SOQ 22-013 - Routine Engineering Services for Water Projects

Resolution 138809 | March 31, 2022

Prepared for:

Parish of Jefferson

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Routine Engineering Services for Water Projects (SOQ No. 22-013)

Resolution No. 138809

B. Firm Name & Address where Project work will be performed:

Stantec Consulting Services Inc.
1340 Poydras Street, Suite 1420
New Orleans, LA 70112

C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:

Dan Grandal, PE, LEED AP, CFM, Vice President
Louisiana Professional Engineering License No. 39361, 2014
dan.grandal@stantec.com
504-654-1756

D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.

Jeff Sapia, PE, PMP Senior Principal
Louisiana Professional Engineering License No. 28226, 1997
jeff.sapia@stantec.com
225-931-8632

E. Please provide the number of employees whose primary function corresponds with each category:

17 (3105)	Administrative	0 (179)	Geotechnical Engineers	0 (25)	Grant/Funding Specialist
0 (535)	Architects (Licensed)	0 (209)	Interior Designers	0 (11)	Sanitary Engineers
1 (136)	Chemical Engineers	0 (191)	Landscape Architects	**11** (574)	Drafting
38 (2444)	Civil Engineers	0 (225)	Land Surveyor	0 (193)	GIS Specialists
4 (451)	Construction Inspectors/Managers	**1** (636)	Mechanical Engineers	**2** (2282)	Other Technical Disciplines
3 (1246)	Ecologists/Biologists	0 (335)	Environmental Engineers		
3 (724)	Electrical Engineers	0 (39)	Specification Writers		
13 (1034)	Engineer Intern	**10** (750)	Structural Engineers		
0 (69)	Professional Land Surveyors	*See EI*	Graduate Engineers		
0 (16)	Estimators	**4** (711)	Project Managers		
1 (224)	Geologists	*See Admin*	Clerical	**108** (16344)	**Total**

Numbers in **Bold** Are for Local (LA) Personnel; Numbers in Parenthesis Indicate all North American Personnel

F. Is this submittal by a JOINT-VENTURE? Please check: YES _____ NO __X__

If marked "No" skip to Section I. If marked "yes" complete Sections G-H.

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.

1. N/A

2.

H. Has this JOINT-VENTURE previously worked together? Please check:

YES _____ NO _____ N/A

I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1.		
2.		
3.		

J. Please specify the total number of support personnel that may assist in the completion of this Project:

Stantec support personnel will be assigned upon review of any project assigned under this Routine Engineering Services for Water Projects contract.

K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e. resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Dan Grandal, PE, CFM, LEED AP | Vice President

Project Assignment:

Principal-in-Charge

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

20 (26 Total)

Education: Degree(s)/Year/Specialization:

BS | 1993 | Civil Engineering, Minor in Environmental Engineering

Active registration: Year first registered/discipline:

1997 | Louisiana Professional Engineering License No. 39361 (Civil) | Also FL
Certified Floodplain Manager
LEED Accredited Professional, U.S. Green Building Council

Other experience and qualifications relevant to the proposed Project:

Dan has more than 26 years of experience in design and construction of civil engineering projects and is a graduate of Tulane University. He has successful experience as a Project Manager having managed large pump stations projects, watermain improvements and sewer collection system improvements, drainage improvements, master plans, site development projects as well SSES program projects. He has served as engineer of record for various sewer, water and drainage projects. He has depth of experience in design, construction estimates, scheduling, permitting, bidding and construction of water and sewer projects. He has successfully executed on design, bidding and construction services for many multifaceted projects including several design/build projects. His experience includes pedestrian and bicycle safety and walkable community designs for urban neighborhoods. His drainage experience has included master plans, Environmental Resource Permitting (ERP), multi-basin floodplain analysis, cut and fill analysis and floodplain management. He is proficient at various software packages including ICPR, Water CAD, Flowmaster, and AutoCAD 3D.

Project Manager, Pinecrest Watermain Master Plan and System Design, Pinecrest, FL
Dan managed design of more than 27 miles of watermain to complete a potable water system in the entire village. The master plan included a computerized model of the entire system and public workshops and meetings were held to inform and educate residents about the work and cost involved in the project. The team also prepared special taxing districts and an EQCB variance to detail the finances of the $23 million project.

Project Manager, SR 15 Pahokee Water Main Relocation, Pahokee, FL
Project Manager for the relocation of approximately 1800 LF of 8" watermain to allow for drainage facilities related with the widening of SR 15 / US 98. The project was a joint partnership agreement between the City of Pahokee and FDOT. Design requirements for the water / main were in accordance to City of Pahokee standards but plans were prepared in accordance with FDOT's Plans Preparation Manual requirements. Permitting also included the Florida Department of Health. Challenges on this project included construction

above 20'-40' of muck. Additional bedding of 2' was placed in small lifts in order to meet compaction requirements.

Project Manager, South Miami Phases Water Main Extension 1A & 1B / SW 72nd to SW 80th Street and from SW 67th Avenue to SW 70th Avenue, South Miami, FL

Project Engineer for this project which consisted of the installation of approximately 2,640 lineal feet of 8" D.I.P. water main with associated fire hydrants, water meters, valves, fittings, pavement restoration and 1" pavement overlay throughout a residential community within the city limits of South Miami. Although most of the project took place within residential streets, there was a need to tap into an existing water main along a highly traveled road. This project site was visited at least twice a week and sometimes even twice on one particular day. In addition to observing the on-going work, digital pictures were taken at almost every visit to record the project progress. These pictures were then printed, labeled and included as part of the Inspector's Daily Construction Report and provided to the City of South Miami on a bi-weekly basis.

Deputy Design Director / Project Manager, Permanent Canal Closures and Pump Project, New Orleans, Louisiana, New Orleans, LA

Deputy Design Director / Project Manager for a $614 million design-build project to help protect the City of New Orleans from storm surges from Lake Pontchartrain. Our solution provides flood protection from surges, which can have wave heights of almost 14 feet, from entering three canals with 18 foot high barriers and pumps rain water from each canal into the Lake Pontchartrain providing drainage to a majority of the New Orleans area. The pumps have a combined capacity of 24,200 cubic feet per second. Pumping is accomplished with 24, 2.6 megawatt generators backed up by six redundant units for a total of 78 megawatts across all three sites. Dan is responsible for the project management of the project including but not limited to design coordination, submittal process & quality control, construction submittal quality assurance, construction administration, design schedule coordination and communication/reporting with JV and USACE.

Project Manager, Miami Beach Design Criteria for Palm and Hibiscus Islands Improvements, Miami Beach, FL

Project Manager for the preparation of design-build criteria packages including design development plans. This project was a full reconstruction project of Palm Island and Hibiscus Island. The scope of work includes full drainage study and permitted design, roadway, sidewalk, bike paths, ADA access, water, sewer, landscaping, lighting, traffic calming and undergrounding of utilities (FPL, ATT and Comcast). Project also included cost estimating, maintenance of traffic, scheduling, storm water pollution prevention, permitting, environmental services (including benthic survey) and preliminary permitting, bidding services and construction management. Public involvement was a major part of the project through public meeting and public information request.

Project Manager, Midway Stormwater Pump Station, Miami, FL

Project Manager for the design and permitting of a stormwater pump station and force main under the SR 826 discharging to the North Line Canal through an energy dissipating structure and outfall. The pump station will transmit the runoff collected from the redesigned collection system to the North Line Canal through directionally bored twin 24-inch diameter carrier pipes in two 36-inch HDPE casing pipes that cross under FDOT's SR-826 pressway. The system was modeled resulting in collection system improvements to provide adequate flood protection to the area. The cost of the project is estimated at $3.5 million.

Project Manager, Belle Meade Drainage Improvements, Miami, FL

Project Manager of this $8 million project which consisted of the design and permitting of a drainage and streetscape improvement project encompassing several miles of road in a developed flood-prone neighborhood providing quality treatment through the use of exfiltration trenches and storm water treatment units and discharging through a large stormwater pump station to the Little River Canal. Permitting included pre/post computer modeling and stage calculation for Miami-Dade's Class II Surface Water Management

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Jeffrey Sapia, PE, PMP | Senior Principal

Project Assignment:

Project Manger

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

25 (33 Total)

Education: Degree(s)/Year/Specialization:

BS | 1993 | Civil Engineering
BS | 1989 | Civil Engineering Technology

Active registration: Year first registered/discipline:

1997 | Louisiana Professional Engineering License No. 28226 (Civil) | Also MS
Project Management Professional – Project Management Institute

Other experience and qualifications relevant to the proposed Project:

Jeff brings 33 years of experience in the planning, design and construction of municipal and commercial projects with emphasis on water and wastewater projects. His typical projects include project management, program management, pump station design, rehabilitation design, master planning, project prioritization, development of standards, and hydraulic modeling. Jeff has performed design calculations, bidding, construction administration, and prepared plans and specifications for multiple projects.

Project Manager, East Bank Water Treatment Plant Expansion (EBWTP), Jefferson Parish, Louisiana
Jeff is serving as Project Manager for this project to expand the EBWTP (P4), rehabilitate both Raw Water Intake Pumping Stations, construct a new Bacteriological and Chemistry Laboratory Building, and rehabilitate portions of the existing EBWTP (P3). As Project Manager, Jeff is responsible for overall project delivery (including design, permitting, bidding, construction administration, and resident inspection) coordination with client and design team, scope/fee development and contract negotiation with client and subcontractors. In addition, Jeff is responsible for project monitoring and administration, invoicing, and status reporting.

Project Manager, On Call Hydraulic Modeling Services, Jefferson Parish, Louisiana
Jeff is serving as Project Manager for this project to perform hydraulic modeling tasks related to the Jefferson Parish water system. Jeff is responsible for overall task delivery, coordination with client and modeling team, scope/fee development, contract negotiation, project monitoring and administration, invoicing, and status reporting. Jeff has delivered 5 tasks to Jefferson Parish under this project.

Project Manager, Waterline Replacement Program, New Orleans, Louisiana
Jeff is serving as Project Manager for this project to replace existing water lines along selected streets within the City of New Orleans. As Project Manager, Jeff is responsible for overall project delivery (including design,

bidding, construction administration, and resident inspection), coordination with client and design team, scope/fee development and contract negotiation with client and subcontractors. In addition, Jeff is responsible for project monitoring and administration, invoicing, and status reporting.

Project Manager, Lake D'Arbonne Phase 1 and 2, Union Parish, LA

Jeff served as Project Manager for this multiphased project. During Phase 1, Jeff was responsible for the conceptual water supply planning of the surface water lake, summary of state and federal drinking water standards, evaluation of water treatment technologies, and development of a conceptual planning report. Jeff also coordinated with state agencies and developed a system improvement plan that was utilized to obtain state funding for improvements. During Phase 2, Jeff was responsible for development of the conceptual design of the selected alternative to treat water from the surface water lake, evaluation of water treatment technologies, and development of a conceptual design technical memorandum. Jeff also coordinated with vendor respresentatives and state agencies. Phase 2 also included a benchscale study of water samples from the lake and a bench scale summary report.

Project Manager, Baton Rouge Sanitary Sewer Overflow (SSO) Program – Staff Extensions, City of Baton Rouge, Baton Rouge LA

Jeff managed multiple program tasks for this Parish wide program to upgrade and replace wastewater systems in Baton Rouge. He was responsible for the development of the entire capital improvements program from conceptual planning (including development of alternatives), the program's baseline schedule, program costs, and construction sequencing. As a Project Manager, Jeff's responsibilities included supervision and coordination of multiple projects including overseeing multiple design contractors and their subcontractors, review of the design schedule, cost control, constructability reviews and technical reviews of contract documents, coordination of bidding and awards and pre-construction phase activities.

Task Manager, Sewer System Evaluation and Rehabilitation Program, Sewerage and Water Board of New Orleans, New Orleans, LA

Jeff managed multiple program tasks for this City program to upgrade and replace wastewater systems in New Orleans, Louisiana. He supervised a staff of engineers and had project manager responsibilities for six projects including the supervision and coordination of multiple design contractors and their subcontractors, review of the design schedule, cost control, and a constructability review. He was responsible for updating the hydraulic model and incorporating revisions to the proposed capital improvement projects.

Project Manager / Design Manager, South Wastewater Treatment Plant Influent Pump Station Modifications and Construction Administration Services, City/Parish of Baton Rouge, Louisiana

Jeff managed a staff that included discipline engineers and subcontractors. During his time as the project manager, Jeff also fostered relationships with major product vendors, directed the design and cost estimation of all demolition, mechanical works, site works, and odor control systems for the City/Parish of Baton Rouge. In addition to managing all phases of project design, Jeff was a member of the design team handling site civil design and odor control design. Jeff also monitored the construction phase of the project through an on-site Resident Engineer.

Project Engineer, Rosethorne Wetlands Assimilation, Coastal Restoration and Protection Authority (CPRA), Jefferson Parish, LA

As contract manager, Jeff organized, directed, and assigned, the most appropriate resources from the combined resources of all firms involved for this CDBG funded project. Jeff also developed the task order scope/fee in accordance with CDBG guidelines. Once completed, this project will nourish the Rosethorne/Fleming Cypress Wetlands and promote the revitalization of this area. The project is located 12.5 miles south of New Orleans and 1.5 miles northeast of the town of Jean Lafitte in Jefferson Parish, Louisiana.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Tracy Anderson, PE | Senior Principal

Project Assignment:

QA/QC - Distribution Systems

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

25 (29 Total)

Education: Degree(s)/Year/Specialization:

BS | 1995 | Civil Engineering

Active registration: Year first registered/discipline:

2014 | Louisiana Professional Engineering License No. 39112 (Civil) | Also CO, FL, AZ, TN, VA

Other experience and qualifications relevant to the proposed Project:

Tracy is a Senior Project Manager with 29 years of experience in planning, engineering, management, and construction of multi-disciplined municipal infrastructure projects. He has been directly involved in the management and design of numerous water and sanitary sewer infrastructure projects including pipelines to 11-ft in diameter and pump stations with flow rates to 475mgd. His projects include: A 20-mile seawater transmission pipeline constructed using fiber reinforced plastic (FRP) pipe with buried valve chambers housing as many as five (5), 8-foot diameter, motor driven, remotely operated valves; A community water system that included construction of new groundwater supply wells, 1.5-million gallons of potable water storage, 5,000 gpm high-lift booster pump station, and 10-miles of distribution pipelines; A seawater pump station that included seven (7) 3,250hp pumps each with a capacity of 66,000 gpm; and a sanitary sewer force main that included installation of 8,000 linear feet of 20- and 24-inch fusible PVC (FPVC) utilizing horizontal directional drilling (HDD).

Conveyance Lead, Water Resource Centralization Project, Parker, CO
Led detailed design and construction phase services for facilities and infrastructure to centralize groundwater treatment facilities at two locations. The design included two greenfield water purification facilities and upgrades to 10 remote groundwater well facilities. The project conveyance system included 45,000 linear feet of 8- to 20-inch HDPE pipe installed for untreated groundwater and an additional 25,000 linear feet of 36-inch steel pipe for finished water conveyance to a neighboring community. The project was delivered using a progressive design-build approach and 60 percent design and GMP were completed in less than five months.

Project Manager, Alton Road (South) Waterline Replacement, City of Miami Beach, Miami, Florida
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 (plans & specifications), permitting and providing support services during procurement and construction.

Project Manager, Miami Springs 8-inch Waterline Replacement, Miami-Dade Water and Sewer Department, Miami, Florida

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 (plans & specifications), permitting and providing support services during procurement and construction.

Project Manager, Miami Springs 12-inch Waterline Replacement, Miami-Dade Water and Sewer Department, Miami, Florida

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 (plans & specifications), permitting and providing support services during procurement and construction.

Project Manager, 47th Avenue Waterline Replacement, Miami-Dade Water and Sewer Department, Miami, Florida

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 (plans & specifications), permitting and providing support services during procurement and construction.

Principal-in-Charge, Morrison Water Treatment Plant Expansion, Morrison, CO

Provided senior oversight for this expansion of the Town of Morrison's water treatment plant (WTP). Preliminary studies had recommended that microfiltration (MF) membrane filtration be installed to expand the WTP capacity to 500,000 gpd, with future expansion to 1.0 mgd. The project included the construction of a new water treatment building and upgrades to the existing sewer system to accommodate backwash waste from the future expansion. Pretreatment processes include coagulation, flocculation, and sedimentation, with retrofit of the existing media filter basin to a holding tank before the pressure-feed MF membranes. The project team worked towards developing an efficient use of the existing structures and tankage. Minimization of costs and meeting a very strict budget, providing for simplistic expansion and simple operations were the goals for the Owner and D/B Team. Ultimately the design met the requirements for the Long Term 2 Enhanced Surface Water Treatment Rule, provided room with minimal additions for future expansion and was on time and under budget.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Linda Pass, PE | Principal

Project Assignment:

Distribution Systems

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

8 (27 Total)

Education: Degree(s)/Year/Specialization:

BS | 1993 | Civil Engineering
MCE| 1994 | Civil Engineering

Active registration: Year first registered/discipline:

2019 | Louisiana Professional Engineering License No. 443423 (Civil | Also: NV, VA, FL, KY

Other experience and qualifications relevant to the proposed Project:

Linda brings 27 years of experience in the design and construction of municipal infrastructure; her passion is making each project count. In a variety of roles from design engineer to construction and project manager, Linda's experience includes the planning, design and construction of water and wastewater treatment plants ranging in size from 1 to 30-mgd capacity, elevated storage tanks, lift stations, sewer force mains, booster pumping stations, diameter water transmission lines, distribution mains, gravity sewer interceptors, trenchless sewer rehabilitation, stream bank stabilization, stream restoration, storm water culvert and drainage systems, and municipal park, trail and restroom improvements.

Project Technical Lead, East Bank Water Treatment Plant | Jefferson Parish, New Orleans, LA
Linda is the Project Technical Lead for a new 40-mgd surface water treatment facility, including coordination of all disciplines to ensure quality and address the multiple challenges of installing a new plant on an existing plant site. The project includes engineering/design, bidding, and construction administration services for a new water treatment plant with operations building and process facilities, including rapid mix, flow splitter, precipitators (flocculation/sedimentation), filters with air scour under drains, bulk chemical storage and feed, waste wash water equalization basin, clearwell, and transfer and high service pumping stations.

Alamance Church Road Water Line Replacement | Greensboro, NC
Project manager, engineer and construction engineer for the Alamance Church Road Widening project. During the road widening scoping, the existing water line was noted as aged cast iron and two sanitary sewers were identified as aged and undersized. As a result, the City of Greensboro requested the water and sewer pipes be replaced in conjunction with the construction of the road widening project. This project included approximately 10,600 linear feet of 8-inch water main relocations, 15 reconnections to existing water mains at street intersections, and more than seventy water meter and sewer cleanout relocations to the edge of the new rights-of-way.

Technical Reviewer, Craig Avenue Water Main Improvements, Charlotte, NC
Project technical reviewer for final design of 4,800 linear feet of 30-inch, 36-inch, and 48-inch water transmission line down a narrow road in an established residential neighborhood.

Project Manager / Engineer / Construction Administrator, Old Salem Infrastructure Improvements | Winston-Salem, NC
Project manager, engineer, and construction administrator for hydraulic capacity analysis, condition assessment, and replacement of approximately 5,700 linear feet of 12-inch to 42-inch storm drains and new curb inlets, 7,100 linear feet of 6-inch through 16-inch water main replacements, and 9,100 linear feet of 8-inch sanitary sewer using a combination of pipe bursting and installation in open cut trenching in a congested national historic district.

Design Engineer, NCDOT Wet Utility Relocations, Various Locations, NC
Design engineer for NCDOT water, sewer force main and gravity sewer wet utility relocations, including R-3300A & R-3300B NC 417 (Hampstead Bypass) Pender County, R-3833C Brawley Road Iredell County, R-5811 Hertford County, R-2707D & R-2707E Shelby Bypass Cleveland County, R-5734A Macon County, and U-5604 Macon County.

Technical Reviewer, Minnekahda Water Booster Pump Station Improvements, Chattanooga, TN
Project technical reviewer for final design of a new water booster pump station and interconnecting water main improvements.

Technical Reviewer, Long Term Water Supply Program, Columbia Power & Water Systems, Columbia, TN
Project technical reviewer for final design of two raw water intake pump stations, sodium permanganate feed bulk storage and systems, and raw water transmission main improvements.

Technical Reviewer, Advanced Water Treatment (AWT) System Rehab, Centreville, VA
Project technical review for 30, 60, 90% design documents and construction of upgrades to this 46 mgd water treatment facility, including improvements to the pressure filtration system to create additional isolation capacity and operational flexibility, filter backwash pump replacement, demolition of obsolete equipment, and replacement of electrical systems and equipment.

Technical Reviewer, Fort Knox Elevated Water Storage Tanks, Radcliff, KY
Project technical reviewer for final design, bidding, and construction of two 1.5-mg composite elevated water storage tanks and associated water system interconnection improvements.

Project Manager/Engineer, Cathey's Creek Raw Water Reservoir, Brevard, NC
Project manager and engineer for a feasibility study for the creation of a new raw water reservoir along Cathey's Creek for the City of Brevard. The study included site investigation, preliminary design, and regulatory review, including reservoir sizing, cost estimate for two options for reservoir siting based on local hydrology, water demands, site topography, and geotechnical borings.

QC Engineer, KRS 1 and RRS Ammonia Feed System Improvements, Fayette County, KY
QC engineer for final design of two 6,600-gallon anhydrous ammonia storage tanks, piping and pressure reducing valve improvements necessary to prevent liquification of anhydrous ammonia in the ammonia feed line.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Sparkle Noble, PE | Associate

Project Assignment:

Mechanical Engineer – Distribution Systems

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

21 (21 Total)

Education: Degree(s)/Year/Specialization:

BS/BC | 2000 | Environmental Engineering

Active registration: Year first registered/discipline:

2009 | Louisiana Professional Engineering License No. 35113 (Environmental)

Other experience and qualifications relevant to the proposed Project:

Sparkle Noble has 21 years of experience primarily focused on design elements of water and wastewater treatment facilities, hydraulic modeling and design of sewer and freshwater systems and pump stations, GIS and sewer rehab analysis. She has acted as Lead Engineer on both the O'Neal Lane Pump Station Design and Prescott Road Pump Station Projects as well as Project Engineer for the SSERP evaluation phase and Baton Rouge SSO Corrective Action Plan. Sparkle specializes in the inspection and review of infrastructure to identify chronic problem areas, facilities and infrastructure components that are in critical condition.

Project Engineer, Waterline Replacement Program, New Orleans, LA
As project engineer, Sparkle helped design water line replacements throughout New Orleans in select neighborhoods, including development of plan and profile drawings, coordination with surrounding utilities and coordination between projects.

Project Engineer, Eastern Hancock County Regional Water Supply System, Hancock County Utility Authority, MS
This project included the design of three 500,000-gallon elevated storage tanks, three 1,000 gallon per minute wells, and approximately 110,000 linear feet of potable water transmission main. As project engineer, Sparkle helped select preliminary sites for the three elevated storage tanks and water wells. She also developed preliminary route alignment maps for the transmission mains. Also coordinated detailed design of the project and attended pre-bid meetings for the term bid of the construction projects.

Lead Engineer, O'Neal Lane Pump Stations Group A, Baton Rouge, LA
As Lead Engineer, Sparkle was responsible for overall delivery of the project, as well as mechanical and civil design, including odor control. The project comprised 40 MWH staff, representing seven design disciplines and two subcontractors. The purpose of this project was to upgrade the 16 pump stations that are part of this project in order to help mitigate chronic sanitary sewer overflows (SSOs) at or near these pump stations and increase the overall system capacity. All pump stations will also have a new standby engine generator.

Sparkle served as the main client/contractor point of contact during the construction phase of this project. She also reviewed submittals, responded to RFIs, and attended meetings.

Project Engineer, UOSA Occoquan Project, Occoquan, VA
Performed evaluation of the filter backwash pumps, which are part of Pump Station 28/1 which is part of UOSA's water reclamation facility. The backwash pumps serve the water filters located in Building L/1 utilizing water from nearby ballast ponds and consisted of two 350 hp vertical turbine pumps supplying 10,000 gpm of flush water. The evaluation included options and recommendations for replacement of the pumps and other modifications to reduce ongoing maintenance issues related to trash being sucked into the pumps from the ballast ponds.

Project Engineer, Sewer System Evaluation and Rehabilitation Program (SSERP), New Orleans, LA
Assisted with updating the HydroWorks hydraulic model of the existing and future versions of the sewer system maintained by the Sewerage and Water Board of New Orleans. She also incorporated changes to the corrective action plans developed during the design process. Ms. Noble also provides quality control on an ongoing basis on the design process.

Lead Engineer, Multiple Pump Stations - Prescott Road/Greenwell Springs Road, Baton Rouge, LA
Lead engineer responsible for overall delivery of the project, as well as mechanical and civil design, including odor control. The purpose of Project NFW-C-0010 was to upgrade the 5 pump stations in order to help mitigate chronic sanitary sewer overflows (SSOs) at or near these pump stations and increase the overall system capacity. PS-24/24A operates as a dry weather/wet weather pump station and will included an odor control biotower and a new electrical building.

Project Engineer, Central PS / PS 42 Improvements ESDC, Baton Rouge, LA
Served as the Project Manager during construction phase services for this $10.5M construction project. This project is part of the Baton Rouge SSO Program being implemented under a Consent Decree with the EPA. The purpose of this project is to convey flows from the Central Basin, including flows from PS 1, PS 59 and LSU PS, to the SWWTP. The project will include design of one 48 million gallon per day (MGD) (33,000 gal/min) submersible pump station, VFD/control building, and biotower-type odor control system. This pump station will replace the existing Central WWTP. Ms. Noble is the main client/contractor point of contact on this project. She attends regular status meetings. Coordinated the review of shop drawings and response to RFIs, as well as evaluates and potential project changes.

Technical Lead, Williams WWTF Headworks/Primary Clarifiers/PEPS Preliminary Design, Mobile Area Water & Sewer System (MAWSS), Mobile County, AL
Responsible for coordinating the design team and the production of a quality deliverable. The scope of work consisted of the development of the necessary 30% design documents to define improvements to allow for the removal of the large solids, rags, plastics and other large solids (screenings); abrasive inert material (grit); and the separation and removal of suspended solids and floating debris (scum) from the raw wastewater. This project included preliminary design documents for the client to request bid plans and specifications for bidding. Under a separate authorization, we will provide program management services, which include but are not limited to design oversight, bidding services, resident construction inspection, and start-up services and project close-out.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Chris Sanchez, PE | Senior Associate

Project Assignment:

Distribution Systems

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

7 (21 Total)

Education: Degree(s)/Year/Specialization:

BS | 2001 | Civil Engineering

Active registration: Year first registered/discipline:

2006 | Louisiana Professional Engineering License No. 32878 (Civil) | Also MS

Other experience and qualifications relevant to the proposed Project:

Chris is a registered civil engineer with 21 years of experience in civil engineering and water resources with heavy emphasis on water distribution, wastewater collection and wastewater pumping. This experience includes water distribution design, wastewater collection system modeling, collection system evaluations and rehabilitation, feasibility level design, design and engineering for construction plans, development of specifications, cost estimates at all stages of work and construction management. Chris is currently the supervisory engineer for the Sewerage and Water Board of New Orleans Sewer System Evaluation and Rehabilitation Program. Chris has performed work on water and wastewater assets in Jefferson Parish, where he is a resident, as well City of New Orleans, City of Kenner and City of Gretna.

Project Engineer, East Bank Consolidated Water Treatment Plant, Jefferson, Louisiana
Project Engineer for the evaluation of an existing 60 MGD water treatment plant complex consisting of four separate plants serving the needs of 250,000 residents. Chris was responsible for several technical evaluation memorandums, including a 20-year population projection and water demand analysis, a mechanical assessment on the existing treatment plants and a hydraulic efficiency analysis on all existing major pumps. These memorandums were then used as the basis of design for the new 40-MGD "P4" water treatment plant. Chris additionally provided technical engineering services during the conceptual development of the new treatment plant as well as detailed opinions of probable costs for various alternatives and stages of design. Currently, Chris serves as the technical lead for construction phase of the Blue House raw water pump station and for the design of the Levee raw water pump station.

Waterline Replacement Program, New Orleans, Louisiana
Design Manager for the design of water line replacements throughout New Orleans in select neighborhoods. Chris was responsible for meeting with the client to review site specific needs for approximately 120 blocks and supervised design for development of plans, profiles including utility conflicts and tie-in details. Chris currently oversees the repackaging of this work into twelve different construction contracts in coordination with the City of New Orleans Joint Infrastructure Roadway Recovery Program. Chris was additionally responsible for technical coordination on local, state, USACE and railroad permitting on several contracts.

Supervisory Engineer, Sewer System Evaluation and Rehabilitation Program, Sewerage and Water Board of New Orleans, New Orleans, LA

Supervisory engineer for the technical program on the Sewerage and Water Board (S&WB) of New Orleans' Sewer System Evaluation and Rehabilitation Program. Responsibilities include the design development of construction plans and specifications for seventy-two (72) sewer rehabilitation contracts throughout the City of New Orleans. Eighteen of these contracts were developed for the S&WB and include full development of plans, specifications and opinions of probable construction cost. An additional forty-nine (49) contracts were developed in coordination with the DPW Joint Infrastructure Roadway Recovery Program, where coordination with other design consulting engineers was required for their respective drainage, sewer, water and pavement design plans, specifications and estimated construction costs. An additional five (5) contracts were coordinated with the S&WB water transmission main rehabilitation program.

Chris was responsible for overseeing design work for the program, including review of CCTV inspections, development of sewer line rehabilitation recommendations and design of pavement restoration in accordance with the City of New Orleans ordinance for roadway restoration. Sewer rehabilitation designs included excavated point repairs, trenched sewer line replacements as well as trenchless rehabilitation methods including cast-in-place pipe liners and pipe bursting with HDPE piping. Chris also oversees program special provisions for compliance with the EPA-S&WB consent decree, Louisiana DEQ funding requirements, EPA WIFIA funding requirements and FEMA Hurricane Katrina PA funding requirements. Chris was also responsible for obtaining permits for DNR Coastal Use Permits, DOTD Utility Permits, City New Orleans DPW Street Cut Permits and Orleans Levee District Levee Safety Permits.

Supervisory Engineer, Sewer Collection System Hydraulic Modeling, City of New Orleans, New Orleans, LA

Supervisory Engineer for the ongoing hydraulic modeling of the City of New Orleans's sanitary sewer collection system. Responsibilities included developing and overseeing the flow monitoring program, client coordination for real time system data, development wastewater profiles for residential, commercial and mixed use areas, development of base flow profiles, development of dry weather model calibration methods for using client pump station wet well level data, reviewing system unit sheets, record drawings and operations schematics to check and update model geometry, developing methods to estimate pipe friction factors in the manifold force main systems and client progress updates. Additional current responsibilities include using the model to provide technical guidance to the client for redevelopment projects throughout the city.

Senior Engineer, Page & Longfellow Sewer Lift Station, Jefferson Parish Utilities Commission, Jefferson Parish, LA

Senior Engineer for the electrical and mechanical rehabilitation of the Page and Longfellow sewer lift stations during construction. Responsibilities included review of field change orders, shop drawings, submittals, and pay applications.

Senior Project Engineer, Tolmas Tract Sewer Forcemain Relocations, City of Jefferson Parish, Jefferson Parish, LA

Senior Project Engineer for the trenchless relocation of two 12-inch force mains in support of the development of the Tolmas Tract. Responsibilities included the evaluation of three sewer lift stations for capacity to accommodate the extended force main, calculations for air release valves, development of plans and specifications for this fast tract project.

Project Engineer, Gretna Wastewater Treatment Plan Rehabilitation, City of Gretna, Gretna, LA

Project Engineer for the rehabilitation of the existing 5 MGD wastewater treatment plant located in the City of Gretna. Personally responsible for project specifications, trickling filter rehabilitation design, final packaging of the drawings, bid phase and engineering services during construction.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

David Steffes, PE | Senior Associate

Project Assignment:

Electrical and Instrumentation & Controls

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

23 (35 Total)

Education: Degree(s)/Year/Specialization:

BS | 1987 | Electrical Engineering

Active registration: Year first registered/discipline:

2014 | Louisiana Professional Engineering License No. 38698 (Control Systems Engineer) | Also OH, FL, MA, KY, TX, MO, NY, MT, IL

Other experience and qualifications relevant to the proposed Project:

David's 30-year career includes serving 10 years as an electrical engineer and 10 years as a construction engineer. He specializes in the design, installation, testing, and start-up of I&C and electrical and process mechanical systems. His experience includes generating process and instrumentation diagrams (P&IDs), installation details, panel display elevations, graphic displays, and control architecture diagrams, as well as well as using using Rockwell RSLogix, Wonderware, and other software packages to develop programmable logic controllers (PLC), distributed control systems (DCS), and human-machine interface (HMI) programming. David has additionally been responsible for the installation, checkout, and start-up of major process mechanical, electrical, and I&C systems for projects across the country.

Lead Instrumentation and Controls (I&C) Engineer, East Bank Water Treatment Plant - P4 Water Treatment Plant, Jefferson Parish, LA

Responsible for generating all of the I&C design documents for the entire water treatment plant, including raw water facility, filtration systems, chemical storage and feed systems, and site utilities. Design documents included control architecture, installation details, panel display elevations, field instrument specifications, control descriptions, PLC hardware/software specifications, and control panel specifications.

Lead Instrumentation and Controls (I&C) Engineer, Southwest Reverse Osmosis (RO) Water Treatment Plant (WTP) Site Security, City of Cape Coral, FL

Completed a design involving installing new site specific cameras and new exterior door card readers into a security network consisting of two main hub cabinets and a security workstation. Included as part of this project

was installation of a transponder and long range card reader, two sliding gates, and intrusion switches. Two remote sites that were tied into the new security system had existing radios that were very high frequency (VHF) and the new design changed them over to spread spectrum Ethernet radios. Other design items included modifications on upgrading the power sources and security hardware and software and some field instrumentation.

SCADA Systems Lead, Water Treatment Plant Condition Assessment and Master Plan, City of West Palm Beach, West Palm Beach, FL

Conducted an evaluation of the existing SCADA system and provided determination of its physical condition and an assessment of long-term needs. In addition, detailed electrical investigations were conducted due to the complexity of the existing electrical system being a combination of old and new plants and several voltage distributions. The evaluation identified long-term requirements and proposed improvements with regards to the reliability of the normal and standby power supplies and the potential electrical equipment failure scenarios that may severely affect plant operation.

Lead Instrumentation and Controls Engineer, Reverse Osmosis Membrane Water Treatment Plant, North Lee County, FL

Responsible for generating all of the instrumentation and control design documents for the entire membrane filtration system and site utility systems. Design documents included control architecture, installation details, panel display elevations, field instrument specifications, control descriptions, PLC hardware/software specifications, and control panel specifications. He supervised loop checkout of all process systems. He directed process mechanical and I&C of the startup.

Lead Instrumentation and Controls Engineer, IRR7 ASR Surface Facilities, City of Cape Coral, Cape Coral, FL

Responsible for generating all of the instrumentation and control design documents for the aquifer surgace recovery production facilities. Design documents included Control Architecture, Installation Details, Panel Display Elevations, Process and Instrumentation Diagrams, Field Instrument specifications, Control Descriptions, PLC Hardware/Software specifications, and Control Panel specifications.

Design Manager/Lead Instrumentation Engineer, Pump Station and Process Improvements Projects: Regional Facilities Site, Tampa Bypass Canal, and Cypress Creek Pump Station, Tampa Bay Water, Tampa Bay Water, FL

Design manager for all three pump station projects overseeing detailed discipline design and coordination and budgets/schedules. He reviewed controls submittals for the project, including the controls portion of the pumps, variable frequency drives, and chemical metering pumps. Completed startup for all of these pump stations.

Lead Instrumentation and Controls Engineer, Miami-Dade Central District Water Reclamation Facility, Miami-Dade County Water and Sewer Department, Key Biscayne, FL

David performed an existing controls evaluation and was responsible for generating theI&C design documents for the entire membrane filtration/reverse osmosis system and site utility systems for this project. The design documents included control architecture, installation details, panel display elevations, process and instrumentation diagrams, field instrument specifications, control descriptions, PLC hardware/software specifications, and control panel specifications.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Emery Myers, PE, PMP, ENV SP | Principal

Project Assignment:

Capital Planning

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

22 (22 Total)

Education: Degree(s)/Year/Specialization:

MS | 2006 | Environmental Engineering
BS | 1998 | Environmental Engineering

Active registration: Year first registered/discipline:

2006 | Louisiana Professional Engineering License No. 32871 (Environmental) | Also NY
Project Management Professional – Project Management Institute
Institute for Sustainable Infrastructure, Envision™ Sustainability Professional (ENV SP)

Other experience and qualifications relevant to the proposed Project:

Emery brings 22 years of experience in the permitting, planning, study, design and construction of water, wastewater, stormwater and environmental projects in south Louisiana. Her experience includes designing wastewater treatment plants and sewage collection systems; developing pollution prevention and control plans; overseeing treatment plant and collection system pumping and piping evaluation studies; and evaluating and modeling water distribution systems. She has led major capital programs including the New York City Department of Environmental Protection's (NYCDEP) Citywide Supervisory Control and Data Acquisition (SCADA) Installation and Water for the Future Program (WFF), New Orleans' Sewer System Evaluation and Rehabilitation Program (SSERP) and Water Master Plan.

Water Distribution System Asset Management Plan, Jefferson Parish, LA
Has served as Project Manager for the evaluation of Jefferson Parish's East and West Bank water distribution systems and preparation of an asset management plan. Project tasks include analysis of the water distribution system's capacity and structural condition, an evaluation of the Parish's rate structure, recommendations for funding options, and an evaluation of ultraviolet disinfection needs at the East and West Bank Treatment Plants. The primary project deliverables include a hydraulic model and a 10-year Capital Improvement Plan. The final submittal will include technical reports summarizing the evaluation, cost estimates, and recommendations.

Project Manager, Waggaman Water Improvements, Jefferson Parish, LA
Served as project manager for the evaluation phase of improvements for a water distribution system. This project was initiated in response to complaints received from citizens and the fire department for low water

pressure. Recommendations included construction of an elevated water tower and installation of new water mains. Her project management tasks included management of budget, scope, and schedule including internal Stantec monthly reporting, project invoicing, and monitoring of risks and issues.

Water Treatment Plant Evaluation, St. Bernard Parish, LA
Collected and evaluated the water treatment plant's operating data to determine operating limitations and to ensure compliance with water quality criteria. The data included verification of total plant capacity and unit loading rates. She also assisted with developing the final report, which included recommendations for the operating plant's capacity and was based on upcoming USEPA water quality requirements for effluent turbidity. Emery helped prepare the final proposal for plant expansion to supply St. Bernard Parish with water based on population growth rates.

Water Distribution System Assessment and Capital Improvement Plan, New Orleans, LA
Performed various tasks under this comprehensive project to assess the water distribution systems for the East and West Bank of New Orleans. The project focused on three integral tracks for an innovative, holistic approach to evaluate the system: physical condition assessment, hydraulic evaluation, and a detailed water leak detection program to determine unaccounted for water. The assessment included the development of a GIS, the construction of a hydraulic model of the water distribution system, and the assessment of system hydraulic performance. Emery performed hydraulic modeling and assisted in the physical condition assessment of pipes and the preparation of a prioritized Capital Improvement Plan (CIP) for the entire water distribution system. The CIP identified the capacity and structural requirements of the New Orleans water distribution systems. The CIP also addressed areas within the systems that require structural improvements and additional hydraulic capacity.

Storm Water Pollution Prevention Plan and Spill Prevention Control and Countermeasures, Jefferson Parish, St. Charles Parish, and City of Slidell, LA
Developed storm water pollution prevention and spill prevention control and countermeasures plans for four facilities, including a sewage pumping station, wastewater treatment plant, and transit maintenance facility. Emery's team evaluated the field data and operating procedures and developed recommendations for preventing and controlling potential spills and subsequent stormwater pollution. She developed these plans to address existing federal and state regulations and provided recommendations for best management practices and safety procedures for operators.

Stormwater Management Plan, Jefferson Parish, LA
Provides ongoing assistance to Jefferson Parish with the implementation of the NPDES Phase I Municipal Separate Stormwater Sewer System (MS4) permit, including preparation of the annual report and permit renewal.

Various Roles, Sewer System Evaluation and Rehabilitation Program, New Orleans, LA
Served as project manager for three SSES studies, training and oversight of field investigations, and QA/QC of project submittals. She conducted training for field crews for manhole inspections and sewage inspection procedures and managed the review, updates, and revisions to the databases. Emery served as project manager for two consecutive basin area Remedial Measures Action Plans (RMAPs). Tasks included QA/QC review of remedial measures recommended for the sewerage collection system basins and cost estimates. She conducted workshops with the Client to solicit input and decisions for the final report, incorporating workshop results into the final report and final presentation required by the EPA. Emery also performed QA/QC for data submittals and identified problems with data through utilization of the quality control procedures established for the data and its review. She successfully addressed the data issues, which resulted in the re-inspection of 30% of the system manholes in the area. Emery helped develop the project scope, managed design consultants, prepared QA/QC of project submittals, and schedule updates. She managed the preparation of data including review and updates of GIS files for specific sewerage basins; submittal of design and operating data for sewage pumping stations and sewer force mains; CCTV video footage for sewer inspections; and databases containing information collected from the SSES projects.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

John Hamm, PE, LEED AP | Principal

Project Assignment:

Structural Engineering

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

17 (38 Total)

Education: Degree(s)/Year/Specialization:

BS | 1981 | Civil Engineering

Active registration: Yar first registered/discipline:

2009 | Louisiana Professional Engineering License No. 35042, Also TX, MN, CO, MO, NV, NM, SC, UT
LEED Accredited Professional, U.S. Green Building Council

Other experience and qualifications relevant to the proposed Project:

John has 38 years of engineering experience, including structural design and project management for numerous WTP's and WWTP's throughout the US and overseas, ranging from 0.5 mgd to 76 mgd. His structural engineering experience includes water and wastewater treatment facilities, water storage reservoirs and distribution systems, wastewater and stormwater collection systems, dam structures and solid and hazardous waste facilities. Since 2005 he has served as a lead structural engineer in Stantec's Denver Water team, managing up to 8 engineers and designers. John's engineering expertise includes structural analysis and design, foundation design, computer modeling, preparation of contract drawings and specifications, cross-discipline coordination and writing technical memoranda, condition assessment of existing structures, and construction services. His project management responsibilities include preparing scopes of work and budgets, monitoring project budgets, workforce planning, interface with clients, supervising staff on projects, and mentoring junior engineers. John is one of the approved structural technical reviewers in Stantec Design.

Structural Engineer, East Bank Water Treatment Plant Expansion, Jefferson Parish, LA
Stantec is providing professional services for improvements at the plant. The first phase of the project included evaluating the WTP, as well as the raw water intake and high service pump stations. The second phase includes providing engineering/design, bidding, and construction administration services for a new water treatment plant with operations building and process facilities, including rapid mix, flow splitter, precipitators (flocculation/sedimentation), filters with air scour underdrains, bulk chemical storage and feed (alum, cationic polymer, gaseous chlorine, bi-metallic phosphate, anhydrous ammonia, and fluoride), waste washwater equalization basin, clearwell, and transfer and high service pumping.

Biota Water Treatment Plant, Phase 1 Northwest Area Water Supply, Minot, ND
Lead structural engineer and Engineer of record for a brand-new compact water treatment plant, 177' x 224', with 9 MGD design capacity and 18 MGD peak flow capacity. The plant includes flocculation basins, DAF basins, dual media filters, UV disinfection, a clear well and treated water wet well, as well as a wash water equalization basin. The entire plant is housed in a precast concrete building consisting of double tees supported by inverted tee beams and columns, and precast insulated wall panels. Offices, break rooms, chemical room and laboratory have reinforced CMU walls. The treatment basins and foundation elements

are reinforced concrete designed per the requirements of ACI 350. The structure has multiple levels and is supported by auger cast piles. Allowance was made for expansion of the plant in the future. The work included engineering services during construction, including review of shop drawings and responding to RFI's.

Structural Engineer of Record, Mesa Water Treatment Plant Upgrades – Phase 1, Colorado Springs, CO

John was the engineer of record for the structural work on upgrades to the existing 50 mgd Mesa WTP. The project consisted of a covered pre-treatment facility (flocculation/sedimentation/flash mix), CMU sulfuric acid and sodium hydroxide storage buildings, several large buried concrete vaults, and decant structures at the solids drying pond, raw water and finished water vaults. The pre-treatment building has a precast concrete double-tee roof with a precast concrete support frame and CMU walls bearing on the walls of the buried treatment basins. The sulfuric acid storage building was designed for blast loads and provided with deflagration panels.

Soldier Canyon Filter Plant Upgrades, Soldier Canyon Water Treatment Facility, Fort Collins, CO

John was the Engineer of Record and led a team of 4 structural engineers and designers on this water treatment plant upgrade, which took the capacity from 30 MGD to 60 MGD and improved chemical treatment processes. Construction Manager at Risk (CMAR) was the alternative delivery method used for this project. The project consisted of a new Flocculation/Sedimentation/Chemical Building, a 40 feet deep Chlorine Contact Tank, Soda Ash Silo and Building and Decant Pond. The design also included modifications to the existing Clarifiers, Filter Effluent Channel, Finished Water Storage Tanks and Filter Effluent Vault. The 150' x 90' Flocc/Sed Basins are cast-in-place concrete with precast insulated wall panels and double-tee roof beams. It is supported by drilled piers and has 6" void forms under the base slab because it is located on the side of a hill and is underlain by sloping, expansive bedrock. The Soda Ash and Chemical Buildings are both pre-engineered metal buildings on concrete foundations. The project was designed for a snow load of 38 psf and an ultimate wind velocity of 164 mph.

Program Manager, Southern Delivery System (SDS) Water Treatment Plant and Finished Water Pump Station, Colorado Springs, CO

Stantec was the program manager for this large water supply project. John performed the quality review of the structural drawings and specifications that were prepared by another consultant. The project consisted of a new 50 MGD WTP, a 10MG prestressed concrete raw water storage tank, and a finished water pump station.

Structural Engineer, Keegan's Bayou WWTP Condition Assessment, Houston, TX,

John performed a visual structural condition assessment of a 10 MGD WTP originally built in 1986. He evaluated the condition of the buildings and water retaining structures. He gave estimates of remaining useful life and recommendations to extend the useful life.

Lead Structural Engineer, South WWTP Wet Weather Improvements, Phase II, Baton Rouge/Parish of East Baton Rouge, Louisiana

This project increased the peak treatment capacity of the South WWTP from 120 mgd to 200 mgd. John was lead structural engineer for the project as well as Engineer of Record for a large number of the structures. The major structures that John was responsible for were the Blower/Electric Building, four 134-feet diameter Final Settling Tanks (FST), Flow Splitter Box, RSS/WSS Pump Station between the FST's, 200-mgd Effluent Pump Station, a Levee Crossing and an Outfall Manhole on the river side of the levee. The plant is adjacent to the Mississippi River and protected by a levee. The design groundwater elevation is at-grade. The site is underlain by a very deep layer of compressible silty soils. The major structures are designed to be supported on precast concrete piles, or an auger-cast pile alternative. The buildings are designed for 110 mph hurricane winds. The design was responsive to very detailed comments from the Program Manager.

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Eric Dallimore, PE | Associate

Project Assignment:

Construction Management

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

6 (18 Total)

Education: Degree(s)/Year/Specialization:

BS | 2005 | Civil Engineering

Active registration: Year first registered/discipline:

2012 | Louisiana Professional Engineering License No. 37129 (Civil)

Other experience and qualifications relevant to the proposed Project:

Eric has 18 years of experience in infrastructure, water, sewer, drainage, flood protection, roadway, and site plan development. He has served as a Project Manager and Project Engineer for the full life-cycle of infrastructure projects from plan development and site demolition through permitting and construction for projects including: pump stations, flood protection levees, drainage systems, and bridges. He regularly coordinates multiple firms and disciplines, agencies, and stakeholders and has experience conducting cost analyses, site visits, inspection reports, and construction administration.

Relevant Project Experience

Project Engineer, 13th Street Drainage Improvement Project, Jefferson Parish, LA
Eric was tasked with the design and preparation of plans and specifications for the complete replacement of subsurface drainage and utilities, which includes placement of large reinforced concrete arch pipe and reinforced concrete box culverts. He was also involved in the replacement of water and sewer utilities.

Civil Engineer / Construction Administration, Drainage Pump Station 17 Structural Repairs and Improvement, New Orleans, LA
Conducted structural investigations to evaluate the deficiencies and solutions to restore the existing pump station which built in 1896 and suffered from a number of structural failures (i.e., cracks at windows, walls, corners; lintel damage, floor settlement, differential settlement in stairways, etc.) in the unreinforced masonry and brick walls because of the effects of Hurricane Katrina. The project included the rehabilitation of the building to extend its structural design life. The rehabilitated facility complies with appropriate codes and standards, as well as historic preservation guidelines. A key consideration in project execution was minimizing disruption to, or impact on, existing operations at the station during construction.

Project Engineer / Construction Administration, Flood St. and Gordon St. Capital Improvements Project, New Orleans, LA
Tasked with design and preparation of plans and specifications for complete replacement of all utilities including drainage, water, and sewer for the 2000 Streets Capital Improvements Program for the City of New Orleans. This project also included construction engineering and administration duties.

Project Manager, West Bank and Vicinity Algiers Canal Fronting Protection Projects, Plaquemines, Jefferson, and Orleans Parishes, LA

This multi-firm, multi-discipline project included design and engineering during construction services for six separate pumping stations along Algiers Canal including Hero, Belle Chase #1, Belle Chasse #2, Planters, Sewerage and Water Board #11, and Sewerage and Water Board #13 Pump Stations. The project featured design and construction of a fronting protection T-Wall with the extension of discharge tubes through the newly constructed flood protection. Eric's main responsibilities included project management and coordination of all firms during both design and engineering during construction phases of the project. He served as the main contact between design firms and the USACE. Eric's other responsibilities included development of plans and specifications, construction site visits, coordination and management of technical submittals, and requests for information during construction.

Resident Engineer during Construction, Permanent Canal Closures and Pumps Project (PCCP), New Orleans, LA

Served as resident engineer for the PCCP project, which includes three 24,300-cfs pump stations featuring flood walls, levees, generator stations, fuel farms, and flood gates designed for both current and future conditions. His responsibilities included providing on-site engineering and field observation support. The project also required use of leading-edge modeling, BIM and CAD tools for structures, hydraulics, geotechnical, electrical, mechanical, and other disciplines to execute 280 design submittals to USACE.

Assistant Project Manager, Mississippi River Re-Introduction into Bayou Lafourche Pumping Capacity Improvements Project, Donaldsonville, LA

Responsible for managing a multi-discipline team finalizing design of a 1,500 cfs diversion pump station to be located within the Mississippi River Levee batture through coordination with USACE, MVN. Managed the design preparation of more than 290 drawings to include coordination on corrosion design, architecture, cofferdam, civil/landscape, environmental permitting, structural, hydraulics, mechanical, electrical, instrumentation, VE, resiliency measures, and USACE 408 permissions. Also responsible for execution of the Quality Management Plan (QMP). Design was completed, and project is in permitting. Eric will provide civil engineering services through the construction phase of the project.

Project Engineer, SELA New Harahan Pumping Station (Pump to the River) Design Documentation Report, Harahan, LA

Inter-department report coordination and maintenance associated with the preliminary design of a new 1,200 CFS pump station located in Harahan, Louisiana. This also includes 8,700 Linear feet of 84" buried steel piping which will bring storm water from the Harahan and Elmwood areas of Jefferson Parish to discharge into the Mississippi River.

Civil Engineer, Pump Stations and Drainage Structures - West Shore Lake Pontchartrain, St. Charles, St. John the Baptist, and St. James Parishes, LA

Serving as part of the civil team, Eric was responsible for early work design, including clearing and grubbing, temporary site layout, construction phasing and sequencing. This new 100-year storm risk reduction system features levees, pump stations, flood walls and gates, environmental and drainage canals, a FEMA 361 operations safe house, and bypass drainage gates. The pump stations are designed to pump stormwater over surge levees and floodwalls and conducted with a resiliency check for a 500-year storm event to confirm the system could withstand overtopping and wave loads.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Roy E. Thomas, PE | Senior Associate

Project Assignment:

Distribution Systems

Name of Firm with which associated:

Stantec

Years' experience with this Firm:

1 (24 Total)

Education: Degree(s)/Year/Specialization:

MBA | 2016 | Masters Business Administration
MSEV | 1998 | MS, Environmental Engineering
BSCE | 1996 | BS, Civil Engineering

Active registration: Year first registered/discipline:

2002 | Louisiana Professional Engineering License No. 29936 (Civil) | Also MS, TX, AL, AR, FL

Other experience and qualifications relevant to the proposed Project:

Roy brings 24 years of design, program, and project management experience of civil and water/wastewater engineering infrastructure projects. This experience includes technical and financial management of projects, as well as oversight of engineering departments, design teams, subconsultants, and contractors.

Project Manager, Hurricane Related Water Restoration Program (HRWRP), New Orleans, LA
Responsible for management of a $150M program, consisting of a series of design and construction contracts to repair facilities damaged by Hurricane Katrina at the Board's Carrollton Water Purification Plant and Central Yard. This role included coordination with the Board's project management staff and the oversight of construction managers, design consultants, and inspectors.

Project Engineer, Water Distribution System Designs – JIRR Program, New Orleans, LA
Responsible for the design of water distribution lines to replace existing lines that were failing. This design was part of the Recovery Roads program for the City of New Orleans. The neighborhoods affected by this design were Mid-City and Read Blvd West.

Project Engineer, Mid-City Basin Sewer System Evaluation Survey, New Orleans, LA
Responsible for field location and verification of sanitary sewer facilities. Assisted in creating a plan of action for surcharged manholes in Mid-City basin. This included the collection and compilation of data on the sanitary sewer system and assistance in database management of sanitary sewer facility information.

Project Manager, LSU University Medical Center Site Design, New Orleans, LA
Responsible for project management of the civil/utility design for the 37-acre LSU University Medical Center in the Mid-City neighborhood of New Orleans, Louisiana. The project developed the site design from a schematic level through the production of construction documents, and ultimately construction through a Construction Manager At-Risk process.

Louisiana Regional Wastewater Treatment Project, St. John the Baptist Parish, LA
Responsible for the planning and design of a regional wastewater treatment plant for the East Bank of St. John the Baptist Parish to replace the existing facilities. This project started with a study to determine the optimum location and design sequence. The first phase of the regional plan is a 4.0 MGD plant for the Reserve community.

Avenue Box Culvert (Constance to Claiborne), New Orleans, LA
Responsible for project management of the survey, geotechnical, and design phases of the box culvert project. This project consisted of a new drainage culvert under the median along Louisiana Avenue. This included coordination with the City of New Orleans, Regional Transit Authority, and various utility companies.

Project Manager, USACE Algiers Canal Levee Project, New Orleans, LA
Responsible for project management of post-Katrina levee improvements along the Algiers Canal on the West Bank of Plaquemines parish. The project included design calculations and notifications of final layouts of ramps, gates, and bulkheads for property owners along the Algiers Canal, review of plans and specifications, and preparation of cost estimates for levee improvements along the Canal.

Project Engineer, Neighborhood Sewer System Improvements, Houston, TX
Responsible for analysis, preliminary design, and cost estimation of sewer improvements to five neighborhoods in Houston, Texas. Design issues included back lot sewers and aged infrastructure beyond its useful life and capacity.

Project Manager, Keesler Air Force Base Privatization Proposal, Biloxi, MS,
Responsible for leading the development of a proposal for the City of Biloxi to take ownership of the water and sewer infrastructure at Keesler Air Force Base. The city was ultimately selected in a competitive proposal process until the privatization effort was placed on hold by the base.

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 1

Project Name, Location and Owner's contact information:

EBWTP Plant Expansion (P4) | Jefferson Parish

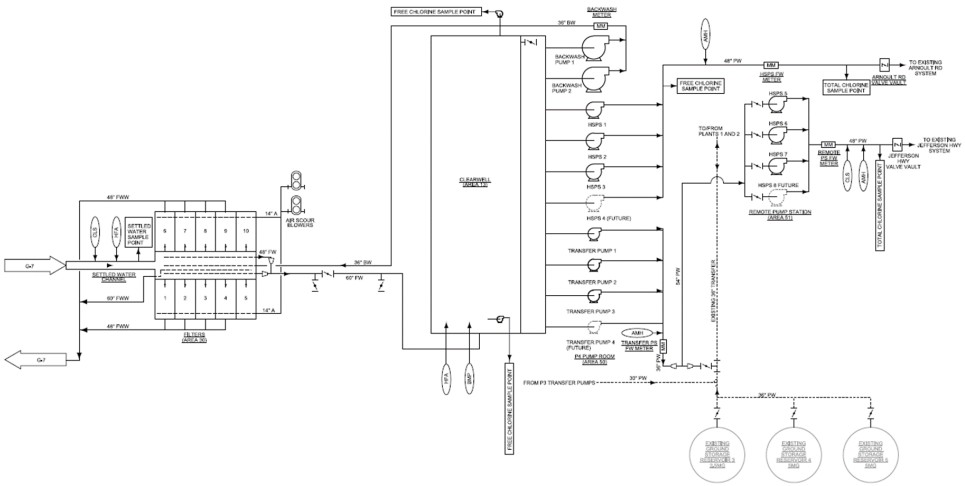
Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Sydney Bazley, Director
504-736-6742

Nature of Firm's Responsibility:

Expansion of the EBWTP consists of a 40 MGD expansion of the existing plant involving the following design disciplines; Civil and Site Development, Architectural, Landscaping, Structural, Geotechnical, Process Mechanical, HVAC/Plumbing, Instrumentation and Control Systems and Electrical. The new P4 facility includes the following components:

- Flash Mix
- Solids Contact Upflow Clarifier Flocculation/Sedimentation Basins
- Dual Media Filters
- Clearwell
- Transfer, High Service and Backwash Pumping
- Peak Demand Pump Station
- Waste Washwater Equalization Basin and Pump Station
- Bulk Chemical Storage
- Chemical Feed



Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2023 (Estimated)	$4.9M	$4.9M

PROJECT NO. 2

Project Name, Location and Owner's contact information:

EBWTP Raw Water Intake Improvements | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Sydney Bazley, Director
504-736-6742

Nature of Firm's Responsibility:

As part of the East Bank Water Treatment Plant project, Stantec designed improvements to both raw water intake pump stations. The Raw Water Pump Station improvements consist of replacing existing vertical turbine pumps, valves, electrical equipment, SCADA systems, piling rehabilitation, as well as minor structural improvements. The improvements at the Blue House PS are nearly complete and the design of the Levee PS is ongoing. Four newly installed 200-mgd pumps at the Blue House PS are shown below.

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2023 (Estimated)	$1.39M	$1.39M

PROJECT NO. 3

Project Name, Location and Owner's contact information:

EBWTP P3 Facility Rehabilitation | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Sydney Bazley, Director
504-736-6742

Nature of Firm's Responsibility:

Stantec performed site visits over a period of several days to assess the existing condition of the existing P3 facility. Based upon the condition assessment, Stantec will rehabilitate the existing P3 facility as part of the East Bank Water Treatment Plant project. Improvements will consist of the rehabilitation and/or replacement of existing structural, mechanical and electrical features of the following P3 Facility components.

- Raw Water Pipeline and P3 Influent Flowmeter
- Rapid Mix Basin
- Precipitators
- Filters
- Pipe Gallery
- P3 High Service Pump Station
- P1 High Service Pump Station
- Powdered Activated Carbon (PAC) Building
- Electrical Room
- SCADA System
- Gaseous Chlorine Room
- Anhydrous Ammonia

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2023 (Estimated)	$TBD (project ongoing)	$TBD (project ongoing)

TEC Professional Services Questionnaire

PROJECT NO. 4

Project Name, Location and Owner's contact information:

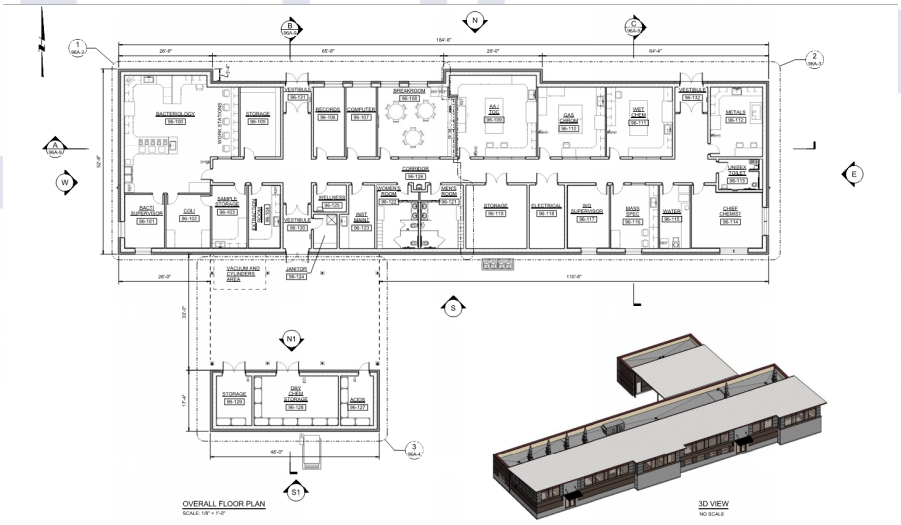
EBWTP Bacteriological and Chemistry Laboratory | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Sydney Bazley, Director
504-736-6742

Nature of Firm's Responsibility:

As part of the East Bank Water Treatment Plant project, Stantec designed a new 10,125 SF Bacteriological / Chemistry Laboratory. The building consists of 2 stories and the design is aesthetically pleasing and functional. The exterior walls are a cavity wall system consisting concrete masonry units with a decorative masonry veneer. The roof system for the building consists of two roof types, a single gable standing seam metal roofing and a low slope single-ply membrane system installed on rigid insulation above a structural metal roof deck. The interior includes metal casework and chemical resistant counters The design of the building is complete and should be advertised for bids in 2022.



Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2023 (Estimated)	$826,000	$826,000

TEC Professional Services Questionnaire

PROJECT NO. 5

Project Name, Location and Owner's contact information:

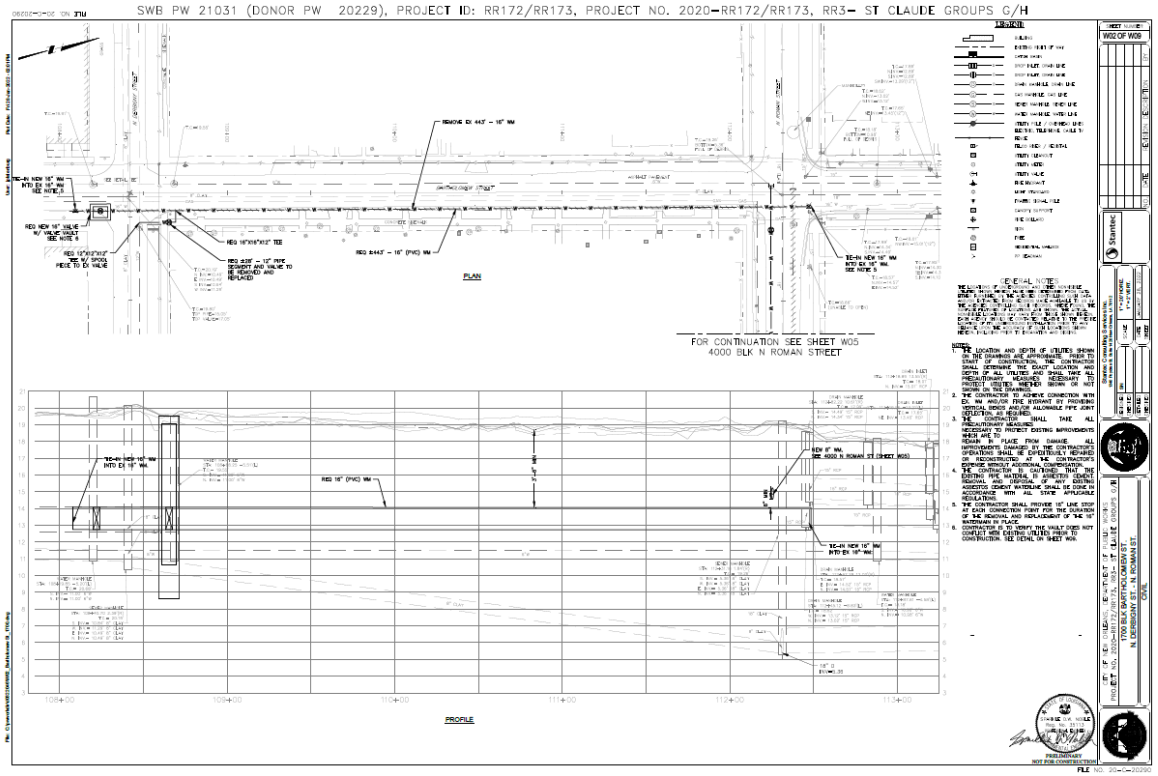
City of New Orleans Water Line Replacement Program | New Orleans

Sewerage and Water Board of New Orleans
625 Saint Joseph Street
New Orleans, Louisiana 70165

Ron Spooner, Interim General Superintendent
504-529-2837

Nature of Firm's Responsibility:

The purpose of this project is to replace water lines on the East Bank as a result of floodwaters from Hurricane Katrina. Stantec prepared designs to replace over 120 blocks of water lines including preliminary design reports, final plans and specifications, bidding, construction administration, resident inspection, and record drawings. All designs were coordinated with the City of New Orleans Street Restoration Program. Topographic survey and geotechnical services were also provided.



Completion Date (Actual or estimated):	Completion Date (Actual or estimated):	
	Entire Project:	**Work for which Firm was Responsible:**
2023 (estimated)	$3.1M	$3.1M

PROJECT NO. 6

Project Name, Location and Owner's contact information:

On-Call Hydraulic Modeling Support – Grand Isle Update | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Jerome Wool, Engineer
504-736-6742

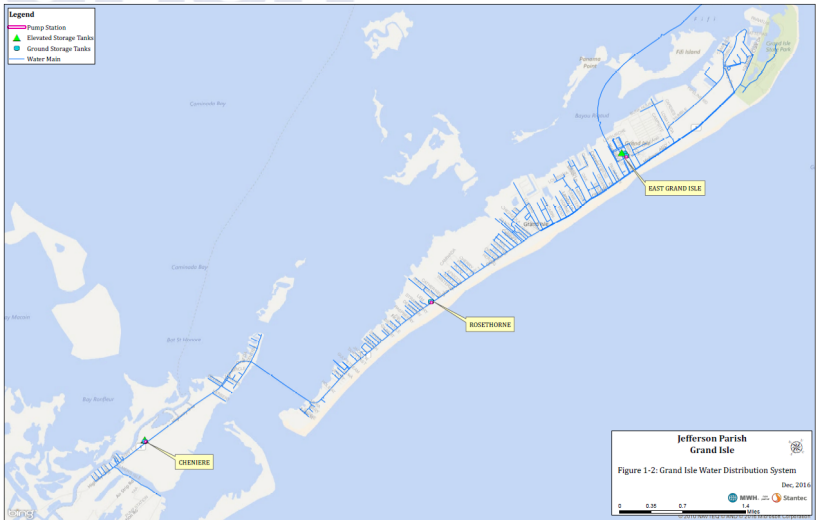
Nature of Firm's Responsibility:

Jefferson Parish operates and maintains the water supply and distribution system for the Town of Grand Isle, Louisiana. Stantec updated the water hydraulic model and identified / addressed deficiencies in the local system, particularly during the times of peak tourism. Stantec identified and reviewed collected system data for input into the hydraulic model. The following facilities were reviewed and updated:

- Lafitte Storage Tank and Pumping Station
- East Grand Isle Storage Tanks and Pumping Station
- Cheniere Storage Tanks and Pumping Station
- Rosethorne Storage Tank and Pumping Station
- All flow and pressure control valves within Grand Isle

Stantec lead the field-testing efforts to collect data for the verification and calibration of the updated model components. Stantec prepared a field-testing plan describing the data to be gathered, its purpose, the data collection process, and the specific data and tests that are to be performed.

Stantec updated and calibrated the water system hydraulic model downstream of and including the Lafitte pump station. Facilities included in the current model were updated with the latest data provided by the Jefferson Parish and collected during the field testing, along with operational details and control logic. Recommendations were captured in a final report.



Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2013 (actual)	$152,200	$152,200

TEC Professional Services Questionnaire

PROJECT NO. 7

Project Name, Location and Owner's contact information:

On-Call Hydraulic Modeling Support – Grand Isle Chenier Elevated Water Storage Tank Analysis | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

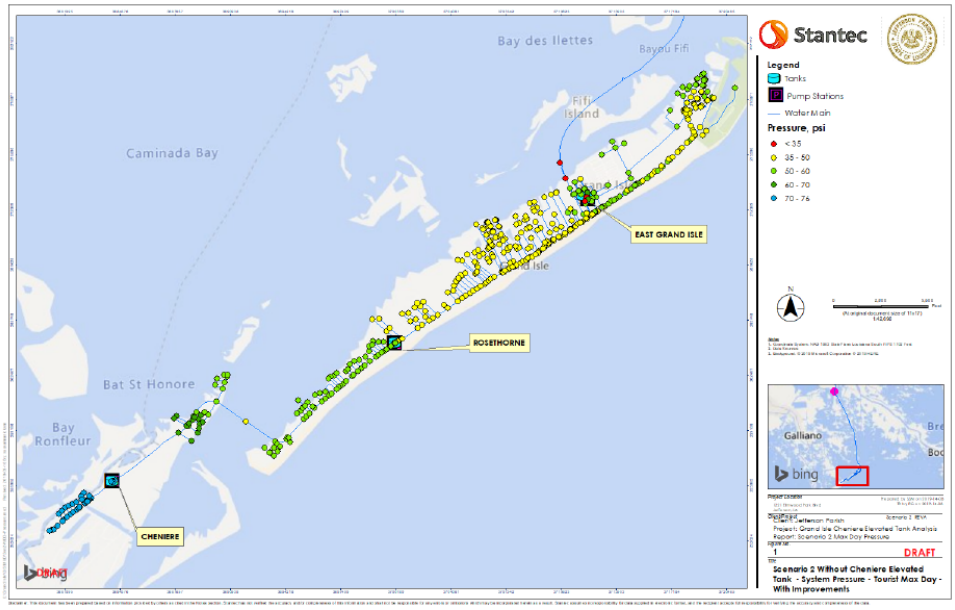
Jerome Wool, Engineer
504-736-6742

Nature of Firm's Responsibility:

Jefferson Parish was considering replacing the existing above ground Chenier elevated water storage tank. Given the cost associated with replacing the elevated water storage tank and the source water now being located on the east side of the island, the Parish would like to assess if the elevated storage tank is still required at this location to meet current level of service.

Stantec updated the Grand Isle water hydraulic model and performed model simulations using the updated computer model of the Grand Isle water distribution system. Stantec reviewed the results model simulations to assess the performance of the system without the Cheniere Elevated Tank and recommend system improvements; such as modifications to pumps, installation of VFDs, modifications to ground storage tank or distribution main upgrades, to achieve current level of service.

Stantec prepared and submitted a presentation summarizing the results of the analysis. Figures and Tables showing the change in model-predicted minimum service pressures, available fire flow, and node water age were provided.



Completion Date (Actual or estimated):	Completion Date (Actual or estimated):	
	Entire Project:	**Work for which Firm was Responsible:**
2020	$13,724	$13,724

TEC Professional Services Questionnaire

PROJECT NO. 8

Project Name, Location and Owner's contact information:

Jefferson Parish East and West Bank Hydraulic Model Updates and Alternative Scenario Runs | Jefferson Parish

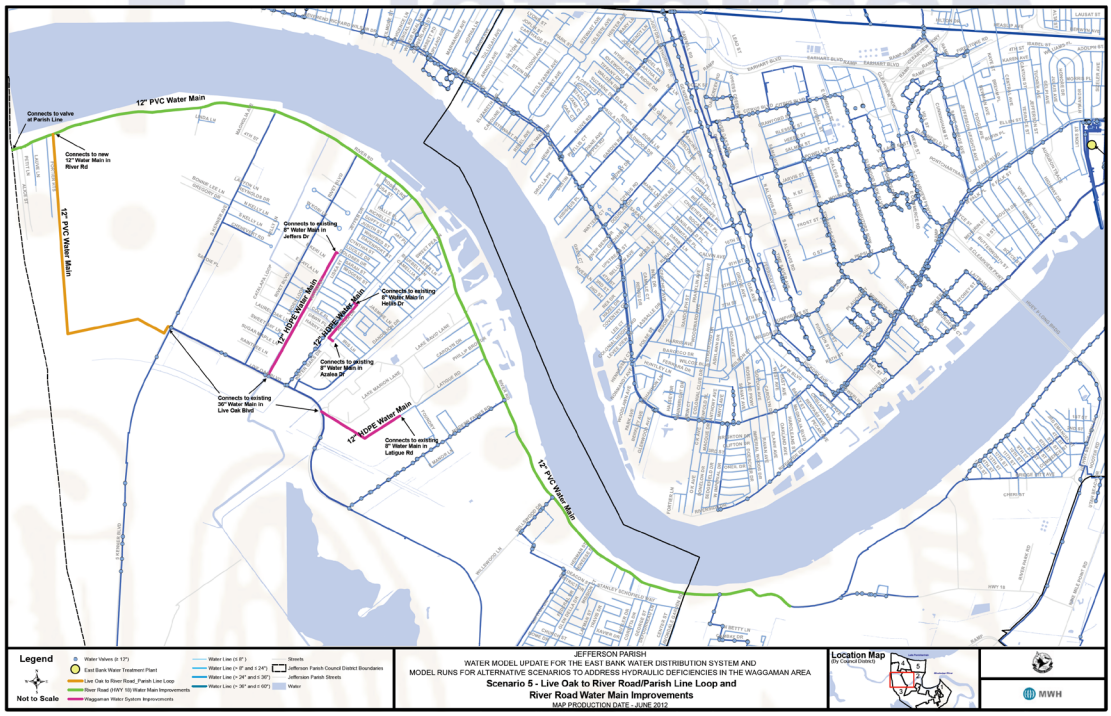
Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Jerome Wool, Engineer
504-736-6742

Nature of Firm's Responsibility:

Jefferson Parish selected Stantec to update the East & West Bank hydraulic models and to run alternative scenarios in an effort to determine the effectiveness of planned capital improvements in the Waggaman area, and the feasibility of interconnecting the east and west bank water distribution systems. Stantec updated the hydraulic model to reflect changes to the distribution system since the model was created by Stantec in 2005.

Once the model was updated, Stantec ran six alternative scenarios. Stantec analyzed the results of the model runs and selected the most effective capital improvements that addressed the low water pressure and quality issues in the Waggaman area. Stantec evaluation confirmed that the Parish was utilizing public funding in the most optimal way.



Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2011	$144,305	$144,305

TEC Professional Services Questionnaire

PROJECT NO. 9

Project Name, Location and Owner's contact information:

On-Call Hydraulic Modeling Support – Kenner Water Study | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Jerome Wool, Engineer
504-736-6742

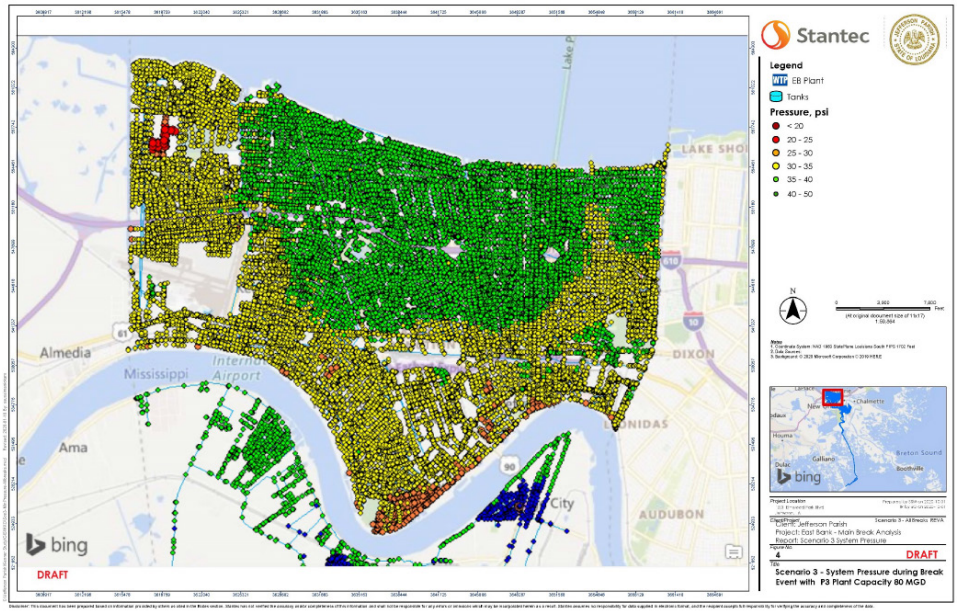
Nature of Firm's Responsibility:

Jefferson Parish performed a study related to the loss in water pressure that occurred during the freeze event in January 2018. The Parish would like to determine the feasibility of a new water tower to supplement the system during a freeze event.

Stantec modified the existing water hydraulic model to simulate the January 2018 freeze event by incorporating 22 water breaks identified by the Parish during the event and modifying the hydraulic model to include the additional demand on the system during the event due to residents opening faucets to keep water flowing through the home to prevent water pipe breaks in the home.

We used an iterative process to run the model and compare the model results at the Moisant and Shrewsbury Towers (towers) and the East Bank Water Treatment Plant (WTP) to the flow and pressure data provided by the Parish at these three locations during the event.

Stantec prepared and submitted a presentation summarizing the results of the analysis including a comparison of EPS results of the 2018 freeze event between the current system and two proposed elevated tank alternatives.



Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2020	$19,897	$19,897

TEC Professional Services Questionnaire

PROJECT NO. 10

Project Name, Location and Owner's contact information:

On-Call Hydraulic Modeling Support – Analysis Proposed Waterline for Barataria Waterway | Jefferson Parish

Jefferson Parish Department of Water
1221 Elmwood Park Blvd, Ste 909
Jefferson, Louisiana 70123

Jerome Wool, Engineer
504-736-6742

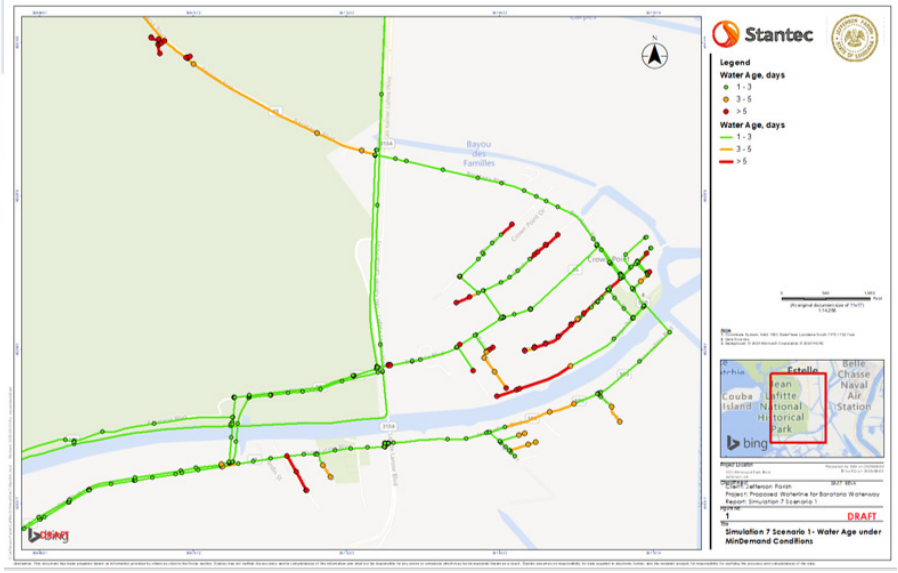
Nature of Firm's Responsibility:

Jefferson Parish was considering adding a new 10-inch and 8-inch waterline on either side of the Barataria Waterway with the 10-inch crossing under the Waterway. The Parish would like to assess the impact on pressure and water quality (water age) in the vicinity of the new waterlines once the new 8-inch and 10-inch lines are added to the system.

Stantec modified the existing water hydraulic model in the Lafitte area to include waterlines added since the previous model update. The Parish performed peak pressure tests at 3 fire hydrants in the area (18, 15, 7) and provided the results to Stantec for incorporation into the model.

Stantec performed model simulations using the updated computer model of the water distribution system. Stantec compared the results of the model baseline scenarios to the results of proposed scenarios to assess the performance of the system with regard to pressure and water age.

Stantec prepared and submitted a presentation summarizing the results of the analysis. Figures and Tables showing the change in model-predicted minimum service pressures, available fire flow, and node water age were provided.



Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	**Work for which Firm was Responsible:**
2020	$8,146	$8,146

M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1.		
2.		
3.		
4.		

Over the last 38 years that we have worked with Jefferson Parish, Stantec has delivered projects on schedule and on budget without any adversarial legal proceedings.

N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.

The Stantec community unites more than 25,000 employees working in over 400 locations across 6 continents. We collaborate across disciplines and industries to bring buildings, energy and resource, environmental, water, and infrastructure projects to life. Our work—engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, construction services, project management, and project economics, from initial project concept and planning through to design, construction, commissioning, maintenance, decommissioning, and remediation—begins at the intersection of community, creativity, and client relationships.

Our local strength, knowledge, and relationships, coupled with our world-class expertise, have allowed us to go anywhere to meet our clients' needs in more creative and personalized ways. 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.

RFQ Criteria #1: Professional Training and Experience (35 points)

Stantec provides engineering, design, and construction management services for water, wastewater, drainage, flood control, pump station, tunnel, sewage, pumped storage, and roadway projects, both domestically and internationally.

Stantec's Louisiana team is fully qualified and staffed to provide the field personnel, engineers, office staff, laboratory personnel, and equipment necessary to accomplish the services as tasked by the Parish. We understand that project sites may be located in areas requiring special equipment for access. We have extensive experience mobilizing the right personnel and tools to accomplish environmental testing and studies in a timely, efficient and cost-effective manner.

In addition to our local staff, Stantec has a deep bench of water experts and technicians to draw from with experience throughout the southeast United States including Louisiana. We've illustrated our proposed team in the organizational chart in this section. Resumes describing the education and experience of project personnel are included in TEC Section K.

Our comprehensive services include hydraulic, mechanical, electrical, civil, structural, and geotechnical aspects of these projects. Client deliverables include: study reports; design memoranda; contract plans and specifications; bid solicitation and evaluation; construction cost estimates; project scheduling, monitoring and control systems; and project completion and start-up documentation. Stantec has completed the design of numerous water, wastewater, and drainage facilities, ranging in capacity from 0.5 cfs to over 30,000 cfs. These facilities include raw water pumping stations, high lift pumping stations, stormwater pumping, pumped storage facilities, and other types of pumping facilities. These stations have included all types of pumps (such as vertical turbines and horizontal split case pumps), electric motor and internal combustion engine drivers, electrical controls for local and remote operations, and telemetering.

Stantec is committed to delivering quality services that are tailored to the specific needs of our clients and their customers.

We have completed hundreds of water engineering projects for federal, municipal, and private-sector clients in the U.S., including:

- Jefferson Parish
- St. Bernard Parish
- City of New Orleans
- Sewerage and Water Board of New Orleans
- City of Slidell
- City of Baton Rouge

- City of Atlanta
- City of Houston
- Metropolitan Water Reclamation District of Greater Chicago
- Illinois Department of Transportation
- Metropolitan Water District of Southern California
- Oglethorpe Power Corporation
- Virginia Power Company
- Multiple International Clients from Latin America to the Far East

#2

Top Design Firms By Market - Water

ENR, August 2021

PROFESSIONAL SERVICES

Stantec is a full-service firm that can provide resources needed to complete any water-related project. Stantec is qualified to provide:

- Project Management
- Hydraulic Modeling of Water Distribution Systems
- Facility Site Analysis and Right-of-Way Acquisition Support
- Right-of-Way, Survey, Legal Description Preparation & Easement Coordination
- Hydraulics and Surge Analysis
- Preliminary Design, Final Design, & Contract Document Preparation
- Design Reviews, Bidability, & Constructability Reviews and Value Engineering
- Bid Services
- Construction Management Services

WATER EXPERTISE

Stantec has a long history of developing innovative water treatment techniques and is recognized as a leader in the field. We have prepared studies and designs for more than 500 water treatment plants, ranging in capacity from 1 to 1,200 MGD. Our engineers have led the design efforts of some of the largest water treatment facilities in the world.

We have developed and incorporated innovative methods into our water treatment facility designs, including many that have been patented. These include pumped blenders (flash mixing), tapered hydraulic flocculation, designed compartmentalization, vacuum sludge removal, back-wash conditioning, simplified filter controls, high-rate filtration, direct filtration, air lift backwashing, ion exchange, and reverse osmosis.

Stantec offers extensive predesign study services, including on-site investigations such as pilot facilities for pretreatment, ozonation, chemical feeding, filtration, and continuous monitoring. We initiated particle count monitoring in addition to the monitoring of turbidity and other physical and chemical parameters. Through our planning and design processes, we develop appropriate solutions to fit even the smallest technically straightforward changes.

Water Distribution System Design. Distribution system infrastructure is a water supply system's most expensive and vital element. Stantec believes that effective planning, innovative design, and consistent maintenance are key to maximizing the lifecycle value of each distribution system component. We offer our clients significant expertise in each of these areas, starting with high level master planning for all components necessary to ensure the system functionality and reliability required to consistently deliver a high quality and sufficient quantity of water to customers in the face of continual growth and changing regulatory requirements. Stantec has the tools and knowledge to develop a complete pipe computer model of a distribution system using existing records or data acquired through field investigations. With a calibrated hydraulic model, the system can be simulated and analyzed to shed light on available capacity, infrastructure needs, energy optimization possibilities and water quality improvements.

Aging distribution networks can result in high capital expenditures just to maintain the existing pipes. Our commitment to enhancing our services by implementing contemporary, innovative technologies for both new construction and existing system rehabilitation often realizes significant cost benefits for our clients while ensuring long-term system integrity.

Water Treatment Plant Upgrade & Expansion. Water treatment plant upgrades and expansions make up a sizable portion of Stantec's portfolio of water projects. We have worked on a substantial amount of Water Treatment Plant (WTP) projects, including:

- Multiple projects for plant expansions larger than $50M in construction costs
- Multiple treatment plants using ozone or membrane treatment technologies
- Multiple treatment plants completed in the last year alone over 50 MGD

Stantec has performed a variety of Value Engineering (VE) assignments and is fully qualified to conduct VE workshops. Many of our senior engineers have completed the U.S. Environmental Protection Agency (EPA) required 40-hour VE training program and have qualified to serve as team coordinators on VE projects. Stantec has experienced water treatment and design professionals with various engineering and architectural disciplines who have served as VE Team Members and are familiar with VE procedures. Stantec's VE experience covers a variety of engineering projects including new and expanded water treatment plants, water transmission mains, wastewater treatment facilities, wastewater interceptors, stormwater (combined wastewater) flow retention and equalization facilities, pumping stations, and force mains.

Water Treatment Plant Design. Stantec has Water Treatment Plant engineering experience unparalleled by our competition. Nearly half of our revenue stems from our water quality engineering services alone. We are one of the largest consulting engineering firms in the United States in the field of water treatment and supply.

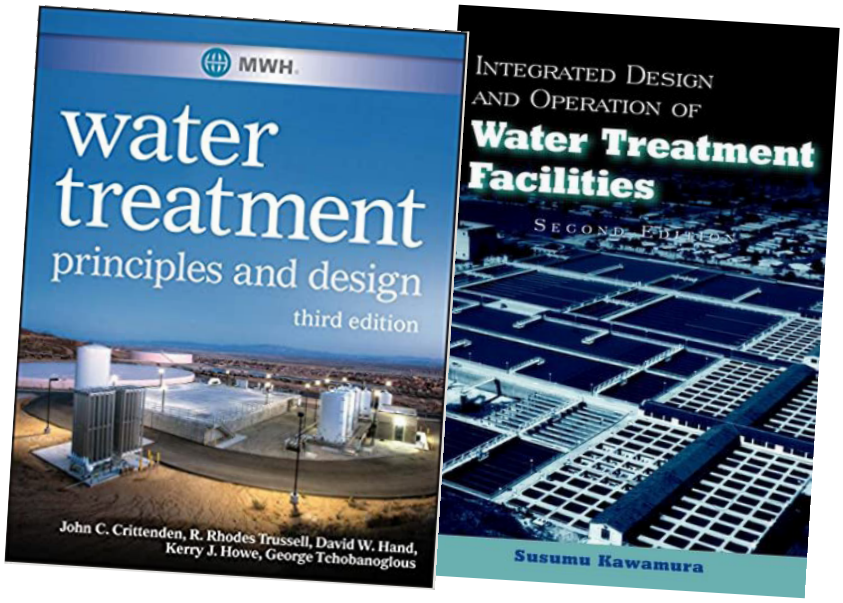
Stantec has a long history of designing award-winning projects using innovative technologies that support our clients' water treatment objectives. James M. Montgomery, founder of MWH (now Stantec), received the company's first commission to design the 100 MGD Alvardo Water Softening & Filtration Plant in 1945. Since then, we have prepared numerous studies and designs for water storage, treatment and transmission. We have consistently maintained our national leadership in water treatment and transmission, water treatment plant design, research, pilot testing, and regulatory development.

Stantec has studied and designed more than 1,000 water treatment plants ranging in size from 1 to 1,200 MGD. We continue to lead the industry in the application of new water treatment technology. Innovations that we have pioneered include:

- Pumped flash mixing
- Tapered flocculation
- Modular design
- Vacuum sludge removal
- Backwash conditioning
- High rate filtration
- Direct filtration
- Airlift backwashing
- Fixed nozzle surface wash
- High efficiency ozonation
- Simplified filter controls
- Ion exchange
- Reverse osmosis

Stantec was selected to complete the national Cryptosporidium Inactivation Study for eleven different agencies. We also designed the two largest microfiltration treatment plants in the country for the Carmichael Water District and the City of Kenosha, Wisconsin.

Water Treatment Textbooks. Published by James M. Montgomery, Inc., Water Treatment Principles and Design is the definitive guide to the theory and practice of water treatment engineering and is used as a textbook at many major universities. Integrated Design of Water Treatment Facilities, another textbook, was published in 1991 by Dr. Susumu Kawamura, a noted water treatment plant expert with our firm.



Regulatory Development. Stantec is at the forefront of monitoring and evaluating regulatory developments in the water field. We routinely publish regulatory summaries, such as our Regulatory Highlights: Information Collection Request (ICR), Disinfectants and Disinfection Byproducts (D/DBP) Rule, and Enhanced Surface Water Treatment Rule (ESWTR). The American Water Works Association (AWWA) asked Stantec to prepare an evaluation of the Safe Drinking Water Act (SDWA) rule as proposed in 1987. Our evaluation showed that most utilities would not comply with the disinfection rule as originally proposed. Considering our findings, EPA rewrote the regulations to allow pretreatment credit for disinfection. Stantec assisted AWWA and EPA by developing the relationship between chlorine and trihalomethanes (THM) based on water from 35 utilities. EPA used the data to validate their model on THM formation.

SCADA & Automation Engineering. Stantec uses both cutting-edge and time-proven control technology and the latest field-proven equipment approaches in developing the configuration of water treatment and distribution control systems. Our staff of mechanical, hydraulic, electrical, and control system engineers is experienced in all aspects of automated control for a wide range of control processes, as well as data acquisition, computer-based control, monitoring displays, and data handling. Stantec designs include data transmission by various communication media including telephone, radio, microwave, fiber optics, CATV, and satellite. Our designs reflect the depth of experience required to understand and control water plant processes and to provide an operator-oriented approach to the control of these processes. Engineers utilize a thorough knowledge of the latest water treatment process equipment to apply control concepts effectively.

Stantec has provided design and support engineering and start-up services related to SCADA and Plant Automation systems for nearly 40 years with clients worldwide. Control system applications include various aspects of water production, treatment, storage, and distribution. Also included are wastewater collection and treatment, as well as automatic operations of large system networks serving municipal populations of up to 12,000,000 and areas over 2,500 square miles. In many cases the design is preceded by a feasibility study and predesign effort that sets forth the remote functions to be monitored and/or controlled, the central control configuration, alternatives in equipment approach, cost alternatives, improvements to be expected in operation, and the savings to be realized.

For Jefferson Parish, Stantec performed an initial evaluation, constructed a pilot SCADA system, and prepared phased design documents for a SCADA system to monitor and control the water, sewerage, and drainage facilities. The water department chose plant automation to ensure the plants on the East and West Banks were being efficiently operated and this project allowed the department to cut operational shifts and automated the chemical feeds and valving which were safety concerns. The SCADA upgrades allowed Jefferson Parish to better monitor and control the systems to more cost effectively run the operation. When completed, the system encompassed more than 500 remote sites including 4 WWTP's, 15 sewage pump stations, 430 sewage lift stations, 40 drainage pump stations, 28 canal level monitors, 2 WTP's, 7 water pump stations, and 12 water storage reservoirs. Overall, the system monitors approximately 20,000 data points. In addition to the normal design service, Stantec performed much of the system software configuration.

RFQ Criteria #2. Capacity for Timely Completion (20 points)

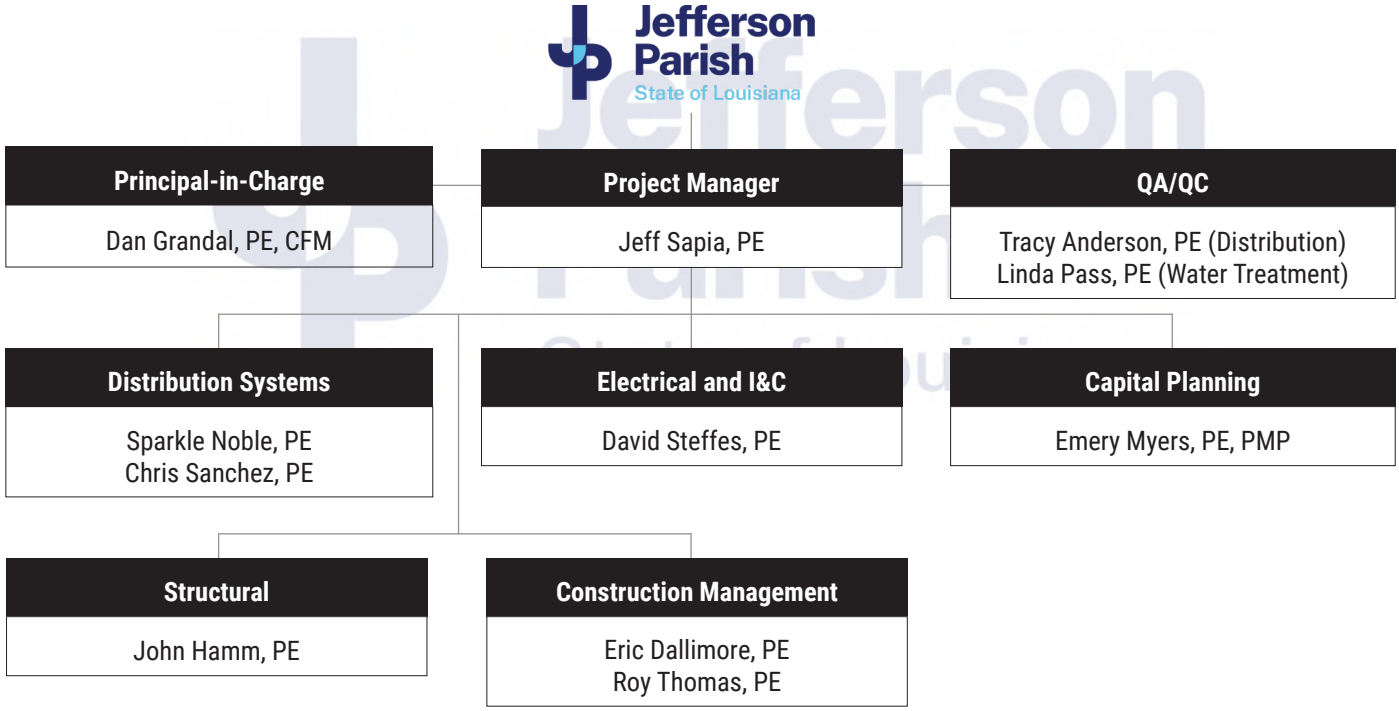
The Stantec approach to this consulting assignment can be summarized in these words: Respond Immediately and Remain Flexible. We will carefully approach this opportunity by teaming our senior project manager with environmental scientists, engineers and technicians who have extensive experience performing water projects The team is well versed in quality control, project management practices, and the need to maintain schedules and fiscal control.

Organization Chart

We are better together. We take this core value seriously here at Stantec. That's why we have assembled a strong team of our top experts and project managers to provide you with the best project experience possible.

The chart below illustrates how our team is organized to deliver your project efficiently and cost effectively. Our leadership team brings you decades of experience in stormwater, resiliency, design, engineering, and project management experience.

The key personnel who comprise our team are available and committed to completing the work within your desired time-frame. We have more than enough resources to successfully deliver this project and take on any additional work that arises. If additional resources and staffing are required, we can reach out to a pool of more than 1,800 water resources professionals company-wide to get the work done.



RFQ Criteria #3. Location of Principal Office (15 Points)

The principal office Stantec will be working from is located in New Orleans.

RFQ Criteria #4. Adversarial Legal Proceedings with Parish (15 points)

Stantec does not have any adversarial legal proceedings with Jefferson Parish.

RFQ Criteria #5. Prior Successful Completion of Projects (15 Points)

Stantec has an excellent performance record for providing coastal engineering services for Jefferson Parish, such as the Bucktown Boardwalk project and the Coastal Whitepaper. One reason we are consistently hired by our clients is our ability to plan and implement quality services and projects on time and within budget. We take a proactive position to understand your needs and consistently meet the expectations of Jefferson Parish.

RFQ Criteria #6. Size of Firm (10 Points)

Stantec has 36 staff available locally, with access to more than 100 Louisiana-based employees with significant local experience in Southeast Louisiana. Firmwide, we bring over 25,000 qualified staff to provide all the potential services required for this contract. Because of our size both locally and nationally, as well as the diversity of services we provide, Stantec is uniquely qualified to offer all the services potentially required for this contract, and others not yet identified, under one umbrella and in a timely manner.

RFQ Criteria #4: Past Performance on Parish Contracts (10 points)

Stantec has partnered with Jefferson Parish to deliver a wide variety of water projects for more than 30 years. The list below highlights these projects representing a wide variety of sizes and scopes. References are located in Section L of the TEC Professional Services Questionnaire following this Statement of Qualifications.

- On-Call Hydraulic Modeling Services (Ongoing)
- Bucktown Boardwalk (2021)
- Page and Longfellow Lift Station Improvements (2015)
- Waggaman Water Distribution System (2011)
- Jefferson Parish Water Asset Management Plan (2007)
- Drainage Improvements at Cleary Avenue and Cypress Street (2007)
- Jefferson Parish WTP Safe Houses (2006)
- W. Napoleon Drainage & Roadway Improvements (2006)
- Zones 1 and 2 Sewerage Pump Station Master Plan (2004)
- Jefferson Parish West Bank WTP Filter Upgrade (2003)
- Jefferson Parish East and West Bank Water Hydraulic Model Updates (2003)
- Jefferson Parish East and West Bank WTP Automation Additions (2000)
- Jefferson Parish SCADA Project (1998)
- Water Treatment Plant Generator Automatic Transfer Switches (1995)
- Marrero Wastewater Treatment Facility Expansion Design & Construction Management Services (1984,1986,1987, 2007)
- East Bank Wastewater Treatment Plant Project (1982–1987)

O. To the best of my knowledge, the foregoing is an accurate statement of facts.

Signature: _____ **Print Name:** Dan Grandal, PE, CFM

Title: Vice President, Water Resources **Date:** March 31, 2022

Design with community in mind

stantec.com