is a project manager and engineer with 10 years of experience in project coordination, design, permitting bidding, in the areas of air quality treatment and water and wastewater treatment. Her experience emphasizes on project coordination for unique and complex wastewater projects as well as permitting and inspection of high-level industrial/manufacturing Title V and Non-Title V sources of air pollution. She has displayed successful tenure engaging top stakeholders throughout a project lifecycle; complemented by a fluency in Spanish. She also has presented at various conferences including the Florida Water Resource Conference, Southwest Florida Water & Wastewater Conference, and for the American Water Works Association. She has also published several articles portraying her expertise and experience.

RELEVANT EXPERIENCE

Consent Decree Project 2.11 Effluent Pump Station Electrical Improvements, Miami-Dade County Water and Sewer Department, Virginia Key, Florida - Project Engineer responsible for overseeing a multi-disciplinary design team closely with the project technical lead to ensure design schedule was met and deliverables were completed. The project focused on sea level rise hardening efforts for the effluent pump station (EPS) at the Central District Wastewater Treatment Plant. A new electrical building was designed to meet a Sea Level Rise (SLR) design elevation of 20.3 ft to house critical electrical and control equipment, including switchgears, motor control centers, and transformers. SLR was a major consideration with regards to designing the electrical building, it required an understanding of the structural needs of the building, including dead loads, live loads, rain loads, wind loads, soil loads, and most importantly, flood loads. Stantec developed a Technical Report, Basis of Design Report, and 30%, 60%, and 100% level design drawings. Stantec provided permitting and bidding services. Stantec is currently providing engineering services during construction.

Consent Decree Project 2.17 Chlorination, Virginia Key, Florida - Project Engineer for the construction phase of the project, which entailed replacing the existing gas chlorination system at the Central District Wastewater Treatment Plant with a liquid sodium hypochlorite storage and feed system. The new bulk storage and satellite buildings for the chlorination system also required hardening design considerations for sea level rise and storm surge protection. Metering pumps for the feed system and critical electrical equipment were elevated to 20.3 ft considering flood loads. Flood protection walls were also built to protect the buildings. During construction Sussette coordinated RFI reviews, Shop Drawing reviews, performed site visits, and oversaw equipment testing. She also assisted in the development of an operation and maintenance manual and record drawings.

Consent Decree Project 2.21 Master Pump Station No. 1, Miami, Florida - Project Manager for this contract, Sussette was responsibilities included monitoring budget, schedule, and contractual obligations for the project during construction. Stantec's scope focused on providing engineering services during construction for upgrades to the ventilation, electrical equipment, and replacement in kind of the odor control system at the pump station. The Odor Control System matched the existing single stage wet chemical scrubber but with an increase in the treatment capacity. She facilitated QA/QC reviews of project efforts and internal meetings with the team to monitor project progress. She also collaborated with multi-stakeholders including subconsultants, contractor, and client.

RAMON CASTELLA

PE, ENV SP, LEED AP

TITLE: Principal in Charge

EDUCATION

- Bachelor of Science in Civil Engineering, Florida International University, Miami, Florida, 1985
- Bachelors in Economics, Florida State University, Tallahassee, Florida, 2010

REGISTRATIONS

- Professional Engineer #40073, State of Florida
- Professional Engineer #11731, Commonwealth of Puerto
- Rico (Estado Libre Associado de Puerto Rico)
- Envision Sustainability Professional (ENV SP)
- LEED Accredited Professional, U.S. Green Building Council

Ramon has over 37 years of expertise in public and private infrastructure projects throughout Florida and the Caribbean. His engineering experience on these projects includes programming, planning, analysis, design, preparation of construction documents, construction administration and inspection and commissioning. His public works infrastructure project types include drainage, flood control, coastal construction, water and sewer systems, roads and bridges, public facilities, parks, project budgeting and grants acquisition.

RELEVANT EXPERIENCE

Central District Wastewater Treatment Plant 1 Secondary Clarifiers and RAS Pump Stations, Miami, Florida - Project Manager for this consent decree project that involved complete rehabilitation of RAS pump stations including pumps, piping, fittings, valves, and appurtenances. The scope of work also included a complete electrical upgrade encompassing transformer upgrades, new electrical feeds, and new raised electrical controls buildings with all new electrical and instrumentation systems.

Watermain Replacement, Sanitary Sewer System, and WASD Pump Station Upgrades, WASD, Key Biscayne, Florida - Project Manager Ramon oversaw construction engineering, construction administration, and inspection services for the Village of Key Biscayne and WASD for this joint $18 million effort. The goal of the project was to provide public sanitary sewer service for approximately 700 single family homes on septic tanks. The project included 35,325 linear feet of eight-inch ductile iron water to replace undersized asbestos-cement facilities, 56,520 linear feet of eight-inch and 12-inch gravity sanitary sewers, 165 sanitary manholes and two new pump stations, and improvements to a third station. The ductile iron watermains installed ranged in size from eight-inches to 16-inches in diameter.

Central District Wastewater Treatment Plant Co-Generation Facility, Miami, Florida - As Project Manager, Ramon supervised this consent decree project that consisted of a new co-generation facility to use treated digester gasses to run engines for electricity production to satisfy plant power needs. The project included a biological scrubbing system to purify the digester gasses prior to use for engine combustion.

Pump Station Improvement Program (PSIP), Miami, Florida - As Principal in Charge, Ramon several pump stations as part of the PSIP. US-EPA issued a consent decree to Miami Dade County requiring more than 112 sewer pump stations be brought into compliance over a period of five years. The Stantec team was selected to provide the engineering services necessary for upgrading more than a dozen pump stations and bring them into compliance with US-EPA criteria. Ramon was responsible for developing and delivering project documents including engineering analysis and reports, project drawings, and specifications. Engineering services also included obtaining state and local permits.

54" Watermain, NW 57th Avenue, WASD, Hialeah, Florida - Ramon, as Project Manager/Engineer of Record, oversaw construction of a new 54-inch ductile iron watermain on NW 57th Avenue from NW 138th Street to NW 142nd Street. The project incorporated an interconnect with the existing 48-inch PCCP watermain which runs parallel to new line, and is being kept as a back-up facility. The interconnect included temporary line stops and a bypass at the existing 48-inch PCCP main, butterfly valves, and access manholes. NW 57th Avenue is a major six-lane divided FDOT urban arterial, which required extensive traffic planning maintenance for the new main installation. The project was executed under a joint project agreement with FDOT District 6.

TRACY ANDERSON

PE

TITLE: QA/QC Technical Advisor

EDUCATION

- Bachelor of Sciences in Civil Engineering, Tempe, Arizona, 1995

REGISTRATIONS

- Florida Profession Engineer #0048969
- Louisiana Professional Engineer #39112
- Arizona Professional Engineer #37264
- Virginia Professional Engineer #0402060947
- Tennessee Professional Engineer #123306

Tracy is a senior project manager with nearly 30 years of experience in planning, engineering, management, and construction of multidisciplined municipal infrastructure projects. He has been directly involved in the engineering and construction of water and wastewater treatment facilities, pump and lift stations, and major transmission pipelines. His projects include a greenfield waste recycling facility (WRF) with treatment capacity of over 14MGD; a raw pump station with seven 3,250-horsepower pumps and a capacity of 66,000 GPM; a 20-mile raw water transmission pipeline constructed using fiber reinforced plastic pipe with buried valve chambers housing as many as five, eight-foot-diameter valves; a complete community water system that included new groundwater supply wells, disinfection, 1.5-million gallons of finished water storage, 5,000 GPM high-lift booster pump station, and 10 miles of distribution pipelines; and 8,000 linear feet of 20- and 24-inch fusible PVC (FPVC) constructed utilizing horizontal directional drilling (HDD). Tracy has 15 years of conveyance experience in the Desert Southwest working with major water providers including City of Phoenix and Salt River Project and his water transmission pipeline and pumping station experience includes more than 200 miles of pipelines with diameters up to 120-inches and pumping heads in excess of 750-psi TDH.

RELEVANT EXPERIENCE

Southwest Wastewater Reclamation Facility, North Port, Florida - Project Manager for preliminary design and permitting for the 2.0MGD Phase I of the Southwest Wastewater Water Reclamation Facility (SWWRF) for the City of North Port. The Phase I site design incorporates planning for future facility expansions to an ultimate treatment capacity of 6.0MGD, accounting for the planned future development within the West Villages area of the City and ensures compatibility of equipment and treatment processes is in accordance with the clients stipulated design criteria.

Wastewater Treatment Plant Expansion, Phase I and Phase II, Maricopa, Arizona - Project Engineer/Resident Project Representative for the planning, pre-design, detailed engineering, and construction phase engineering services for a new wastewater treatment facility for the Ak-Chin Indian Community. Phase I of the project included design and construction of the original 65,000 gpd facility. Phase II included design and construction for an upgrade to 270,000 gpd. The facility included reuse elements, an influent lift station, a mechanical treatment facility, chlorination, and discharge to evaporation/percolation ponds. For the upgrade, the design included a new collection system and pump station. We also replaced the existing stabilization ponds with a new biological/mechanical process consisting of influent pumps and screens, Biological Nutrient Removal (BNR), clarification, filtration, disinfection, and effluent pumping. Effluent disposal options included reuse and recharge. The landscape master plan uses effluent from the wastewater treatment facility.

Nogales International Wastewater Treatment Plant Design-Build Services, Nogales, Arizona - Project Engineer for the planning, pre-design, detailed engineering, and construction phase engineering for a new 14.7MGD upgrade of the Nogales International Wastewater Treatment Plant in Nogales, Arizona. A fast-track, Progressive Design-Build project that included decommissioning of the existing detritors and replacement with vortex grit tanks, 6-millimeter screens downstream of the existing 25-millimeter coarse screens, bio-filters for plant wide odor control, and three secondary process trains for nitrification and denitrification. The facility design was completed in a compressed six-month schedule with close coordination between designers and contractor in order to meet the City's fixed "not to exceed" $53 million project budget.

Wastewater Treatment Facility Upgrade, Pinedale, Wyoming - Tracy, as Principal in Charge, provided quality control reviews and management activities for the planning, design and construction of improvements to the Town's existing wastewater treatment facility. Improvements included upgrade and expansion of existing aerated lagoon treatment plant including new headworks facility, new anaerobic pretreatment cells, upgrade of aerated lagoons, and new UV disinfection system. Project is the first known municipal treatment application in Wyoming utilizing design concept of modified advanced integrated pond system (AIPS) of anaerobic pretreatment cells followed by aerobic cells. The new headworks facility included mechanical screen/ screenings press system, flow measurement, grit removal/ classifier system, chemical feed for adding alkalinity, and influent pumps. New electrical power and controls were provided including emergency diesel generator, site and building security, and SCADA system.

47th Avenue Waterline Replacement, Miami-Dade Water and Sewer Department, Miami, Florida - Technical Director responsible for the detailed design and final construction documents for approximately 10,000 LF of 16" ductile iron watermain along SR 847/NW 47th Avenue from SR 860/NW 183rd Street to North of NW 207th Drive and a 500 LF horizontal directional drill (HDD) beneath the SFWMD Snake Creek Canal. The project includes installation of new fire hydrants according to Miami-Dade Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents, permitting and providing support services during procurement and construction.

Miami Springs 12-inch Waterline Replacement, Miami-Dade Water and Sewer Department, Miami, Florida - Technical Director responsible for the detailed design and final construction documents for approximately 5,600 LF of 12-inch ductile iron watermains in the area around the Miami Springs Circle including Curtiss Parkway, Royal Poinciana Boulevard, Canal Street and Westward Drive. The project includes installation of new fire hydrants according to Miami-Dade Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents, permitting and providing support services during procurement and construction.

Miami Springs 8-inch Waterline Replacement, Miami-Dade Water and Sewer Department, Miami, Florida - Technical Director responsible for the detailed design and final construction documents for approximately 3,500 LF of 8-inch ductile iron watermains in the Miami Springs area including: Linwood Drive, from Ludlam Drive to Hammond Drive; Payne Drive, from Hammond Drive to Lenape Drive; and Coolidge Drive, from NW 36th Street to Oakwood Drive. The project includes installation of new fire hydrants according to Miami-Dade Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents, permitting and providing support services during procurement and construction.

Alton Road (South) Waterline Replacement, Miami Beach, Miami, Florida - Technical Director responsible for the detailed design and final construction documents for approximately 12,000 LF of 8" ductile iron (DI) watermain along SR 907/Alton Road, from south of 43rd Street to W 48th Street and from Lake View Drive to W 63rd Street and approximately 8,890 LF of 20" DI watermain along SR 907/Alton Road from Lake View Drive to W 63rd Street and along W 63rd Street Alton Road to La Gorce Drive. The project includes installation of new fire hydrants according to Miami Beach Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents, permitting and providing support services during procurement and construction.

Alton Road (North) Waterline Replacement, City of Miami Beach, Miami, Florida - Project Manager responsible for the detailed design and final construction documents for approximately 5,000 LF of 8" ductile iron (DI) watermain along SR 907/Alton Road, from Michigan Avenue to North Bay Road/Chase Avenue and approximately 2,500 LF of 12" DI watermain along SR 907/Alton Road from North Bay Road/Chase Avenue to south of Ed Sullivan Drive/43rd street. The project includes installation of new fire hydrants according to Miami Beach Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents, permitting and providing support services during procurement and construction.

ANDREA CRUMPACKER

TITLE: Resiliency Technical Advisor

EDUCATION

- Master of Science in Environmental Analysis & Decision Making, Houston, Texas, 2005
- Bachelor of Science in Biology, Truman State University, Kirksville, Missouri, United States, 1999

Andrea has 22 years of experience and is passionate about connecting people and water, working to solve complex issues so that communities can use their public water resources. She is focused on stormwater and wet weather flow planning around the Gulf, particularly in Florida. Andrea's professional background ranges from marine biology, researcher and project manager to business management and director of surface water programs.

RELEVANT EXPERIENCE

Hallandale Beach Stormwater Master Plan, Hallandale Beach, Florida - As Technical Advisor, Andrea provided technical review and oversight of project documents.

Freedom Park Stormwater Master Plan, Collier County, Florida - As Technical Advisor, Andrea provided expert technical review and oversight of this stormwater planning document for Freedom Park Preliminary Design.

Hallandale Beach Sea-Level Rise and Critical Infrastructure Analysis, Hallandale Beach, Florida - Andrea provided technical review and oversight of project documents.

East San Gabriel Valley Watershed Management Group Coordinated Integrated Monitoring Program, Los Angeles County, California - Provided guidance to the team on planning alternatives to reach water quality compliance, including for microbial source tracking, load estimates, modeling, and potential applicable best management practices.

Pacoima Wash Greenway , Los Angeles County, California - Provided technical direction and expertise during project selection, document production, and monitoring plan recommendations.

East San Gabriel Valley Watershed Management Group Coordinated Integrated Monitoring Program, Los Angeles County, California - Provided guidance to the team on planning alternatives to reach water quality compliance, including for microbial source tracking, load estimates, modeling, and potential applicable best management practices.

Green Alleys Master Plan, Los Angeles County Unincorporated Areas, California - Andrea provided high-level oversight of project work, strategic direction, and client interaction. She leveraged knowledge of the MS4 Permit, local strategies for stormwater capture, and the County of Los Angeles focus on serving the unincorporated area to provide feedback on the plan.

Los Angeles County Public Works Water Quality Monitoring Contract, Alhambra, California - As Project Manager, Andrea managed a multi-year $20M shared capacity contract to provide water quality as-needed services to LADPW in support of storm water compliance programs. To date, she has successfully conducted 11 task orders. The scope of work for those tasks has ranged from development bioassessment of freshwater streams to implementation of the post-BMP construction at Oxford Basin and ongoing Marina del Rey CIMP monitoring. Key achievements of the contract to date include negotiations with LA Water Board staff to reduce the Marina del Rey CIMP monitoring requirements by 80% while still collecting scientifically relative data.

Water Quality and Engineering As-Needed Contract, Alhambra, California - As Program Manager, Andrea managed a multi-year $6M contract to provide water quality and engineering as-needed services to Public Works in support of stormwater compliance programs. To date, 19 task orders have been successfully conducted. The scope of work for those tasks has ranged from development of a PEIR for the EWMPs to bioassessment monitoring, development, and implementation of the Marina del Rey EWMP and CIMP, as well as Malibu ASBS monitoring and compliance document development.

HAL SCHMIDT

PE, BCEE

TITLE: Wastewater Systems Technical Advisor / QA/QC and Peer Reviewer - Service Area 4

EDUCATION

- Master of Science in Engineering, Vanderbilt University, Nashville, Tennessee, 1981
- Bachelor of Science in Engineering, Vanderbilt University, Nashville, Tennessee, 1980

REGISTRATIONS

- Florida Professional Engineer #38819,
- North Carolina Environmental Professional #29130
- Virginia Professional Engineer #39324,
- Georgia Professional Engineer #18218

Hal has 41 years of experience in the planning, permitting, design, construction management, and start-up of over $2.5B worth of wastewater capital improvement projects. His primary focus has been in the areas of advanced and high level biological nutrient removal, membranes, and reclaimed water reclamation, biosolids management and resource recovery. His broad wastewater experience includes permitting, master planning, evaluation and detailed design of treatment systems (biological nutrient removal, membranes, etc.), water reclamation, and biosolids management (thickening, dewatering, stabilization and resource recovery). In his current role as the Stantec's Southeast Wastewater Practice Leader, Mr. Schmidt provides technical analysis and review support to project teams for new and rehabilitated wastewater collection facilities, treatment, reclaimed water and biosolids management facilities; process modeling of liquid treatment processes; energy management and resource recovery (biogas, nutrients, etc.); emerging contaminant removal technologies; and construction sequencing. He has served on numerous state and national forums and stakeholder work groups related to environmental rules, regulations and environmental legislation, and emerging treatment technologies. He is active on numerous committees within the Water Environment Federation; served as a technical advisor/reviewer for the Water Reuse Research Foundation collaborative research projects, and have co-authored a number of Manuals of Practices for wastewater treatment, reclaimed water reuse, and biosolids management.

RELEVANT EXPERIENCE

Central District Wastewater Treatment Plant Chlorination Facilities (CD 2.17), Miami-Dade County, Florida - Hal as Technical Advisor and Senior Engineer for this contract, provided detailed design, permitting, bidding, and engineering design during construction for the replacement of existing elemental gas chlorination system with a new liquid sodium hypochlorite storage and feed system. Under this Task Order, the new liquid hypochlorite facilities were designed to provide the required levels of chlorine to properly disinfect the treated wastewater prior to its discharge outside of the WWTP, as well as to support other internal plant processes.

South District Wastewater Treatment Plant Acid Phase Digester Cluster 1 & 2 Upgrades and New Acid Phase Digester Complex (CD 1.07), Miami-Dade County, Florida - Hal was Technical Advisor for this project that includes rehabilitation, repair and process modification of the Digester Complex at SDWWTP designed for a 15 to 20 year service life depending on the system component and contingent on routine maintenance. Major mechanical components of the anaerobic digestion systems for Clusters 1 and 2 will be replaced as part of this project. Under this project, the existing single-phase mesophilic anaerobic digestion process will be modified to acid/gas phase esophilic anaerobic digestion for effective codigestion of FOG and TWAS. The acid/gas phase mesophilic anaerobic digestion process consists of acid phase digestion followed by gas phase digestion. The design will provide the operational flexibility of independently feeding FOG and TWAS to Clusters 1 and 2, bypassing acid phase digestion.

Central District Wastewater Treatment Plant Headworks Upgrades (CD 2.03 & 2.04), Miami-Dade County, Florida - Hal was Technical Advisor for this project that consisted of upgrading the headworks facilities at Plants 1 (63MGD) and 2 (80MGD). This project included an analysis of alternative approaches for raw wastewater screening facilities, the rehabilitation or replacement of the existing grit chambers, and odor control alternatives. The project includes constructing channels to install four perforated plate type fine screens with 6 mm screen openings at each plant. Each screen was designed to of pass 70 percent of the influent flow. Alternatives were developed to upgrade the existing aerated grit chambers to improve removal efficiency and capture, which include CFD modeling, baffling and new diffusers and blowers. The odor control

improvements included replacing the existing 2-stage chemical scrubber system and relocation and upsizing of the duct work to effectively collect the off gases. Other improvements included relocation of the electrical equipment to a climate controlled environment, new instrumentation and controls; and other miscellaneous structural and hydraulic improvements.

Central District Wastewater Treatment Plant Injection Well Pump Station Design, Miami-Dade County, Florida - Hal as Senior Engineer provided detailed design, permitting, bidding, and engineering services during construction for this project. Our engineers and specialists used BIM 3D modeling technology to develop the design and optimize the design timeline; performed a Water Quality Characterization for the various influent streams; coordinated the new design to minimize potential utility conflicts during construction; completed the detailed design considering optimization practices for increased energy efficiency; provided the client with full system redundancy at the new facility; mitigated potential impact of sea level rise; obtained all necessary FDEP, City of Miami, and RER permits to place the new system component in service; successfully mitigated construction impact to existing plant operations; and provided engineering services during construction.

Central District Wastewater Treatment Plant High Purity Oxygen Wet Weather Improvements, Miami, Florida - Hal provided the technical oversight of the wet weather improvements to the high purity oxygen (HPO) activated sludge system at Miami-Dade Water and Sewer Department's (MDWASD's) 143MGD Central District WWTP. This work involved process modeling (GPSx) to alternatives (i.e., contact stabilization, step feed and ballasted flocculation) for the operational staff to treat wet weather flows at Plant 2 (80MGD). The results of the process modeling indicated that step feed treatment was the optimal and provided the operation staff with the flexibility necessary during wet weather flow conditions. The upgrades were designed to be operation when the influent flows exceeded 115MGD at Plant 2 while still providing the necessary treatment to meet the facility's permitted effluent requirements. This project included incorporation of new 60-inch diameter piping in an already congested area of the site, motorized valves to provide for automatic step feed operation, and new instrumentation and controls for this operation. The work was completed with this project while maintaining the existing HPO facilities in service.

North District Wastewater Treatment Plan Primary and Secondary Clarifier Upgrades, Miami, Florida - As Technical Advisor, Hal was responsible for the technical oversight of Miami-Dade Water and Sewer Department's (MDWASD) upgrades to the primary and secondary clarifier facilities at the 112.5MGD North District WWTP. This project included the necessary planning, permitting and final design services associated with the upgrades to six primary clarifiers and 12 secondary clarifiers. This project consisted of replacing the collector mechanisms for primary clarifiers 1, 2, 4, 5, and 6, and secondary clarifier mechanisms for units 1 through 8. The center well for secondary clarifiers 1 through 10 were enlarged and density current baffles were provided. For all clarifiers, structural rehabilitation of the effluent launders and each tank was recoated in areas of corroded and eroded concrete. New covers were provided for the primary clarifiers and new walkways were provided for the secondary clarifiers. The existing return activated sludge (RAS) pumps were replaced and equipped with variable frequency drives, and the electrical infrastructure associated with these three pump stations were upgraded. Odor control upgrades included new duct from the six primary clarifier tanks and new chemical scrubbers were provided.

Central District Wastewater Treatment Plant Process Modelling HPO Operating Scenarios During Wet Weather Upgrades, Miami, Florida - Hal was the technical advisor for the process team that evaluated alternative process modifications to the high purity oxygen (HPO) activated sludge facilities at the 143MGD CDWWTP during wet weather flow conditions. The work involved process modeling varying alternative operating modes within the HPO facilities for Plants 1 and 2 that included plug flow, contact stabilization and step-feed options. Based on the various alternative operating scenarios, it was determined that operating the HPO facilities in the contact stabilization mode during wet weather conditions was the most favorable for the current operations.

Miami-Dade Water and Sewer Department Consent Decree Projects, Miami , Florida - Hal was responsible for the technical oversight of Miami-Dade Water and Sewer Department's $2.2 billion wastewater capital improvements program at their three regional WWTPs, as outlined in the Consent Decree that was executed in 2014. All of the projects included the necessary planning/phasing, permitting, preliminary and final design, and construction oversight and start-up services. These projects have included work associated with both liquid and solids treatment processes, and include: upgrades to the single stage mesophilic digestion facilities at the 143MGD Central District wastewater treatment plant (CDWWTP); preparation of an Engineering Assessment Report at the CDWWTP; upgrades to the headworks facilities at Plants 1 and 2 at the CDWWTP; upgrades to the oxygen production facilities at the CDWWTP; a fats, oils, and grease receiving station at the 120MGD South District wastewater treatment plant (SDWWTP); upgrades to the single stage mesophilic anaerobic digestion facilities at the SDWWTP; new sludge thickening and dewatering facilities at the SDWWTP and the CDWWTP; new biogas treatment facilities at the CDWWTP to provide suitably clean biogas to the Co-Gen building.

BECKY HACHENBURG

PE, PMP

TITLE: Water Treatment Systems Technical Advisor

EDUCATION

- Master in Sciences in Industrial and Systems Engineering, University of Florida, Florida, 1998
- Bachelor of Sciences in Environmental Engineering, University of Florida, Florida, 1995

REGISTRATIONS

- Florida Professional Engineer #55435
- Georgia Professional Engineer #039895
- Project Management Professional (PMP)®, Project Management Institute

Over the last 27 years, Becky has distinguished herself as a project engineer, engineer-of-record, program technical manager, project manager, client services manager, and stakeholder coordinator. She is also a regional leader for Stantec in the Southeast US. During her career, she has managed well over 100 municipal projects in the Southeast and for the past ten years she has regularly served as project principal for clients ranging in size from 100,000 to nearly one million customers. Becky has extensive experience in the fields of water treatment process design, water management, environmental engineering, and water quality analysis, with water resources project experience including supply, ASR, and injection wells; surface water storage, canal conveyance and constructed wetlands; permitting, pilot testing, design, and construction for water treatment systems including microfiltration, nanofiltration, brackish reverse osmosis water, and surface water treatment; and electronic operations and maintenance manuals. She also has a strong track record of adeptly managing projects in the fields of hydraulic modeling, water and wastewater master planning, condition assessments, and CIP analysis. Additionally, she has worked on several consent decree projects.

RELEVANT EXPERIENCE

Energy Efficiency Study for Hollywood Water Treatment Plant, Hollywood, Florida - As QA/QC Manager, Becky managed and performed an energy efficiency study to evaluate the energy usage at the City's 20MGD nanofiltration water treatment plant to determine if energy savings could be realized. The City implemented Stantec's recommendations to modify the nanofiltration feed pumps and piping and reduced annual power consumption of each membrane softening train by 24% (savings of approximately $85,000 per year). Becky performed field analysis, project budgeting, technical review, invoicing, and client contact.

Water Treatment Plant Upgrade, West Palm Beach, Florida - Client Service Manager for this 47MGD surface water treatment plant upgrade program. Becky met regularly with the client to discuss the project's progress. She made sure Stantec's project manager had the resources to complete the work within schedule and budget. The project involved evaluating multiple treatment alternatives for the City's 50MGD WTP to meet the Health Department's Consent Order, improve drinking water quality, and expand the plant to accommodate proposed build-out capacities. We conducted pre- and posttreatment bench scale tests and a surface water membrane pilot test to evaluate treatment schemes. We also evaluated existing plant conditions to determine rehabilitation and replacement needs and what could be salvaged and incorporated in the plant upgrades to minimize costs and waste. The 18-month effort resulted in a treatment alternatives report that evaluated 22 conceptual design options using different source waters and treatment schemes, present-value life cycle costs based on construction, consumables, operations, and debt-service. Other improvements included replacing gaseous chemical systems with liquid systems, managing the automation system implementation, a new electrical generator and switchgear building, a new FPL power feed, pilot testing for MIEX progressed to permit application and procurement documents, a new mixing and metering header, drought management planning, Profibus conversion, high service pump evaluation and refurbishment, condition assessment and capital improvements planning, and design/construction of a new 50MGD UV system.

East Water Treatment Plant, Miramar, Florida - Project manager for 3rd party construction management services for an upgrade of the East Water Treatment Plant (lime softening, filters, hypochlorite, ancillary systems). Becky was responsible for reviewing change orders, claims, RFIs, and handling all communication between our client and the contractor.

Broward County 1A Water Treatment Plant, Broward County, Florida - Client Service Manager for the 1A WTP Expansion project. This project includes design and construction of a Florida water supply test well, Floridan water supply production wells, low pressure reverse osmosis water treatment plant expansion and associated facilities, water quality blending coordination with existing lime softening plant, and concentrate injection well. Becky is responsible for making sure our project manager has the resources to complete the project within schedule and budget. She also works with the client and the project team to negotiate work order amendments as the work progresses. Well siting and Floridan test well design has been completed.

Design and Construction of the Sawgrass Water Treatment Plant and Expansion, Sunrise, Florida - Becky served as design manager and project engineer during design of this 18MGD nanofiltration facility. Becky was primarily responsible for all mechanical and process specifications, coordination between all design disciplines and subconsultants, permitting, and overall quality control coordinator. Upon completion of the design, she worked as part of the construction management team at the project site for more two years. In this role, she was responsible for addressing field issues with the contractor, processing payment applications, preparing change orders, reviewing shop drawings, and submitting building permit modifications. Becky was the Engineer of Record for the 6MGD expansion of this plant. The project included the addition of two 3MGD nanofiltration membrane trains, first stage feed pump, two interstage feed pumps, degasifier, chemical storage and metering pumps, transfer pump and associated appurtenances. In this capacity, she was primarily responsible for coordination between all design disciplines, contract document preparation, permitting, and overall quality control coordination. She addressed field issues with contractors, prepared change orders, and reviewed shop drawings as a member of the construction management team.

Flamingo Park Wellfield and Transmission Main, Sunrise, Florida - Becky served as the Project Manager and Engineer of Record for this project, which consisted of outfitting four wells with submersible turbine pumps, well vaults, and ancillary equipment within a City park. It also included approximately 8,000 lf of 36-inch diameter transmission main and 5 kVA power conduit, including a microtunnel, a new emergency generator and portable generators, hydraulic modeling, surge analysis, and power supply evaluations. Becky's duties included client service, permitting, multiple City agency coordination, bidding services, subconsultant relations, and cost control.

Powdered Activated Carbon (PAC) Treatment System (WA-28), West Palm Beach, Florida - Design of the PAC Basin involved two serpentine channels to provide 15 minutes of contact time to ensure removal of taste and odor causing compounds from surface water sources. Subsurface vibro-replacement of soil with stone columns provided the structure bearing capacity needed to construct this new pretreatment basin in a more economical manner than conventional precast concrete columns. This project also involved the replacement of aging, below-grade influent flow meters with new mag meters which could be more easily maintained. As part of this design, hydraulic evaluation revealed one of six raw water pumps would require replacement to avoid cavitation. This project also presented the opportunity to install isolating slide gates on the settled water flume bypass channel, allowing the City to use an existing bypass to their filters. Stantec provided pilot testing, detailed design, bidding and engineering services during construction.

New Electrical Generator Switchgear and Building (WA-16 & WA-23), Miami-Dade County, Florida - Becky was Project Manager for this new WTP electrical design for this project has been provided with split bus power distribution system with a generator based standby power system. Power inside the facility is distributed utilizing dual 4.16 kV distribution system configuration to comply with the EPA Class I Reliability operational requirements, which also applies to the water treatment process. The new system is provided with two independent 13.2 kV FPL feeders and two City owned 5MVa (Mega Volt Ampere) primary unit substation transformers to complement the doubleended 5kV main switchgear with split bus system to eliminate the single point failure scenario. The three new -2500kW (kilo watt), 4.16kV standby diesel generator system is integrated into the main power system via paralleling switchgear and automatic transfer switches. All switching between the utility and generator power is through a series of electrical interlocks controlled by a redundant master PLC. The utility and generator power is distributed to the double-ended unit substation transformers and 5kV motor control centers (MCC) via automatic transfer switches. The major process equipment is also distributed proportionally to each load center, which is one of the requirements for operational reliability.

Norwood-Oeffler Water Treatment Plant Value Engineering North Miami Beach, Florida - Becky served as project manager for two five-day value engineering studies. The project consisted of expanding the existing lime softening facility and adding a 13MGD of membrane treatment, 10 new Floridan and Biscayne supply wells, raw water piping, a concentrate injection well, remote storage, high service pumping, and pressure sustaining interconnects. Responsibilities included contracting the VE facilitator, coordinating the team members, serving as a team member, and communications with the client. The City accepted and incorporated VE recommendations which reduced construction costs by approximately $8 million.

MANUEL MONCHOLI

PhD, PE

TITLE: Wastewater Treatment Lead and Regional Biosolids Leader - Service Area 1, Wastewater QA/QC Service Area 4

EDUCATION

- PhD, Civil Engineering, Florida International University, Miami, Florida, 2019
- Master of Sciences in Environmental Engineering, Florida International University, Miami, 2004
- Bachelors of Engineering in Chemical Engineering, Stevens Institute of Technology, Hoboken, New Jersey, 2001

REGISTRATIONS

- Florida Professional Engineer #86586
- Texas Professional Engineer #139722

Manuel is a process engineer with 20 years of experience in planning, design, construction, operations, and management of water and wastewater utilities. His key areas of focus include wastewater treatment process engineering, biosolids treatment and handling, and capital program management. Prior to joining Stantec, Manny served as Operations Program Management Division Chief at the Miami-Dade Water & Sewer Department, where he oversaw major process and electrical upgrades to treatment plants and pipeline infrastructure.

RELEVANT EXPERIENCE

Central District Wastewater Treatment Plant (CDWWTP) **Anaerobic Digester Startup, Miami-Dade County Water & Sewer Department, Miami, Florida -** As Senior Process Engineer, Dr. Moncholí was part of the Stantec team leading development and operational guidance of startup procedures and execution for rehabilitated biosolids digesters. Project includes (12) 1.5 MG digesters operated in single phase anaerobic mesophilic mode featuring stainless steel floating gas holder covers, linear motion mixers, and digester heating via heat exchangers with heat recovery from combined heat and power systems.

Central District Wastewater Treatment Plant (CDWWTP) **Temporary Sludge Thickening Evaluation, Miami-Dade County Water & Sewer Department, Miami, Florida -** As Senior Process Engineer, Dr. Moncholí conducted an alternatives analysis to provide thickened waste activated sludge to anaerobic digesters at 6% solids to simulate futureoperational conditions of the CDWWTP new sludge thickening and dewatering building underconstruction was part of the Stantec teamleading development and operational guidance of startup procedures and execution for rehabilitated biosolids digesters. Project includes (12) 1.5 MG digesters operated in single phase anaerobic mesophilic mode featuring stainless steel floating gas holder covers, linear motion mixers, and digester heating via heat exchangers and heat recovery from combined heat and power systems.

South District Water Treatment Plant (SDWWTP) **and Central District Wastewater Treatment Plant (**CDWWTP) **Biosolids Treatment ESDC, Miami, Florida -** As Senior Process Engineer, Dr. Moncholí performed pre-commissioning site inspections for conformance with design documents, quality of construction, and readiness for startup and operation of the anaerobic digesters for CDWWTP and SDWWTP. The CDWWTP Digester rehabilitation project consists of (12) 1.5 MG digesters operated in single phase anaerobic mesophilic mode featuring stainless steel floating gas holder covers, linear motion mixers, and digester heating via heat exchangers and heat recovery from combined heat and power systems. The SDWWTP Digester rehabilitation and process upgrade project consists of (4) 0.25 MG fixed cover, anaerobic acid phase digesters with jet pump mixing systems and digester heating via heat exchangers followed by (12) 1.5 MG digesters operated in single phase anaerobic mesophilic mode featuring stainless steel floating gas holder covers, linear motion mixers, and digester heating via heat exchangers and heat recovery from combined heat and power systems.

Houston Wastewater Operations FEMA Hurricane Harvey Damage Assessment, Houston, Texas - As Technical Services Manager Engineer, Dr. Moncholi Lead a team of City of Houston and consultant project management, FEMA specialists and design professionals on the development and population of an asset management database, condition assessment and damage assessment of the City's 39 wastewater treatment plants and 0ver 380 lift stations in response to damages from Hurricane Harvey in the City's effort to seek FEMA funds for systemwide repairs, equipment replacement and facility hardening.

Houston Wastewater Operations Treatment Facility Consolidation Program, Houston, Texas - As Technical Services Managing Engineer, Dr. Moncholi developed resilient design guidelines for the rehabilitation, upgrade and expansion of all City of Houston Wastewater Treatment Facilities. These design guidelines were the basis of coordinated wastewater treatment plant planning and design efforts for the consolidation, rehabilitation, upgrade and storm hardening of City of Houston's Wastewater Operations lift station and treatment facilities impacted by Hurricane Harvey. An estimated $2.1 B program to harden hurricane damage facilities in place or divert flows and expland receiving regional plant accordingly.

Miami-Dade Water and Sewer Department Renewal and Replacement Capital Program, Miami, Florida - As Operations Program Management Division Chief, Dr. Moncholi was responsible for the coordination of project scope development, project prioritization, capital budgeting and implementation oversight of renewal, and replacement of primarily process mechanical and electrical equipment for drinking water treatment and wastewater plants along with pipe rehabilitation and replacement for large sanitary sewer lines, sewer collection system pump stations and drinking water transmission and distribution mains. Approximately a $100M in annual capital expenditures.

Wastewater Systems Consent Decree Capital Improvement Program, Miami-Dade County WASD, Miami, Florida - As Capital Improvement Senior Program Manager, Dr. Moncholi initiated the capital planning, project scheduling, and capital budgeting of sewer collection and transmission, pump stations and treatment plant multi-year $2 B capital program to address an EPA and FDEP mandated consent decree. Upon program implementation, Dr. Moncholí was the programs WWTP technical director and program manager ensuring timely design decisions, coordination design and construction element with other capital programs, leading alternative analysis, pilot testing efforts and design review in this complex 15 year program with 52 projects across 3 regional WWTPs totaling an ADF of 300MGD.

Biosolids Master Plan and Regional Biosolids Processing Facility, Miami-Dade County WASD, Miami, Florida - As Wastewater Systems Process Engineer, Dr. Moncholi successively as assistant project manager, wastewater process engineer and later Acting Assistant Director of Wastewater Systems and utility champion of the beneficial use of biosolids, Dr. Moncholí lead the evaluation, master planning, alternative delivery and procurement efforts of a biosolids master plan and subsequent capital projects. The aim of the program, to transition from the distribution of primarily Class B Biosolids dewatered cake and seasonal Class A biosolids compost to year round Class A biosolids processing and distribution in a sustainable and cost competitive manner. The program progression relies on a phased approach of $300 M in sludge thickening, stabilization and dewatering improvements at the SDWWTP and CDWWTPs in advance of a regional biosolids processing facility estimated at $200 M.

Renewal and Replacement Capital Program, Miami-Dade County WASD, Miami, Florida - As the Former Operations Program Management Division Chief, Dr. Moncholi was responsible for the coordination of project scope development, project prioritization, capital budgeting and implementation oversight of renewal and replacement of primarily process mechanical and electrical equipment for drinking water treatment and wastewater plants along with pipe rehabilitation and replacement for large sanitary sewer lines, sewer collection system pump stations and drinking water transmission and distribution mains. Approximately a $100M in annual capital expenditures.

Biosolids Master Plan and Regional Biosolids Processing Facility , Miami, Florida - Dr. Moncholi served successively as an assistant project manager, wastewater process engineer, and later Acting Assistant Director of Wastewater Systems and utility champion for the beneficial use of biosolids. In this capacity, he led the evaluation, master planning, alternative delivery, and procurement efforts of a biosolids master plan and subsequent capital projects. The aim of the program was to transition from the distribution of primarily Class B Biosolids dewatered cake and seasonal Class A biosolids compost to year round Class A biosolids processing and distribution in a sustainable and cost competitive manner. The program progression relies on a phased approach of $300 million in sludge thickening, stabilization, and dewatering improvements at the SDWWTP and CDWWTPs in advance of a regional biosolids processing facility estimated at $200 million.

Wastewater Operations Treatment Facility Consolidation Program, Houston, Texas - As Technical Services Managing Engineer, Manuel developed resilient design guidelines for the rehabilitation, upgrade and expansion of all City of Houston Wastewater Treatment Facilities as part of a $2.1B program to harden hurricane damaged facilities. These design guidelines were the basis of coordinated wastewater treatment plant planning and design efforts for the consolidation, rehabilitation, upgrade and storm hardening of City of Houston's Wastewater Operations lift station and treatment facilities impacted by Hurricane Harvey.

ZUHAL OZTURK

PhD, PE

TITLE: Regulatory Compliance Lead - Service Area 1

EDUCATION

- PhD, Civil (Environmental) Engineering, Florida International University, 2006
- Master of Sciences in Environmental Engineering, Istanbul Technical University, 2000
- Bachelor of Sciences in Environmental Engineering, Istanbul Technical University,1996

REGISTRATIONS

- Florida Professional Engineer # 79757

Dr. Öztürk, with 15 years of experience, is an environmental engineer with experience in permitting, water and wastewater treatment, water reuse, hydraulic and hydrogeological modeling, watershed management and hazardous waste remediation. Her experience emphasizes coordination of complex civil/environmental engineering permitting efforts, advanced wastewater treatment processes, stormwater modeling, remediation of chlorinated solvents using permeable reactive barriers, hydrogeological modeling of solute transport and industrial wastewater treatment. Her wide technical knowledge and practical experience have proven very beneficial and critical in the successful outcomes of the permitting efforts in Florida. She has technical publications and presentations depicting her area of expertise and experience. She also served as a reviewer for Scientific Journals.

RELEVANT EXPERIENCE

South District Wastewater Treatment Plant Consent Decree Project - CD 1.07 Digesters and Control Building Upgrades, Acid Phase and Substation 7 and 8 – Construction Phase, Miami-Dade County WASD, Miami, Florida - Assistant Project Manager for this project that includes rehabilitation, repair and process modification of the Digester Complex at SDWWTP designed for a 15 to 20 year service life depending on the system component and contingent on routine maintenance. Major mechanical components of the anaerobic digestion systems for Clusters 1 and 2 will be replaced as part of this project. Under this project, the existing single-phase mesophilic anaerobic digestion process will be modified to acid/gas phase esophilic anaerobic digestion for effective codigestion of FOG and TWAS. The acid/gas phase mesophilic anaerobic digestion process consists of acid phase digestion followed by gas phase digestion. The design will provide the operational flexibility of independently feeding FOG and TWAS to Clusters 1 and 2, bypassing acid phase digestion.

South District WWTP Consent Decree Project - CD 1.11 SDWWTP General Electric Design Substations 9, 10, 11, and 12 - Bid and Construction Phase, Miami-Dade County WASD, Miami, Florida - Dr. Ozturk is serving as the Assistant PTL for this project which requires reviewing RFIs, submittals, and technical support during the construction of the project. Project includes of furnishing all materials, labor, and equipment necessary for the electrical improvements for Substations 9, 10, 11, and 12.

City of Hialeah ROWTP, Hialeah, Florida, Hialeah, Florida - As Project Engineer, Dr. Ozturk was responsible for the coordination of the Acceptance Test for the 10MGD design build operate (DBO) Hialeah Reverse Osmosis Water Treatment Plant (ROWTP). Responsibilities included preparation of the Acceptance Test Plan and Schedule per the Contract requirements and applicable Operation Permits, working closely with the Acceptance Test team members to ensure all testing and operating conditions are recorded, coordination with the labs for sampling and test result reports.

City of Fort Lauderdale - Fiveash Water Treatment Plant Evaluation and GAC Pilot Testing Project, Fort Lauderdale, Florida - As Assistant Project Manager, Dr. Ozturk served as the Assistant Project Manager and Senior Engineer for this project. Her responsibilities included coordination of the team members, review of existing technical reports including City's Comprehensive Utility Strategic Master Plan (CUSMP) regarding condition assessments and scheduled rehabilitations and/or replacements both for the Fiveash WTP and Prospect Wellfield. She was also responsible for coordination of Site Visits and compilation of Site Visit

observations conducted at the Fiveash WTP and Prospect Wellfield. A Technical Memorandum was prepared for the "Existing Facility Condition Assessment" which included these evaluations and recommendations for the current and anticipated future condition for the Fiveash WTP and Prospect Wellfield.

City of Hialeah Reverse Osmosis Water Treatment Plant (ROWTP), Hialeah, Florida - As Project Permit Coordinator, Dr. Ozturk was responsible for the coordination of the permitting efforts for the 10MGD design build operate (DBO) Hialeah Reverse Osmosis Water Treatment Plant (ROWTP). Her responsibilities included coordination of the permitting staff, follow up for the permitting efforts, serve as the conduit between the Project Team and the permitting agencies.

MDWASD Transmission Watermain Project Phase I,II&III, Hialeah, Florida - As Project Engineer, Dr. Ozturk served as the project engineer for MDWASD Transmission Watermain Project Phase I&II which entailed over 10,000 lf of 36-inch pipe for Finished Watermain. Responsibilities included the coordination of the environmental permitting staff to support the design team in the selection of the best possible route for the proposed transmission watermain that transfer treated water from the Hialeah ROWTP. The project included a Microtunnel under I-75 and Horizontal Directional Drill (HDD) under a canal culvert.

MDWASD Miami Springs Wellfield Rehabilitation Project Step 1, 2 and 3, Miami Gardens, Florida - Dr. Ozturk was Deputy Project Manager/Project Engineer for this project. Responsibilities included the coordination and preparation of the project components including permitting, design, research, regulatory compliance and bid documents. She also worked with the Construction Managers regarding coordination and review of the Shop Drawings and RFIs during the Step 1 production water well drilling phase of the project. She maintained communication with stakeholders related to the project as well as local, state and federal agencies.

Town of Davie Pilot Study, Town of Davie, Florida - Dr. Ozturk was responsible for the coordination of the Advanced Oxidation Process (AOP) Treatment Study for the Town of Davie Pilot Study conducted for Indirect Potable Reuse via Groundwater Aquifer Recharge. Study was designed to evaluate the feasibility of Ultrafiltration (UF), Reverse Osmosis (RO) and Ultraviolet Light (UV) and UV/Hydrogen Peroxide (UV/H2O2) for removal of both conventional water quality parameters and emerging microconstituents. Approach was proven feasible through the 6-month pilot and AOP bench scale testing. A report was prepared and submitted to the Florida Department of Environmental Protection Agency (FDEP). In addition, the result of the AOP Treatment Study was presented to the FDEP and at several local and national conferences.

Peace River Reservoir Project, Peace River, Florida - Dr. Ozturk, as Project Engineer, worked to secure the Environmental Resource Permit (ERP) for Peace River, Florida. She conducted stormwater modeling using ICPR3 to evaluate feasibility of the design of the new improvements around the Peace River Reservoir as part of the ERP application preparation process.

City of North Miami Beach SSES Annual Report, North Miami Beach, Florida - As Project Engineer, Dr. Ozturk prepared the City of North Miami Beach (CNMB) 2009, 2011, and 2013 Sanitary Sewer Evaluation Survey (SSES) Annual Reports. The project included the review and qualification of the sanitary sewer inspection efforts and to prepare the Calendar Year 2009, 2011, 2013 Annual Reports for submittal to the Miami-Dade County Department of Environmental Resources Management (DERM) **for the CNMB's wastewater collection system.**

Town of Davie, Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update, Town of Davie, Florida - Project Manager – Dr Ozturk is serving as the Project Manager for the Town's Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update Project. She is responsible for coordination with the Client and other agencies and municipalities during the preparation of the Town's Draft and Final WSFWP. Her other responsibilities include reviewing the data, reports and applicable policies, monitoring and preparing the deliverables, addressing comments received from the South Florida Water Management District (SFWMD), preparation and submittal of the invoices and budget projections.

City of Sunrise, Ten-Year Water Supply Facilities Work Plan (WSFWP) – 2020 Update, Sunrise, Florida - Dr Ozturk is serving as the Project Manager for the City's Ten-Year Water Supply Facilities Work Plan (WSFWP) – 2020 Update Project. She is responsible for coordination with the Client and other agencies and municipalities regarding the City's Draft and Final WSFWP. Her other responsibilities include reviewing the data, reports and policies, monitoring and preparing the deliverables, addressing comments received from the South Florida Water Management District (SFWMD), preparation and submittal of the invoices and budget projections.

MDWASD Central District WWTP Effluent Toxicity and Disinfection Study Plan Central District Wastewater Treatment Plant, Miami, Florida - As Project Technical Lead, Dr. Ozturk helped further develop the Draft Toxicity and Disinfection Plan of Study required by Amendment to the Administrative Order Number AO-09-008-DW-13-SED and prepared the final plan of study. Project included developing a draft plan of study, provide responses to FDEP's review comments, and develop the final plan of study as required to meet the administrative order requirements.

OSCAR BELLO

PE

TITLE: Wastewater Collection and Reuse Lead - Service Area 1

EDUCATION

- Bachelor of Science in Civil Engineering, University of Central Florida, Orlando, Florida, 1999

REGISTRATIONS

- Florida Professional Engineer #61612
- Designated Professional - Design Build Institute of America State of Florida General Contractor License #CGC1525348
- State of Florida Certified Utility & Excavation Contractor #CUC1225471

Oscar has 25 years of experience in water, wastewater, conveyance, site civil engineering, stormwater, and heavy civil construction. He has managed a wide variety of large wastewater collection, water distribution, and conveyance projects. Well versed in septic to sewer conversation projects in urban environments. Oscar has an array of technical experience including wastewater modeling (low pressure systems), trenchless installation (pipe bursting, jack & bore, and HDD), water and sewer pipeline design ranging in size from 4 inches up to 66 inches (PVC, DIP, Steel & PCCP), existing utility rehabilitation in existing neighborhoods, drainage and lift station designs.

He has provided planning, final design, and construction management services for conventional design-bid-build and alternative delivery projects. He has a strong background in Heavy Civil construction. Prior to joining Stantec, Oscar worked for a national water/wastewater contractor. His skills include site risk analysis, estimating, constructability review, scheduling, and project close-outs.

RELEVANT EXPERIENCE

Design-Build Cudjoe Regional Wastewater Collection System - Outer Islands, Cudjoe Key, Florida - Oscar served as Engineer of Record for this septic-to-sewer design-build project. He was responsible for design, community meetings, modeling, permitting and construction of the central sewerage collection and transmission system for the Lower Keys, described as the Cudjoe Regional Wastewater Collection System Project. The service area included the “outer keys” of Big Pine, Little Torch, Ramrod, No Name and Lower Sugarloaf Keys. It was a hybrid-Wastewater collection system including Low Pressure (EOne Grinder Stations) and Gravity Main. The contract amount was $105M, which included over 240,000 linear feet of pipe, 65 lift stations, 4 master pump stations, 5,500 service connections, and several HDD sub-aqueous crossings. Conducted hydraulic modeling using SewerCAD.

City of Ft. Lauderdale Water and Sewer Biennial Engineer’s Report, Fort Lauderdale, Florida - Oscar served as Project Manager and lead contact with the City. This Biennial Report was developed based on discussions with City’s leadership and personnel that are responsible for planning, operating, maintaining, and upgrading the Water and Sewer System, review of system planning, and models provided by the City. Furthermore, the report summarized Stantec’s review of the water and wastewater facilities, including physical condition, regulatory compliance, and the City’s capital plans.

Design-Build 54” Effluent Disposal Pipeline, Northwest, Florida - Design Project Manager for this $54M project that was a private Design-Build project. It involved 81,000 LF of 48” and 54” Steel and Ductile Iron wastewater pipeline with a 54” river outfall and diffuser. Scope included 40 combination air release valves, 30 manways, 800 LF of jack and bore casing installation, wetlands crossings, two river crossings. Project scope required USACOE and FWC permitting.

Broward County Water and Wastewater Services - 48” Force Main Replacement, Ft Lauderdale, Florida - Oscar served as project engineer for the design and permit to relocate an existing 48” Force Main located within Florida Turnpike Right-of-Way. This project involved open-cut installation of approximately 5,400 LF of 48” DIP followed by the removal of an existing PCCP. Coordination included Turnpike District of the FDOT, South Florida Water Management District, the Florida Department of Environmental Protection, and Broward County Water and Wastewater Services.

60" PCCP Effluent Discharge Emergency Repairs, Hollywood, Florida - Project Manager for this emergency contract that included 15MGD effluent bypass with 48" HDPE. Two 60" line-stops were required for the bypass. Project included (2) separate 60" PCCP repairs utilizing 60" closure kits and 60" repair clamps. The repair locations required constant dewatering. Significant dewatering operations including hydraulic pumps, sedimentation tank, large silt bag which clean discharge into a detention pond.

Route Analysis for 36-inch Transmission Force Main along Snake Creek Canal Basis of Design Report (BODR), Miami Gardens, Florida - Project Manager for this project to provide consulting engineering services to the Miami-Dade Water and Sewer Department (MDWASD) to prepare a Basis of Design Report (BDOR) for the installation of approximately 24, 870 LF of 36-inch Transmission Force Main (FM) which will convey wastewater from Master Pump Station to an existing 30-inch FM along the south side of Snake Creel Canal. The existing 30-inch/36-inch force main alignment begins at PS422, heads south to NW 207th Street, then continues east along NW 207th Street to NW 27th Avenue. The Scope of Work of this Task includes a BODR, which will evaluate routes and recommend the preferred route and preliminary alignment, pipeline material, construction methods and define general characteristics of the new 36-inch force mains to guide the final design. Route Analysis included environmental and local stakeholder impacts, and
HDD evaluations.

Key Haven Wastewater Collection System Phase 2 Improvements, Florida Keys, Florida - Oscar was the Project Manager for this project for which the Florida Keys Aqueduct Authority took over an existing gravity sewer system referred as the Key Haven Wastewater Collection System. A Sanitary Sewer Evaluation Survey (SSES) assessment was required to evaluate the magnitude of infiltration/inflow sources. The project was located in an existing residential neighborhood in the lower Florida Keys. The existing gravity system is made of 24,100 LF of sewer pipe, 80 manholes and four lift stations. Project delivered a comprehensive Sanitary Sewer Evaluation Survey (SSES) assessment program including an infiltration/inflow (I/I) analysis and an engineering report comparing conventional gravity sewer replacement vs. low pressure sewer. Tasks included CCTV inspections, physical survey of the collection system, including manholes structures, inverts, manhole risers, covers, conductivity/salinity testing, flow analysis, and smoke testing.

Design-Build-Operate Wastewater System, Islamorada, Florida - As Project Manager, Oscar was part of this $106M septic to sewer conversion design-build-operate in the Florida Keys. The purpose of the Project was to ensure that all wastewater is collected and treated to State of Florida mandated levels prior to disposal and to ensure safe and reliable wastewater collection and treatment for the community. Additional project considerations included minimizing potential environmental impacts on the Village and surrounding areas, with regard to habitat conservation, marine protection, endangered species and habitat, air and water quality, greenhouse gas emissions, wetlands and estuary preservation or enhancement. The Design-Build scope included: Modifications to the existing NPK and Key Largo wastewater treatment facilities for additional flow, equalization and aeration, 1 Master Pump Station and 4 Vacuum Pump Stations, 7 Ocean Channel Creek crossings using HDD from 8"-18", Hybrid Vacuum / Low Pressure Sewer / Grinder collection system (E One) consisting of approximately 400,000 LF of 3" to 10" PVC and HDPE Pipe, Transmission System consisting of approximately 100,000 LF of 8" to 18" PVC and HDPE, 1.25" HDPE Service Line- approx. 100,000 LF, Service to approximately 4,500 customers, Installation of 434 residential (EOne) Low-Pressure grinder pumps. Services Provided: Construction Management, Master Scheduling, Cost estimating, Value Engineering, Construction and operation services.

Design-Build Services for Business District Pump Station, Low Pressure Sewer System and Watermain Improvements, Miami Shores, Florida - As Design-Build Manager, Oscar was responsible for entire project delivery. Project consisted of the installation 3,100LF of 8" DIP force main, low pressure sewer system (Flygt grinder stations), new Miami-Dade WASD regional pump station (47HP), and 4,100LF of 12" watermain throughout the Miami Shores Village Central Business District. Oscar identified $422,236 in savings through a Value Engineering exercise.

60" PCCP Effluent Discharge Emergency Repairs, Hollywood, Florida - Oscar served as project manager for an emergency repair that included 15MGD effluent bypass with 48" HDPE. Two 60" line-stops were required for the bypass. Project included (2) separate 60" PCCP repairs utilizing 60" closure kits and 60" repair clamps. The repair locations required constant dewatering. Significant dewatering operations including hydraulic pumps, sedimentation tank, large silt bag which clean discharge into a detention pond.

HEATH WINTZ

PE

TITLE: Water Supply & Treatment Lead - Service Area 2 , Water QA/QC - Services Area 4

EDUCATION

- Bachelor of Science in Environmental Engineering, University of Florida, Gainesville, Florida, 2004

REGISTRATIONS

- Florida Professional Engineer #69261

As Lead Environmental Engineer and Project Technical Lead of the Water Group in our West Palm Beach Office, Heath, with 23 years of experience, has provided engineering services for treatment and disinfection of potable water as well as treatment and reuse of municipal and industrial wastewater. Heath's experience includes the design of pump stations, hydraulic structures, chemical feed, and process control systems. From preliminary field and bench testing to engineering design and construction, his breadth of experience provides added value to clients through every phase of a project.

RELEVANT EXPERIENCE

Water Treatment Plan UV System and Related Infrastructure, West Palm Beach, Florida - As Lead Process Mechanical Engineer, Heath led the lead process mechanical team through the fast-track design of a 50MGD UV treatment process building including a new transfer pump station, hypochlorite storage and feed systems, bypass of 32 filters via large diameter hot taps, line stops, and custom fabricated steel fittings. He coordinated SCADA system and fiber optic network modifications for controls. He replaced large split-case centrifugal high-service pumps while minimizing time out of service.

Water Treatment Plant Automation, West Palm Beach, Florida - As Project Engineer, Heath developed P&IDs for existing treatment processes and collaborated with instrumentation and system integration staff to develop plans and specifications for SCADA automation of 47MGD surface water treatment plant originally constructed in 1894. He provided operational/ engineering knowledge of facility to ensure integration with projects under design as part of overall program management.

Water Treatment Plant Bulk Hypochlorite Conversion, West Palm Beach, Florida - As Project Engineer, Heath conducted bench scale monochloramine disinfection tests to determine impact of hypochlorite on turbidity, caustic usage and disinfection byproduct formation. He implemented phased approach to dose hypochlorite while existing chlorine gas building converted to bulk storage and coordinating local subconsultants with in-house design professionals.

West Palm Beach Water Treatment Plant Treatment Alternatives Evaluation, West Palm Beach, Florida - As Lead Process Mechanical Engineer, Heath led the multidiscipline engineering evaluation of treatment facility modifications for Ion Exchange, Ultrafiltration, Actiflo, PAC, and UV treatment processes. He coordinated conceptual design with construction group to develop budget level capital and NPV costs based on geotechnical, structural, mechanical, electrical and control needs of each alternative.

Vulnerability Assessment, West Palm Beach, Florida - As Project Engineer, Heath reviewed water supply, treatment and distribution system security measures to identify system vulnerabilities. Prepare recommendations to reduce possible negative impact to water treatment and distribution systems.

Water Treatment Facility Injection Well (IW-1) Modification, Pompano Beach, Florida - Senior Engineer for this project that required preparation of specifications and review of drawings for relining of the concentrate injection well with FRP and mechanical integrity testing. Heath served as the Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Central District Wastewater Treatment Plant Design and FDEP UIC Permitting of Injection Wells, WASD, Miami, Florida - Lead Engineer This project involved coordinating mechanical wellhead design and siting of six new Class I 3,400-foot injection wells for disposal of AADF in order to comply with Ocean Outfall Elimination Legislation. Heath served as the Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Pump Station #2 Odor Control System Alternative Evaluation, WASD,Miami, Florida - Heath, as Project Engineer, directed staff engineers preparing alternative evaluation technical memorandum for chemical, biological, and absorptive odor control technologies. He analyzed historic data provided by client to determine threshold concentrations and coordinated with dispersion modeling provide by consultants. In addition, he evaluated alternatives based on construction constraints, operations requirements and risk to WASD based on sea level rise.

Water Treatment Facility Dual Zone Monitoring Well Modification, Pompano Beach, Florida - Heath served as the Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP. This project focused on preparing drawings and short-form specifications for modification of the dual-zone monitoring well purge piping. Work also included evaluation of the capability of existing pumps to operate with reduced pressure zone assembly.

Injection Well Wellhead Repair and Rehabilitation, Venice Gardens East Water Reclamation Facility, Sarasota County Public Utilities,Venice, Florida - Heath prepared specifications and drawings for modifications to injection well including purge water piping and reduced pressure zone assembly to simplify sampling. Heath served as Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Monitor Well Rehabilitation, Wastewater Treatment Facility Deep Injection Lower Zone, Palm Beach County Water Utilities Department, Pahokee, Florida - Heath provided engineering, hydrogeological, and professional services required during the rehabilitation and testing of Pahokee Wastewater Treatment Facility Deep Injection Lower Zone Monitoring Well. Heath served as the Engineer of Record providing construction and technical oversight in addition to preparation of the rehabilitation and testing report to FDEP.

New Water Treatment Plant 2, 3, 8 Production Wells, Palm Beach County Water Utilities Department, West Palm Beach, Florida - Heath prepared specifications and drawings for construction of eight new surficial production wells. The project involved design of approximately 2,000 feet of directional drill and open cut pipeline on WTP 2 site. He also coordinated mechanical pipeline design with integration of instrumentation.

Water Treatment Plant 8 Wells Rehabilitation, Palm Beach County Water Utilities Department, West Palm Beach, Florida - Heath prepared specifications and drawings for rehabilitation of five surficial production wells. Work involved removal of wellhead, inner casing, rehab of outer casing or lining with PVC, new column and pumps w/VFDs. He coordinated mechanical pipeline design with integration of instrumentation.

Lift Station 5229 Bypass,Palm Beach County Water Utilities Department, Palm Beach County, Florida - Heath reviewed previous contract documents, prepared scope and negotiated fee with design consultants to re-evaluate key re-pump station bypass alternatives and prepare construction drawings and specs. Additionally, he reviewed design approach and provided technical feedback for plan and profile drawings to facilitate bypass and emergency reverse operation of collection system flow to ECRWRF while ensuring continuous service to City of Lake Worth. He developed sequencing plan to facilitate 48-inch forcemain replacement.

Eastside Water Reclamation Facility Process Improvements, Venice, Florida - As Project Engineer, Heath coordinated multidisciplinary (mechanical and structural) design of headworks grit removal system for an 8MGD facility. He designed grit fluidization and pumping system for snail classifier as part of headcell system retrofit.

WAS Pump and Valve Replacement, West Palm Beach, Florida - As Project Engineer, Heath prepared drawings, permitting and specifications for pumping and bypass system to facilitate replacement of WAS pumps and over 120 inoperable plug valves over 8 secondary clarifiers. Prepared construction constraints, permitting, and worked with contractor to ensure continuous operation of 70MGD wastewater facility.

Aerobic Digester AB-1 Stabilization, West Palm Beach, Florida - As Project Engineer, Heath prepared specifications, permitting and drawings to facilitate pre-purchase of floating surface aerators and repairs to fixed surface mixer/aerators, and associated work necessary to stabilize sludge for dewatering and composting.

SIMON MEIKLE

P.Eng.

TITLE: Disinfection Systems Lead - Service Area 2

EDUCATION

- Bachelor of Science in Mechanical Engineering, with Distinction, University of Calgary, Calgary, Alberta, Canada, 2010

REGISTRATIONS

- Association of Professional Engineers and Geoscientists of Alberta Professional Engineer #365

Simon is a water/wastewater engineer with 13 years of experience. He is project technical lead on multi-disciplinary wastewater projects, responsible for technical design, interdisciplinary project coordination, project team integration, and overall deliverable quality assurance. Simon has been involved in a variety of water, wastewater, and pump station engineering projects. His project technical experience includes hydraulic analysis, equipment sizing and selection, treatment capacity evaluation, technical specification writing, asset condition assessments, and cost development.

RELEVANT EXPERIENCE

Fish Creek Wastewater Treatment Plant Upgrades - Phase 1 (Conceptual Design) Calgary, Alberta, Canada - Project Manager providing technology evaluation, conceptual design, opinion of probable cost development, and implementation strategy for the nitrification upgrades and peak flow management approach for the South Catchment. Simon responsibilities as Deputy Project Manager includes reporting project financials and progress to City Project Management Team. Provide oversight of deliverables for Peak Flow Management assessment, as well as technology evaluation for nitrification upgrades. Regulator engagement for PFM methodology; actively engaged with City and Regulator to develop PFM methodology and update receiving water assessment to demonstrate impact of PFM on the Bow River. Lead triple bottom line evaluation methodology development and assessment of technology alternatives for the FCWWTP Upgrades. Project is in conceptual design phase.

Bonnybrook Wastewater Treatment Plant Heating System Upgrade, Calgary, Alberta - Project Coordinator for the retrofit replacement and expansion of the Power Generating & Heating building for installation of four (4) new boilers to increase capacity of the heating system at the Bonnybrook Wastewater Treatment Plant to meet demands for future Plant expansion. Heating system upgrade includes installation of 2 new 600 hp boilers and 2 new 700 hp boilers, as well as upgrades to pumping systems and distribution piping.

Frank Wastewater Treatment Plant Expansion Project, Crowsnest Pass, Alberta - Project Technical Lead for the design of a new 24 MLD Headworks facility and secondary treatment system. Preliminary design included treatment criteria evaluation, treatment technology review, capacity assessment, and influent pumping evaluation. The expansion is focused on providing long term wastewater treatment for Crowsnest Pass, including consolidation of treatment to one primary facility.

Athabasca Camp Wastewater Treatment, Fort McMurray, Alberta - Project Technical Lead for the design/report, preparation, and evaluation of multiple treatment options for a camp in northern Alberta, including SBR, Extended Aeration and MBR. Assisted with evaluation of suitable technology, as well as preparation of design basis. Assisted with design of the selected wastewater treatment plant, which included influent equalization, sequencing batch reactor treatment, ultraviolet disinfection, and solids handling and disposal.

Town of High River Liquid Waste Management Study, High River, Alberta - Project Manager for the design, report, and evaluation of a number of wastewater servicing options for local treatment and sub-regional/regional transfer solutions, developing an OPC for each option and evaluating using NPV analysis. Stakeholder and environmental considerations were also evaluated for each option.

DAVE CLARKE

PE, CFM

TITLE: Water Transmission and Distribution Lead - Service Area 2

EDUCATION

- Master of Science in Civil Engineering, Florida International University, Miami Beach, Florida, 2008
- Bachelor of Science in Civil Engineering, Florida International University, Miami Beach, Florida, 2002

REGISTRATIONS

- Florida Professional Engineer #66553
- Florida Certified Floodplain Manager #US-12-06737
- Georgia Professional Engineer #040056

Dave is a Project Manager and Principal with Stantec. He has 20 years of experience numerous public infrastructure projects which includes coordination and design of water and wastewater utilities for major and design build projects, including urban arterials for City of Miami Beach, Miami-Dade County Water and Sewer Department (MDWASD), Hallandale Beach, Town of Davie etc. and Florida Department of Transportation (FDOT), and Florida Turnpike through Joint Project Agreements (JPAs). Dave will be project manager responsible for the overall delivery of each assigned project. Dave is a talented project manager who brings solid technical solutions to problem solving while keeping the client's needs in mind. Dave is currently assisting the City of Miami Beach with water and wastewater improvements along Alton Road through a JPAs. His technical expertise encompasses utility master planning, asset management, detail design, regulatory compliance and permit assistance, construction management and CIP development for water, wastewater and reuse conveyance projects. Dave is committed to his clients, their needs and their communities and has dedicated his career to providing planning and engineering services to water utilities throughout South Florida.

RELEVANT EXPERIENCE

Joint Participation Agreement (JPA) Relocation Plans 54-inch Watermain, Miami, Florida - Deputy Project Manager and Engineer of Record for maintenance of Traffic Plans. JPA project which included installation of approximately 1600 LF of 54-inch DIP watermain. Also includes connections to two existing 24-inch DIP watermains, and to one existing 48-inch Prestressed Concrete Cylinder Pipe (PCCP) watermain at low flow periods within the times determined by the M-D WASD. Duties includes development of scope and man hours, technical special provisions, quantities, construction cost estimate, shop drawings review, coordination with lead roadway project, and permitting through Department of Health.

Pump Station 1- Pump Station 2 Interim Piping Upgrades, Miami, Florida - Senior engineer for the suction & discharge piping upgrades at MDWASD's two largest Pump Stations (PS-1 and PS-2). Project includes new piping (42-inch, 48-inch and 60-inch), plug valves (42-inch, 48-inch and 60-inch) and fitting to allow flexibility in flow into and out of these two stations, and into the two cross-bay force main manifolds. Responsible for design, client management, permitting, utility coordination, specifications and cost estimate.

Redundant 36-inch Transmission Force Main along Snake Creek Canal, Miami, Florida - Senior Engineer for the preliminary engineer report for the installation of approximately 24, 870 LF of 36-inch Transmission Force Main (FM) for M-D WASD which will convey wastewater from PS422 (3028 NW 208th Terrance in Miami Gardens) to an existing 30-inch FM on the west side of the rail road crossing (adjacent to I-95) along the south side of Snake Creel Canal. The existing 30-inch/36-inch force main alignment begins at PS422, heads south to NW 207th Street, then continues east along NW 207th Street to NW 27th Avenue. At NW 27th Avenue the existing force main turns south and crosses to the south side of Snake Creek Canal, then turns east, continues along the south side of Snake Creek Canal, and ends on the west side of the CSX Railroad Crossing. Deliverables include PER, which will recommend the preferred route and preliminary alignment, pipeline material, construction methods and define general characteristics of the new 36-inch force mains to guide the final design.

SL-1B.1 66-inch Force Main to SDWWTP Phase 1, Miami, Florida, Miami, Florida - Project Engineer for the SL-1B.1 is an MD WASD 66-inch transmission force main proposed to convey wastewater flows from the east terminus of SL-2.2 100 feet west of the intersection of SW 112TH

Avenue and SW 216TH Street to the existing 60-inch pipe connection on an existing 72-inch transmission force main at the intersection of SW 97TH Ave and SW 216TH Street near the SDWWTP. The force main has an approximate length of 8,700 linear feet. There is trenchless crossing under the Florida's Turnpike and SFWMD's Black Creek (C-1) Canal with a Mirco-tunnel. A new 90-inch steel casing will be used to accomplish the micro tunnel.

JPA Alton Road (North) Waterline Replacement, Miami Beach, Florida - Engineer of Record for the design and construction of approximately 12,000 LF of 8" ductile iron (DI) watermain along SR 907/Alton Road, from south of 43rd Street to W 48th Street and from Lake View Drive to W 63rd Street and approximately 8,890 LF of 20" DI watermain along SR 907/Alton Road from Lake View Drive to W 63rd Street and along W 63rd Street Alton Road to La Gorce Drive. The project includes installation of new fire hydrants according to Miami Beach Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents (plans & specifications), permitting and providing support services during procurement and construction.

JPA Alton Road (South) Waterline Replacement, Miami Beach, Florida - Engineer of Record for the design and construction of approximately 5,000 LF of 8" ductile iron (DI) watermain along SR 907/Alton Road, from Michigan Avenue to North Bay Road/ Chase Avenue and approximately 2,500 LF of 12" DI watermain along SR 907/Alton Road from North Bay Road/Chase Avenue to south of Ed Sullivan Drive/43rd street. The project includes installation of new fire hydrants according to Miami Beach Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents (plans & specifications), permitting and providing support services during procurement and construction.

North Lee County WTP Wellfield Expansion, Phase III, Lee County, Florida - QA/QC Officer for this project that consists of 19 production wells—8 on-site wells at the NLC Water Treatment Plant (WTP) and 11 of-site wells—and several 10 miles of raw water transmission mains ranging in size from 10 inches in diameter to 30 inches. To reduce restoration and impacts to traffic, the new mains will be installed using trenchless drilling methods. There will be two crossings of Florida Water. A 1,000 LF horizontal directional drill (HDD) of a 24 inch HDPE pipe under Popash Creek along with a 1,000 LF HDD of a 24 inch HDPE pipe under Bayshore Creek. Stantec's services included the hydrogeological services, route evaluations, property acquisition assistance, hydraulic analyses, environmental services, detailed design, permitting, bidding assistance, and construction observation.

City of Sunrise, JPA Relocation 8-inch Watermain, Broward County Florida - Project Manager for this project for which the City of Sunrise Utilities Department owns and maintains an existing distribution 8-inch Polyvinyl Chloride (PVC) portable Watermain (WM) facility which currently serves residents and businesses along SR 84 EB between Pine Island and University Drive. It is necessary to relocate a portion of this WM along SR 84 EB to facilitate the proposed sound barrier wall number six (6) construction which consists of two sections along SR 84 EB. The firm is in charge of the design to relocate approximately 550 LF of the existing WM, the technical special provisions and permitting through FDOT (utility office) and Broward County Health Department.

Town of Davie JPA Relocation 4-inch Force Main, Broward County, Florida - Project Manager for this project. The Town of Davie Utilities Department owns and maintains an existing 4-inch Polyvinyl chloride (PVC) Force main (FM) facility which currently serves Bradford Marine. The existing 4- inch FM ties into an existing lift station at Bradford Marine then continues to the west North of SR 84 WB, Ramp U- 15 and South of Canal Drive, and diverts to the North into New River Cove Apartments, where it terminates into an existing manhole. The firm is in charge of the design to relocate approximately 942 LF of the existing FM, the Technical Special Provisions, quantities, and permitting through FDOT (utility office) and FDEP.

Town of Davie Water and Sewer Improvement, Davie, Florida - Project Manager and Engineer of Record responsible for the construction documents for the installation of approximately 2,650 LF of 8" HDPE watermain WM via pipe bursting, 4,500 LF of 6" DIP WM via open cut, 350 LF of 4" DIP WM via open cut, 18 new fire hydrants, 650 LF of 8" PVC Sanitary Sewer, 100 LF of 6" PVC Laterals and 4 New Manholes, in the Brentwood and Brentwood west community, along SW 67th Avenue, and SW 41st Street. Hydraulic modeling of the system was done to confirm WM sizes, velocities and fire flow requirements. The project is driven by the Town of Davie's desire to replace existing asbestos concrete cement (AC) water WM piping and galvanized steel service lines in the project area, provide sufficient fire flow coverage and improve the level of service by providing a more robust distribution system. The project includes installation of new fire hydrants according to Town of Davie Fire Department requirements, new water services, re-connections of existing stub outs within the project limits, roadway milling and resurfacing and replacement of pavement markings.

PAUL DEKEYSER

PE

TITLE: Value Engineering Lead - Service Area 4

EDUCATION

- Master of Sciences in Environmental Engineering, Michigan Tech University, Houghton, Michigan, 1979
- Bachelor of Sciences in Civil Engineering, Michigan Tech University, Houghton, Michigan, 1978

REGISTRATIONS

- Michigan Professional Engineer #29290

Paul has 43 years of experience in the water industry and has been involved in all aspects of project delivery throughout his career. He started as a treatment technologist specializing in dynamic modeling of advanced wastewater treatment systems and also participated in the design of a dozen treatment plants with roles ranging from staff engineer to project manager. Paul has also participated in several design-build projects as the engineering manager and was the deputy program manager for the $450 million program for the Allegheny County Sanitation Authority. In that role, his was responsible for the implementation of design improvements and direct technical interface with the client. Paul excels at leading internal team building functions to create multidisciplinary teams across companies in collaboration with clients and specializes in facilitation and conflict resolution.

RELEVANT EXPERIENCE

Allegheny County Sanitary Authority (ALCOSAN) Plant Expansion, Pittsburgh, Pennsylvania - Paul served as deputy program manager for a $450 million expansion program for ALCOSAN. Paul also managed CH2M HILL's project office at the ALCOSAN treatment plant site. The program included hydraulic and solids handling expansion and new odor-control facilities for the 757-MLD ALCOSAN wastewater treatment plant. The Engineering Program Management (EPM) project recommended $450 million of capital improvements built in three phases over a 12-year period. Predesign for the recommended facilities were prepared in 10 different packages and awarded to local design firms to maximize local involvement. Paul performed the process analyses and modeling for the recommended treatment alternatives, managed the conceptual and predesign phases, and managed a subsequent solids handling facility plan for ALCOSAN.

Bangor Wastewater Treatment Plant Expansion and Upgrade, Bangor, Maine - Paul served as project manager for design and construction phase services for a wastewater treatment project that consists of an expansion and upgrade of the existing 8MGD primary treatment plant to a 18MGD secondary treatment plant. The design was completed five months ahead of the schedule dictated by an EPA Consent Agreement and within budget. Tight site constraints were met using an innovative approach. An activated biofilter was placed on top of aeration basins to minimize land requirements. The treatment plant design incorporated operational flexibility.

Broad Run Water Reclamation Facility, Loudoun County, Virginia - As Project Manager, Paul led the engineering study that conceptualized a new 10MGD water reclamation facility to accommodate explosive growth in Loudoun County, Virginia. The treatment plant processes raw sewage into near drinking-water quality and is essentially a wastewater treatment plant in series with a water treatment plant. At completion, the facility was the largest membrane bioreactor plant in the country and has the most stringent discharge permit requirements in the nation including virus removal requirements and drinking water level standard for turbidity. During the design phase, there were still issues to be resolved including treatment plant discharge location and level of treatment required.

Piscataway Water Resource Recovery Facility (WRRF) Bioenergy, Accokeek, Maryland - As Project Executive, Paul was the project executive for a bioenergy project that upgraded WSSC's Piscataway solids handling system using the Cambi process. Stantec is providing design engineering and construction inspection services to PC Construction for this design-build project. Paul is also a member of the governing board for the DB Team. In this role, Paul participated in the design workshops as well as monthly review meetings with the client and the contractor. The design workshops created a solution that exceeded WSSC's budget and adjustments needed to be made. Paul led a client/contractor/designer meeting that prioritized scope items for WSSC.

JEOVANNI AYALA-LUGO

PE

TITLE: Process Design Engineer

EDUCATION

- Bachelor of Science in Chemical Engineering, University of Puerto Rico, San Juan, Puerto Rico, 2000

REGISTRATIONS

- Florida Professional Engineer #72421
- Texas Professional Engineer #119656
- Arizona Environmental Professional #65363
- Georgia Professional Engineer #041902
- Alabama Professional Engineer #37778
- Maryland Professional Engineer #52668
- Colorado Professional Engineer #56434

Jeovanni is a supervising engineer with 22 years of experience focusing on wastewater and residuals treatment. His experience includes residuals master plans, design, condition assessments, construction and startup of wastewater and residuals facilities.

RELEVANT EXPERIENCE

City of Sunrise Water Reclamation Facility Expansion Preliminary Engineering Report, Sunrise, Florida - As Project Engineer for this project, Jeovanni produced the Preliminary Design Report for the Sunrise Water Reclamation Facility. This facility was used as a model of water reclamation, and as such, included advance treatment techniques not usually found of facilities of this size. This included, fine screening of the influent, MBR, RO and UV technologies. Responsible for establishing the design requirements for all aspects of the treatment process. Developed initial cost estimate for the expansion of the facility.

Eastside WRF Headworks Improvements and Expansion, Venice, Florida - As Project Engineer for this project, Jeovanni conducted data acquisition and treatment process modeling (using BioWin™) for four operation scenarios at the Venice Eastside WRF. Provided recommendations on conceptual level design criteria for biological process and grit removal, process design improvements, and suggested project phasing and/or sequencing of the selected alternative. After approval from the City on the recommended process, Jeovanni worked as the process and mechanical design lead

David L. Tippin Water Treatment Facility Filtration System Replacement, Tampa, Florida - Jeovanni supervised the replacement of 32 dual media filter. The work included the demolition of the existing underdrain system and replacement with new plastic underdrains. The new underdrain system was attached to the concrete structure with anchor bolts to prevent uplift during operation. In addition, the existing sand and carbon media were replaced to improve treatment capacity of the filtration systems.

West Palm Beach Water Treatment Plant Improvements, West Palm Beach, Florida - Jeovanni served as part of the project design team for the design, permit and construction management service for the upgrade of a 47MGD plant. The design included sodium hypochlorite and aqua ammonia above grade mixing, treatment process selection, IX preliminary design and permitting, mechanical, electrical and structural condition assessment, chemical feed systems and pump station modifications.

WASD CDWWTP & SDWWTP Thickening and Dewatering System Replacement, Miami, Florida - Jeovanni was the process mechanical lead for two teams assigned to develop design criteria documents for the new thickening and dewatering facilities of WASD's SDWWTP (115MGD) and CDWWTP (143MGD). Jeovanni and his teams analyzed the biosolids production for the CDWWTP and SDWWTP. Evaluated between five thickening technologies and four dewatering technologies to recommend alternatives best suited for the department needs.

River Oaks Secondary Settling Tank No.1 Rehabilitation Hillsborough County, Florida - As Design Engineer and Project Manager, Jeovanni was responsible for the design and construction phases of the replacement of aging mechanical equipment of the River Oaks Secondary Settling Tank No.1 with new components of more compatible materials.

CRAIG KALTENBACH

PE

TITLE: Structural Engineer

EDUCATION

- Bachelor of Sciences in Civil Engineering, University of Cincinnati, 1996

REGISTRATIONS

- Florida Professional Engineer #63619
- Texas Professional Engineer #113657
- Pennsylvania Professional Engineer #078082
- Ohio Professional Engineer #65472
- Massachusetts Professional Engineer #45525
- Connecticut Professional Engineer #PEN.0030174
- New York Professional Engineer #096916
- New Jersey Professional Engineer #24GE05320300
- Virginia Professional Engineer #053224

Craig has 27 years of experience in structural engineering. His emphasis has been in structural design and construction support for projects ranging from the rehabilitation and retrofit of existing facilities to the design of efficient and cost-effective new facilities. Craig has particular expertise with water and wastewater treatment plants and collection and distribution systems.

RELEVANT EXPERIENCE

Central District Wastewater Treatment Plant 1 and Plant 2 Headworks and Grit Structures, Miami, Florida - Craig, as Lead Structural Engineer, provided visual inspection, non-destructive testing, and destructive testing of the Headworks and Grit Structures for both Plant 1 and Plant 2 at the Central District Wastewater Treatment Plant. Craig reviewed record drawings and prior inspections prior to performing a site visit to determine the existing conditions visually.

Central District Wastewater Treatment Plant Rehabilitate, Replace and Upgrade Program, Miami, Florida - Craig provided structural engineering quality assurance throughout the project design phases and consultation on the feasibility of the structural design aspects. Work included the inspection and assessment of the existing processes and associated equipment to develop a prioritized schedule to upgrade the existing facilities, an energy audit, biological process and hydraulic modeling to control and optimize treatment during all flow and loading conditions, and an assessment of regulatory compliance.

Southwest Water Reclamation Facility, Cape Coral, Florida - Craig was the Lead Structural Engineer for the expansion design and engineering services during construction of the $117.5 million Southwest WRF. This design/CM at-Risk project involved the expansion of the wastewater plant from 6.6MGD to 13.6MGD. He designed structural modifications for existing headworks, inlet screening facility, new aeration basins, new clarifiers, chlorine contact basins, sodium hypochlorite and alum storage and feed buildings, effluent transfer and reclaimed water distribution pumps, and a reclaimed storage tank.

Everest Water Reclamation Facility, Cape Coral, Florida - Craig was the Lead Structural Engineer for the design and engineering services during construction of the expansion of the $60 million Everest WRF. The structural design included two aeration basins, a clarifier, an administration building and generator building.

Van Dyke Aerator, Hillsborough County, Florida - Craig provided the structural engineering support during the design phase for two RAS/WAS pump stations and miscellaneous clarifier improvements. He also provided valuable structural engineering services during construction. Stantec was tasked with upgrading the liquid treatment process at the Van Dyke WWTF. The upgrade included replacing the aerators in two oxidation ditch systems and two clarifiers to replace existing older equipment.

W-11 Southwest RO Emergency Switchgear, Cape Coral , Florida - Craig served as Lead Structural Engineer for the emergency switchgear building replacement design and engineering services during construction of the Southwest RO WTP.

NEIL JOHNSON

PG, PMP

TITLE: Supply & Disposal Wells Professional

EDUCATION

- Master of Science, Geology, University of Florida, Gainesville, Florida, 1996
- Bachelor of Science, Geology, University of Florida, Gainesville, Florida, 1991

REGISTRATIONS

- Professional Geologist #2052, State of Florida
- Project Management Professional (PMP), Project Management Institute
- State of Florida Certified Contractor #1509641
- State of Florida Water Well Contractor #11284

Neil has more than 30 years combined experience as a project manager, hydrogeologist, geologist, driller, geotechnical inspector, and environmental technician. His experience includes staff management, construction oversight, testing, and rehabilitation of production wells, Underground Injection Well (UIC) Class I Injection well systems and UIC Class V Aquifer Storage and Recovery (ASR) wells; characterization of Coastal Plain sediments; development of drilling and sampling plans; monitor well installation; interpretation of hydrogeologic, geophysical, and geochemical data; quality control of construction methods and materials; regulatory coordination; and report preparation. Neil has performed permitting, design, construction supervision, testing, and inspection of ASR and Class I injection wells throughout Florida. This incorporates mud rotary and reverse air drilling, well construction, casing installation and pressure testing, supervising cementing, monitoring coring operations, geologic and hydrologic sampling, lithologic descriptions, conducting packer tests, mechanical integrity testing, and geophysical logging.

RELEVANT EXPERIENCE

Water Treatment Plant 9 Wellfield Expansion / Production Well Construction and Rehabilitation, Palm Beach, Florida - Lead Hydrogeologist responsible for the construction of 9 new production wells and the rehabilitation of 15 existing wells at the Palm Beach County Water Utility Department's Water Treatment Plant No. 9. He also was lead hydrogeologist for the design of nine new production wells and rehabilitation of nine existing wells for the Department's system-wide wellfield expansion, including well siting and development of technical specifications. He also oversaw well testing and the coordination of project subconsultants.

Dual Media Filter Rehabilitation (WA-27 & WA-30), West Palm Beach, Florida - Stantec assisted the City by evaluating the condition of dual media sand-GAC filters. Stantec inspected media surfaces for defects and conducted targeted evaluations of selected filters for coring investigations. Samples of media were collected for laboratory analysis including mass spectroscopy, x-ray diffraction, and a rapid small-scale column test (RSSCT) to determine expected remaining life of GAC media. Based on these investigations and air-scour operational issues, the City chose to move forward with rehabilitation of 32 filters. As part of this replacement, concrete structures and underdrains were inspected for spot repairs and rebar replacement prior to stainless steel air-scour lateral welding and re-installation. As part of these rehabilitation efforts, the City chose to replace a number of clay tile filter underdrains with new HDPE underdrain block featuring integrated air-scour wash systems.

UV System and Related Infrastructure (WA-33) West Palm Beach, Florida - Following the treatment alternative evaluation, Stantec was tasked with piloting and designing a 50MGD UV disinfection process and related infrastructure improvements. UV, with the addition of a PAC chamber for taste and odor, was determined to provide a lower capital cost alternative producing similar log credits for virus, giardia, and cryptosporidium removal and enhanced taste and odor protection from potential algae outbreaks. Design for this UV treatment process involved two potential UV vendors, a new transfer pumping station, and a new sodium hypochlorite feed room. Location of the UV building next to a historic pump station required careful architectural considerations. Sequencing of construction required demolition of structures from 1926-1947, and arterial bypassing of filtered water under demanding shut-down timeline requirements. Stantec provided pilot testing, detailed design, bidding and engineering services during construction. Construction challenges included extensive unforeseen underground conditions,

sheeting and excavating next to an active 3MG ground storage tank, dewatering, and large diameter overnight piping tie-ins.

High Services Pump Modifications (WA-33), West Palm Beach, Florida - The City of West Palm Beach utilizes seven high service pumps range in age from 30 to 50 years, with one pump being over 60 years old. These pumps were evaluated to identify opportunities to increase capacity and reduce power consumption, either through operational improvements or equipment modifications. Stantec conducted a condition assessment to document any physical deficiencies in the condition of the existing pumps. This evaluation indicated the potential to increase the capacity of three of the high service pumps with minor modifications to the existing impellers. As part of an addition to the UV system project, Stantec evaluated, designed and provided construction management services to replace the four oldest vertical suction lift pumps with new split-case horizontal centrifugal pumps and construct a new flooded-suction header to feed these pumps from the ground storage tanks. This new flooded suction header eliminated an energy-inefficient hydraulic brake assembly and allowed the City to take advantage of the full positive suction head in the ground storage tanks, saving the City up to $100,000 annually.

Powdered Activated Carbon (PAC) Treatment System (WA-28), West Palm Beach, Florida - Design of the PAC Basin involved two serpentine channels to provide 15 minutes of contact time to ensure removal of taste and odor causing compounds from surface water sources. Subsurface vibro-replacement of soil with stone columns provided the structure bearing capacity needed to construct this new pretreatment basin in a more economical manner than conventional precast concrete columns. This project also involved the replacement of aging, below-grade influent flow meters with new mag meters which could be more easily maintained. As part of this design, hydraulic evaluation revealed one of six raw water pumps would require replacement to avoid cavitation. This project also presented the opportunity to install isolating slide gates on the settled water flume bypass channel, allowing the City to use an existing bypass to their filters. Stantec provided pilot testing, detailed design, bidding and engineering services during construction.

Palm Beach County Raw Water Master Plan, Palm Beach, Florida - Project Hydrogeologist providing assistance and technical review in developing the Hydrogeologic Characterization, Alternative Water Resources, and Wellfield Testing and Evaluation Sections of the Master Plan. Neil developed the wellfield testing and evaluation criteria for the raw water supply wells. Neil reviewed the historical well rehabilitation efforts of several of PBCWUD's wells and developed a list of recommendations for future well rehabilitation.

Permitting Class V Group 7 Potable Water ASR System, Springtree Water Treatment Plant, Sunrise, Florida - Project Manager/Lead Hydrogeologist during the final permitting phase of this Class V Group 7 Potable Water ASR System project. This is the first treated water ASR system in southeast Florida to receive a Letter of Authorization to Use (LOATU) by the Florida Department of Environmental Protection. The authorization allows the City to inject, store, and recover up to 2MGD of treated groundwater. Neil negotiated the issuance of the LOATU with the FDEP and coordinated the final completion activities with the Broward County Health Department.

Broward County Water Treatment Plant, Broward County, Florida - Project Hydrogeologist responsible for the preliminary design of two Floridan Aquifer Test Production Wells and a Class I Injection Well System. The first phase of this project included a well-siting study, hydrogeologic characterization, permitting review, and Basis of Design Report. The project will ultimately provide raw water and disposal capabilities for a 7MGD ROWTP Expansion of the existing Lime Softening Water Treatment Plant.

Program Manager Services, Sunrise, Florida - Project Hydrogeologist responsible for senior technical review for several sections within the Master Plan including Raw Water Supply and Alternative Water Supply. Neil managed the development of the Floridan Aquifer analytical model. He also assisted in the development of the Regional Biscayne Aquifer numerical model.

Water Treatment Plant 9 Wellfield Expansion / Production Well Construction and Rehabilitation, Palm Beach, Florida - Lead Hydrogeologist responsible for the construction of 9 new production wells and the rehabilitation of 15 existing wells at the Palm Beach County Water Utility Department's Water Treatment Plant No. 9. He also was lead hydrogeologist for the design of nine new production wells and rehabilitation of nine existing wells for the Department's system-wide wellfield expansion, including well siting and development of technical specifications.

RICK COWLES

PG

TITLE: Supply & Disposal Wells Professional

EDUCATION

- Master of Sciences in Hydrogeology & Geophysics , Wright State University, 1993
- Bachelor of Science in Geology, Mount Union College, 1991

REGISTRATIONS

- Florida Professional Geologist #2656

Rick Cowles, with 31 years of experience, is a seasoned professional geologist who is very familiar with the City's production and deep injection wells. Between 2006 and 2013, under his previous employer, Rick worked on all the Floridan Wells at the RO Plant. Rick was the hydrogeologist for the construction of the production wells. Additionally, he was the Professional Geologist for the Maintenance of the remaining Floridan Wells. He designed the RO plant's concentrate DIW. Lastly, he facilitated the Water Consumptive Use permit for the RO Plant.

RELEVANT EXPERIENCE

City of Hollywood Well Field Expansion, Hollywood, Florida - Project Technical Lead to develop additional water supplies to meet growing demands and has received grant money from the South Florida Water Management District (SFWMD) to install four Upper Floridan Aquifer brackish water production wells. The new Floridan well sites were selected to reduce the effects of pumping on the City's existing Floridan wells. The water from all the Floridan wells is treated an existing RO plant. Because the sites for the new wells had already been permitted by SFWMD, a letteRr modification was required to relocate the new Floridan wells to locations that would reduce pumping effects on the existing Floridan wells and to reduce the potential for up conning of saline water. Groundwater flow modeling was used to demonstrate the pumping effects from the new wells on surrounding Floridan water supply users.

Broward County Well Evaluation and Biscayne Aquifer Replacement, Broward County, Florida - Project Manager for the evaluation and development of design documents for the replacement of two Biscayne Aquifer projection wells in the County's 2A well field. Based on well performance testing, it was determined that the performance of existing wells No. 8 and No. 9 could not be improved by rehabilitation. As a result, design documents were prepared to replace the production wells utilizing the existing casings and vaults. This involved increasing the size the wells final casings and deepening the wells. New pumps and motors were also designed.

Florida Biscayne Aquifer Well Field Rehabilitation, Sunrise, Florida - Project Manager for the development of a well field performance plan, conducting of 15 production well performance tests, development of a basis of design report, and development of specifications for the rehabilitation of 15 public water supply wells. The city of Sunrise has observed a substantial reduction in capacity of one of their Biscayne Aquifer well fields from 24MGD to 16MGD. As part of our investigation, we determined that the reduction in capacity was the result of poor performance of some wells and from leaking check valves. Based on the results of the investigation, it was determined that at least four production wells need to be replaced, 6 production wells are producing large quantities of sand and may need to be replaced, 9 check valves need to be replaced and 8 flow meters need to be replaced. Current work is focusing on the rehabilitation of the production wells. The next phase of work included the development of design specifications for the installation of replacement production wells, pump replacement, and wellhead upgrades.

Florida Biscayne Aquifer Well Field Rehabilitation, Sunrise, Florida - Project Manager for the development of a well field performance plan, conducting of 15 production well performance tests, development of a basis of design report, and development of specifications for the rehabilitation of 15 public water supply wells. The city of Sunrise has observed a substantial reduction in capacity of one of their Biscayne Aquifer well fields from 24MGD to 16MGD. As part of our investigation, we determined that the reduction in capacity was the result of poor performance of some wells and from leaking check valves. Based on the results of the

investigation, it was determined that at least four production wells need to be replaced, 6 production wells are producing large quantities of sand and may need to be replaced, 9 check valves need to be replaced and 8 flow meters need to be replaced. Current work is focusing on the rehabilitation of the production wells. The next phase of work included the development of design specifications for the installation of replacement production wells, pump replacement, and wellhead upgrades.

Upper Floridan Aquifer Production Well Design and CA Services, Miramar, Florida - Project Manager for the design and installation of two Upper Floridan Aquifer brackish water supply wells. Each well was capable of producing 3MGD of water. Permitting, testing and reporting was also part of this project. Each well was approximately 1,200 feet deep with a 24-inch final casing.

Upper Floridan Aquifer Production Well Design and CA Services, Hollywood, Florida - As project manager, Mr. Cowles designed four Upper Floridan Aquifer projection wells, oversaw construction administration and field services, managed aquifer testing and reporting requirements. Each production well was completed with 17.4-inch Certa-Lok casing to a depth of approximately 950 feet. The open-hole section of each well extended from approximately 950 to 1200 feet. Each well was capable of producing 1400 gpm.

Aquifer Storage and Recovery (ASR) Wells, South Florida Water Management District (SFWMD), Okeechobee, Florida - Rick served as project manager for the siting, design, permitting, construction, and testing of 50 ASR wells for SFWMD. Each ASR well will be capable of storing and recovering 5MGD of treated surface water. Work to date includes siting analysis, ASR well design, FDEP UIC permitting support, and treatment evaluations. In addition to siting and designing new ASR well systems, work also include the evaluation of the existing Kissimmee ASR well and treatment system, and conducting an MIT on the existing L-63N ASR well. This is a multi-year project and installation of the first ASR well is scheduled for the fourth quarter of 2020 once the UIC permit is received.

Water Use Permitting and Upper Floridan Aquifer Design | South Florida Water Management District, Lauderhill, Florida - Rick, as Project Technical Lead, aided in the development of a water use permit for the South Florida Water Management District utilizing Upper Floridan Aquifer as an alternative public supply. The sites for twelve Upper Floridan Aquifer wells were identified and included as part of the water use permit application. In addition, groundwater flow modeling and preliminary well design criteria were developed to support the application. The next phase of work was to install a test Upper Floridan Aquifer well and begin the development of the design documents for the construction of a RO plant.

15MGD Test Production Well Design, FPL/NextEra, Homestead, Florida - Rick served as client manager and lead for development of 15MGD test production well design and bid documents associated with source water and wellhead construction for a deep injection well system. The project involved the construction of four source water production wells that produces 15MGD of hypersaline water and the permitting of the DIW to receive the water. Construction oversight and oversight of a 15MGD injection test and long-term operational testing are part of the project.

Biscayne Aquifer, North Miami Beach, Florida - Rick served as project manager for the investigation of a PCE and VC plume migrating into the City's well field. This investigation involved installation of tri-zone monitoring wells utilizing rotosonic drilling technology, groundwater sampling, and groundwater modeling. Based on the results of the investigation, production wells were identified that needed to remain in production to capture the VOC plume. The water from these wells was then run through an air stripping system and sent to the plant for treatment.

Well Biscayne Aquifer Production Well Rehabilitation, Miami Beach, Florida - Rick acted as technical manager for the rehabilitation of three Biscayne Aquifer production wells. All three wells had casing breaches requiring the wells to be relined to remain in services. After relining of the wells, each well was acidized and redeveloped. Because of the high transmissive properties of the aquifer, very little additional drawdown was observed at the original pumping rates, although the wells had a smaller casing diameter. The relining of the wells saved the client approximately $800,000 in costs associated with design, re-drilling of wells and construction of new well heads.

VOC Plume Mapping and Groundwater Modeling, North Miami Beach, Florida - Rick served as project manager for the investigation of a PCE and VC plume migrating into the City's well field. This investigation involved installation of tri-zone monitoring wells utilizing rotosonic drilling technology, groundwater sampling, and groundwater modeling. Based on the results of the investigation, production wells were identified that needed to remain in production to capture the VOC plume. The water from these wells was then run through an air stripping system and sent to the plant for treatment.

Well Field Expansion, Production Well Design, and Construction Administration, Charlotte County, Florida - As Project Manager, Rick developed plans and specifications for the installation of an Upper Floridan and a Lower Hawthorn Aquifer brackish water production wells. The water from these wells is to be treated at the existing RO plant. The Upper Floridan well was approximately 1100 feet deep and the Lower Hawthorn well was approximately 650 feet deep. Both wells could produce 700 gpm.

BEN QUARTERMAINE

PE

TITLE: Stormwater Engineer

EDUCATION

- Bachelor of Science, University of Central Florida, Environmental Engineering, Naples, Florida, 1995

REGISTRATIONS

- Florida Professional Engineer #57571

Ben has 27 years of experience managing the design and permitting of transportation projects including all stages of project planning: the preparation of a project scope and fee, project scheduling and budgeting to ensure that the project is designed efficiently and effectively, extensive client interaction and resource allocation. Hands-on experience supporting and advising junior engineers as well as the coordination of sub-consultants and outside parties. Projects include roadway design, intersection improvements, sidewalks, trail systems, roadway master planning and the coordination of special assessment methodologies for proposed infrastructure within improvement districts in Florida. Ben takes great care to understand the existing environmental and physical conditions of a project to ensure that the proposed infrastructure will be designed with the best available data, avoiding unnecessary impacts while ensuring that any impacts that cannot be avoided are properly mitigated for. Low impact design, green infrastructure restoration, and smart landscaping are tenants of his designs.

RELEVANT EXPERIENCE

Sorrento East Integrated Water Resources Improvements, Sarasota, Florida - As Drainage Engineer, Ben was responsible for the design and permitting for the conversion of an existing, abandoned wastewater effluent pond to a stormwater treatment and flood storage facility; and the re-sizing of several culverts within the existing Sorrento East subdivision. The project was designed to improve water quality within a coastal watershed and to address localized street flooding in the existing subdivision.

Fruitville Road/Colburn Road to Debrecen Road Transportation Engineering Services, Sarasota, Florida - As Project Engineer Ben was responsible of the design s for the reconstruction of Fruitville Road from a two-lane roadway to a four-lane urban arterial over a distance of 2.1 miles. The new roadway section consists of an urban four-lane divided roadway with multi-use paths, closed drainage, signalized intersections, street lighting, and landscaping. Services also included design of a 16-inch watermain and provision of a utility corridor for existing (and future) water, wastewater, cable, and fiber optic utility service. The existing signals at Coburn Road, East Road, Tatum Ridge Road, and Sarasota Center Boulevard were upgraded to current standard, accommodating additional lanes.

Webber Street Reconstruction, Sarasota, Florida - As Project Engineer, Ben was responsible for the redesign of the Webber Street outfall to address roadway flooding issues associated with the Webber Street sidewalk improvements. Submittal of a Southwest Florida Water Management District permit modification was required to address level of service flooding and included modifications to the drainage structure and enlargement of the treatment system to ensure that the roadway level of service issue was addressed and that the improvements met original permit requirements.

Fort Hamer Road Extension - Segment C, Lakewood Ranch, Florida - Project Manager responsible for roadway and drainage design of approximately 4000 ft roadway segment with six stormwater retention ponds and wetland impacts. Oversite of the utility adjustments, Southwest Florida Water Management District Environmental Resource Permit application package efforts, no adverse stage increases by utilizing ICPR3 and Arc GIS software, water quality treatment calculations utilizing BMPTRAINS, as well as construction plans and bid documents.

RYAN CAPELLE

PE

TITLE: PFAs Lead

EDUCATION

- Master of Science in Infrastructure Systems Engineering, University of Minnesota, Minneapolis, Minnesota, 2002
- Bachelor of Science in Civil Engineering, University of Minnesota, Minneapolis, Minnesota, 1998

REGISTRATIONS

- North Dakota Professional Engineer #PE-10171
- Wisconsin Professional Engineer #41310-6
- Minnesota Professional Engineer #43142

In his 26 years of providing engineering service, Ryan has developed the ability to manage multi-discipline teams that develop effective solutions for communities through the design and implementation of water treatment, and water supply projects. He has provided service on more than 55 water treatment facilities and other water infrastructure projects. For several years, Ryan has focused his expertise in per- and polyfluorinated substances (PFAS). Ryan's work includes the design, management, and implementation of full-scale PFAS treatment facilities, pilot-scale test facilities and emergency response programs. Ryan collaborates with Stantec's Research Team and with private organizations to prepare and conduct pilot-scale analyses including procurement of experimental plans, data analysis, and economic evaluations of treatment processes/ technologies that reduce PFAS and other contaminants in drinking water.

RELEVANT EXPERIENCE

Victoria Field Water Treatment Plant, Chaska, Minnesota - Ryan performed all aspects of process design, including chemical feed systems, hydraulic profile, and treatment process design and layout. He managed construction services including construction observation, special inspection of structural components, correspondence, and coordination. Ryan oversaw execution of contract termination and completion of the project through the bonding company due to contractor default. Stantec completed a water treatment plant feasibility study that determined Chaska was overdue for an increase in treatment capacity, and ultimately designed a new 12.6MGD iron and manganese removal treatment facility. The facility includes two forced draft aerators, 45 minutes of detention at design flow, six gravity-type filter cells, three backwash retention tanks, a 750,000 gallon clearwell, and a total high lift pumping capacity of 15,000 gpm. The plant's well equipped conference rooms and educational spaces are designed to encourage community access.

Water Treatment Facility, South Bend, Indiana - Ryan was responsible for assisting in process design, writing the Operations & Maintenance Manual, and organizing and writing a marketing brochure explaining the conversion for this 15MGD water treatment facility's open house. His construction service efforts included construction management, observation, special inspection of structural components, correspondence, and communication between contractor and client. Stantec converted the South Bend Water Works North Pumping Station to a full-fledged 15MGD water treatment plant. Listed on the National Register of Historic Places, the existing 36,000 square foot pumping station interior was completely dismantled to the foundation, while preserving the historic character of the exterior shell. Stantec's engineers creatively placed the pressure filter vessels, backwash tanks, chemical feed, HVAC systems, and two-story Water Works administrative offices within the existing building.

Water Treatment Facility, Cokato, Minnesota - Ryan was responsible for performing hydraulic design and writing process specifications. This project consisted of the construction of a new water treatment plant to meet demands for the removal of arsenic, iron, and manganese from the City's groundwater supply. Work included select demolition, excavation, dewatering, backfilling, grading, paving, concrete, masonry, process equipment, well work, interior and underground piping, painting, HVAC, plumbing, electrical, and correlated items.

Water Treatment Facility Expansion, Maple Grove, Minnesota - Ryan was responsible for assisting in layout and hydraulic design and writing process specifications. Stantec provided comprehensive design services for the 15MGD expansion to this 15MGD iron and manganese removal plant, originally designed by Stantec. The project included the design of a new SCADA system incorporating the water system and 15 sanitary and storm lift stations.

SEAN COMPEL

PE, ENV SP, LEED AP

TITLE: Construction Engineer

EDUCATION

- Bachelor of Science in Civil Engineering, University of Miami, Miami, Florida, 2002

REGISTRATIONS

- Professional Engineer #66618, State of Florida
- Envision Sustainability Professional (ENV SP)
- LEED Accredited Professional, U.S. Green Building Council

Sean has 20 years of extensive experience in the planning, design, permitting and construction of civil engineering and site development projects. He has served as project construction administrator and project manager for various roadway, drainage, water, sewer, underground electrical, and industrial projects. Clients include municipalities, state agencies, educational facilities, and private businesses. His experience in construction services has allowed him to effectively deliver projects satisfying all owner requirements and goals. Responsibilities during construction include permitting, review of scheduling, and overall cost analysis.

RELEVANT EXPERIENCE

Sawgrass International Corporate Parkway - Reuse and ASR RAW Watermain - Sunrise Pipeline, Sunrise, Florida - Construction Administrator for this contract for which Stantec provided Construction Management and Engineering Services during construction for the Sawgrass Reuse. Distribution and Aquifer Storage and Recovery (ASR) Well RAW Water Pipeline System. The project consists of the installation of approximately 30,000 LF of new mains for a new reuse distribution system and a new Aquifer Storage and Recovery (ASR) well system. The portion of the work related to the new reuse distribution system consists of approximately 23,000 LF of ductile iron pipe (DIP), valves and fittings ranging in size between 4-inches and 36-inches in diameter. The portion of the work related to the new raw eater transmission main for the Sawgrass ASR Well system Design includes approximately 7,000 LF of 16-inches DIP, valves and fittings, connecting the ASR booster pump station within the Sawgrass Utility Complex and the SGF-1 ASR well.

Campground Sanitary Sewer Collection System & Electrical System Refurbishment at John Pennekamp Coral Reef State Park, Key Largo, Florida - Project Engineer and Construction Administrator for this project. The John Pennekamp Coral Reef State Park provides visitors with a gateway to the natural world. To keep this environment pristine and accessible for visitors, we constructed a sanitary sewer collection system and access roadway to service the 47-site campground. During the limited time frame during the off-peak park operations, we constructed a sewer collection system consisted of approximately 1,000 linear feet of 8” gravity sewer lines, six concrete manholes and the associated service laterals to each campsite. The lift station provided a deeper wet well as needed to accommodate the new campground collection system. We reconfigured the station electrical and piping to the new wet well layout. The electrical system refurbishment consisted of troubleshooting the recurring chronic line shorting and voltage drops, and determining which electrical wiring runs conduits, and service panels need to be replaced. Additionally, we investigated the engineering of the various existing sanitary sewer systems at the park, and of the existing and proposed adjacent Key Largo Wastewater Treatment District (KLWTD) Collection and Transmission Facilities. Our company evaluated the hydraulic capacity and loading for Pennekamp SP Lift Station No. 1.

FIU Central Utilities (LS1) Lift Station, Modesto Maidique Campus, Miami, Florida - Construction Administrator for the rehabilitation and improvements to FIU’s MMC’s primary lift station. The project consisted of the conversion of line-shaft pumps to dry-pit mounted submersible pumps and increased the capacity to 75 Horsepower. A full electrical upgrade was also performed.

FIU System Evaluation Survey (SSES) Campuswide, Modesto Maidique Campus, Miami, Florida - Construction Administrator for the implementation of the Sanitary Sewer Evaluation & Survey (SSES), consisting of inventorying the existing gravity collection system, cleaning, TV inspection, and smoke testing of all the sanitary sewer lines, laterals, and manholes in nine pump station

areas at the Modesto Maidique (University Park) Campus and the Computer Engineering and Applied Science Campus. Contractor surveyed approximately 40,000 linear feet (LF) of pipes, 152 manholes, and 280 laterals. At the time of the SSES, FIU had approximately 220,000 gallons per day of infiltration and inflow (I&I). The purpose of the SSES was to determine the conditions and severity of defects requiring repairs. Plans and specifications are currently being prepared for the necessary system repairs, with phases corresponding to the priority of the repairs, based on the amount of I&I. In total, about one-fourth of the pipes and manholes require repairs and rehabilitation. The repair and rehabilitation work was performed with ARRA funds in approximately one third of the time allocated.

FIU W1 Lift Station, Modesto Maidique Campus, Miami, Florida - Construction Administrator for this project that consisted of a new replacement triplex lift-station with 45 Horsepower which handles all of the wastewater transmission for the West and South areas of the Modesto Maidique Campus.

NW 2nd Avenue Wastewater Meter, North Miami Beach, Florida - Construction Administrator for this project which included planning, design, permitting, construction administration, certification, and conveyance of a new wastewater meter on an existing forcemain owned and operated by the City that connects to a Miami-Dade Water and Sewer Department interceptor. New meter was set inside an underground vault, provided with isolation valves and fittings, and a check valve (in separate manhole), with telemetry and controls to comply with WASD requirements. The new installation required service to be maintained during construction, and interruption of service was limited to the removal of thrust blocks to allow for the new piping to be connected. The new meter was located inside the right-of way of the South Florida Water Management District's C-9 Canal.

Doral Grande, Atlantic and Pacific Developments, Doral, Florida - Construction Administrator for this project that consisted of a regional WASD Wastewater Pump Station for the entire half section. Project included watermain extensions to serve the new development and a 20" wastewater forcemain donated to Miami-Dade WASD. Project also included full construction management including inspections and engineering support. The proposed utilities serve a 30 Acre site being developed into a 300 apartment residential community in Doral. Other improvements included paving, drainage, striping, signage, geometry and development of adjacent right of ways.

Miami-Dade DERM/DORM FEMA Drainage Improvement Project, Miami-Dade County, Florida - Project Engineer for drainage design of 34 sites throughout Miami-Dade County totaling over 12 miles of roadway, including several section line and half section line roads.

Outfall replacement at 398 Harbor Drive, Key Biscayne, Florida - Construction administrator for this drainage project which involved a new 24 inch outfit to Biscayne Bay to relieve flooding on surrounding streets. The new outfall replaced an old collapsed pipe at another location and it included a duckbill type backflow preventer. The installation of the outfall required securing a 10 foot wide easement through private property and also required close coordination and compliance with the permitting agencies including Miami Dade DERM. The Village of Key Biscayne secured a grant from FDEP and the project was successfully completed and closed out on time.

Key Biscayne Redevelopment of Gravity Drainage Wells, Key Biscayne, Florida - Project Manager and Construction Administrator for this project that involved the cleaning, rehabilitation, and redevelopment of 30 existing gravity drainage wells located throughout the Village. Responsibilities included inspections, management, and conducting testing at each well to ensure expected discharge capacity was achieved. The work was funded by a grant from the South Florida Water Management District.

Key Biscayne Zones 1 & 4 Watermain and Sanitary Sewer Replacement, Key Biscayne, Florida - Construction Administrator responsible for assisting with the administration of sanitary sewers, manholes, existing pump station upgrades and modifications, lateral connections, fire hydrants, watermain replacement including valves and appurtenances, and roadway/ right-of-way restoration, and other related work as shown on the plans.

Key Biscayne Zones 2 & 3 Reclaimed Water & Line Replacement Sanitary Sewer, Key Biscayne, Florida - Director of Construction Services responsible for the construction administration for this project that includes the construction of sanitary sewers, manholes, existing pump station upgrades and modifications, lateral connections, fire hydrants, watermain replacement including valves and appurtenances, and roadway/right-of-way restoration, and other related work as shown on the plans. In addition to observing the on-going work, digital pictures were taken at almost every visit to record the project progress.

Reclaimed Water Distribution System, Key Biscayne, Florida - Construction Administrator for this civil site work including site clearing, earthwork and grading, paving, reclaimed watermains including services, valves and appurtenances, landscaping and roadway/right-of-way restoration. The reclaimed water distribution system was installed from the northern Village limits running south, primarily along Fernwood Road, to West Mashta Drive. The project included the installation of service lines and meter boxes for future use.

CARL C CHAN

PE

TITLE: Modeling Engineer

Carl is a water resources engineer with over 23 years of industry experience focusing on wastewater and stormwater collection systems. In addition to serving as a Project Manager, Modeling Lead, Senior Technical Specialist, and Quality Reviewer in many sewer programs, Carl is also the firm's Discipline Delivery Lead under the Network Modeling Group who is responsible for providing technical direction and project delivery. Carl is committed to the water industry through his leadership roles with WEF Collection System Committee Modeling Technical Practice Group and I/I Technical Practice Group. He specializes in using a variety of collection system modeling platforms to meet clients' hydraulic modeling needs during the planning, design and implementation phases of their sewer programs.

EDUCATION

- American Academy of Water Resources Engineers Diplomate, USA, 2017
- Master of Sciences in Civil and Environmental Engineering, Norwich University, Northfield, Vermont, 2006
- Bachelor of Sciences in Water Resources Engineering, University of Guelph, Guelph, Ontario, Canada, 2000

REGISTRATIONS

- Ohio Professional Engineer #PE.69755

RELEVANT EXPERIENCE

ALCOSAN Regional Wetweather Plan Development, Allegheny County, Pennsylvania - As Senior Technical Specialist, Carl supported the development of the Wet Weather Plan by conducting long-term continuous simulation (1-year) for the entire ALCOSAN wastewater system (~ 20,000 nodes). He evaluated various alternatives that can provide the optimal CSO and SSO controls. Mr. Chan also conducted tunnel hydraulic evaluation to support the development of the Regional Wet-Weather Plan. He determined the sizing of the regional tunnel needed to provide various levels of CSO and SSO control and developed potential tunnel operation strategies to optimize the proposed tunnel usage. He also conducted modeling support to evaluated the impact of green infrastructures in reducing wet-weather improvement needs.

Rothman Road Sanitary Sewer Discharge Control Evaluation, Fort Wayne, Indiana - Carl, as Project Manager, managed this multi-year project in which CDM Smith and Fort Wayne City Utilities worked together as a team to determine a cost-effective and technically reliable solution for fulfilling Consent Decree requirements to eliminate sanitary sewer discharges (SSD) in the Rothman Road area. He provided in-person and online modeling trainings to client's engineers. Mr. Chan also conducted RDII analysis to evaluate the effective of sewer rehabilitation.

Combined Sewage Pump Station Design, Fort Wayne, Indiana - Carl was responsible for leading a team using XPSWMM model to support the hydraulic evaluation of a large wastewater pump station (770MGD) during its preliminary design phase. His responsibilities included estimating the future pumping needs to reduce CSO volume and flooding risks, supporting pump operation analysis, and confirming the configuration and pumps operation range during the final design phase. He conducted workshops with the City's staff and designer team members and was responsible for writing the hydraulic assessment report.

SCADA & Modeling Integration for Little Miami Watershed System Optimization, Cincinnati, Ohio - As Project Manager, Carl developed an innovative approach that integrated both SCADA and collection system modeling to identify RTC opportunities to optimize the wastewater system performance and operations. He led a team of water resources and automation engineers that developed a visualization tool for evaluating system operations. He also conducted long term continuous simulation to identify the potential alternative operational opportunities that could reduce capital improvement needs. He also helped MSD conducted cost-benefit analysis to support implementation of the RTC. Carl developed advanced hydraulic models to simulate the process within the seven MSDGC wastewater treatment plants. The treatment plant hydraulic models were then connected to the 50,000-node SWM (i.e. collection system model) to support sewer improvement planning.

DIANE QUIGLEY

AICP, CFM, WEDG Professional

TITLE: Funding & Grant Assistance

EDUCATION

- Master of Urban and Regional Planning, University of New Orleans, New Orleans, Louisiana, 1995
- Bachelor of Science, Geology, Nicholls State University, Thibodaux, Louisiana, 1987

CERTIFICATIONS

- American Planning Association - American Institute of Certified Planners, Chicago, Illinois, 1997
- Association of State Floodplain Managers - Certified Floodplain Manager, Orlando, Florida, USA, 2022
- The Waterfront Alliance - Waterfront Edge Design Professional, Tallahassee, Florida, 2022

Diane has over 36 years of experience in areas of resiliency, environmental, transportation and land use planning. She is experienced in the processes of project development, environmental review, and corridor studies for multiple transportation modes including transit, rail, and Intelligent Transportation Systems. Throughout her career she has focused on an integrated approach to comprehensive, collaborative solutions to infrastructure, resilience, environmental and transportation systems development. She supplements her technical experience with legislative and policy development, strategic planning, program development and management, process improvement and performance management, interagency coordination, and public involvement. She also has experience in local government planning including the adoption of land development code language, Comprehensive Plan policy amendments, including working with large agency leadership and policymakers.

RELEVANT EXPERIENCE

Florida Statewide Flooding and Sea Level Rise and Resilience Plan, Florida - As Program Director for the Resilient Florida Program, Diane was responsible for the development of the first ever Statewide Flooding and Sea Level Rise and Resilience Plan for the state of Florida. This legislatively mandated plan outlines a framework for adapting and mitigating critical assets against the impacts flooding and sea level rise. The plan consists of a list of implementation projects, totaling $270M over three years that will enhance Florida's efforts to protect infrastructure as well as inland waterways, coastlines, and shores, which are invaluable natural defenses against sea-level rise and flooding.

Development of a Standard Scope of Work for Local Vulnerability Assessments, Florida Department of Environmental Protection - Diane coordinated with staff in the preparation of a Standard Scope of Services for a Vulnerability Assessment in accordance with section 380.093 Florida Statutes. The standard scope provides guidance to local governments, regional entities, and counties in drafting a scope of services for a VA. It provides minimum technical criteria for GIS based inundation models, draft language for scope elements and a content checklist for communities to follow to ensure compliance with state laws. She was responsible for final editing and document review.

Draft Rulemaking 62S-8, Florida Department of Environmental Protection, Florida - In her role of Program Director, Diane was responsible for the oversight of a rulemaking process for FDEP Rule 62S-8 which detailed the project evaluation, scoring and ranking process for grants awarded as part of the Statewide Flooding and Sea Level Rise Resilience Plan. The rulemaking process involved collaboration with technical advisory groups, drafting rule language, conducting public workshops and collecting public comments on the Rule. The public comments were addressed and incorporated into the Rule, where appropriate.

Gadsden County Land Development Code Amendments, Gadsden County Board of County Commissioners, Florida - As Director, Diane facilitated the changes to the land development code to clarify driveway spacing requirements, parking lot paving requirements as well as revisions to the chapter relating to location, placement, and approval process for cell phone towers. She presented the proposed amendments to the Planning Commission and County Commission for approval and adoption.

BILL MARRIOTT

PE

TITLE: Lead Copper Rule

EDUCATION

- Master of Science - Environmental Engineering in Civil Engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois, 1996
- Bachelor of Science in Engineering Analysis, Clemson University, Clemson, South Carolina, United States, 1994

REGISTRATIONS

- Florida Professional Engineer #95418
- Georgia Professional Engineer #PE049717
- Louisiana Professional Engineer #PE 004728

Bill has 26 years of engineering experience in the study and design of water and wastewater treatment systems, pumping stations and pipelines. He has conducted pilot scale studies of treatment process alternatives, has experience with alternative project delivery methods and has had involvement with membrane-related project work.

RELEVANT EXPERIENCE

South Mesquite Creek Regional WWTP Screenings Handling Improvements, Mesquite, Texas - Bill served as a project engineer assisting with the design of improvements to the headworks and grit removal facility located at the South Mesquite WWTP. His primary responsibilities on this project included coordinating the layout of one new screen assembly, two screenings sluice troughs and two washer/compactor units in the newly enclosed headworks structure with the work of other disciplines.

Advanced Water Treatment (AWT) Demonstration Project, West Palm Beach, Florida - Bill assisted in the operation of two alternative technologies that were tested for advanced treatment of secondary effluent coming from the City's East Central Regional (ECR) Water Reclamation Facility. Those technologies were: 1) a combined microfiltration (MF)/reverse osmosis (RO) pilot system and 2) a UV disinfection pilot. Following treatment by these two pilots, secondary effluent flowed into a manmade wetlands area (which was the final treatment step to provide reclaimed water).

South Laredo Wastewater Treatment Plant (WWTP) 6MGD Expansion, Laredo, Texas - Bill served as a project engineer who oversaw the design of a new headworks structure, one new clarifier unit, a chlorine feed facility and a chlorine contact basin at the South Laredo WWTP. These improvements were implemented to double the plant's rated capacity, in terms of Average Daily Flow (ADF), from 6MGD to 12MGD.

DCPCMUD Wash Water Tank Replacement, Dallas, Texas - Bill served as the served as the project engineer responsible for overseeing the design and construction of a new 370,000 gallon prestressed concrete wash water tank to replace an existing welded steel storage tank. He also performed the hydraulic analysis which verified that a 6-inch gravity fill line (HDPE below grade and stainless steel above grade) could be constructed from this tank to supply finished water to the Backpulse Tank, which is a component of the plant's ultrafiltration membrane system.

Weslaco Water Treatment Plant Expansion, Weslaco, Texas - Bill served as a project engineer and was responsible for providing construction phase services related to the solids handling facilities at the Weslaco WTP. This required coordination with the Construction Manager at Risk delivery method used for the project's construction phase. He also prepared the revised CT study which addressed capacity increases for the existing Plants 2, 3 and 4 treatment basins and the new Plant 5 treatment train.

BRA Surface Water and Treatment System (SWATS) Neutralization Facility Imp., Granbury, Texas - Bill served as the project manager responsible for overseeing miscellaneous improvements to the existing Neutralization Facility at BRA SWATS plant. The primary elements that were examined included addition of a citric acid feed system for all three neutralization tanks as well as an extension of the caustic feed system.

TAB E.

Approach to Scope of Work

TAB E. Approach to Scope of Services

In the following section, you will find a discussion of Stantec's approach to the City of Hollywood's Department of Public Utilities water and wastewater treatment projects, the scope of work, and to specific issues that are important to providing these types of services. This discussion includes key issues of typical water and wastewater projects, and a detailed approach to dealing with these issues.

This approach clearly demonstrates Stantec's project understanding, knowledge of local conditions, and the specific concepts, strategies, and engineering principles that are needed to successfully complete these projects. This project approach will also demonstrate **Stantec's passion, expertise, and innovative solutions developed over decades of performing quality engineering services that will exceed your expectations for the potential water and wastewater projects listed below.**

Stantec has reviewed the City of Hollywood's Department of Public Utilities 5-year 2023 Capital Improvement Plan and we have identified key water and wastewater treatment projects that could become potential projects to be implemented under this solicitation:

- Southern Regional Wastewater Treatment Plant (SRWWTP) Oxygenation Trains Rehabilitation, Upgrade & Replace Mixers – Aeration Train #3, 4 & 5
- SRWWTP Clarifier Rehabilitation & Upgrades
- SRWWTP South Electrical Service Center Rehabilitation
- VFD for Injection Well Pumps 2&3
- SRWWTP Effluent Pump Station Jockey Pump
- SRWWTP & WTP Fire Alarm System Upgrades
- WTP Membrane Softening Trains Replacement
- East and West Elevated Tank Rehabilitations
- Filter Media and Steel Filter Replacements
- WTP Storage Tanks 3&4 Valves Replacement
- WTP ABB Flow Meters Replacement

The Stantec Project Team is committed to designing quality for the above water and wastewater treatment projects, and providing expert trusted advice to the City.

Our Commitments

- We will follow a successfully proven detailed project management plan, including strong communication guidelines and adherence to project schedule
- We will provide suggestions and ideas for innovative solutions
- We will adhere to a stringent quality assurance and quality control plan
- We will provide consulting opinions and advice, as requested regarding specific projects, working as an extension of Department staff

Each commitment helps Stantec to deliver expert consulting advice, design and engineering services that meet and exceed our clients' expectations. Additionally, we have developed and will apply innovative concepts and practices that are certain to exceed the City's expectations and contract obligations of our services and the objectives of these projects. **Our specific approach to the potential projects identified in the City's Capital Improvement Plan is described in the following pages.**

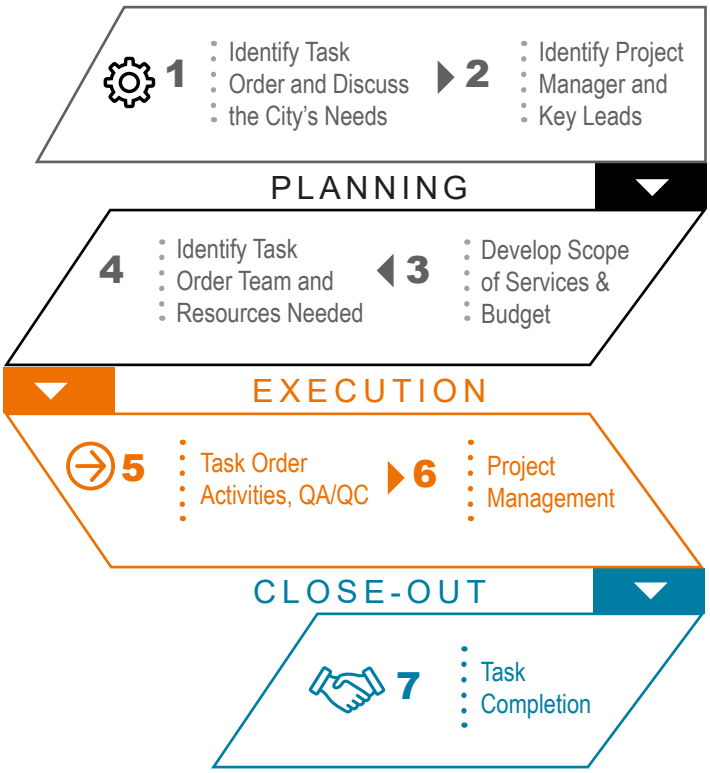
Our management approach to projects assigned in these type of services is based on the application of consistent practices through the project lifecycle. From the early conception of a project or task order, we use a robust process to guide project teams towards project delivery excellence.

PROJECT LIFE CYCLE

Project delivery requirements are aligned to the project lifecycle so that all team members know what to do, when to do it, who is responsible, and how it is done.

BEST PRACTICES IN PROJECT DELIVERY

- Defining roles and responsibilities for project leadership and key staff and setting commitment expectations for project resources
- Estimating costs using a bottom up approach and work breakdown structure
- Ensuring clear understanding of client objectives across the project team
- Defining scope specifically and breaking work down into manageable and logical activities
- Sequencing activities to meet deadlines and using resources efficiently
- Anticipating risks and planning responses appropriately
- Planning communication among project team members effectively to enable frequent exchanges of information between all project team members, the client, and stakeholders
- Planning and budgeting Health and Safety, Quality, and Environmental issues with control measures put in place to achieve expected results
- Monitoring costs and value to allow for error correction and the calculation of variances as the project gets executed.



TEAM ASSIGNMENTS

1 Listen, Discuss the City's Needs, and Identify Task Orders

The Stantec Team will respond quickly and effectively to the City's needs. A clear collaborative understanding of the City's needs will allow Stantec to rapidly identify resources and deliver the required expertise at the best possible value. The greatest reductions in overall costs occur in the earliest phases of each project or task through development of a clear needs assessment and delivery strategy.

2 Contact Project Manager and Key Leads

Once our Project Manager, Colin has discussed the task order needs with the City staff, he will identify the best team with relevant experience to complete the task. Our leadership team, consisting of our QA/QC Technical Advisors and Project Leads, all have experience working collaboratively in an integrated fashion to deliver successful projects. Key technical leads will facilitate selection of the support team members based on experience and availability. We are dedicated to providing reliable, professional services when called upon by the City.

RIGHT PERSON, RIGHT JOB

At Stantec, we place a lot of emphasis on assigning roles based on an individual's strengths and natural abilities. We specifically selected a proven multi-disciplinary engineering and support services team to support the City. Our team integrates local pumping and conveyance, as well as our water/wastewater project managers with our global network of treatment plant experts and worldwide design and construction best practices.

SCOPE MANAGEMENT AND SCHEDULE MANAGEMENT AND COST CONTROL

3 Develop Scope of Services & Budget

Colin will work with the appropriate key technical leads and subject matter experts to develop a scope and budget evaluating the associated cost and schedule risks to the project. The draft scope and budget, after internal review, will be submitted to the City. Colin and the key technical leads will identify potential risks to the project and include assumptions and potential solutions based on their experience and understanding of the project, and incorporate them into the task scope and budget. Incorporating solutions to manage these constraints early in the planning phase provides the best opportunity for the City to complete projects on schedule and within budget. Project cost and scheduling controls will be developed and maintained for each task.

REALIZING THE **VALUE**

We've found including risk mitigation considerations early in the scoping phase helps to ensure the project will meet the initial budget and schedule as planned.

SCHEDULE DEVELOPMENT

During the planning phase, Colin and key technical leads work together to develop a project milestone schedule to estimate the timeframe for the completion of specific project activities. Developed in our scheduling tool, the schedule identifies and commits the required personnel to the project. Linked to the Microsoft project schedule, the budget provides on demand earned value analysis, forecasting, and reporting to provide early analysis of variances and schedule risks. During execution of the project, Colin maintains and updates the schedule to achieve completion of the project within deadlines agreed with the client.

FEE DEVELOPMENT

The planning phase evaluates the detailed estimates of project resource costs and the estimated revenue to ensure proper control of expenditures to avoid unnecessary overruns. Project fee development will be prepared according to a detailed work breakdown structure estimated from the bottom up. The fee will be developed in accordance with the approved contract rate tables in a time and materials format with a not-to-exceed amount. This detailed level of effort with corresponding deliverables, meetings/workshops, and assumptions identified will facilitate project needs discussions with the City's project manager and ensure expectations amongst all parties are understood.

4 Team Coordination and Communications

INTERNAL DESIGN TEAM COORDINATION

Colin will hold regular progress meetings throughout the duration of the project with the design team to track project status and ensure proper resource allocation across the assigned task order projects. After these meetings, Colin will capture meeting notes, decision logs, and will identify action items for the team. These meetings will provide a regular forum within which team members representing various disciplines can share progress, findings, and concerns, and work toward the development of collaborative solutions. The progress meeting will also provide a means for the team to focus on the early identification of design issues and alternatives and discuss progress specific to each task. Depending on the complexity, schedule, and number of disciplines involved, these meetings will be held monthly at a minimum and as often as weekly for more complex projects.

REALIZING THE **VALUE**

A key focus for Stantec is delivering the project as specified, on time, and on budget. We actively seek out client feedback throughout the project life cycle so that we deliver on our commitment.

ACCOUNTABILITY

Our standard project management process ensures roles and responsibilities of everyone involved in project delivery are clearly defined. This allows performance expectations to be set and holds individuals as well as the collective team accountable. We continually collect compliance and key performance indicator data to hold team members accountable.

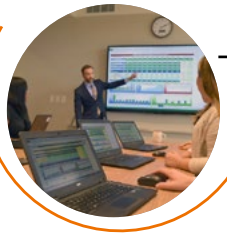
PROJECT DELIVERY

Our standard project management process ensures roles and responsibilities of everyone involved in project delivery are clearly defined. This allows performance expectations.

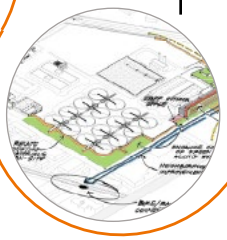
PROJECT DELIVERY

5 Task Order Activities, QA/QC

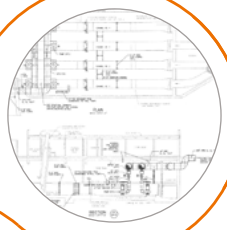
Project Kickoff
- Schedule
- Communication Protocols
- Review Existing Studies/Reports
- Interviews - Plant/Engineering Staff
- Facility Assessment
- Summary of Project Goals/Issues



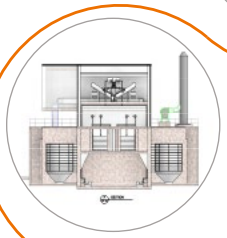
Facility Plan Development
- Develop Technical Memoranda
- Process and Facility Assessment
- Area Classification (NFPA 820)
- Process Modeling
- Hydraulics
- Unit Processes
- Constructability
- Alternative Layouts
- Sustainability
- Envision
- Electrical



Facility Plan (10%)
- Introduction of Technologies
- Basis of Design Report (BODR)
- BODR Workshop

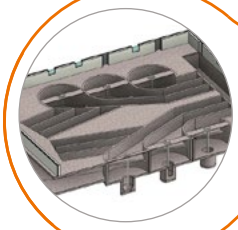


Preliminary Design (30%)
- Survey/Geotechnical Investigation
- 30% Design Documents
- QA/QC Review
- Opinion of Probable Const. Costs (OPCC)
- Value Engineering
- Design Review

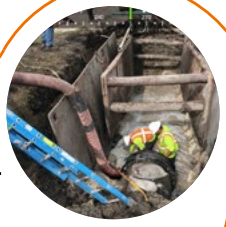


Design Development (60%)
- 60% Design Documents
- QA/QC Review
- OPCC
- Design Review Meeting

Detailed Design (90%)
- 90% Design Report
- Final Drawings/Specs
- QA/QC Report
- OPCC
- Design Review Meeting
- Permitting Reviews



Final Design (100%)
- Final Comments
- OPCC
- Final QA/QC Report



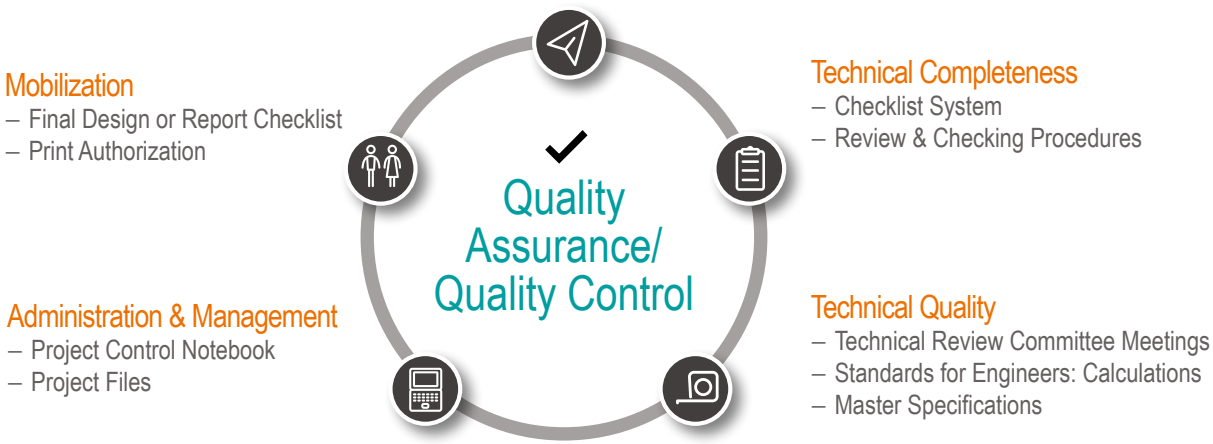
Design Service During Construction
- Bid and Award Services
- Project Representative Services
- Shop Drawings Review
- Respond Contractor Questions
- Field Inspections

Closeout/ Startup Services

Work Flow Plan

This graphic illustrates the road map Stantec will follow in delivering potable water, wastewater, and reclaimed water projects. It is specifically tailored to meet the City's goals, all milestone and contract requirements, and when and how frequently Stantec will address such critical components as QA/QC, cost estimating, and design reviews.

During the project kickoff, Stantec will establish quality assurance and control procedures to assure a solid foundation throughout the life of the project.



QA/QC PROCEDURES

During the execution phase of a Task Order, Colin will proactively communicate with the City's Project Manager or Project Engineer to ensure transfer of project information and knowledge across the integrated team. This is typically through a combination of regular meetings, conference calls, and status reports. In accordance with the accepted QA/QC plan, all deliverables will be subject to our rigorous quality review procedures. After internal review procedures are complete, Colin will submit all deliverables in draft final format to allow the City to review and comment on the work products. We will tabulate and track all review comments for resolution before final submittal of the deliverable.

THE QA/QC PLAN

The Stantec team will start each component of this project with a Quality Management Plant (QMP) prepared by a team consisting of the Project Manager, QA/QC Manager(s), and key technical staff on the assignment.

The QMP will define QA/QC procedures and responsibilities that are responsive to the City's process and standards and customized to each task. We will develop this plan based on our experience with compiling plans and performing reviews for many other similar projects. Our team partners will also be required to comply with the requirements of the QA/QC plan.

At each stage of project development, from the Facility Planning Report through construction closeout, work products will be reviewed by the appropriate technical reviewer and approved by the QA/QC manager and Project Manager prior to submission to the City.

Quality projects result from sound business and engineering practices as well as talented project management and technical staff focused on meeting the City's goals. As part of the QA/QC plan, we will integrate a Quality Management System (QMS) into all phases of the project. The following components are included in the QMS project:

1. Management actively promotes quality in activities and defines responsibilities for maintaining a quality focus.
2. Trained resources, providing quality products.
3. Processes and procedures customized to the Project's needs to promote quality in the delivery of products and services.
4. Specified QA/QC requirements included in all design and construction contracts to conform to the overall QA/QC plan. We use standardized forms for project and design audits to ensure compliance with the QA/QC plan.

6 Project Management

SCHEDULE CONTROL AND MANAGEMENT

Once work starts on the project, the actual schedule progress is tracked and compared to the baseline schedule. The earned value metric used for this is the Schedule Performance Index (SPI). Colin can easily monitor schedule and cost variances on planned, earned, and actual cost basis through earned value analysis. Project reporting is also provided on actual versus planned resource loads. On-time delivery is a key metric to assess project performance.

Effective project scheduling plays a crucial role in ensuring project success. Project scheduling impacts the overall finances of a project. Time constraints require project managers to schedule resources effectively. This is particularly true when resources must have highly specialized skills and knowledge in order to complete a task.

Stantec's proposed Project Manager Colin Devitt, PE has a track record of delivering projects within the original baseline schedules. During the scoping phase a comprehensive work breakdown structure is created where budgets, duration and resources are assigned for each task and major activities. The baseline schedule is communicated with client at kick off meeting where deliverable milestones, workshops and client review periods are provided in advance. To keep projects on track, he sets realistic time frames for her team, assigns resources appropriately, promotes communication and manages quality.

Stantec has a successful track record of delivering projects on schedule and in some cases earlier.

COST MANAGEMENT AND CONTROL

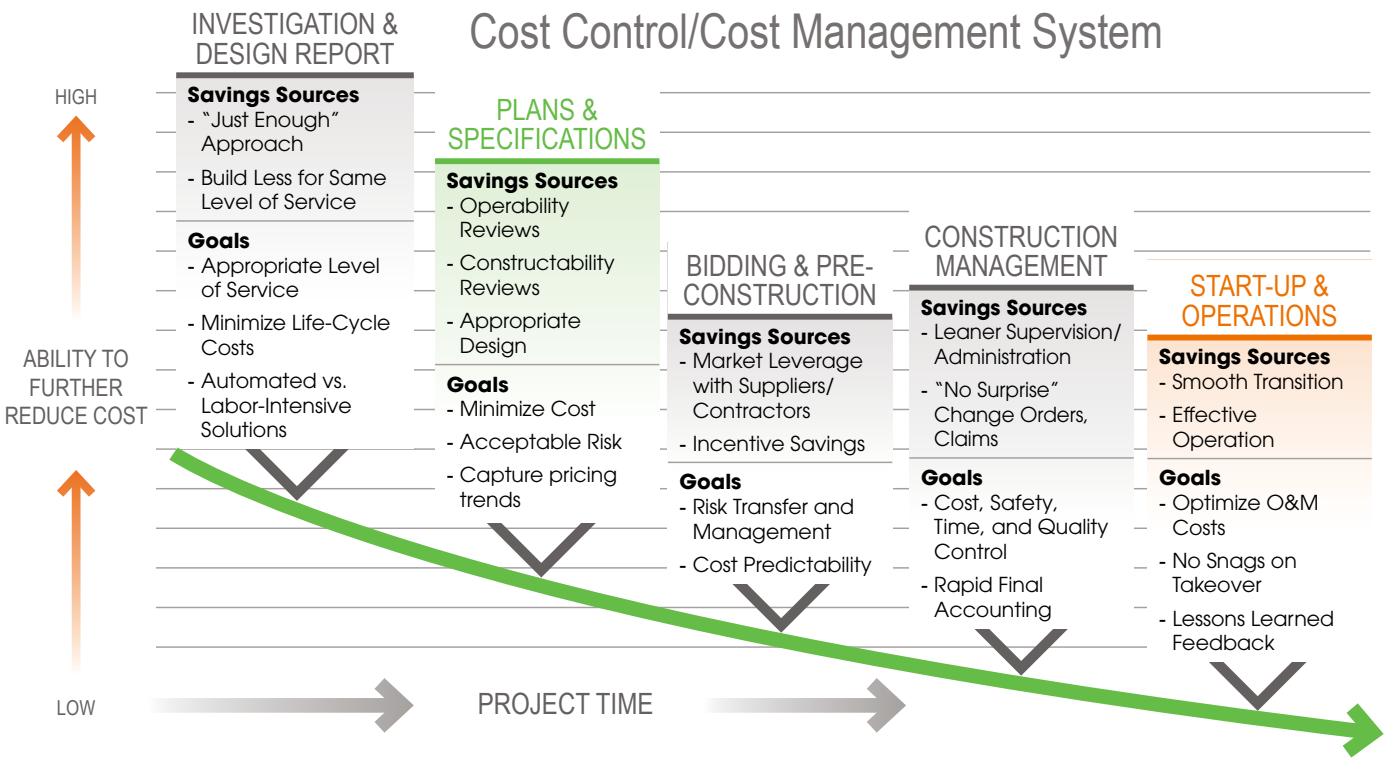
There are two types of cost management and control that our team will work proactively to manage on behalf of the City.

1. Design fee management to complete project within budget
2. Cost of construction managed through technology and design selection, risk transfer, and value engineering

MANAGEMENT OF CONSTRUCTION COST

Early in the project delivery is the greatest ability to impact costs. It is at this early stage that our design team will work with the City to review the level of service required for the given project, minimize life cycle costs, and establish project must-haves and nice-to-haves. As the design gets further developed the focus will shift to cost minimization as a function of constructability and operability of the project followed by market leverage during bidding and preparation of construction contract documents to transfer risk appropriately between the City and the contractor.

The cost control/cost management system graph below illustrates that our ability to reduce costs decreases as the project gets further developed, bid, and then constructed. Stantec will leverage our design, construction, and operations staff, in partnership with the City, to bring these various perspectives to the project to make sure costs are reviewed and minimized at every step of the project development.



DESIGN FEE MANAGEMENT

Stantec uses Oracle for project financial management which has a robust PM Dashboard and drill down information for our Project Managers to use to manage their projects. We use Earned Value Management (EVM) techniques as part of a suite of status reporting to integrate project scope, time, and cost objectives and measure these against the baseline plan during execution of the project. EVM predicts project outcomes based on actual performance to date and facilitates proactive project management, by identifying problems early on, in time to plan and implement corrective actions. Our Project Manager conduct monthly meetings with Senior Project Management Staff to review project performance.

BUDGET CONTROL

With the initiation of this contract, Colin will develop and maintain a budget for each project task assignment. Our performance on past projects is demonstrated with our timely ability to clearly communicate with the clients. This can be confirmed by the references we have provided in TAB F of this document.

Our ability to consistently achieve project objectives within budget is driven by our commitment to assign the most appropriate technical resources to the project, the diligence taken in developing the proposal to ensure the effort is aligned with your priorities, and delivering on our commitment. The cost estimate will be monitored by the project team during project execution. It will be an agenda item for all team meetings ensuring that the team remains cognizant of the projects' financial constraints. This will allow for early identification of budgetary risks and will empower the City to remain in control of the projects' scope and budget.

OUR PROVEN ON TIME/SCHEDULE AND ON BUDGET DELIVERY CONSISTING OF SUCCESSFUL CONSTRUCTION COST ESTIMATES

At Stantec, we understand the importance, level of detail needed for preparation of construction cost estimates and the ultimate use of the information. We follow the Association for the Advancement of Cost Engineering (AACE) recommended practice for cost estimating. We also understand the constraint on the utility along with importance of available funding and ability to execute projects based on available funding.

Stantec's in-house cost estimators used to work for contractors and understand details needed to develop Class I and Class II Opinion of Probable Construction Cost (OPCC) per the contract documents. These estimators are connected with local vendors and subcontractors. They also understand that there are many factors affecting the estimate accuracy, a few examples are listed below:

- Degree of project definition
- Familiarity with technology/ vendor inputs
- Complexity of project and execution
- Quality of reference cost estimating
- Assumptions used
- Techniques of estimation employed
- Time and level of effort budgeted for estimating
- Market and pricing conditions
- Currency exchange and trade tariffs

Our estimates are developed to typically match the mid-point of all bids.

The following are just a few examples of how we have been delivering projects on budget and schedule for accelerated design projects and the % difference between our OPCC and the low bid.

Project Description	Design OPCC	Low Bid Price	Difference	% Difference
CD 1.05 Effluent Pump Station	$23,678,826.00	$22,413,000.00	$1,265,826.00	5.3%
CD 1.07 Digesters and Control Buildings, Acid Phase, HW Loop & Substation	$90,921,698.00	$81,700,000.00	$9,221,698.00	10.1%
CD 2.01 Substations 7A 8A, 9A, & 10A	$ 9,194,154.00	$ 8,554,000.00	$ 640,154.00	7.0%
CD 2.08 and 2.10 Return Sludge Pump Station	$21,337,620.44	$19,325,000.00	$2,012,620.44	9.4%
CD 2.08 and 2.10 RAS Pipeline (Emergency Bid)	$1,740,839.00	$1,714,543.45	$ 26,295.55	1.5%
CD 2.11 Effluent Pump Station - ESDC	$18,643,311.00	$19,129,000.00	$485,689.00	-2.6%
CD 2.19 Co-Gen Facility	$31,353,554.00	$32,960,000.00	$1,606,446.00	-5%
CD 3.02 Primary Clarifiers ESDC	$45,980,243.00	$44,298,290.00	$632,692.47	3.7%

TAB F

References

TAB F. References

VENDOR REFERENCE FORM

City of Hollywood Solicitation #: RFQ-041-23-JJ - Water Treatment Plant and Wastewater Treatment Plant
Reference for: Stantec Consulting Services Inc.

Organization/Firm Name providing reference: City of Sunrise
Organization/Firm Contact Name: Timothy A. Welch, PE
Title: Director of Utilities
Email: twelch@sunrisefl.gov
Phone: (954) 888-6055
Name of Referenced Project: CSA Water, Wastewater, Reuse and Natural Gas
Contract No: CSA
Date Services were provided: May 2021 to On-Going
Project Amount: $734,450 (Prof. Fee)

Referenced Vendor's role in Project: ☒ Prime Vendor ☐ Subcontractor/ Subconsultant
Would you use the Vendor again? ☒ Yes ☐ No. Please specify in additional comments

Description of services provided by Vendor (provide additional sheet if necessary):
Professional Services – Water, Wastewater, Wastewater Reuse and Natural Gas Utilities Projects

Please rate your experience with the Vendor	Need Improvement	Satisfactory	Excellent	Not Applicable
Vendor's Quality of Service				
a. Responsive	☐	☐	☒	☐
b. Accuracy	☐	☐	☒	☐
c. Deliverables	☐	☐	☒	☐
Vendor's Organization:				
a. Staff expertise	☐	☐	☒	☐
b. Professionalism	☐	☐	☒	☐
c. Staff turnover	☐	☐	☒	☐
Timeliness/Cost Control of:				
a. Project	☐	☐	☒	☐
b. Deliverables	☐	☐	☒	☐

Additional Comments (provide additional sheet if necessary):
Stantec Consultants have performed superbly for our Utilities Department over the 15 plus years I've worked with them here at Sunrise.

****THIS SECTION FOR CITY USE ONLY****

Verified via:	Email:	☐	Verbal: ☐	Mail:	☐
Verified by:	Name:			Title:	
	Department:			Date:	

VENDOR REFERENCE FORM

City of Hollywood Solicitation #: RFQ-041-23-JJ - Water Treatment and Wastewater Treatment Plant Projects
Reference for: Stantec Consulting Services Inc.

Organization/Firm Name providing reference: City of North Port
Organization/Firm Contact Name: Michael Acosta
Title: Utilities Engineering Manager
Email: macosta@cityofnorthport.com
Phone: 941-240-8013
Name of Referenced Project: On-Call Engineering, WRP Biosolids Upgrades Project
Contract No:
Date Services were provided: 2015 - 2017
Project Amount: $855,000 - Engineering

Referenced Vendor's role in Project: ☑ **Prime Vendor** ☐ **Subcontractor/ Subconsultant**

Would you use the Vendor again? ☒ **Yes** ☐ **No. Please specify in additional comments**

Description of services provided by Vendor (provide additional sheet if necessary):
At the City's water reclamation facility (WRF), Stantec served as the Owners Engineer for upgrades at the WRF that expanded the facility from 3.2 MGD to 7.0 MGD. The scope of services included compliance and operations assistance, planning, permitting, design, bidding, construction, start-up assistance, resolution of regulatory issues, process modeling and facility specific studies.

Please rate your experience with the Vendor	Need Improvement	Satisfactory	Excellent	Not Applicable
Vendor's Quality of Service				
a. Responsive	☐	☐	☒	☐
b. Accuracy	☐	☐	☒	☐
c. Deliverables	☐	☐	☒	☐
Vendor's Organization:				
a. Staff expertise	☐	☐	☒	☐
b. Professionalism	☐	☐	☒	☐
c. Staff turnover	☐	☐	☒	☐
Timeliness/Cost Control of:				
a. Project	☐	☐	☒	☐
b. Deliverables	☐	☐	☒	☐

Additional Comments (provide additional sheet if necessary):
Stantec has been a part of our Continuing Services Library dating back to at least 2016, just before my employment by the City. They have always done, and continue to do excellent work. We highly recommend them.

****THIS SECTION FOR CITY USE ONLY****						
Verified via:	**Email:**	☐	**Verbal:**	☐	**Mail:**	☐
Verified by:	**Name:**				**Title:**	
	Department:				**Date:**	

VENDOR REFERENCE FORM

City of Hollywood Solicitation #: RFQ-041-23-JJ - Water Treatment and Wastewater Treatment Plant Projects
Reference for: Stantec Consulting Services Inc.

Organization/Firm Name providing reference: Seminole Tribe of Florida
Organization/Firm Contact Name: Randy Fouch, PE **Title:** Project Manager
Email: ranthusfouch@semtribe.com **Phone:** 954.203034
Name of Referenced Project: Water Supply Wells Maint. **Contract No:** WO 20845
Date Services were provided: IMM Wells 2 & 4 February 2022 to Present **Project Amount:** $49,892 (Prof. Fee)

Referenced Vendor's role in Project: ☒ Prime Vendor ☐ Subcontractor/ Subconsultant
Would you use the Vendor again? ☑ Yes ☐ No. Please specify in additional comments

Description of services provided by Vendor (provide additional sheet if necessary):
ENGINEERING SERVICES FOR DESIGN, AND SERVICES DURING CONSTRUCTION FOR A 300 GPM SURFICIAL DRINKING WATER WELL.

Please rate your experience with the Vendor	Need Improvement	Satisfactory	Excellent	Not Applicable
Vendor's Quality of Service				
a. Responsive	☐	☐	☒	☐
b. Accuracy	☐	☐	☒	☐
c. Deliverables	☐	☐	☒	☐
Vendor's Organization:				
a. Staff expertise	☐	☐	☒	☐
b. Professionalism	☐	☐	☒	☐
c. Staff turnover	☐	☐	☒	☐
Timeliness/Cost Control of:				
a. Project	☐	☐	☒	☐
b. Deliverables	☐	☐	☒	☐

Additional Comments (provide additional sheet if necessary): STANTEC IS OUR CONSULTANT OF CHOICE FOR OUR WATER SUPPLY WELLS.

******THIS SECTION FOR CITY USE ONLY******

Verified via:	**Email:**	☐	**Verbal:**	☐	**Mail:**	☐
Verified by:	**Name:**				**Title:**	
	Department:				**Date:**	

VENDOR REFERENCE FORM

City of Hollywood Solicitation #: RFQ-041-23-JJ (Water Treatment Plant and Wastewater Treatment Plant Projects)
Reference for: Stantec Consulting Services Inc.

Organization/Firm Name providing reference: Utilities Commission, City of New Smyrna Beach, Florida
Organization/Firm Contact Name: Julie A. Couillard, P.E.
Title: Director of Engineering
Email: jcouillard@nsbufl.com
Phone: 386-566-3231
Name of Referenced Project: Water Systems Operational Assessment and Optimization plan
ract No: RSQ -15 - 19
Date Services were provided: 08/27/2019 to 08/28/2020
Project Amount: $290,308.00

Referenced Vendor's role in Project: ☑ Prime Vendor ☐ Subcontractor/ Subconsultant
Would you use the Vendor again? ☐ Yes ☐ No. Please specify in additional comments

Description of services provided by Vendor (provide additional sheet if necessary): The Utility System Optimization Study evaluated operations of the water and wastewater systems to improve, re-rate capacity and prioritize capital expenditures; regulatory and permitting strategies were developed to improve operations and minimize SSO's; conditions assessments of the utility facilities (WTP, WRF, lift stations, etc) were performed to develop the R&R program.

Please rate your experience with the Vendor	Need Improvement	Satisfactory	Excellent	Not Applicable
Vendor's Quality of Service				
a. Responsive	☐	☐	☒	☐
b. Accuracy	☐	☐	☒	☐
c. Deliverables	☐	☐	☒	☐
Vendor's Organization:				
a. Staff expertise	☐	☐	☒	☐
b. Professionalism	☐	☐	☒	☐
c. Staff turnover	☐	☐	☐	☒
Timeliness/Cost Control of:				
a. Project	☐	☐	☒	☐
b. Deliverables	☐	☐	☒	☐

Additional Comments (provide additional sheet if necessary):
Stantec has been a part of OUR CONSULTING Team SINCE 2019 and are a TRUSTED ADVISORY partner IN addition to being an EXCELLENT Design Team. WE HIGHLY RECOMMEND them.

****THIS SECTION FOR CITY USE ONLY****						
Verified via:	**Email:**	☐	**Verbal:**	☐	**Mail:**	☐
Verified by:	**Name:**				**Title:**	
	Department:				**Date:**	

TAB G.

Sub Consultants Information

TAB G. Subconsultant Information

Our Team Partners

In addition to our own expertise, we have partnered with surveyors and mappers, geotechnical, water & wastewater, and structural engineering firms to deliver the best solutions for the City of Hollywood.

C Solutions, Inc., established in 2005, is a minority owned small business enterprise certified to do business in Florida with offices in Broward, Miami Dade, Palm Beach and Orange Counties. They believe that providing the right solution relies on quality of the client relationship and are committed to a shared understanding of the challenge, the need and the desired result. Their expertise includes planning, design, permitting, and construction management of water, wastewater and reclaimed water infrastructure projects for public municipalities.

Metco Southeast, LLC is a minority owned firm established in 2008 to provide multi-disciplined Consulting Engineering Services to meet the needs of the communities located in the State of Florida in the areas of Water and Wastewater Systems. Metco Southeast is a Certified Small and Disadvantage Business with multiple agencies throughout the region including Broward County. Since its inception, Metco Southeast has established a well-earned reputation for the delivery of complex design engineering solutions in addressing the needs of the most challenging engineering projects.

Pangeo Consultants, LLC, with over 18 years of experience in the field of geotechnical and structural engineering, is a Broward County based consulting firm with a commitment to providing responsive, innovative, and cost effective solutions.

Pangeo Consultants specializes in the field of geotechnical engineering with a focus on the South Florida region. Their vast experience allows them to more effectively prescribe field studies from which their clients may anticipate and mitigate potential subsurface issues early in the project timeline, thereby avoiding time and cost overruns.

PGC also offers construction phase inspections of pile installation (auger cast, driven, and sheet piles), groundwork modification and chemical grouting procedures, quality control and quality assurance testing of construction materials, and structural inspections to verify methods of construction comply with the contract documents.

Stoner & Associates, Inc. was founded 1988 and has developed a reputation as a professional, reliable company that provides accurate surveys, legal documentation, and associated services combined with dependability for over two decades.

Today, Stoner & Associates has over fifteen employees, including four Licensed Professional Surveyor and Mappers, supervising four survey field crews. Stoner & Associates maintains an office in Fort Lauderdale, Florida.

CSOLUTIONS
bringing solutions to mind

Felipe A. Martinez, P.E.

Director of Engineering

Education

M.S. – Civil/Environmental Engineering, Louisiana State University, 2001

B.S. – Civil Engineering, Universidad del Valle (Cali, Colombia), 1996

Registration

Professional Engineer: Florida (License No:68402)

Felipe Martinez is a civil / environmental engineer experienced in wastewater and water treatment process design, water distribution systems, wastewater collection and transmission systems, water reuse systems, hydraulic modeling, permitting and construction management. Mr. Martinez has over 24 years of experience in the program management, planning, design, and construction of water and wastewater facilities in the United States and overseas.

MASTERPLANS:

Design Project Manager, Miami-Dade Ocean Outfall Legislation (OOL) Program, Miami-Dade County, Florida. Mr. Martinez served as Design Project Manager for this program. The $2.55 billion master planning program addressed implications of new state regulations as well as threats of sea level rise and storm surge to their wastewater infrastructure. The 11-year OOL Program is driven by a regulatory mandate from the Florida Legislature to dramatically reduce wastewater discharge to the Atlantic Ocean by 2025. Mr. Martinez shared responsibility for wastewater system master planning, as well as management of the overall delivery of a long-term program encompassing design, procurement, construction, and commissioning of approximately 3 of the 26 major capital projects.

Project Manager, Sewer Implementation and Consent Order Program, Fort Lauderdale, Florida. Mr. Martinez participated in the $144 million Sewer Design and Implementation Program for the City of Fort Lauderdale. Mr. Martinez worked as the Project Manager for the NE 25TH Ave. 24-Inch Force Main Replacement project which consists of the replacement approximately 5,500 linear feet of the existing 24-inch Reinforced Concrete Pipe (RCP) along NE 25th Avenue. Mr. Martinez also served as a Project Manager for NE 38TH ST. 42-Inch Force Main which will replace approximately 8,000 feet of 42-inch Ductile Iron Pipe (DIP) force main along NE 38th Street and the construction of 3,000 feet of new 24-inch force main along NE 19th Ave. Additionally, Mr. Martinez was the project manager for the GT Lohmeyer WWTP Effluent Pipe project which contains the replacement or rehabilitation of the 54-inch force main that extends from the G.T. Lohmeyer Wastewater Treatment Plant (WWTP) to the deep injection wells (DIWs). Mr. Martinez responsibilities included defining scope of service, deciding the project delivery method, ratifying the project schedule and cost, and reviewing preliminary design alternatives.

Project Manager, FL Stormwater Program; Cordova Road and Isle of Palms Seawall Replacements, Fort Lauderdale, Florida. Mr. Martinez workied a project manager for the construction services of the Cordova Road Seawall and Isle of Palms Seawall replacement projects. The Cordova Road seawall is located on Cordova Road from North of SE 12 Street to South of SE 8 Street at the City's Right of Way located in the east side of Cordova Rd. The wall is approximately 2, 203 LF. The Isle of Palms Drive seawall is located on Isle of Palms Drive, South of Las Olas Blvd. and East of Royal Plaza Drive. This seawall is approximately 922 LF. Construction cost is $7,712,000. Mr. Martinez responsibilities comprised logging requests for information and issuing necessary technical interpretations and clarifications of the Construction Contract Documents; developing and/or issuing requests for routine project cost

and/or schedule changes from the Contractor; logging, tracking, reviewing and processing shop drawings, manufacturer operation and maintenance manuals, and any other submittals; reviewing applications for payment and accompanying data, determining the amounts owed, and recommending approval of payments due the Contractor; conducting a progress meeting with the Construction Contractor and the CITY to review project status and identify issues that may affect the project schedule.

WASTEWATER:

Design Engineer, Southern Regional WRF, Palm Beach County, Florida. Mr. Martinez conducted data collection, hydraulic modeling and general process design for expansion of the Palm Beach County Southern Region Water Reclamation Facility from 30MGD to 35MGD capacity, including headworks, aeration basins, secondary clarifiers, effluent pump station, gravity belt thickening, belt press dewatering systems, anaerobic digesters and disinfection system. Additionally, Mr. Martinez provided design, cost estimating and permitting assistance for the 3MGD PBC Century Village North Reclaimed Water Production Facility included disc filters, chlorine contact/storage tanks, distribution pumps, and bulk sodium hypochlorite.

Design Engineer, Wastewater Consulting Services (Various contracts since 1987) Palm Beach County, Florida. Mr. Martinez has provided study, design, permitting, and construction administration and/or management services on numerous wastewater projects for Palm Beach County. Project assignments have included the Wastewater Master Plan, Glades Wastewater Master Plan, SRWRF Screen Evaluation and Headworks Bypass, Spanish Village Reclaimed Water Facility.

Design Engineer, Thomas P Smith Water Reclamation Facility, Tallahassee, Florida. Mr. Martinez participated in the design and construction administration of Tallahassee Thomas P. Smith Water Reclamation Facility Improvements Project. Mr. Martinez worked in the design of the high-level disinfection facilities consisting of deep-bed denitrification filters, chlorine contact basins and a bulk sodium hypochlorite storage/feed system, as well as the solids processing facilities including primary sludge thickening/fermentation, waste-activated sludge storage, a gravity belt thickening building, digested sludge storage, and centrifuge dewatering

Design Engineer, City of Sunrise, Florida. Mr. Martinez served as project engineer for the planning, design, cost estimating, permitting, bidding and construction management of the South West Wastewater Treatment rehabilitation and expansion. Mr. Martinez responsibilities were the design of the headwork facilities, secondary clarifiers, RAS and WAS pumps station, high-level disinfection facilities consisting of deep-bed filters, chlorine contact basins and a bulk sodium hypochlorite storage/feed system. Mr. Martinez also worked in the process design, binding, and construction management Springthree Wastewater Treatment Plant bulk sodium hypochlorite storage/feed system. Additionally, Mr. Martinez worked in the City of Sunrise Water and Wastewater Capital Improvements Master Plant. His functions were program planning, assets inventory and evaluation, cost estimating, and capital improvements development.

Design Engineer, Loxahatchee River District, Town of Jupiter, Florida. Mr. Martinez served as project engineer the design of return and waste activated sludge systems, a solids storage and transfer system, solids de-watering, disinfection system, and reclaimed water facilities for the 2MGD expansion to the existing 9.0-mgd Water Reclamation Facility.

METCO Southeast CONSULTING ENGINEERS

RAJARAM VIJAYENDRAN, PE

PRINCIPAL ENGINEER

Mr. Vijayendran has over 40 years' experience as Principal Engineer and Project Principal for several capital improvements projects relating to water and wastewater distribution and treatment systems. He has served on the primary client contact on several municipal projects. His expertise also includes preparation of project plan for SRF funding on Wastewater Treatment Plant Improvement Projects.

EDUCATION

B.A., 1973
Electrical Engineering
Annamalai University, India

M.B.A., 1984,
Finance Wayne State University, MI

LICENSES/ REGISTRATIONS

Professional Engineer, Florida, Michigan, Ohio, Pennsylvania

YEARS OF EXPERIENCE

Total Years – 45 years

Current Firm – 38 years

PERCENTAGE OF TIME

10-15%

Relevant Project Experience:

Principal Engineer - Deep Injection Wells No. 3 and 4 Pump Station Project No. 18-9119A - City of Hollywood, Broward County

METCO was tasked to develop preliminary design task memorandum and detailed design documents for major HVAC, plumbing and fire protection system associated with two major facilities namely: new Injection Well Electrical Service Center (IWESC) Building and Injection Well Pump Station No.2 (IWPS2) Building. The IWESC is the main switchgear and standby power generation building which also receives power from utility company. This building also has the utility metering and automatic throw-over switch (ATO) vault that will be owned, operated and maintained by FPL. The IWPS2 is the pump station that has the medium voltage variable speed controllers and associated switchgear for the operation of the injection well pumps. The electrical system for the new Injection Well Pump Station and related facility will require new dual 13.2 kV primary service from FPL and standalone standby power generation system to match the design principles of the existing Plant and the electrical design requirements as mandated by EPA for such facility. Due to relatively high horsepower rating of the pump motors at 1250HP, the IWESC and the IWPS2 buildings are large to house all the electrical and mechanical equipment required for the current and future pump operations. His responsibilities include providing basic design parameters such as equipment sizing, building mechanical parameters, and process performance requirements for these two buildings.

Principal Engineer: North Regional WWTP Fine Bubble Aeration Basin Conversion; Broward County Water & Wastewater Services

Provide Engineering Services for design, permitting and engineering during the construction for the conversion of the mechanical aeration systems with Modules A, B, and D of the North Regional WWTP to fine bubble aeration systems. His responsibilities include field investigation and preparation of drawings and specifications for electrical system modifications.

Principal Engineer – Master Pump Station 456 Improvements at North Regional WWTP, Broadview, FL

The project involved converting the Master Pumping Station MPS-456 from a wet well pumping system to an in-line pumping system. This required modification to the yard piping and converting the wet well area to a mechanical equipment room for adding new jockey pumps. The station's two existing 100 HP main pumps and their VFD's were replaced with new pumps, motors, VFDs and electric powered discharge valves. Two new 15 HP jockey pumps with VFDs and electric powered discharge valves were added. All HVAC equipment was replaced. The existing 480V MCC, the utility transformer, the 250 KW emergency generator and 400 Amp automatic transfer switch was replaced. All light fixtures, the lighting panel and transformer were replaced.

Project Principal: 3C Potable Water Storage Tank, Broward County Water and Wastewater Services; Miramar, Florida

Provided construction phase services for HVAC, Plumbing and Fire Protection Systems which included: Review of contractor submittals including shop drawings, F/P hydraulic calculations, operational and maintenance manuals, testing and balancing reports.

Project Principal: Pump Station 310 Relocation, Broward County Water and Water Services; Fort Lauderdale, Florida

Provided engineering services to prepare design documentation and contract specifications for HVAC, Plumbing, Sprinkler Systems and to provide engineering assistance during the project bidding process.

Principal Engineer – Master Pump Station 450 Improvements at North Regional WWTP, Broadview, FL

The project involved converting the Master Pumping Station MPS-456 from a wet well pumping system to an in-line pumping system. This required modification to the yard piping and converting the wet well area to a mechanical equipment room for adding new jockey pumps. The station's two existing 100 HP main pumps and their VFD's were replaced with new pumps, motors, VFDs and electric powered discharge valves. Two new 15 HP jockey pumps with VFDs and electric powered discharge valves were added. All HVAC equipment was replaced. The existing 480V MCC, the utility transformer, the 250 KW emergency generator and 400 Amp automatic transfer switch was replaced. All light fixtures, the lighting panel and transformer were replaced.

Principal Engineer: Effluent Pump Stations Electrical Improvements-Pumps 1 thru 6 - BODR, Detailed Design, Permitting, and Bidding Services at South District WWTP; Miami Dade Water and Sewer Dept.

The project involved replacement and upgrade of existing medium voltage (5kV) switch gear equipment, primary power transformers, medium voltage VFDs and motors, and low voltage switchgear and MCCs. The scope of work included design of major Electrical, and I&C improvements associated with Effluent Pump Station Upgrade at Central District WWTP.

Principal Engineer: Headworks Plant 1 and Headworks Plant 2 and Odor Control Systems at Central District WWTP; Miami Dade Water and Sewer Dept.

The project involved replacing all electrical power distribution equipment and all controls. Hydrogen sulfide gas in the plant's headworks areas had been causing severe corrosion in the existing motor control centers and power distribution panels. Two new electrical buildings were designed to provide a contaminant free environment for the new motor control centers, lighting panels, automatic transfer switches, and control panels.

Principal Engineer: Chlorination Facilities Detailed Design, Permitting, and Bidding Services at Central District WWTP; Miami Dade Water & Sewer Dept.

The project involved replacing the plants chlorine evaporators with a more energy efficient sodium hypochlorite disinfection system. The project involved designing a new building for the sodium hypochlorite storage tanks, a pump room for the truck unloading pumps, transfer pumps and metering pumps, also included two satellite buildings with sodium hypochlorite day tanks and metering pumps. In each of the three new buildings, a dedicated electrical room was designed to provide a contaminant free environment for the new motor control centers, lighting panels automatic transfer switches, power distribution panels and control panels.

Principal Engineer: OOL Program - Municipal Injection Wells and Pumping Stations Improvements at Central District WWTP; Miami Dade Water and Sewer Dept.

As part of our overall contract for the program, METCO was tasked to develop Preliminary design Task memorandum and detailed design documents for major Electrical, HVAC, Plumbing and Fire protection System associated with new Injection Well Pump Station and associated Electrical Substations at Central District WWTP of WASD. The new Injection Well Pump Station under OOL Program is designed to pump treated effluent through a pressurized conveyance system to seven new injection wells for final disposal. The new Injection Well Pump Station is comprised of Eight (8)- 900 HP Pumps, each rated for a capacity of 19 MGD.

PANGEO CONSULTANTS
GEOTECHNICAL ENGINEERING AND INSPECTIONS

Years of Experience:

- 18

Education:

- Louisiana State University-Baton Rouge
- BS in Civil Engineering –2003

Registrations:

- Professional Engineer State of Florida #68448

Professional Memberships:

- FES - Florida Engineering Society-Broward Chapter Past President
- ASCE

Awards:

- Outstanding Technical Achievement by the Florida Engineering Society Broward Chapter 2014

PAUL C. CATLEDGE, P.E.
PRINCIPAL 2017 - Present

Mr. Catledge is a graduate of Louisiana State University with a B.S. in Civil Engineering, with over eighteen (18) years of engineering experience including geotechnical analysis, design and inspection of deep and shallow foundation systems, and structural design. Mr. Catledge also has thirteen (13) years of experience overseeing and performing construction materials testing and structural inspections. He is registered in multiple states including Florida, New York, Indiana, Texas, Kentucky, Michigan and Louisiana. He is a member of ASCE and a past President of the Broward Chapter of the Florida Engineering Society. He is a founding principal of PanGeo Consultants.

The following is a partial listing of his project experience.

RELATED EXPERIENCE

Joint Government Center Campus, Fort Lauderdale, FL
This project called for the construction of a new 28 story state of the art Joint Government Center Campus to include a new bus transit terminal, a maintenance facility and administration offices for Broward County's Transportation Department, a multi-story parking garage, future office space, retail areas and other amenities. The Campus is anticipated to include a multi-story Class "A" office building or a series of buildings of approximately 700,000 sq. ft. inclusive of approximately 150,000 sq.ft. for City use in addition to the parking garage and bus terminal. Conducted soil borings and produced a geotechnical report for the construction.

Miami-Dade County Airports - Runway, Taxiway and Apron Rehabilitation, Miami-Dade County
Performed geotechnical sampling and studies at Miami International Airport, Opa Locka Airport, Tamiami Airport, Homestead Airport, and Dade Collier Airport in order to evaluate pavement condition as well as recommend repairs and/or pavement design for reconstruction of damaged structures. Included coordination of activities with airport staff for runway closures, determining necessary laboratory testing, analysis and design.

MDC Homestead Campus, Parking Lots 55, 56 & 57, Homestead, FL
This project called for the construction of a new parking lot with guard house, marquees, pedestrian and vehicular monuments and other amenities. Performed borings, exfiltration tests and produced a geotechnical report for the construction.

Homestead General Aviation Airport, Homestead, FL
The asphalt paved runway section was reviewed for serviceability. Performed borings and produced a geotechnical report.

Proposed Roundabout, North Miami Beach, FL
This project called for the construction of a new roundabout at NE 14th Ave & NE 151st St in North Miami Beach. Minor slope adjustments, driveway harmonizations and a new

drainage system were included in the construction. Performed borings, exfiltration tests and produced a geotechnical report for the construction.

Proposed Exit Road from Blue Garage (PG2), Miami, FL
This project called for the paving of an existing grass area for an at grade access road to the existing Blue garage (PG2) at the Modesto A. Maidique Campus in Miami. Performed borings, exfiltration tests and produced a geotechnical report for the construction.

Broward College Parking Garage, Davie, FL
Performed the site analysis and geotechnical design for the pile supported 6 story parking garage as well overseeing the pile load test, testing and inspections during construction.

42nd St. Bridge, Miami, FL
Conducted a geotechnical exploration and evaluation for the design and construction of the 42nd St. Bridge in Miami, Florida. Performed foundation analyses for the proposed bridge that included compression, tension, and lateral load capacity predictions of square driven precast prestressed concrete pile foundations, as well as settlement estimates and pile installation criteria and addressed the potential impact of pile driving vibrations on the existing structures including utilities.

College Avenue Phase II Roadway Improvements, Davie, FL
Conducted geotechnical analysis for the reconstruction approximately ½ mile of College Ave in Davie, FL. Provided analyses included soil preparation recommendations as well as suitable layer thicknesses and relevant LBR values.

Highlands Drive Roadway Improvements, North Miami, FL
Performed the geotechnical analysis and design plans for the reconstruction of Highland Boulevard as a two-lane boulevard from Biscayne Boulevard south to interface with a new roundabout that is currently being designed at NE 137th Avenue.

Interstate 10 Expansion Drilled Shafts, Lafayette LA
As an employee of the Louisiana Department of Transportation and Development (LaDOTD) monitored the installation of four, 60-inch diameter drilled shafts as part of Interstate 10 widening through Lafayette, La.

I-10 Crossover, Slidell, LA
Designed the alignment of a temporary crossover bridge for Interstate 10 over Lake Pontchartrain after Hurricane Katrina. Portions of 1-10 were washed out by the storm surge and traffic was rerouted to the least affected section in order to perform emergency repairs.

I-75 Express Lane Segment D, Miramar, FL
Determined scope of work and subsequent geotechnical analyses for the new roadway section to be located in the median of Interstate 75.

STONER & ASSOCIATES, Inc.
SURVEYORS - MAPPERS

James D. Stoner, P.S.M.
President

Professional Profile

Mr. Stoner is a second generation Land Surveyor, with over forty years of surveying experience in South Florida. He began his surveying career at Williams, Hatfield, & Stoner, Inc. working from the bottom as a Rodman, all the way up to Vice President of the Surveying Department.

Mr. Stoner founded Stoner & Associates, Inc. in 1988, based on the philosophy that attention to detail and quality work would create a successful firm. He manages all aspects of the firm's growth and development.

Mr. Stoner has supervised both small and large scale surveying projects. His firm has successfully completed numerous roadway and other various projects, while working directly with the clients and consultants.

Education

Associates of Science in Land Surveying
Palm Beach Community College in 1979

Professional Registrations

State of Florida Professional Surveyor and Mapper
License Number LS4039

Professional Affiliations

Florida Surveying and Mapping Society
Florida Surveying and Mapping Society – Broward Chapter
American Congress on Surveying and Mapping
Leadership Broward

TAB H.

Financial Resources

TAB H. Financial Resources

Stantec Inc. is a publicly traded entity listed on the New York Stock Exchange (Symbol: STN) and the Toronto Stock Exchange (Symbol: STN). We are required to be financially stable in order to maintain these listings and we are required to adhere to the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission "(2013 framework)" (the COSO criteria). We are subject to ongoing independent audits that prove our financial stability and credit worthiness.

For a complete view of our audited financial statements, visit the Financial Information section of our web site at https://www.stantec.com/en/investors/stantec-financial-information. Please note that Stantec Inc.'s operating subsidiaries and affiliates (e.g., Stantec Consulting Ltd., Stantec Consulting Services Inc., etc.) are not publicly traded, but are owned and/or controlled by Stantec Inc. Stantec Inc.'s financial statements are consolidated to include its subsidiaries and structured entities that are controlled, but do not necessarily include all affiliates. Detailed financial statements for the past 3 years are included under separate file.

Consolidated Financial Statement - Years Ended December 31, 2021, and 2020 are attached.

Management Report

The annual report, including the consolidated financial statements and Management's Discussion and Analysis (MD&A), is the responsibility of the management of the Company. The consolidated financial statements were prepared by management in accordance with International Financial Reporting Standards. Where alternative accounting methods exist, management has chosen those it considers most appropriate in the circumstances. The significant accounting policies used are described in note 4 to the consolidated financial statements. Certain amounts in the financial statements are based on estimates and judgments relating to matters not concluded by year-end. The integrity of the information presented in the financial statements is the responsibility of management. Financial information presented elsewhere in this annual report has been prepared by management and is consistent with the information in the consolidated financial statements.

The board of directors is responsible for ensuring that management fulfills its responsibilities and for providing final approval of the annual consolidated financial statements. The board has appointed an Audit and Risk Committee comprising four directors; none are officers or employees of the Company or its subsidiaries. The Audit and Risk Committee meets at least four times each year to discharge its responsibilities under a written mandate from the board of directors. The Audit and Risk Committee meets with management and with the external auditors to satisfy itself that it is properly discharging its responsibilities; reviews the consolidated financial statements, MD&A, and the Report of Independent Registered Public Accounting Firm; and examines other auditing and accounting matters. The Audit and Risk Committee has reviewed the audited consolidated financial statements with management and discussed the quality of the accounting principles as applied and the significant judgments affecting the consolidated financial statements. The Audit and Risk Committee has discussed with the external auditors the external auditors' judgments of the quality of those principles as applied and the judgments noted above. The consolidated financial statements and MD&A have been reviewed by the Audit and Risk Committee and approved by the board of directors of Stantec Inc.

The consolidated financial statements have been examined by the shareholders' auditors, PricewaterhouseCoopers LLP, Chartered Professional Accountants. The Report of Independent Registered Public Accounting Firm outlines the nature of their examination and their opinion on the consolidated financial statements of the Company. The external auditors have full and unrestricted access to the Audit and Risk Committee with or without management being present.

Gord Johnston
President & CEO
February 23, 2022

Theresa Jang
Executive Vice President & CFO
February 23, 2022

Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining an adequate system of internal control over financial reporting. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards (IFRS). Management conducted an evaluation of the effectiveness of the system of internal control over financial reporting based on the framework in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework).

Management has assessed the effectiveness of the Company's internal control over financial reporting, as at December 31, 2021, and has concluded that such internal control over financial reporting is effective. PricewaterhouseCoopers LLP, which has audited the consolidated financial statements of the Company for the year ended December 31, 2021, has also issued a report on the effectiveness of the Company's internal control over financial reporting.

As permitted by published guidance of the U.S. Securities and Exchange Commission (SEC), management's evaluation of and conclusions on the effectiveness of internal control over financial reporting did not include the internal controls of Greg Tucker and Associates Pty Ltd., Clever West Investments Pty Ltd., Paleo Solutions, Inc., Driven by Values B.V., the North America and Asia Pacific engineering and consulting groups of Cardno Limited, and Cox|McLain Environmental Consulting, Inc., which are included in the Company's 2021 consolidated financial statements because they were acquired by the Company through business combinations during 2021. The aggregate assets of these entities represent 5.1% of the Company's total assets as at December 31, 2021, and the aggregate gross revenue earned from the date of acquisition to December 31, 2021, represents 1.9% of the Company's gross revenue for the year ended December 31, 2021.

Gord Johnston
President & CEO
February 23, 2022

Theresa Jang
Executive Vice President & CFO
February 23, 2022

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Stantec Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting
We have audited the accompanying consolidated statement of financial position of Stantec Inc. and its subsidiaries (together, the Company) as of December 31, 2021 and the related consolidated statements of income, comprehensive income, shareholders' equity and cash flows for the year then ended, including the related notes (collectively referred to as the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and its financial performance and its cash flows for the year then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle
As discussed in Note 6 and Note 33 to the consolidated financial statements, the Company changed the manner in which it presents the consolidated statement of cash flows in 2021.

Basis for Opinions
The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audit of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management's Annual Report on Internal Control over Financial Reporting, management has excluded Greg Tucker and Associates Pty Ltd., Clever West Investments Pty Ltd., Paleo Solutions, Inc., Driven by Values B.V., the North America and Asia Pacific engineering and consulting groups of Cardno Limited, and Cox|McLain Environmental Consulting, Inc. from its assessment of internal control over financial reporting as of December 31, 2021 because they were acquired by the Company through business combinations during 2021. We have also excluded Greg Tucker and Associates Pty Ltd., Clever West Investments Pty Ltd., Paleo Solutions, Inc., Driven by Values B.V., the North America and Asia Pacific engineering and consulting groups of Cardno Limited, and Cox|McLain Environmental Consulting, Inc. from our audit of internal control over financial reporting. The aggregate assets of these entities represent 5.1% of the Company's total assets as of December 31, 2021, and the aggregate

gross revenue earned from the date of acquisition to December 31, 2021, represents 1.9% of the Company's gross revenue for the year ended December 31, 2021.

Definition and Limitations of Internal Control over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters
The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit and risk committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

R*evenue recognition – estimated contract costs, change orders and variable consideration for fixed-fee and variable-fee-with-ceiling contracts*
As described in Notes 4 and 5 to the consolidated financial statements, the Company accounts for its revenue from fixed-fee and variable-fee-with-ceiling contracts over time using the percentage of completion method where the stage of completion is measured using costs incurred to date as a percentage of estimated costs for each contract, which requires estimates to be made for contract costs and revenues. For the year ended December 31, 2021, revenue from fixed-fee and variable-fee-with-ceiling contracts makes up a portion of gross revenue of $4,576.8 million. Estimated revenue is updated to reflect the amount of consideration the Company expects to be entitled to in exchange for providing goods and services. Change orders are included in estimated revenue when management believes the Company has an enforceable right to the amount, the amount can be estimated reliably, and realization is highly probable. To evaluate these criteria, management considers the contractual or legal basis for the change order, the cause of any additional costs incurred and the history of favourable negotiations for similar amounts. Variable consideration, including change orders approved as to scope but unapproved as to price, is included in estimated revenue to the extent it is highly probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Estimates of variable consideration are based on historical experience, anticipated performance, and management's judgments based on the information available at the time. Contract costs include direct labour, direct costs for subconsultants and other expenditures that are recoverable directly from clients. Progress on jobs is regularly reviewed by management and estimated costs to complete are revised based on the information available at the end of each reporting period. Estimated contract costs are based on various assumptions that can result in a change to contract profitability from one financial reporting period to another, including assumptions about labour productivity and the complexity of the work to be performed.

The principal considerations for our determination that performing procedures relating to revenue recognition – estimated contract cost, change orders and variable consideration for fixed-fee and variable-fee-with-ceiling contracts is a critical audit matter are (i) the significant judgments by management in determining the estimated contract costs, change orders and variable consideration related to fixed-price and variable-fee-with-ceiling contracts; (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating audit evidence related to the estimated contract costs, change orders and variable consideration for fixed-fee and variable-fee-with-ceiling contracts.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process, including controls over the determination of estimated contract costs, change orders and variable consideration for fixed-fee and variable-fee-with-ceiling contracts. These procedures also included, among others, for a selection of fixed-price and variable-fee-with-ceiling contracts, (i) evaluating and testing management's process for determining the estimated contract costs and estimated revenue from change orders and variable consideration; (ii) assessing management's ability to reasonably estimate contract costs and estimate revenue from change orders and variable consideration by performing a comparison of the actual costs and actual revenue from change orders and variable consideration with prior period estimates; (iii) evaluating estimated revenue from change orders and variable consideration by obtaining and inspecting related contract agreements, amendments and change orders and meeting with project teams personnel; and (iv) evaluating management's assessment of progress on contracts and the estimated contract costs by interviewing project teams personnel to evaluate the impact that labour productivity and the complexity of the work to be performed has on the estimated contract costs.

/s/ PricewaterhouseCoopers LLP

Chartered Professional Accountants

Edmonton, Canada
February 23, 2022

We have served as the Company's auditor since 2021.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Stantec Inc.:

Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated statement of financial position of Stantec Inc. (the “Company”) as of December 31, 2020, the related consolidated statements of income, comprehensive income, shareholders’ equity and cash flows for the year ended December 31, 2020, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020, and its consolidated financial performance and its cash flows for the year ended December 31, 2020, in conformity with International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board.

Basis for Opinion
These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP
Chartered Professional Accountants

We served as the Company's auditor from 1993 to 2021.

Edmonton, Canada
February 24, 2021, except as to Notes 6a and 33, as to which the date is February 23, 2022

Consolidated Statements of Financial Position

As at December 31 *(In millions of Canadian dollars)*	Notes	**2021** **$**	2020 $
ASSETS			
Current			
Cash and deposits	9	**193.9**	289.5
Trade and other receivables	10	**823.7**	738.0
Unbilled receivables		**421.7**	342.2
Contract assets		**70.2**	66.7
Income taxes recoverable		**85.6**	47.2
Prepaid expenses		**45.8**	39.4
Other assets	15	**23.5**	42.1
Total current assets		**1,664.4**	1,565.1
Non-current			
Property and equipment	11	**233.7**	240.1
Lease assets	12	**476.5**	447.0
Goodwill	13	**2,184.3**	1,673.8
Intangible assets	14	**373.3**	182.0
Net employee defined benefit asset	19	**17.0**	47.3
Deferred tax assets	27	**48.3**	42.4
Other assets	15	**228.9**	191.2
Total assets		**5,226.4**	4,388.9
LIABILITIES AND EQUITY			
Current			
Bank indebtedness	9	**7.2**	4.7
Trade and other payables	16	**634.7**	576.0
Lease liabilities	12,25	**123.9**	103.6
Deferred revenue		**264.8**	197.3
Income taxes payable	27	**26.6**	24.2
Long-term debt	17	**51.0**	46.6
Provisions	18	**36.7**	20.5
Other liabilities	20	**34.5**	14.3
Total current liabilities		**1,179.4**	987.2
Non-current			
Lease liabilities	12,25	**545.0**	526.2
Income taxes payable		**8.9**	10.2
Long-term debt	17	**1,194.1**	634.2
Provisions	18	**122.6**	107.7
Net employee defined benefit liability	19	**58.7**	91.2
Deferred tax liabilities	27	**77.5**	63.4
Other liabilities	20	**38.0**	39.5
Total liabilities		**3,224.2**	2,459.6
Shareholders' equity			
Share capital	23	**972.4**	932.2
Contributed surplus		**10.6**	12.9
Retained earnings		**1,043.4**	958.6
Accumulated other comprehensive income		**(24.7)**	24.8
Total shareholders' equity		**2,001.7**	1,928.5
Non-controlling interests		**0.5**	0.8
Total liabilities and equity		**5,226.4**	4,388.9

See accompanying notes

On behalf of Stantec Inc.'s Board of Directors

Douglas Ammerman, Director

Gord Johnston, Director

Consolidated Statements of Income

Years ended December 31 *(In millions of Canadian dollars, except per share amounts)*	Notes	**2021** **$**	2020 $
Continuing operations			
Gross revenue		**4,576.8**	4,730.1
Less subconsultant and other direct expenses		**940.7**	1,045.6
Net revenue		**3,636.1**	3,684.5
Direct payroll costs	30	**1,672.8**	1,754.0
Project margin		**1,963.3**	1,930.5
Administrative and marketing expenses	23,30,36	**1,423.6**	1,352.9
Depreciation of property and equipment	11	**53.9**	57.9
Depreciation of lease assets	12	**107.9**	117.7
Amortization of intangible assets	14	**60.0**	53.2
Net impairment of lease assets and property and equipment	11,12	**24.8**	78.6
Net interest expense	28	**37.9**	49.2
Other net finance expense		**5.4**	4.9
Foreign exchange loss		**4.0**	1.5
Other income	31	**(17.2)**	(2.1)
Income before income taxes and discontinued operations		**263.0**	216.7
Income taxes			
Current	27	**66.7**	79.5
Deferred	27	**(4.4)**	(21.9)
Total income taxes		**62.3**	57.6
Net income for the year from continuing operations		**200.7**	159.1
Discontinued operations			
Net income from discontinued operations, net of tax	8	**—**	12.0
Net income for the year		**200.7**	171.1
Earnings per share, basic			
Continuing operations	32	**1.80**	1.43
Discontinued operations		**—**	0.11
Total basic earnings per share		**1.80**	1.53
Earnings per share, diluted			
Continuing operations	32	**1.80**	1.42
Discontinued operations		**—**	0.11
Total diluted earnings per share		**1.80**	1.53

See accompanying notes

TAB I.

Legal Proceedings and Performance

TAB I. Legal Proceedings and Performance

Liquidated Damages

As a provider of professional services (as opposed to construction services) Stantec does not typically enter agreements with liquidated damages. Notwithstanding, in the interest of transparency, Stantec does not track liquidated damages and penalties.

Stantec performs work on thousands of discrete projects annually. All but a very few of these projects are completed successfully. Occasionally, issues arise on a project that prevents Stantec from completing an assignment. Such issues include failure of the client to secure or maintain financing; failure of the client to pay consultant invoices; and disagreements over scope of work. Stantec takes great pride in and places a high value on its long-term ongoing relationships with its clients. This is evident by the fact that the majority of our clients are repeat customers. Where issues arise on a project, Stantec makes every commercially reasonable effort to resolve matters in dispute amicably in the mutual interests of the client and Stantec. This serves both Stantec and our clients well.

To the best of our knowledge after reasonable inquiry, Stantec has not been exposed to Liquidated Damages.

Arbitrations

There are no unsatisfied judgments or arbitration awards outstanding against Stantec. Stantec does have some legal proceedings, lawsuits, or claims pending. These are a normal part of professional services industries. All have been reported to Stantec's insurers who are in the process of adjusting/managing them. None will have a material effect on the financial position of the company or its ability to undertake this assignment. Perhaps of greater comfort to our clients is the fact that Stantec seeks to deal with client concerns and claims promptly and fairly through its Risk Management group. As a public company, Stantec has substantial assets and maintains a high professional liability insurance limit. Stantec's claims history has resulted in relatively low insurance premiums when compared with firms of similar size and character.

Lawsuits

There are no unsatisfied judgments or arbitration awards outstanding against Stantec. Stantec does have some legal proceedings, lawsuits, or claims pending. These are a normal part of professional services industries. All have been reported to Stantec's insurers who are in the process of adjusting/managing them. None will have a material effect on the financial position of the company or its ability to undertake this assignment. Perhaps of greater comfort to our clients is the fact that Stantec seeks to deal with client concerns and claims promptly and fairly through its Risk Management group. As a public company, Stantec has substantial assets and maintains a high professional liability insurance limit. Stantec's claims history has resulted in relatively low insurance premiums when compared with firms of similar size and character.

Other Proceedings issues

In the interest of transparency, we do advise that we have been subject to a few administrative penalties, some orders and warning letters relating to regulatory matters. In each instance, our company cooperated fully with the applicable regulatory agency towards a prompt resolution. Further, our Risk Management team has taken proactive steps to review and update our practices and procedures to prevent future incidents from occurring.

Stantec also has been subject to a number of worksite investigations related to minor infractions of occupational health and safety laws that have resulted in citations or orders. However, Stantec has not been convicted of any violation of any federal or provincial occupational health and safety laws. Perhaps of greater comfort, no incidents have affected our ability to complete a project. In each instance, Stantec cooperated fully with the applicable regulatory agency towards a prompt resolution. Furthermore, Stantec's Risk Management team has taken proactive steps to review and update its practices and procedures to prevent future incidents from occurring.

Bankruptcies

There are no bankruptcies to report.

Contract Terminated by the Other Party

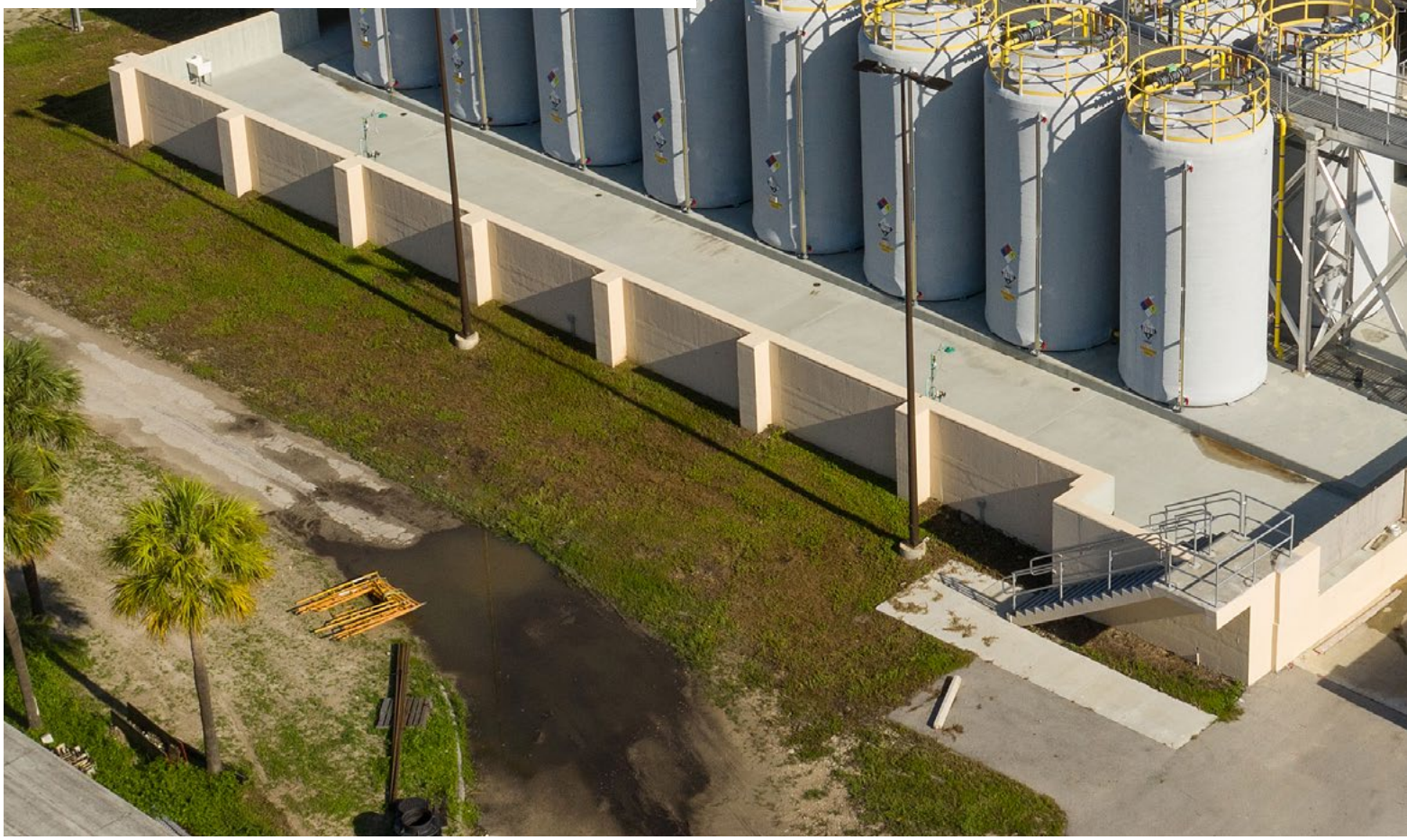
Stantec performs work on thousands of discrete projects annually. All but a very few of these projects are completed successfully. Occasionally, issues arise on a project that prevents Stantec from completing an assignment. Such issues include failure of the client to secure or maintain financing; failure of the client to pay consultant invoices; and disagreements over scope of work. Stantec takes great pride in and places a high value on its long-term ongoing relationships with its clients. This is evident by the fact that the majority of our clients are repeat customers. Where issues arise on a project, Stantec makes every commercially reasonable effort to resolve matters in dispute amicably in the mutual interests of the client and Stantec. This serves both Stantec and our clients well.

To the best of our knowledge after reasonable inquiry, except for the following matters, Stantec has not been terminated for cause within the last 5 years:
On June 18, 2019, Stantec received a letter from its client, PLACE E-Generation One, LLC purporting to terminate for cause Stantec's services on its project located in Minneapolis, MN. Stantec has contested the termination for cause and the matter is not currently resolved.

In 2018, Stantec received a letter from its client, Hillsborough Area Regional Transit Authority ("HART"), terminating Stantec for cause on its project located in Tampa, FL. Stantec believes the termination was due to performance by a subconsultant of Stantec and not Stantec itself. Stantec disputed the allegation that cause existed to terminate the contract, but the matter was never formally appealed by Stantec beyond its administrative remedies.

Have you ever had to use bonding moneys to complete a project or to pay a subconsultant or supplier?

No



TAB J.

Required Forms

TAB J. Required Forms

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

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS

1. This form statement is submitted to the City of Hollywood by Ramon Castella, PE, ENV SP, LEED AP for Stantec Consulting Services Inc.
(Print individual's name and title) (Print name of entity submitting sworn statement)
whose business address is 800 Fairway Drive, Suite 195, Deerfield Beach, Florida 33441
and if applicable its Federal Employer Identification Number (FEIN) is 11-2167170. If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.

2. I understand that "public entity crime," as defined in paragraph 287.133(1)(g), Florida Statues, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misinterpretation.

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

4. I understand that "Affiliate," as defined in paragraph 287.133(1)(a), Florida Statutes, means:

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

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

business with a public entity. The term "person" includes those officers, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

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

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

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime, but the Final Order entered by the Hearing Officer in a subsequent proceeding before a Hearing Officer of the State of the State of Florida,

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

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

`

_____
(Signature)

Sworn to and subscribed before me this 27th day of February, 2023.

Personally known X

Or produced identification ___ Notary Public-State of Florida

___ my commission expires November 27, 2023
(Type of identification)

_____
(Printed, typed or stamped commissioned name of notary public)

GRACE MORALES
Notary Public - State of Florida
Commission # GG 918389
My Comm. Expires Nov 27, 2023
Bonded through National Notary Assn.

STATEMENT OF QUALIFICATION CERTIFICATION

Please Note: All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit http://www.dos.state.fl.us/).

Company: (Legal Registration) Stantec Consulting Services Inc.

Name/Principal/Project Manager: Colin Devitt, PE, Project Manager

Address: 800 Fairway Drive, Suite 195

City: Deerfield Beach State: Florida Zip: 33441

Telephone No. 708-204-1262 **FEIN/Tax ID No**. 11-2167170 Email: colin.devitt@stantec.com

Does your firm qualify for MBE or WBE status: N/A MBE _____ WBE _____

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No.	Date Issued	Addendum No.	Date Issued
1	January 24, 2023		
2	January 24, 2023		

VARIANCES: State any variations to specifications, terms and conditions in the space provided below or reference in the space provided below all variances contained on other pages of bid, attachments or bid pages. No variations or exceptions by the Proposer will be deemed to be part of the bid submitted unless such variation or exception is listed and contained within the bid documents and referenced in the space provided below. If no statement is contained in the below space, it is hereby implied that your bid/proposal complies with the full scope of this solicitation. If this section does not apply to your bid/proposal, simply mark N/A. **If submitting your response electronically through OPENGOV you must click the exception link if any variation or exception is taken to the specifications, terms and conditions.**

N/A

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal. I have read all attachments including the specifications and fully understand what is required. By submitting this signed bid/proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, hereby agrees that in no event shall the City's liability for respondent's indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of five hundred dollars ($500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Ramon Castella, PE, ENV SP, LEED AP
Name (printed)


Signature

February 27, 2023
Date:

Vice President
Title

Authorized Representative Certificate

OFFICER'S CERTIFICATE
of
STANTEC CONSULTING SERVICES INC.
A **NEW YORK** CORPORATION

I, the undersigned, do hereby certify that:

1. I am the duly elected and acting **Secretary** of **Stantec Consulting Services Inc.**, a **New York** corporation (the "**Corporation**").

2. On **April 1, 2022**, the following resolution was adopted by the Corporation's Board of Directors:

BE IT RESOLVED THAT:

1. the Corporation hereby adopts the Signing Authority Policy, as modified or amended from time to time, of Stantec Inc.;

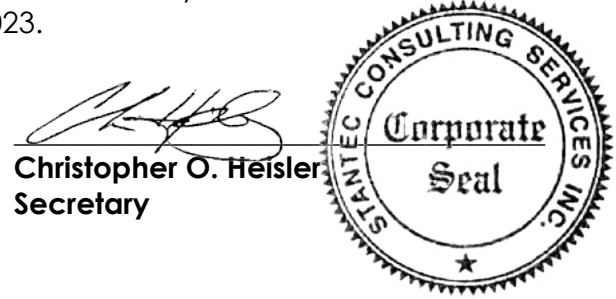
2. execution of any documents for and on behalf of the Corporation shall be governed by the Signing Authority Policy, as modified or amended from time to time, of Stantec Inc.; and

3. the Secretary or any of the Corporate Counsels of the Corporation be authorized, empowered and directed from time to time as required to facilitate the execution of contracts or submission of proposals, to sign, and to seal with the Corporate Seal, Certificates of the foregoing action evidencing the authority delegated in the Signing Authority Policy, as amended from time to time, of Stantec Inc.

Ramon Castella is a **Vice President** of the Corporation, and in that capacity is duly authorized to sign proposals for professional services in accordance with the Corporation's Signing Authority Policy in connection with the following project:

Request for Qualifications RFQ-041-23-JJ
Water Treatment Plant and Wastewater Treatment Plant Projects
City of Hollywood, Florida

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Corporation, this 16th day of January, 2023.



Christopher O. Heisler
Secretary

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

Stantec Consulting Services Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☑ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

800 Fairway Drive, Suite 195 / (remit to) 13980 Collections Center Drive

Requester's name and address (optional)

6 City, state, and ZIP code

Deerfield Beach, FL 33441-1828 / Chicago, IL 60693-0139

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN,* later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

1	1	–	2	1	6	7	1	7	0

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here | **Signature of U.S. person ▶** Lori L. Van Dermark Digitally signed by Lori L. Van Dermark Date: 2022.01.24 10:01:07 -05'00' | **Date ▶**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9.*

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

Insurance

CERTIFICATE OF LIABILITY INSURANCE

10/1/2023

DATE (MM/DD/YYYY) 9/19/2022

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

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

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	**CONTACT NAME:** **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:**
INSURED 1414100 STANTEC CONSULTING SERVICES INC. 370 INTERLOCKEN BOULEVARD, SUITE 300 BROOMFIELD CO 80021-8012 SCSI GENERIC - $3M	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Berkshire Hathaway Specialty Insurance Company — 22276 **INSURER B :** AIG Specialty Insurance Company — 26883 **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 14181323 **REVISION NUMBER:** XXXXXXX

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY CLAIMS-MADE OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC OTHER:			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ XXXXXXX
							MED EXP (Any one person)	$ XXXXXXX
							PERSONAL & ADV INJURY	$ XXXXXXX
							GENERAL AGGREGATE	$ XXXXXXX
							PRODUCTS - COMP/OP AGG	$ XXXXXXX
								$
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY SCHEDULED AUTOS HIRED AUTOS ONLY NON-OWNED AUTOS ONLY			NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident)	$ XXXXXXX
							BODILY INJURY (Per person)	$ XXXXXXX
							BODILY INJURY (Per accident)	$ XXXXXXX
							PROPERTY DAMAGE (Per accident)	$ XXXXXXX
								$
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
							AGGREGATE	$ XXXXXXX
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		NOT APPLICABLE			PER STATUTE OTH-ER	
							E.L. EACH ACCIDENT	$ XXXXXXX
							E.L. DISEASE - EA EMPLOYEE	$ XXXXXXX
							E.L. DISEASE - POLICY LIMIT	$ XXXXXXX
A	Professional Liab	N	N	47-EPP-308810	10/1/2022	10/1/2023	$3,000,000 PER CLAIM/AGG	
A				NO RETROACTIVE DATE			INCLUSIVE OF COSTS	
B	Contractors Pollution Liab			CPO8085428	10/1/2021	10/1/2023	$3,000,000 PER LOSS/AGG	

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

CERTIFICATE HOLDER

14181323

TO WHOM IT MAY CONCERN

FL

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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Insurance

ACORD

CERTIFICATE OF LIABILITY INSURANCE

5/1/2023

DATE (MM/DD/YYYY) 4/22/2022

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

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

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	**CONTACT NAME:** **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:**
	INSURER(S) AFFORDING COVERAGE — **NAIC #**
	INSURER A : Berkshire Hathaway Specialty Insurance Company — 22276
INSURED 1415077 STANTEC CONSULTING SERVICES INC. 370 INTERLOCKEN BLVD SUITE 300 BROOMFIELD CO 80021-8012	**INSURER B :** Travelers Property Casualty Co of America — 25674
	INSURER C :
	INSURER D :
	INSURER E :
	INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 14193567 **REVISION NUMBER:** XXXXXXX

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR X CONTRACTUAL/CROSS X XCU COVERED GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:	N	N	47-GLO-307584-04	5/1/2022	5/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 2,000,000 $ 1,000,000 $ 25,000 $ 2,000,000 $ 4,000,000 $ 2,000,000 $
B B	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY	N	N	TC2J-CAP-8E086819 (AOS) TJ-BAP-8E086820	5/1/2022 5/1/2022	5/1/2023 5/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ XXXXXXX $ XXXXXXX $ XXXXXXX $ XXXXXXX
A	X **UMBRELLA LIAB** X OCCUR X **EXCESS LIAB** CLAIMS-MADE DED RETENTION $	N	N	47-UMO-307585-04	5/1/2022	5/1/2023	EACH OCCURRENCE AGGREGATE 	$ 5,000,000 $ 5,000,000 $ XXXXXXX
B B B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)** Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	N	UB-3P635310 (AOS) UB-3P533004 (MA, WI) EXCEPT FOR OH ND WA WY	5/1/2022 5/1/2022	5/1/2023 5/1/2023	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

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

TO WHOM IT MAY CONCERN.

CERTIFICATE HOLDER

14193567
TO WHOM IT MAY CONCERN
FL

CANCELLATION See Attachment

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Joseph M Agnello

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Company Certifications

State of Florida
Department of State

I certify from the records of this office that STANTEC CONSULTING SERVICES INC. is a New York corporation authorized to transact business in the State of Florida, qualified on November 14, 2001.

The document number of this corporation is F01000005948.

I further certify that said corporation has paid all fees due this office through December 31, 2022, that its most recent annual report/uniform business report was filed on April 29, 2022, and that its status is active.

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

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fifth day of May, 2022

Secretary of State

Tracking Number: 3959289683CU

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

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

Broward County Certifications

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-831-4000

VALID OCTOBER 1, 2022 THROUGH SEPTEMBER 30, 2023

DBA:
Business Name: STANTEC CONSULTING SERVICES INC

Receipt #: 315-274235
Business Type: ENGINEER (CERTIFICATE OF AUTHORIZATION)

Owner Name: STANTEC CONSULTING SERVICES INC
Business Location: 800 FAIRWAY DR STE 195 DEERFIELD BEACH
Business Phone:

Business Opened: 01/06/2016
State/County/Cert/Reg: 27013
Exemption Code:

Rooms	Seats	Employees	Machines	Professionals
		4		

For Vending Business Only — Number of Machines: — Vending Type:

Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
30.00	0.00	0.00	0.00	0.00	0.00	30.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

THIS BECOMES A TAX RECEIPT WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

STANTEC CONSULTING SERVICES INC
1687 114TH AVE SE STE 100
BELLEVUE, WA 98004

Receipt #WWW-21-00261828
Paid 09/26/2022 30.00

2022 - 2023

Business Tax Office
150 NE 2nd Ave.
Deerfield Beach, FL 33441
Phone: (954) 480-4333
E-mail: web.btr@deerfield-beach.com

Deerfield Beach Florida

Business Tax Receipt License
2022 - 2023
License Number: 2023-464547
Date Issued: 9/30/2022
Expires: 9/30/2023

Classification: ENGINEERING SERVICES/ENGINEER

STANTEC CONSULTING SRVCS INC
11130 NE 33RD PLACE #200
BELLEVUE, Washington 98004

Business Location: 800 FAIRWAY DRIVE DFB 33441
Service(s): ENGINEERING FIRM - SUITE 195

Tax Amount: $117.60	Add Fees: $122.40	Penalty: $0.00	Total Amount Paid: $240.00

Notice: This tax receipt becomes *NULL* and *VOID* if ownership, business name, or address changed. Business owner **must** apply to Business Tax Office for Transfer.