



WSP USA

1100 Poydras Street
Suite 1175
New Orleans, LA 70163
(504) 249-6430

wsp.com

January 28, 2021

Jefferson Parish Council
c/o Eula Lopez
Parish Clerk
General Government Building
200 Derbigny Street, Suite 6700
Gretna, LA 70053

RE: Statement of Qualifications
TEC Professional Services Questionnaire for
Routine Engineering Services for Sewer Projects
(Resolution 136766)

Dear Ms. Lopez:

WSP USA Inc. (WSP) is pleased to submit a response to the Request for a Statement of Qualifications demonstrating our capability to provide professional engineering services for **Sewer Projects** in Jefferson Parish. WSP is a leader in engineering and professional consulting services, dedicated to serving local communities. We are engineers, planners, technical experts, strategic advisors and construction management professionals. We partner with our clients to help communities prosper.

Jose Rodriguez, PE, a seasoned Project Manager with over 25 years of experience in the management of infrastructure projects will lead our team. Jose is located in our New Orleans office and will be extremely responsive to your needs. He will be leading a team with local resources to address project and coordination needs quickly and efficiently. Our team of highly qualified engineers, led by Jose, include civil, structural and electrical engineers prepared to handle any assignments, responsively and efficiently, while meeting scope, budget and schedule requirements.

I would like to personally thank you in advance for your consideration of the WSP team for this project. I am confident in this team, and we look forward to the opportunity to partner with Jefferson Parish. Please feel free to contact me directly at max.nassar@wsp.com or (504) 249-6430 with any questions or additional information you require about our capabilities, our staff, and/or our services.

As signer of this statement of qualification and Area Manager, I am a representative of our firm, and I am authorized to submit this proposal and authorized to contractually obligate WSP USA Inc. We look forward to partnering with Jefferson Parish and exceeding your expectations.

Sincerely,

WSP USA Inc. | Federal Tax ID: 11-1531569

Max Nassar
Vice President, Senior Area Manager

WSP USA

wsp.com

Technical Evaluation Committee (TEC) Questionnaire

Instructions

- The Technical Evaluation Committee (TEC) Questionnaire shall be used for professional services related to architecture, engineering, or survey projects.
- **The TEC Questionnaire should be completely filled out. Complete and attach ALL sections. Insert “N/A” or “None” if a section does not apply or if there is no information to provide.**
- Questionnaire must be dated and signed by an authorized representative of the Firm. Failure to sign the questionnaire shall result in disqualification of proposer pursuant to J.P. Code of Ordinances Sec. 2-928.
- All subcontractors must be listed in the appropriate section of the Questionnaire. Each subcontractor must provide a complete copy of the TEC Questionnaire, applicable licenses, and any other information required by the advertisement. Failure to provide the subcontractors' complete questionnaire(s), applicable licenses, and any other information required by the advertisement shall result in disqualification of proposer pursuant to J.P. Code of Ordinances Sec. 2-928.
- If additional pages are needed, attach them to the questionnaire and include all applicable information that is required by the questionnaire.

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Routine Engineering Services for Sewer Projects in Jefferson Parish
Resolution Number: 136766

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

WSP USA Inc.
1100 Poydras Street
Suite 1175
New Orleans, LA 70163

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:

Michael J. Abrahams, PE
Senior Structural Engineer / Technical Director, Structures
One Penn Plaza
New York, NY 10119
(212) 465-5185
michael.abrahams@wsp.com

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.

Jose L. Rodriguez, PE
Senior Civil Engineer / Engineering Lead
Louisiana, Mississippi, Alabama
1100 Poydras Street, Suite 1175
New Orleans, LA 70163
(504) 249-6430
jose.l.rodriguez@wsp.com

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

<u>1</u> Administrative	<u> </u> Estimators	<u> </u> Specification Writers
<u> </u> Architects (Licensed)	<u> </u> Geologists	<u>2</u> Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u>1</u> Graduate Engineers
<u>3</u> Civil Engineers	<u> </u> Interior Designers	<u>4</u> Project Managers
<u>1</u> Construction Inspectors	<u> </u> Landscape Architects	<u> </u> Clerical
<u> </u> Ecologists	<u> </u> Land Surveyor	<u>1</u> Grant/Funding Specialist
<u>2</u> Electrical Engineers	<u>1</u> Mechanical Engineers	<u>9</u> Sanitary Engineers
<u>2</u> Engineer Intern	<u>2</u> Environmental Engineers	
<u> </u> Professional Land Surveyors		<u>29</u> TOTAL

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

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.
N/A

H. Has this JOINT-VENTURE previously worked together? Please check:
YES ☐ NO ☐

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. N/A		
2.		
3.		

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

N/A _____

TEC Professional Services Questionnaire

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:

Max Nassar
Vice President - Senior Area Manager

Project Assignment:

Principal-in-Charge

Name of Firm with which associated:

WSP USA Inc.

Years' experience with this Firm:

4 (38 with others)

Education: Degree(s)/Year/Specialization:

B.A. / 1976 / Psychology (Louisiana State University)

Active registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Mr. Nassar, a native of Jefferson Parish LA, has spent 30 years in executive level positions in Fortune 500 Companies in both the Manufacturing/Industrial Sector and AE Consulting Services Sector. Over the past 28 years, he has overseen a multiplicity of infrastructure projects in the southeast United States and Central America, with a value in the billions. Many of these projects have been in Louisiana and Mississippi and have been performed for a variety of public and private clients including Louisiana Department of Transportation and Development, The Mississippi Department of Transportation, The Louisiana Department of Natural Resources, The New Orleans Regional Planning Commission, The New Orleans Regional Transit Authority, The Louisiana Coastal Protection and Restoration Authority, the Jackson Mississippi Municipal Airport Authority, the Louis Armstrong New Orleans International Airport, the Port of New Orleans and others. His international experience includes port and harbor consulting at Puerto Cortes in Honduras, Central America and construction oversight of the Port Connector Roadway in Honduras, Central America. He has successfully led negotiations and mediations for a variety of private clients.

Mr. Nassar possesses demonstrated experience in all forms of Project Leadership, Government and Stakeholder Relations, Program Management, Project Management, Program and Project Development, and Construction Management and Inspection services related to major infrastructure and facilities projects which include roadway, highway and bridge infrastructure, drainage and utilities infrastructure, railways and transit ways, airport facilities, and various marine and waterfront infrastructure and facilities.

His resume follows.



MAX NASSAR

Vice President

Senior Area Manager, Gulf States Area (LA, MS, AL)



Years with the firm

4

Years total

42

Areas of practice

*Program & Project
Management*

*Government and
Stakeholder Relations*

*Program & Project
Development*

Construction Management

Inspection Services

Languages

English

CAREER SUMMARY

Mr. Nassar, a native of Jefferson Parish LA, has spent 30 years in executive level positions in Fortune 500 Companies in both the Manufacturing/Industrial Sector and AE Consulting Services Sector. Over the past 28 years, he has overseen a multiplicity of infrastructure projects in the southeast United States and Central America, with a value in the billions. Many of these projects have been in Louisiana and Mississippi and have been performed for a variety of public and private clients including Louisiana Department of Transportation and Development, The Mississippi Department of Transportation, The Louisiana Department of Natural Resources, The New Orleans Regional Planning Commission, The New Orleans Regional Transit Authority, The Louisiana Coastal Protection and Restoration Authority, the Jackson Mississippi Municipal Airport Authority, the Louis Armstrong New Orleans International Airport, the Port of New Orleans and others. Mr. Nassar's international experience includes port and harbor consulting at Puerto Cortes in Honduras, Central America and construction oversight of the Port Connector Roadway in Honduras, Central America. He has successfully led negotiations and mediations for a variety of private clients.

Mr. Nassar possesses demonstrated experience in all forms of Project Leadership, Government and Stakeholder Relations, Program Management, Project Management, Program and Project Development, and Construction Management and Inspection services related to major infrastructure and facilities projects which include roadway, highway and bridge infrastructure, drainage and utilities infrastructure, railways and transit ways, airport facilities, and various marine and waterfront infrastructure and facilities.

Additionally, Mr. Nassar has served as a member of the board of directors of a variety of business and civic entities as well as many quasi-public governmental boards or committees related to local, state, and national infrastructure. He also served on the Mayor of New Orleans' Committee for the Acceleration of Project Delivery and chaired the Mayor's Subcommittee tasked with assisting Disadvantaged Business Enterprises in expanding their business capacity. He served on the transition team of a Louisiana Governor, on both the Transition Team's Transportation Committee and the Economic Development Subcommittee. Mr. Nassar also served as the chairman of the St. Charles Parish Council.

EDUCATION

BA, Psychology, Louisiana State University, Baton Rouge, Louisiana

1976

ADDITIONAL TRAINING

Post-graduate studies in Business, Finance, Labor Relations, and Industrial Operations, Tulane University and Loyola University, New Orleans, Louisiana

PROFESSIONAL MEMBERSHIPS

Louisiana Governor's Transition Team, Economic Growth Advisory Council, Member Transportation Subcommittee, Member



MAX NASSAR

Vice President

Senior Area Manager, Gulf States Area (LA, MS, AL)

Construction Management Association of America - MS AL LA Chapter, Former Board Member

Mayor Mitch Landrieu - Construction Acceleration Task Force, Member

Mayor Mitch Landrieu, City of New Orleans Business Capacity Development Committee, Chairman

Former Member of various National, State and Local Governmental Committees related to infrastructure, transportation, aviation, economic development, environment, land use, and finance

Coast Builders Coalition, Former Member Board of Directors

St. Charles Parish Council, formerly served as Chairman

St. Charles Parish District 3, Councilman

St. Charles Parish Planning and Zoning Commission, Ad-Hoc Member

National Association of Counties and Member Environmental and Wetlands Steering Committee, former Member

Louisiana Police Jury Association, Former Member

Louisiana Police Jury Association Highway Committee, Former Member

Louisiana Police Jury Association Health and Human Resources Committee, Former Co-Chairman

PROFESSIONAL EXPERIENCE

- Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Project Principal, Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Airline Drive (US 61) pumping station in Metairie, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades.
- Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Project Principal, Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Boyd Street pumping station in Baton Rouge, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades.
- Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Project Principal. Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Chippewa Street pumping station in



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Vice President

Senior Area Manager, Gulf States Area (LA, MS, AL)

Baton Rouge, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades.

- Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Project Principal. Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Bluebonnet Boulevard pumping station in Baton Rouge, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades.
- Pontchartrain Levee District; Cross Bayou Pump Station Inspection and Assessment. Project Principal. The Cross Bayou Pump Station is owned by the Pontchartrain Levee District. The District desires to transfer the Station to ownership of St. Charles Parish. Prior to the transfer the station will undergo an in-depth inspection and assessment of the infrastructure. The Project Team will review O & M experience, develop a Rough Order Repair Estimate, and develop a Scope of Services and Plan for refurbishment of the Statement. A partial listing of the systems included are Diesel Pump Drives, Fuel Transfer and Storage Tanks, Power Take Off and Gear Reducer, Main Pumps, Auxiliary Pumps, Standby Generator, Trolley System, Automated Bar Screen and Telemetry and Controls.
- Review of Existing Wharf Condition Assessment Reports, New Orleans LA, USA: Project Principal for this project which included a review of the assessment of existing conditions at the Poland Avenue Wharf, the Seventh street Wharf, and the Louisiana Avenue Wharf. This independent review of the existing condition reports prepared by others, and included the provision of alternative repair recommendations and cost estimates for the facilities. Client: The Board of Commissioners of The Port of New Orleans.
- Port Wide River Facilities Fender Study, New Orleans, LA: Project Principal for this assessment of existing conditions of the fender systems, including the evaluation of specific design alternatives outside of the regular timber fender pile systems based on existing conditions, interface with existing wharves, type of vessels served and traffic. The project included guidance on procurement, installation and maintenance costs for the recommended fender options. Client: The Board of Commissioners of The Port of New Orleans. (2020 ongoing)
- First St. Wharf Deck Replacement – Phase 2, New Orleans, Louisiana: Project Principal for construction administration of the repair of the First Street Wharf concrete deck. The scope of work for the construction included identifying damaged concrete sections below wharf deck on the Mississippi River side and above the wharf deck. Repair work included full depth and partial depth concrete deck repairs. Project duties also included attending meetings, managing inspectors, reviewing submittals, monitoring schedule and budget and approving contractor request for payment. Client: The Board of Commissioners of The Port of New Orleans. Dates: January 2019 – Present.



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Senior Area Manager, Gulf States Area (LA, MS, AL)

- Seabrook Bridge Span Replacement Project, New Orleans, LA, USA: Project Principal for this span replacement project which included structural design, coordination of the the preparation of plans and specifications, and assurance of timely delivery to the client. The Seabrook Bridge is a Strauss-Trunnion Bascule Bridge over the Inner Harbor Canal in New Orleans. The Port of New Orleans is replacing the approach spans to the main movable section of the bridge. Client: The Board of Commissioners of The Port of New Orleans.
- Port Wide River Facilities Fender Study, New Orleans, LA: Project Principal for this assessment of existing conditions of the fender systems, including the evaluation of specific design alternatives outside of the regular timber fender pile systems based on existing conditions, interface with existing wharves, type of vessels served and traffic. The project included guidance on procurement, installation and maintenance costs for the recommended fender options. Client: The Board of Commissioners of The Port of New Orleans. (2020 ongoing)
- CRISI Grant Benefit Cost Analysis, New Orleans, LA: Project Principal for this Benefit Cost Analysis related to the Consolidated Rail Infrastructure and Safety Improvements Grant submitted by the New Orleans Public Belt Railroad, for Switch and Yard Capacity Improvements that would provide improved Safety, Handling Time, Handling Cost and Related Benefits. Client: The Board of Commissioners of The Port of New Orleans. (2020 ongoing)

PREVIOUS EXPERIENCE

Before joining WSP, Max's project experience with other engineering consulting firms included:

- Port of Pascagoula Master Plan Update, Pascagoula, Mississippi: Project Principal for the upate of the Port's Master Plan which had been created in 1996 and had last been updated in 2004. The new Master Plan included, but was not limited to, suggestions for growth, diversification, development of under utilized real estate and wharf expansion as well as increased trade with Central America and the Carribean. The plan was constructed to be fiscally conservative and one that identified areas that the Port had not traditionally pursued. Client: The Port of Pascagoula. (2011)
- CSX Rail Relocation Study and Environmental Impact Statement (EIS), Mississippi Department of Transportation (MDOT), Harrison, Hancock & Jackson Counties, Mississippi: project principal and government/stakeholder liaison for this effort. The EIS was funded by congress and initiated to study the creation a new east-west highway along the Mississippi Gulf Coast by relocating the existing CSX Railroad right-of-way out of populated areas, business districts, and tourism locations along the coastline. The EIS was charged with identifying the best feasible corridors for relocation of CSX railroad in Mississippi and demonstrating the application of remote sensing technologies to environmental analysis for transportation planning projects. The EIS project was intended to address issues relating to the existing CSX railroad corridor including projected impacts of the proposed relocation on current railroad customers, need to retain trackage, communications and other railroad facilities in some areas, and probable impacts of not relocating the rail line (no-build alternative).
- Mississippi Statewide Railroad Crossing Management Information System, Mississippi Department of Transportation (MDOT), statewide Mississippi: project



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Senior Area Manager, Gulf States Area (LA, MS, AL)

quality assurance and quality control manager, for the development of The Mississippi Railroad Crossing Management Information System (MRCMIS), a dynamic database application designed to assist in the management of the public and private at grade railroad and roadway crossings throughout the state of Mississippi. The MRCMIS was designed for the MDOT to be used by the Rails, Ports, and Freight Division to operate as a geographic information graphic user interface (GUI) to facilitate data entry, editing, and printing of various forms and crossing informational data. The MRCMIS database incorporated all the fields in the current Federal Railroad Administration (FRA) crossing inventory (Form 6180.71) plus 10 additional MDOT defined fields

- Millennium Port Feasibility Study, Board of Commissioners, Port of New Orleans, New Orleans, Louisiana: assisted in the preparation of project study. The project work scope includes a port market forecast to the year 2040, shipping forecasts, rail and trucking forecasts, development strategies, financial plans and cost-benefit studies. Depending on the port's location in proximity to open water, the market forecast projects annual 2040 throughput from 3.2 to 5 million TEUs. Buildout development costs exceeded \$1 billion.
- Design Report for the Culvert/Bridge Construction at Lapalco Boulevard and Grand Cross Canal, USACE, New Orleans District, Jefferson Parish, Louisiana: prepared 30% design report for evaluation of the alternatives for improving the drainage capacity of the Grand Cross Canal at its intersection with Lapalco Boulevard. The alternatives included adding additional culverts to the existing culverts or replacing the existing culverts with bridges to provide for the increased capacity of the canal crossing, provided a recommendation regarding the best solution based upon factors such overall cost, disruption to the public, traffic accommodation, and conflicts with existing utilities.
- Regional Planning Commission, Plaquemines Parish Intermodal Feasibility Study, Louisiana: Project Principal for feasibility study, which involved the conceptual planning of alternative rail corridors to serve potential downriver container terminal sites. The project included a capacity assessment of the existing rail corridor and a phased plan for upgrading rail capacity to meet projected requirements of a Millennium Port.

AWARDS

PRESENTATIONS

Presentations

- Nassar, Max. "Mississippi I-10 Corridor and CSX Rail Relocation." Main Session, National Center for Remote Sensing Technology-Environment, Geospatial Information for Corridor Assessment and Planning National conference, Memphis, Tennessee

TEC Professional Services Questionnaire

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:

Jose L. Rodriguez, PE
Senior Civil Engineer / Engineering Lead

Project Assignment:

Project Manager

Name of Firm with which associated:

WSP USA Inc.

Years' experience with this Firm:

3 (23 with others)

Education: Degree(s)/Year/Specialization:

B.A., / 1992 / Civil Engineering (University of New Orleans, LA)

Active registration: Year first registered/discipline:

2003 / Louisiana Professional Engineer (E-30492)
2004 / Florida Professional Engineer (62195)

Other experience and qualifications relevant to the proposed Project:

Jose Rodriguez has over 25 years of experience with roles of progressive responsibility as a civil engineer performing roadway design (including sewer design), bridge design, project management, construction supervision, estimating and project implementation for various clients in the states of Louisiana and Texas. Over the course of his professional career, he has had the opportunity to work in close relationship with Jefferson Parish, the Louisiana Department of Transportation, City of New Orleans Department of Public Works, New Orleans Sewer and Water Board, Plaquemines Parish, St. Bernard Parish, U.S. Army Corps of Engineers, New Orleans Regional Planning Commission, Marathon Petroleum Co., TXDOT, City of Baton Rouge, City of Gretna and others. Jose has extensive experience of Inroads, Autodesk Civil 3d and Leap Bridge for Concrete Bridge Design.

His resume follows.



JOSE L. RODRIGUEZ, PE

SENIOR CIVIL ENGINEER



Years with the firm

3

Years total

26

Professional qualifications

Louisiana, 2003 (E-30492);

Florida, 2004 (62195)

CAREER SUMMARY

Jose Rodriguez has over 25 years of experience with roles of progressive responsibility as a civil engineer performing roadway design, bridge design, project management, construction supervision, estimating and project implementation for various clients in the states of Louisiana and Texas. Over the course of his professional career, he has had the opportunity to work in close relationship with the Louisiana Department of Transportation, City of New Orleans Department of Public Works, New Orleans Sewer and Water Board, Plaquemines Parish, Jefferson Parish, St. Bernard Parish, U.S. Army Corps of Engineers, New Orleans Regional Planning Commission, Marathon Petroleum Co., TXDOT, City of Baton Rouge, City of Gretna and others.

Jose has extensive experience of Inroads, Autodesk Civil 3d, Leap Bridge for Concrete Bridge Design, and Excel Spread Sheets. Mr. Rodriguez is fluent in Spanish and has used his abilities to translate important safety documents and safety instruction from English to Spanish.

Mr. Rodriguez has served on the board of the American Concrete Institute (ACI) Louisiana Board, becoming president of the Louisiana Chapter in 2010. He has served as judge in ACI's annual best concrete project competitions and remains active in this organization.

EDUCATION

B.A., Civil Engineering, University of New Orleans, LA,

1992

PROFESSIONAL EXPERIENCE

Highway, Bridge and Utility Engineering Projects

- City of Gretna 12" Stumpf Boulevard Sewer Force main, Gretna, Louisiana: Project Designer and Project Manager for the preparation of plans, specifications and bid package for a 12" sewer force main for the City of Gretna. The project required the installation of over 2,500 ft. of horizontally directional drill pipe to minimize traffic disruption and cost. During construction of this project, served as construction coordinator for the City of Gretna.
- New Orleans Submerged Roadway Program Management, New Orleans, Louisiana: Quality Control Reviewer for this multi-million program management team for the LADOTD and the FHWA. Jose helped develop design guidelines and processes for the standardization of engineering work for the repair of damaged roadways by Hurricane Katrina in the City of New Orleans and other Parishes. He was responsible for conducting quality control reviews on roadway plans prepared by other engineering firms for compliance with LADOTD and the Federal Highway administration design standards. Cost: \$150M
- Magnolia Ridge Levee Project, St. Charles Parish, Louisiana: Quality Control Review and plan preparation for the Magnolia Ridge Levee project for St. Charles Parish.
- Twin Span Over Lake Pontchartrain, New Orleans, Louisiana: Independent Quality Reviewer for a 12 -Lane twin span bridge over Lake Pontchartrain designed by LADOTD with Federal Highway Emergency funds and participated in the substructure design for a segmental bridge alternate design for the same bridge. Cost: \$600M
- John James Audubon Bridge Approach, New Roads, Louisiana: Project Designer responsible for the geometric horizontal and vertical alignment for five approach bridges to the John James Audubon Cable Stay Bridge. Jose was also in charge of the



JOSE L. RODRIGUEZ, PE
SENIOR CIVIL ENGINEER

quality control for all bridge approaches and the design of all precast concrete girders for the project.

- Reynes Street Reconstruction, New Orleans, Louisiana: Project Manager and Design Engineer for this \$7M FEMA funded reconstruction. This project consisted of the total reconstruction of eleven blocks (4,300 ft.) of asphalt pavement and base material, installation of new drainage, sewer and water mains and house connections, new driveways and sidewalks. He provided Quality Control Review of subconsultant work as part of the scope of work.
- Earhart Boulevard Causeway Interchange, New Orleans, Louisiana: Project Designer responsible for the geometric design and roadway plan preparation for the Earhart Boulevard Causeway Interchange. The Earhart Boulevard Causeway Interchange purpose was to assist in traffic congestion relief for the east-west flow in traffic for the New Orleans Metro Area. It consisted of the development roadway and bridge ramps for the creation of an elevated signal controlled interchange. The estimated construction cost for this project was approximately fifty-nine million dollars. Responsible for the development of all horizontal and vertical alignments for this project as well as roadway plan preparation, developing all roadway cross sections, drainage design, utility conflict resolution and cost estimating for the project. Bentley Inroads was used for the development of the roadway plans for this project. Jose provided Quality Review of the subconsultant plans.
- Peters Road Bridge and Extension, Phases I, II, and III, Harvey, Louisiana: Project Designer responsible for the geometric design of all three phases of Peters Road. The project consisted of approach roadways in Jefferson and Plaquemines Parishes, elevated crossing over the Intracoastal Waterway and two low level bridges over the Barataria Canal. The project also included approximately 2000 feet of box culverts and concrete channel realignment. The project was done in coordination with Plaquemines and Jefferson Parishes, The Regional Planning Commission, LADOTD and the US Army Corps of Engineers. Phase I cost: \$18M
- I-10 from Veterans to Clearview, Metairie, Louisiana: Project Designer responsible for roadway plan preparation for widening 1.2 miles of I-10 from three lanes to five lanes in each direction. The project also included bridge work to accommodate the new roadway widening. Jose was also responsible for the alignment and design of concrete sound walls along the corridor. Helped implement an innovative two-sided concrete stamp process for the noise wall precast concrete panels. Cost: \$42M
- Napoleon Avenue Box Culvert, Kenner, Louisiana: Project Designer for the preparation of plans for the relocation of utilities for the US Army Corps of Engineers Napoleon Canal Box Culvert and the reconstruction of the existing roadway. Jose reviewed the horizontal and vertical alignment for conflict with utilities and overall hydraulic performance. Jose provided Quality Control Review for subconsultant plans and specifications.
- US-167, Winn Parish, Louisiana: Project Designer responsible for the for the geometric design and plan preparation of Louisiana TIMED Program funded 15 miles' section US-167. The project consisted of adding two additional lanes to US-167 and evaluating the geometric deficiencies of the existing two-lane roadway. Bentley Inroads was used for the design of the roadway, creating a digital terrain model to evaluate the roadway alignment and cut sections thru a very irregular and undulating terrain. He provided Quality Control Review services.



JOSE L. RODRIGUEZ, PE
SENIOR CIVIL ENGINEER

- Causeway Boulevard Interchange Improvements Phase I, Metairie, Louisiana:
Project Designer for the project which consisted of widening Causeway Boulevard elevated structure at Veterans Boulevard and the construction of new at grade and elevated ramps to provide better accesses, improve safety and eased congestion at this heavily travel interchange. Responsible for evaluating existing girders, the design of new precast concrete girders and the roadway plan preparation for this project. Also, responsible for evaluating and design of new sewer and water lines for the project as well as coordinating the removal and replacement of all utilities affected by the new roadways or/and structure foundations. Jose provided Quality Control review on the project. Cost: \$35.6M

City of New Orleans Department of Public Works (1996-1998): Project Manager for the Department of Public Works responsible for overseeing roadway plan preparation and drainage and utility design and Quality Control Review. As project manager, responsible for scheduling and managing projects to ensure their timely completion and within the established budget.

Department of Transportation and Development (1993- 1996): Participated in a rotational program which gave him the opportunity to work in many civil engineering branches within the Department of Transportation. Jose worked in bridge, road design, drainage and Hydraulics, geotechnical and construction.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Cain, PE Southern States District Water Lead
Project Assignment:
Technical Advisor
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
1 (34 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1981 / Civil Engineering (University of Kentucky, KY)
Active registration: Year first registered/discipline:
1988 / Professional Engineer, North Carolina (14469) 1993 / Professional Engineer, Virginia (0402020298) 2013 / Professional Engineer, Kentucky (29745) 2017 / Professional Engineer, Florida (82730)
Other experience and qualifications relevant to the proposed Project:
<p>David Cain has over 35 years of experience in the municipal water and wastewater industry in the Southeast, and currently serves as WSP's Southern States District Water Lead. He has extensive experience in computer and organizational processes, most notably hydraulic modeling programs. David is particularly effective as a client liaison and as a coordinator of the many phases of a project, including financial planning assistance and complex project scheduling to ensure projects are completed on time. He also has built and managed teams responsible for large water resources projects such as flood control structures, pumping stations, dams, hurricane protection, and watershed planning, including the Permanent Canal Closures and Pumps (PCCP) project to protect the City of New Orleans against hurricane impacts post-Katrina.</p> <p>David has served as project manager on numerous wastewater projects. Wastewater treatment plant projects include both greenfield and renovation/expansion, representing various types of processes and levels of complexity. His experience also includes large-scale pumping stations, force mains, and gravity sewers. He has been particularly successful in negotiating on behalf of his clients with regulatory agencies for interim limits and modifications to existing permits.</p> <p>His resume follows.</p>



DAVID CAIN, PE

Southern States District Water Lead



CAREER SUMMARY

David Cain has over 35 years of experience in the municipal water and wastewater industry in the Southeast, and currently serves as WSP's Southern States District Water Lead. He has extensive experience in computer and organizational processes, most notably hydraulic modeling programs. David is particularly effective as a client liaison and as a coordinator of the many phases of a project, including financial planning assistance and complex project scheduling to ensure projects are completed on time. He also has built and managed teams responsible for large water resources projects such as flood control structures, pumping stations, dams, hurricane protection, and watershed planning, including the Permanent Canal Closures and Pumps (PCCP) project to protect the City of New Orleans against hurricane impacts post-Katrina.

Years with the firm

1

Years total

35

Professional qualifications

Professional Engineer in:

NC, 1988 (#14469)

VA, 1993 (#0402020298)

KY, 2013 (#29745)

FL, 2017 (#82730)

Areas of practice

Water, Wastewater, Water Resources

David has served as project manager on numerous wastewater projects. Wastewater treatment plant projects include both greenfield and renovation/expansion, representing various types of processes and levels of complexity. His experience also includes large-scale pumping stations, force mains, and gravity sewers. He has been particularly successful in negotiating on behalf of his clients with regulatory agencies for interim limits and modifications to existing permits.

EDUCATION

BS Civil Engineering, University of Kentucky, Lexington, KY 1981

PROFESSIONAL MEMBERSHIPS

American Water Works Association (AWWA) 1987

PROFESSIONAL EXPERIENCE

Representative Wastewater/Stormwater Projects

Before joining WSP, David's project experience with other engineering consulting firms included:

- US Army Corps of Engineers, New Orleans District, New Orleans, LA
 - **Permanent Canal Closures and Pumps (PCCP)** – Managing Leader for this \$730 million project to protect the City of New Orleans from hurricane and storm impacts post-Katrina. The combined system has a pumping capacity of 24,300 cfs, making it the second-largest system of its type in the world.
- Greensboro, NC
 - **North Buffalo Sanitary Sewer Replacement and Stormwater BMPs** - Program manager for the \$45 million city of Greensboro North Buffalo Sanitary Sewer Replacement and Stream Restoration project. Responsibilities included coordinating the efforts of two large consultants and numerous subconsultants, plus design of 20,000 linear feet of 60" and 54" gravity sewer.

Gallimore Dairy Road Pump Station - Project manager responsible for designing the existing pump station replacement, a larger 4 mgd station located downstream and closer to city limits. The new pump station is a wet well/dry well type with a communitor. A permanent generator was placed at



DAVID CAIN, PE

Southern States District Water Lead

the site and tied into the city's existing SCADA system. The pumping station included a wet well structure, surge relief vault, and control building. Station design provided an initial capacity of 3,200 gpm with provisions to increase the capacity with pump impeller changes to meet anticipated increases in flows.

- Burlington, NC
 - **Great Alamance Creek Sewer** - Project manager for the design of approximately 55,000 linear feet of 30" through 24" gravity sewer along Great Alamance, Gunn, and Back Creeks. Design considerations included handling steep topography, numerous creek crossings, wetlands, a new NCDOT bridge, and the presence of archaeologically significant Indian campsites. This project included an environmental assessment and wetlands permitting.
 - **Southwest Sewer Study** - Project manager for a sewer study to evaluate alternatives to provide sewer service to a new drainage basin, including a full gravity interceptor system and several phased approaches using interim pumping stations. The system will ultimately allow the City to transport up to 14 mgd to the South Burlington Wastewater Treatment Plant.
- Eden, NC
 - **Sewerage System Master Plan** - Project manager for a comprehensive sewer master plan for the city. Coupled with steady client consultation, provided a thorough analysis of past studies, historical information, and hydrological data. The plan evaluated interceptors, upgraded existing pumping stations, and expanded the Mebane Bridge WWTP from 7 to 13.5 to meet rapidly expanding industrial demand.
 - **Smith River Sewer** - Project manager for design of a new 24" gravity sewer to replace a 700-foot section of sewer that collapsed under an existing building. Design consisted of combined open-cut and tunneling operations through the city's heavily traveled traffic circle. Complicating factors included soils contaminated by adjacent underground leaking storage tanks.
 - **Industrial Park Pumping Station and Force Main** - Project manager for a new 3.8 mgd pump station and approximately 26,000 linear feet of 24" and 16" force main designed to meet expanding industrial wastewater loads. A design was conceived to also expand an existing pump station by 1.1 mgd, thereby effectively saving the City approximately \$400,000 in gravity sewer installation costs through a residential area.
- Cary, NC
 - **Western Wake Water Reclamation Facility** - Project manager for design of the Town's new \$100 million, 18 mgd advanced tertiary wastewater treatment plant. The design required coordination of multiple consultants both inside and outside the plant fence.

PUBLICATIONS AND PRESENTATIONS - WASTEWATER

Major Outfall Replacement in a Highly Urbanized Setting, presented at the WEF Collections System Conference, Raleigh, NC, June 2011

Replacing the Heart of Your Aging Sewer System without Killing the Patient, presented at NC AWWA/WEA Conference, Raleigh, NC, November 2004.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Loduca, PE Senior Supervising Electrical Engineer
Project Assignment:
Lead Electrical Engineer
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
21 (18 with others)
Education: Degree(s)/Year/Specialization:
Ph. D. / 2011 / Engineering Management (Missouri University for Science and Technology) M.S. / 2005 / Engineering Management (University of Missouri – Rolla) B.S. / 1981 / Electrical Engineering (Virginia Military Institute) A.A.S.(summa cum laude) / 1995 / Management (Virginia Western Community College)
Active registration: Year first registered/discipline:
1998 / Louisiana Professional Engineer (28117)
Other experience and qualifications relevant to the proposed Project:
<p>David Loduca is a supervising electrical engineer with WSP with more than 35 years of experience. He is experienced on projects including municipal water and wastewater facilities, industrial facilities, highway lighting, renewable energy, airport landside facilities, telecommunications facilities, government facilities, campus lighting, educational facilities, and transportation maintenance facilities. Dave's duties include power distribution and lighting design, grounding, fire detection and alarm, public address, intrusion detection, CCTV, code compliance, and utility coordination. He prepares specifications, construction cost estimates, and calculations such as lighting level, voltage drop, and short-circuit/coordination.</p> <p>His resume follows.</p>



DAVID LODUCA, PH.D., PE, LEED AP

**Professional Associate
Certified Project Manager
Supervising Electrical Engineer**



Years with the firm

19

Years total

37

Professional qualifications

Professional Engineer:

Virginia, 1990 (20603)
California, 1998 (E15878)
Florida, 1993 (46453)
Georgia, 1994 (21119)
Illinois, 1998 (062-52552)
Indiana, 2007 (10707946)
Iowa, 2007 (18296)
Kansas, 2007 (19295)
Louisiana, 1998 (28117)
Maryland, 2002 (28484)
Michigan, 2007 (54375)
Missouri, 1998 (29899)
Nebraska, 2006 (11700)
New Jersey, 2000 (GE42700)
North Carolina, 1993 (18870)
Ohio, 1993 (E56698)
South Carolina, 1994 (15826)
Texas, 2007 (99060)
Ontario, 2009 (100 15210 1)

**U.S. Green Building Council
LEED BD+C Accredited
Professional**

**Record: National Council of
Examiners for Engineering
and Surveying, 1990 (9600)**

CAREER SUMMARY

David (Dave) Loduca is a supervising electrical engineer with WSP. He is experienced on projects including industrial facilities, light rail and subway lighting and electrical systems, highway lighting, renewable energy, airport landside facilities, telecommunications facilities, government facilities, campus lighting, educational facilities, transportation maintenance facilities, commercial offices, restaurants, retail stores and gas stations.

Dave's duties include power distribution and lighting design, grounding, fire detection and alarm, public address, intrusion detection, CCTV, code compliance, and utility coordination. He prepares specifications, construction cost estimates, and calculations such as lighting level, voltage drop, and short-circuit/coordination. He supports construction management and administration by answering RFIs and conducting site checking, design reviews, scheduling and staging personnel, and ordinary supervisory tasks for an electrical design group.

EDUCATION

Ph.D., Engineering Management, Missouri University for Science and Technology,	1965
M.S., Engineering Management, University of Missouri – Rolla	2005
B.S., Electrical Engineering, Virginia Military Institute	1981
A.A.S., summa cum laude, Management, Virginia Western Community College	1995

PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronic Engineers (IEEE)
Excellence in Missouri Foundation
Missouri Quality Award (MQA)
Senior Member Board of Examiners
American Society of Quality (ASQ), Member
American Society of Engineering Management (ASEM), Member

PROFESSIONAL EXPERIENCE

- Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services, Statewide (Contract No. 4400004763) Task Order 1 and 2 (H.010439) Boyd St Pump Station Improvement (Baton Rouge) and 21st St Pump Station Improvement (Baton Rouge): Work involved upgrade of the three LADOTD freeway pumping stations. Dave designed controls, lighting and new electrical distribution at each pump station for the replacement of 8 main pumps and 2 stripper pumps. Dave was the project manager and the electrical designer of record.



DAVID LODUCA, PH.D., PE, LEED AP

*Professional Associate
Certified Project Manager
Supervising Electrical Engineer*

- Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Chippewa St Pump Station (Baton Rouge) and Airline Drive Pump Station (Metairie). The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades. Dave was the project manager and the electrical designer of record.
- Pontchartrain Levee District; Cross Bayou Pump Station Inspection and Assessment. The Cross Bayou Pump Station is owned by the Pontchartrain Levee District. The District desires to transfer the Station to ownership of St. Charles Parish. Prior to the transfer the station will undergo an in-depth inspection and assessment of the infrastructure. The Project Team will review O & M experience, develop a Rough Order Repair Estimate, and develop a Scope of Services and Plan for refurbishment of the Statement. A partial listing of the systems included are Diesel Pump Drives, Fuel Transfer and Storage Tanks, Power Take Off and Gear Reducer, Main Pumps, Auxiliary Pumps, Standby Generator, Trolley System, Automated Bar Screen and Telemetry and Controls. Dave was the project manager and the electrical designer of record.
- Ridge Road Pumping Station, Wichita, Kansas: lead electrical engineer for pre-design and final design of a 1,500CFS wet well storm water pumping station. Project major components consisted of five 250 HP main pumps, mechanical ventilation of 325,000-cfm and 1,200 KW generator emergency power.
- South Florida Water Management District (SFWMD), Miscellaneous Engineering Services, Boca Raton, Florida: supporting impoundment design for the Central Florida Everglades Acceler8 Restoration Program, Site 1 Impoundment, Boca Raton, Florida. The site whose water level is being controlled by the pump station is an approximately 1,800-acre triangle of undeveloped land located adjacent to the Hillsboro Canal in southern Palm Beach County. The purpose of the impoundment project is to provide groundwater recharge, reduce seepage from adjacent natural areas, provide water supply for environmental and urban demands and prevention of saltwater intrusion. The Impoundment functions by capturing excess storm runoff from the Hillsboro Canal urban drainage basined for later release, thus reducing loss of direct runoff to tide. Dave prepared basis of design report for the electrical distribution of the wetland pumping station.
- Port of New Orleans Due Diligence Study, New Orleans, Louisiana: lead electrical engineer for a study of the Halter Marine Complex, which sustained damage from Hurricane Katrina. The objective of the study was to determine the feasibility and cost of (1) restoring the facility to pre-Katrina conditions and (2) upgrading the facility to current IBC standards. The study included field observations of electrical distribution equipment, major feeders, and key elements of utilization equipment with an eye for flood damage and disrepair that may have pre-dated Katrina.
- Housing Authority of New Orleans – Fischer Housing Revitalization Project, New Orleans, Louisiana: project involves planning and design of a 73-acre (29.5-hectare)



DAVID LODUCA, PH.D., PE, LEED AP

***Professional Associate
Certified Project Manager
Supervising Electrical Engineer***

neighborhood on the West Bank of New Orleans Parish for the Housing Authority of New Orleans. This \$100 million project involves the demolition of an elderly high rise and three 60-unit apartment buildings at the Fischer Housing Development and the design of a new community that will include 640 dwelling units of family housing ranging in size from two to four bedrooms, a 25,000-square-foot (2,320-square-meter) Community Center, a 2,500-square-foot (230-square-meter) Management Office and miscellaneous support buildings. Dave provided QC review of plans and technical specification documents for the single-family dwelling units.

- East Valley Water District, New Administration Campus, Highland, California: designer for new lighting for site street improvements for the widening of Greenspot Road. Project involved ground-up development for a 28,500 SF administration building and 5,900 SF operations building on 24.7 acres of land located on Greenspot Road in the City of Highland, including environmental planning, design engineering, and construction support.
- North Main Street Reconstruction; City of Columbia, South Carolina: electrical engineer for lighting on one-half mile reconstructed segment of North Main Street. Work included electrical service and distribution, and lighting and electrical calculations for new roadway/pedestrian light poles, and irrigation system.
- Facility Modification to Accommodate CNG Fuels, Stark Area Regional Transit Authority (SARTA) Canto, Ohio: performed electrical QA/QC review.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Werner Reinefeld, PE, ENV SP Director, Water Resources Engineer
Project Assignment:
Conveyance Systems
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
5 (29 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1983 / Civil Engineering (Central University of Venezuela)
Active registration: Year first registered/discipline:
2006 / Professional Engineer: Florida (63042)
Other experience and qualifications relevant to the proposed Project:
<p>Werner Reinefeld has more than three decades of experience in the fields of civil and infrastructure engineering, project management, design construction, computer aided design, and land development. His experience includes work in the areas of earthworks, road systems, hydrological and hydraulic systems and modeling, water and wastewater facilities, sewer systems, stormwater and drainage, utility coordination, oil-contaminated water remediation, energy efficiency audits, permitting feasibility studies, proposal preparation, and land development projects.</p> <p>His resume follows.</p>



WERNER REINEFELD, PE, ENV SP

Conveyance Systems



CAREER SUMMARY

Werner Reinefeld has more than three decades of experience in the fields of civil and infrastructure engineering, project management, design construction, computer aided design, and land development. His experience includes work in the areas of earthworks, road systems, hydrological and hydraulic systems and modeling, water and wastewater facilities, sewer systems, stormwater and drainage, utility coordination, oil-contaminated water remediation, energy efficiency audits, permitting feasibility studies, proposal preparation, and land development projects.

EDUCATION

B.S, Civil Engineering, Central University of Venezuela,

1983

Years with the firm

5

Years total

34

Professional qualifications

Florida, 2006 (63042)

Envision Sustainability
Professional

NASSCO Certified

Areas of practice

Pipeline design,
construction, rehabilitation

Construction management

Project / Program
management

Cost estimation

Languages

English/Spanish/Portuguese

PROFESSIONAL EXPERIENCE

Water and Sewer

MDWASD – 54" PCCP Force Main Rehabilitation on W. Flagler St. (Design Build), Miami, Florida: For this 54-inch FM rehabilitation project for the MDWASD, Mr. Reinefeld served as Project Manager for the rehabilitation of an existing 54-inch Prestressed Cylinder Concrete Pipe along W. Flagler Street. The project encompasses approximately 3,500 feet of pipe rehabilitation along W. Flagler Street from SW 78 Place to a meter station east of SW 72 Avenue using Compressed Fit (Swagelining) Technology. The design approach was focused on providing the required facilities in the most cost effective means possible, while safely minimizing the impacts to the area and its stakeholders along this very congested traffic corridor.

MDWASD – NDWWTP AND CDWWTP Ocean Outfall Permanent Repairs, Miami, Florida: For these two Ocean Outfall Repair projects for the MDWASD, Mr. Reinefeld served as Project Manager for the repair of both the 90-inch and 120-inch ocean outfall pipelines for the NDWWTP and CDWWTP. The design for the repairs consists of installation of articulated concrete block mats (ACBM), which will be laid over the pipe at the identified leak locations, and associated rip-rap rubble and geotextile for scour protection. Washed river rock will be used to harmonize between the top of the pipe and the existing grade. This project is a result of Ocean Outfall Legislation enacted by the EPA and is receiving supplemental funding from FEMA for design and construction. For that reason, tight handle on the schedule is required to meet the milestones and associated deadlines.

Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Acadian pumping station in Baton Rouge, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades. Mr Reinefeld was responsible of the Hydraulic evaluation and engineering services during construction.



Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Chippewa pumping station in Baton Rouge, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades. Mr Reinefeld is responsible of the Hydrological Modelling , Hydraulic Design and Engineering Services During Construction.

Louisiana Department of Transportation and Development Retainer Contract for Electrical & Mechanical Services Statewide. Under a statewide retainer contract with the Louisiana Department of Transportation and Development the project team provided engineering design services for the rehabilitation and upgrade of the LADOTD's Bluebonnet pumping station in Baton Rouge, LA. The project involved inspection and assessment of all aspects of an existing storm water pump station located in Baton Rouge Louisiana. Following the inspection and assessment, the team provided architectural, mechanical, electrical, controls, hydraulic, civil and structural design services to bring the station to a state of good repair including necessary upgrades. Mr Reinefeld is responsible of the Hydraulic Design and Engineering Services During Construction.

Pontchartrain Levee District; Cross Bayou Pump Station Inspection and Assessment. The Cross Bayou Pump Station is owned by the Pontchartrain Levee District. The District desires to transfer the Station to ownership of St. Charles Parish. Prior to the transfer the station will undergo an in-depth inspection and assessment of the infrastructure. The Project Team will review O & M experience, develop a Rough Order Repair Estimate, and develop a Scope of Services and Plan for refurbishment of the Statement. A partial listing of the systems included are Diesel Pump Drives, Fuel Transfer and Storage Tanks, Power Take Off and Gear Reducer, Main Pumps, Auxiliary Pumps, Standby Generator, Trolley System, Automated Bar Screen and Telemetry and Controls. Mr Reinefeld is responsible of the Hydraulic Design and Engineering Services During Construction.

Design/Build Services for Stormwater Pump Station on 19th St. between Convention Center and Meridian Ave., Miami Beach, FL: Mr. Reinefeld served as Lead Design Engineer for the construction of the 19th Street pump station which is part of the overall plan for a city-wide stormwater improvement system to reduce flooding for residents of Miami Beach, more specifically, for the neighborhoods near the Convention Center. The work under this project comprises the design, permitting and construction of a new 80 MGD stormwater pump station and ancillary site infrastructure and discharge facilities. In addition to the pump station components and electrical infrastructure to power the station, construction-related services also include site preparation, earthwork, dewatering, storm drainage infrastructure installation, parking reconstruction, utility adjustments, landscaping, and seawall modifications on the south side of the Collins Canal between Convention Center Drive and Meridian Avenue.

MDWASD's \$91M Program and Construction Management Services related to the Wastewater System Priority Projects (PMCM), Dade County, Florida: The PMCM Team was selected by the Miami Dade Water and Sewer Department (MDWASD) to



provide Program and Construction Management Services related to the Wastewater System Priority Projects. Services provided include, but are not limited to, program management, construction management, development coordination, public outreach, engineering analysis, hydraulic modeling, scheduling, cost estimates, inspections and document control. Mr. Reinefeld is working as a Deputy Task Leader for the PMCM Team within the Wastewater Collection and Transmission System (WCTS) Task. The WCTS Task is assisting the Department with the coordination and management of ninety-three (93) Force Main and Pump Station Projects, from conception to closure, including the following phases: Engineering Design, Permitting, Procurement, Construction, and Certification.

MDWASD \$17M Pump Station Improvement Program (PSIP), Dade County, Florida: Design Manager Lead for the upgrading of the Wastewater Collection and Transmission System (WCTS) that includes pump stations and force mains pursuant to which each pump station has to be certified as capable of meeting a nominal average pump operating time (NAPOT) of less than or equal to 10 hours per day. Pump stations exceeding the NAPOT criteria must have a Remedial Action Plan (RAP) and no certificate of occupancies can be issued for connections to the WCTS upstream of that pump station until the RAP recommendations are implemented. The program aims to bring into compliance 109 sewage pump stations that do not comply with the NAPOT criteria and/or are in need to be upgraded. Mr. Reinefeld provided QA/QC to the cost estimate structure of the Program.

Central New River Water Main HDD Crossing, Fort Lauderdale, Florida: Engineer of Record responsible for the design of 800 linear feet of a sub aqueous water main crossing under the New River Canal. The existing 16-inch cast iron water main is aging and undersized for the existing and future potable water demands. It will be replaced with a 20-inch HDPE DR-13.5 pipe to be installed via Horizontal Directional Drilling (HDD) in the middle of Fort Lauderdale Downtown Area. Project includes extensive coordination with the residents of the high-rise buildings within the area, the downtown development authority and Broward County Jail Facility.

Pipe Lining Restoration of Fire Main and Discharge Lines in Midtown and Downtown Tunnels, Norfolk Virginia: Design lead responsible for the construction plans for the rehabilitation (lining) of 3,800 ft of a 12-inch fire main and 1,800 ft of a 8-inch discharge pipe in the Midtown Tunnel Eastbound as well as 1,500 ft of 8-inch discharge pipe in the Downtown Westbound Tunnel.

Lake Toho Restoration/AWS (Judge Farms) Project South Ditch 1 Stormwater Pump Station, Toho County, Florida (ongoing): EOR responsible for the Site layout and mechanical plans for the proposed Stormwater pump station. Scope of work included preparation of Wet well calculations, pump selection and pump operational and system curves.

WCII Reclaimed Water Reservoir Pump Station, Orange County, Florida: Senior Hydraulic responsible of the Site plan and mechanical plans for the proposed Stormwater pump station. Scope of work included preparation of Wet well calculations, pump selection and pump operational and system curves. Owner: City of Orlando.

MDWASD North Miami 60-inch Force Main, Dade County, Florida: EOR responsible for designing 30%, 60%, 90%, Permit Plan and Profile drawings for about 3 miles of



60-inch PCCP project. The scope of work included preparation of the alternative routes available for the new 60-Inch force main, construction materials and methods, construction cost and coordination with Federal, State and County regulatory agencies, local governments, property owners and stakeholders having interest or potential interest in this project.

MDWASD 42-inch WM to Port of Miami, Dade County, Florida: Deputy Project Manager and Engineer of Record for the design of a proposed 36 – inch Transmission Main that will interconnect with a future 36-inch stub-out (WASD’s Downtown Loop Project) located at the intersection between Biscayne Boulevard (SR 5 / US-1) and NW 5th Street and the Port of Miami. Approximately 7,700± ft. of transmission pipe. The proposed Transmission main takes into consideration future system expansion and improvements identified in the Port of Miami’s Master Plan. Scope of work included 2,2200 LF of Horizontal Directional Drilling under Biscayne Bay.

MDWASD Design Build 48-inch WM at Downtown Miami “The Loop”, Dade County, Florida: Engineer of Record for the Installation of a 48-Inch Diameter Water Main Downtown Loop Closure. The project’s primary purpose is to provide interconnection of the Hialeah/Preston (north service area) and Alexander Orr (south service area) water transmission systems to form a “loop” closure. WSP|PB will be responsible for the planning, design, permitting and construction services associated with the construction of a new 30-, 36-, and 48-inch water main.

One of the critical challenges the team addressed was working in a highly-urbanized area and in public right of way. Construction in Downtown Miami will be affected by vehicular and pedestrian traffic and will contend with numerous congested utilities occupying the streets and rights-of-way.

MDWASD North Main 60-inch Force Main, Dade County, FL: EOR responsible for designing 30%, 60%, 90%, Permit Plan and Profile drawings for about 3 miles of 60-inch PCCP project. The scope of work included preparation of the alternative routes available for the new 60-Inch force main, construction materials and methods, construction cost and coordination with Federal, State and County regulatory agencies, local governments, property owners and stakeholders having interest or potential interest in this project.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Dudley C. "Chip" Smith III., PE Technical Advisor
Project Assignment:
Senior Water and Wastewater Engineer
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
5 (34 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1982 / Civil Engineering (Old Dominion University, Norfolk, Virginia)
Active registration: Year first registered/discipline:
1999 / Professional Engineer: North Carolina (24691) 1997 / Professional Engineer: South Carolina (18617) 1987 / Professional Engineer: Virginia (17735)
Other experience and qualifications relevant to the proposed Project:
Chip Smith has 39 years of technical experience in planning, design, and construction administration of storm drainage, sanitary sewer, and water supply/distribution projects. This work includes sewer condition assessments, infiltration and inflow studies, hydrology and hydraulic modeling, rehabilitation, and operation/maintenance projects and programs for numerous clients. His project experience includes technical support and quality control for large, multi-disciplinary efforts for projects with time constrained schedules, often requiring extensive coordination between multiple stakeholders. His resume follows.



DUDLEY C. "CHIP" SMITH III, PE
Senior Water and Wastewater Engineer



Years with the firm

5

Years total

39

**Professional
qualifications**

**Professional
Engineer, North
Carolina 1999
(#24691)**

**Professional
Engineer, South
Carolina 1997
(#18617)**

**Professional
Engineer, Virginia
1987 (#17735)**

CAREER SUMMARY

Chip Smith has 39 years of technical experience in planning, design, and construction administration of storm drainage, sanitary sewer, and water supply/distribution projects. This work includes sewer condition assessments, infiltration and inflow studies, hydrology and hydraulic modeling, rehabilitation, and operation/maintenance projects and programs for numerous clients. His project experience includes technical support and quality control for large, multi-disciplinary efforts for projects with time-constrained schedules, often requiring extensive coordination between multiple stakeholders.

EDUCATION

B.S., Civil Engineering, Old Dominion University, Norfolk, VA 1982

PROFESSIONAL MEMBERSHIPS

Water Environment Federation

American Public Works Association

PROFESSIONAL EXPERIENCE

- **Friars Branch Basin Improvements, City of Chattanooga, Tennessee:** Senior consultant providing technical guidance and overall QA/QC for construction inspection and construction administration for the rehabilitation of nineteen thousand nine hundred and forty-two inch to eighteen-inch reinforced concrete pipe (RCP) sanitary sewer interceptor using cured-in-place pipe (CIPP). The project includes three thousand one hundred vertical feet of manhole rehabilitation, re-instating eighty-one service laterals, and lining fifty-four six-inch service laterals. Services include overseeing submittals review for temporary by-pass pumping up to twenty-two million gallons per day, CIPP Liner thickness designs, pre-and post-rehabilitation CCTV inspections, his \$7.9M contract is being performed by Lane In-liner and schedule to be complete in January 2018.
- **Professional Engineering Services for Sanitary Sewer System Consent Order Services, Hampton Department of Public Works, Virginia:** Project Director who assisted the City of Hampton with maintaining compliance with the regional consent order issued to HRSD and the localities that depend on HRSD for waste water treatment in eastern Virginia. Included in these services: Develop a city wide sanitary sewer model using MIKE URBAN, a Capacity Assurance Program, the development of the City's SSes plan, Capacity Management Operations and Maintenance (CMOM) Plan, Condition Assessment Report and Rehabilitation Plan as required by the Consent Order with a budget of



DUDLEY C. “CHIP” SMITH III, PE
Senior Water and Wastewater Engineer

\$165 million. Provision of flow monitoring, assistance with smoke testing, CCTV inspections and other Sanitary Sewer Evaluation Survey (SSES) related activities required by the Consent Order.

- **Sanitary Sewerage System Improvements, Reedy/McKee Creek Outfalls (Cabarrus County), Charlotte Mecklenburg Utilities, Charlotte, North Carolina:** Project Director for the design and construction of 63,000 LF of 24-inch to 48-inch sanitary sewer, flow metering stations and 16 MGD pump station in the eastern portion of Cabarrus County. Work included alternative routings, preparation of plans, specifications, bidding documents, and pump station design for discharge into an existing force main.
- **Combined Sewer Overflow (CSO) Program, City of Atlanta, Georgia:** Senior Consultant who led the development a conceptual master plan to separate the existing combined sewer system in downtown Atlanta in to separate storm drainage and sanitary sewer systems. Estimated sewer separation cost was more than \$1 billion. Work involved coordination of city consultants performing the following tasks: Assessing current land use and projected future land use through the use of GIS to estimate future flows. Directed SSES contractors to assist with GIS development and structural condition assessment of sewer system for sewer rehabilitation program development. Task included adding all utilities to the GIS to create a tool for developing projects in the urban core. Prepared SWMM hydraulic model to determine the capacity of the existing system; analyzed necessary improvements; and identified storage opportunities for storm water management facilities. Prepared planning level cost estimates for a recommended sewer separation program in compliance with the EPA CSO and SSO consent orders.
- **Sanitary Sewerage System Improvements, Reedy/McKee Creek Outfalls (Mecklenburg County-Charlotte Mecklenburg Utilities, Charlotte, North Carolina:** Project Director who oversaw the design of 31,000 LF of 12-inch to 36-inch sanitary sewer along Reedy Creek and 25,000 LF of 8-inch to 24-inch sanitary sewer along McKee Creek in the eastern portion of Mecklenburg County.
- **Big Haynes “Find & Fix” I/I Reduction Project Gwinnett County, Georgia:** Coordinated design and management of the field computer-based condition assessment inventory of the Big Haynes wastewater collection system. Work involved the development of customized field data collection software, automated quality control and data conversion programs to be compatible with the County’s GIS and Computerized Maintenance Management System (CMMS). Field activities included the utilization of pentop computers, loaded with the County’s GIS and linked to GPS receivers to provide real time data collection and streamline data processing. Work was completed as a part of a \$7.5 million Find & Fix rehabilitation project designed to reduce infiltration and inflow (I/I).

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Glenn A. Bottomley, PE Senior Supervising Engineer
Project Assignment:
Water and Wastewater Pumping Facilities
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
31 (2 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1986 / Civil Engineering Technology, (Old Dominion University)
Active registration: Year first registered/discipline:
1992 / Professional Engineer; Virginia (233299)
Other experience and qualifications relevant to the proposed Project:
<p>Glenn Bottomley has managed hydrology, hydraulics, stormwater management, and infrastructure projects with drainage construction values totaling over \$30 million. His diverse experience and qualifications include project management, task leader and design responsibilities for; hydrologic and hydraulic analysis and design with an emphasis in: computer modeling (SWMM, HEC-2), watershed evaluations and alternative studies, urban roadway and highway drainage systems, stormwater management and BMPs, analysis and design of urban storm sewers; subdivision and site development with specific experience in port facilities and light rail; highway and urban roadway design with an emphasis in leading large multi-disciplinary efforts for projects with time-constrained schedules or requiring extensive coordination between multiple stakeholders.</p> <p>His resume follows.</p>



GLENN A. BOTTOMLEY, PE
Senior Supervising Engineer



Years with the firm

31

Years total

33

**Professional
qualifications**

***Professional Engineer:
Virginia, 1992 (23299)***

CAREER SUMMARY

Glenn Bottomley has managed hydrology, hydraulics, stormwater management, and infrastructure projects with drainage construction values totaling over \$30 million. His diverse experience and qualifications include project management, task leader and design responsibilities for; hydrologic and hydraulic analysis and design with an emphasis in: computer modeling (SWMM, HEC-2), watershed evaluations and alternative studies, urban roadway and highway drainage systems, stormwater management and BMPs, analysis and design of urban storm sewers; subdivision and site development with specific experience in port facilities and light rail; highway and urban roadway design with an emphasis in leading large multi-disciplinary efforts for projects with time-constrained schedules or requiring extensive coordination between multiple stakeholders. In addition, Glenn has experience utilizing the following hydrologic and hydraulic analysis programs on design projects: EPA Storm Water Management Model (SWMM); HEC-2; HYDRAIN; KYPIPES; ROUT; and TR-55.

EDUCATION

B.S., Civil Engineering Technology, Old Dominion University, 1986

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers, Virginia Lakes and Watersheds Associations

PROFESSIONAL EXPERIENCE

- **North Beach Stormwater, Pump Station and Ocean Outfall, Virginia Beach, Virginia:** Project Manager for the planning, design, construction documents, and contract administration for this \$20 million construction project consisting of: large diameter collection system, 90,000 gallon-per-minute submersible pump station, 2,000 linear feet of large diameter force main ocean outfall, microtunnel evaluation, EPA SWMM computer simulation model, Watershed Evaluation Study, environmental permitting, public utility relocations, architectural design for pump station generator building and landscaping consistent with the oceanfront resort community environment, phased construction and detailed estimates to meet budgetary constraints, and public participation with civic leagues and residents.
- **Eastern Shore Drive Stormwater Pump Stations and Watershed Evaluation, Virginia Beach, Virginia:** Project manager for the study, planning, final design, contract documents, contract administration and construction inspection. The project watershed



is at the mouth of the Chesapeake Bay and the Atlantic Ocean and experiences frequent flooding due to moderate rainfall and storm surges from hurricanes and northeasters. Sea level rise and increased precipitation impacts are being evaluated and strategies developed. The project involves the planning, phasing and prioritization for three stormwater pump stations ranging from 45,000 to 80,000 gpm. The largest pump station is a “smart pump station” that uses water level sensors and automated tide gates to protect against storm surges and establishes a long-term strategy for sea level rise and increased precipitation. The smart pump station will pump down water surface elevations in the main watershed tidal canal, connected by two pump stations, to provide storage for the design storm. Remote telemetry control and SCADA will allow pre-emptive gate closures and pump drawdown for predictive forecasting of storms.

- **HRSD System Metering, Phase IV, Hampton Roads, Virginia:** as project manager provided planning, design, and bidding documents and construction services to install 53 flow meters and pressure sensors on large diameter interceptor force mains across seven jurisdictions for the Hampton Roads Sanitation District (HRSD) for their Master Meter Program. The project is critical to meeting the EPA-driven consent order requirements. The meter installations quantify and separate flow contribution for the individual jurisdictions and provide data for the Regional Wet Weather Management Plan and provide information to evaluate the integrity of the system and calibration of the hydraulic model. Maintaining service during meter installation often required pipe replacement and involved evaluation of: shutdowns, pump and haul, line stop and bypass and impacts of construction in urban principal arterials.
- **South Battlefield Boulevard Sewer Project, Chesapeake, Virginia:** Project Manager for providing construction documents and construction inspection and administration services for sanitary sewer service for 280 acres with a \$1.8 million construction cost. The project involved 14,500 linear feet of gravity sewer, 29 jack-and-bore crossings, submersible pump station, 1,000 linear feet of 16-inch interceptor force main with a pile supported aerial creek crossing, Health Department approval, property owner coordination, construction administration and Auto CAD plans.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brian C. Hundt, PE Senior Civil Engineer
Project Assignment:
Lead Civil Engineer
Name of Firm with which associated:
WSP USA, Inc.
Years' experience with this Firm:
3 (7 with Others)
Education: Degree(s)/Year/Specialization:
B.S. / 2009 / Civil Engineering (University of Louisiana, LA)
Active registration: Year first registered/discipline:
2015 / Louisiana Professional Engineer (0039459)
Other experience and qualifications relevant to the proposed Project:
<p>Brian Hundt has 10 years of experience as a civil engineer on numerous projects such as roadway design, waterline replacement, drainage design, construction administration, and inspection. Throughout his professional career, Mr. Hundt has worked closely with Louisiana Department of Transportation, Jefferson Parish, New Orleans Sewerage and Water Board, City of New Orleans Department of Public Works, and St. Charles Parish. Brian has a comprehensive knowledge of Autodesk Civil 3D and Excel.</p> <p>His resume follows.</p>



BRIAN C. HUNDT, PE

Senior Civil Engineer



Years with the firm

3

Years total

10

Professional qualifications

Professional Engineer:
Louisiana, 2015
(PE0039459)

Areas of practice

Civil Engineering

CAREER SUMMARY

Brian Hundt has 10 years of experience as a civil engineer on numerous projects such as roadway design, waterline replacement, drainage design, construction administration, and inspection. Throughout his professional career, Mr. Hundt has worked closely with Louisiana Department of Transportation, Jefferson Parish, New Orleans Sewerage and Water Board, City of New Orleans Department of Public Works, and St. Charles Parish.

Brian has a comprehensive knowledge of Autodesk Civil 3D and Excel.

EDUCATION

B.S., Civil Engineering, Louisiana State University, Baton Rouge,
Louisiana

2009

PREVIOUS EXPERIENCE

Before joining WSP, Brian's project experience with other engineering consulting firms included:

- Columbia City Residences at Bayou District, New Orleans, Louisiana: As project engineer, Brian created plan and profile sheets for roadways, drainage and water lines during the design phase. Brian also performed drainage calculations for sizing of the stormwater drainage system and provided routine inspections of civil work during the construction phase. The project consisted surveying, civil engineering and transportation planning services for the housing portion of the Bayou District Foundation project, which includes 465 mixed income units. Brian was involved with phases 2A, 2B and 3 of the Columbia City project.
- Southeast Louisiana Hospital Replacement of Potable Water Lines, St. Tammany Parish, Louisiana: Brian provided inspection and construction administration for the replacement of the water distribution system for a campus of 67 buildings (approximately 462,000 square feet). Duties included inspection of construction, writing inspection reports, attending monthly progress meetings, reviewing pay requests and creating change orders. Client: Louisiana Office of Facility Planning and Control.
- Jefferson Parish Submerged Roads Program, Council Districts 1, 2, & 5, Jefferson Parish, Louisiana: As project engineer, Brian designed 12 Jefferson Parish projects for PCCP and asphaltic pavement repairs and overlay of Hurricane Katrina roadway damage under a FEMA funded program. The total program design spanned approximately 100 miles of Jefferson Parish roadway. He designed 375,000 square yards of Portland Cement Concrete Pavement for street replacement and 80,000 tons of asphaltic street replacement and repairs. He also managed Jefferson Parish agreements, managed design staff, and coordinated the bidding process with Jefferson Parish including prebid meetings, addenda, and review of bids. During the construction phase, Brian managed project inspection, testing reports, contractor payment request, and project closeout. All design was in accordance with Jefferson Parish and FEMA requirements.
- St. Bernard Group A, New Orleans, Louisiana: Roadway reconstruction, roadway repairs, waterline replacement, sidewalk repairs, and handicap ramp replacement for forty-five blocks within the City of New Orleans. Brian attended design meetings with the New Orleans Department of Public Works, Sewerage and Water Board. He conducted field visits to determine the location of utilities (including



BRIAN C. HUNDT, PE

Senior Civil Engineer

water and sewer lines) roadway and sidewalk repairs, creating plan sheets, calculating quantities, creating cost estimates and compiling bid documents and specifications.

- Ormond Boulevard Pavement and Rehabilitation, St. Charles Parish, Louisiana: Project Engineer for the construction administration phase of the project which consisted of concrete roadway patching and a 2-mile asphalt mill and overlay of Ormond Boulevard. Brian's duties included submittal approvals, site visits, approving daily reports, generating monthly estimates and creating change orders in LADOTD's SiteManager.
- Island Restoration, Terrebonne Parish, Louisiana: Project engineer for the construction administration phase of the project which consisted cold mill of existing asphalt pavement, placing 20,000 cubic yards of new crushed stone base course, and placing 6,600 tons of superpave asphalt surface and overlay on the existing and widened roadway. The design also included 17,000 cubic yards of stone riprap to stabilize and line the side slopes adjacent to waterways on both sides of the roadway. Duties included approving submittals, weekly inspections, recommending plan changes, tracking quantities, reviewing pay requests and creating change orders.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Victor A. Sanchez, PE Senior Structural Engineer / Engineering Lead
Project Assignment:
Lead Structural Engineer
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
3 (24 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1991 / Civil Engineering, Structures (Autonomous University of Santo Domingo) M.S. / 2017 / Civil Engineering (Ohio University)
Active registration: Year first registered/discipline:
2008 / Louisiana Professional Engineer (33976)
Other experience and qualifications relevant to the proposed Project:
<p>Victor Sanchez serves as Supervising Structural Engineer for WSP in Louisiana, Alabama and Mississippi. He is a Professional Engineer with more than 25 years of experience in structures and bridge design, using AASHTO-LRFD specifications and state-of-the-art bridge engineering software. His experience includes both, pre-stressed concrete bridges and steel composite bridges with a variety of span lengths and geometries configurations. He is thoroughly familiar with design specifications for Louisiana structures.</p> <p>His resume follows.</p>



VICTOR A. SANCHEZ, MSCE, PE

Supervising Structural Engineer, Bridges



Years with the firm

3

Years total

27

Professional qualifications
Louisiana Professional Engineers and Land Surveyors Board, 2008 (33976)

Puerto Rico Board of Professional Engineers and Land Surveyors, 2005 (17457)

Areas of practice

Structural Engineering

CAREER SUMMARY

Mr. Sanchez serves as Supervising Structural Engineer in WSP USA's Baton Rouge and New Orleans offices. He has over 15 years of experience in bridge design to include prestressed concrete bridges and steel composite bridges of a variety of span lengths and geometric configurations. Victor's roles have included engineer of record, project manager, and lead engineer. He has been responsible for organizing and scheduling specific tasks and assignments, as well as for quality control and assurance. He has attained invaluable familiarity with the design specifications of Louisiana, Florida, and Puerto Rico.

Victor's duties have included preparing design plans, calculations, and specifications for bridges and related structures. He is proficient in state-of-the-art structural engineering software such as MIDAS, CSI Bridge, LUSAS, LRSA, MDX, and AASHTO-LRFD.

EDUCATION

M.S., Civil Engineering, Ohio University, Athens, Ohio, 2017	2017
B.S., Civil Engineering, Structures, Autonomous University of Santo Domingo, Santo Domingo, Dominican Republic	1991

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers (ASCE)

PROFESSIONAL EXPERIENCE

- Fort Polk Waste Water Treatment Plant, Fort Polk, Louisiana: Victor's responsibilities entailed the preparation all phases of plan production, from conceptual and preliminary plans to sealed construction plans for all the structures in the project, including retaining walls, rehabilitation of reinforced concrete tanks, reinforced concrete foundation slabs, and structural steel buildings.

PREVIOUS EXPERIENCE

Before joining WSP, Victor's project experience with other engineering consulting firms included:

- Union Pacific Railroad Overpass Near Tioga, Rapides Parish, Louisiana: lead engineer and engineer of record responsible for contract document preparation including cost estimate, specifications, final plans, structural calculations, and coordination for project delivery per Louisiana Department of Transportation policies. The total bridge length is 950 ft. and consists of a main span using steel plate girders as superstructure elements over three continuous spans (210ft-275ft-210ft). The bridge approaches to the main spans consist of two-spans 85-foot AASHTO type III prestressed concrete continuous spans at north side and one 85-foot AASHTO type III prestressed concrete span at the south side. The bridge substructure consists of concrete piers caps supported on columns which are supported on drilled shafts and spread footings on drilled shafts.



VICTOR A. SANCHEZ, MSCE, PE
Supervising Structural Engineer, Bridges

- Union Pacific Railroad Bridge at Sicard, Ouachita Parish, Louisiana: Victor's responsibilities were to provide plans, quality check, prepare the bridge load rating report, and to assist the environmental section of the LADOTD in completing the environmental clearance for the project. In addition, he provided construction support and reviewed shop drawings submitted by the general contractor. This bridge consists of a main span using steel plate girders as main superstructure elements over three continuous spans (102ft-175ft-102ft). The bridge approaches consist of three 84-foot continuous spans at the north side, and three 84-foot continuous spans at the south. Bridge approaches superstructure main elements are prestressed concrete AASHTO Type IV girders.
- I-10 Over Julia Street, Girder Rehabilitation Project, New Orleans, Louisiana: Engineer of record (EOR) responsible for coordinating the preparation of contract documents, including plans, calculations, cost estimates and providing quality control and assurance to work prepared by team members. During the construction phase of the project, Victor provided construction support by reviewing and approving shop drawings and calculations submitted by the contractor. This project involved the replacement of one existing steel cap beam in straddle bent number 25w and the replacement of all connecting plates elements on the adjacent steel cap 26 w. Both substructures are located over the same exit ramp on the I-10 in New Orleans.
- Florida Avenue Bridge over IHNC, Poland Avenue /Alvar Street to Tupelo Street, New Orleans, Louisiana: senior engineer providing support in the structural design of the Florida Avenue Bridge approaches. Bridge approaches are continuous prestressed concrete beam bridges, providing access to the main span bridge. Structural calculations for both the superstructure and the substructure components of the approaches were provided using state of the art tools. This was a very challenging project from the foundation design viewpoint due to the non-competent soil conditions and the construction schedule. Great inter-office coordination was needed to meet the client requirements. Client: Louisiana Department of Transportation and Development.
- SH 161 NTTA Bridges No. 4 and No. 6, Irving, Texas: Victor was responsible for the quality control of the structural calculations. The two bridges belong to the North Texas Turnpike Authority (NTTA) SH 161 design-build project. The bridges were redesigned due to project constraints during construction. Bridge No. 4 is a 17-span, continuous prestressed concrete bridge superstructure that uses TX 54 Girders. The substructure consists of hammerhead pier caps supported on drilled shafts. Bridge NO. 6 is a two-span continuous prestressed concrete bridge using TX 54 Girders. Its substructure consists of concrete piers supported on columns which are on drilled shafts. Client: Texas Department of Transportation.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
James V. Rydquist, PE Central Regional Manager, Water and Wastewater
Project Assignment:
Senior Water / Wastewater Manager
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
2 (28 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1994 / Civil and Environmental Engineering (University of Michigan)
Active registration: Year first registered/discipline:
2003 / Professional Engineer, Ohio (E-68537) 2003 / Professional Engineer, Michigan (046880)
Other experience and qualifications relevant to the proposed Project:
<p>James Rydquist is a senior manager with extensive experience in the design and management of large multi-discipline projects involving water and/or wastewater treatment, sanitary sewer systems and water main improvement, Combined Sewer Overflow (CSO) reduction, Sanitary Sewer Overflow (SSO) elimination and Supervisory Control and Data Acquisition (SCADA). His responsibilities have included management, planning, conceptual analysis, design, and construction management. He has developed a wide range of expertise in organizing large projects involving many disciplines and teaming partners. He has excelled in completing fast track projects on time with a limited amount of construction changes.</p> <p>His resumes follows.</p>



JAMES V. RYDQUIST, PE

Central Regional Manager, Water and Wastewater



CAREER SUMMARY

James Rydquist is a senior manager with extensive experience in the design and management of large multi-discipline projects involving water and/or wastewater treatment, sanitary sewer systems and water main improvement, Combined Sewer Overflow (CSO) reduction, Sanitary Sewer Overflow (SSO) elimination and Supervisory Control and Data Acquisition (SCADA). His responsibilities have included management, planning, conceptual analysis, design, and construction management. He has developed a wide range of expertise in organizing large projects involving many disciplines and teaming partners. He has excelled in completing fast track projects on time with a limited amount of construction changes.

EDUCATION

B.S., Civil and Environmental Engineering, University of Michigan, 1994
Ann Arbor, Michigan

PROFESSIONAL EXPERIENCE

Wastewater

- RTQ 54-inch PCCP Force Main Rehabilitation, Design Build, Miami, FL (2019-2020): Quality control review of a slipline rehabilitation project that includes 3,500 feet of 54-inch forcemain that is being slip-lined with new HDPE pipe. Construction is being completed in multiple phases with detailed construction sequencing to ensure flows are by passed or kept in service during construction.
- Devona Sanitary Sewer Design, Devona, OH (2019-2020): Key concept review related to sewer design for a 400+ home community within hilly terrain. The client needed the best and most cost effective options for providing sanitary to homes mandated by the Ohio EPA.
- Perry Street Diversion Pumping Station, Oakland County, Michigan (2013-2016): project manager for the ACEC award winning design of a diversion pumping station that diverts 30 percent of flow on an average basis from the Oakland County Interceptor to the newly acquired Pontiac Wastewater Treatment Plant. Flow diversion will alleviate hydraulic problems within the interceptor and also reduce costs incurred by treating the sewage at the Pontiac Treatment Plant verses sending all flow to the Detroit Water and Sewerage Department through the interceptor. Design utilized dry pit submersible pumps with a wet well level that “floats” off the interceptor to maintain minimum flows in the sewer while maintaining the average diversion. Discharge from the pumping station included the design of 2 miles of HDPE sewer forcemain with associated easements, utility and interstate road crossings.
- As-needed Sewer System Evaluation, Maintenance Recommendations and Planning, Oakland County Water Resources Commissioner (WRC), Michigan (2012-2018): project manager of an as-needed contract with WRC for sewer collection evaluation and improvements. Tasks have included review of PACP scoring criteria for use in a new asset management software, review of CCTV tapes for PACP scoring consistencies, recommendations for sewer rehabilitations, maintenance recommendations for persistent root problems, comparisons of spiral lining technologies to traditional CIP methods, and assistance in use of grant funds for repairs within their system. As one task within the program, coordinated and led the design of an asset management plan for a disadvantaged community within

Years with the firm

2

Years total

28

Professional qualifications

Professional Engineer:
Ohio, 2003 (No. E-68537);
Michigan, 2000 (No.
046880)

Construction Documents
Technologist (CDT),
Construction
Specifications Institute,
2003

Areas of practice

Water/Wastewater

Languages

English



JAMES V. RYDQUIST, PE

Central Regional Manager, Water and Wastewater

two-weeks-time, to meet requirements of the State Funding SAW funding program and provide the disadvantaged community an opportunity to access grant funds for needed storm improvements.

- Electrical and Instrumentation Design for THP Residual Treatment at the Pontiac WWTP, Water Resources Commissioner (WRC), Oakland County, Michigan (2015-2018): managed the electrical and instrumentation design of the new residual treatment improvements at the Pontiac Wastewater Treatment Facilities as part of a multiple consultant led team. The THP process will be one of only a few municipalities using the new innovative technology in the United States.
- Downriver Wastewater Treatment Facility (DWTF) Clarifier Upgrades, Wyandotte, Michigan (2011-2014): construction manager for improvements to the Wayne County DWTF clarifiers to improve flow distribution between the individual units and improved the solids settling within each individual clarifier. During design clarifier modeling was completed to determine the best configuration of improvements and equipment. Completed construction allowed for improved treatment, higher treatment volume capabilities through the process and better distribution of flows.
- Wastewater Treatment Asset Sustainment Program, Major Automotive Manufacturer, Multiple Locations (2008): site manager for several plant locations, including Ypsilanti, Michigan; Bedford, Indiana; and Toledo, Ohio. Projects included wastewater treatment analysis, stormwater treatment improvements, chemical feed improvements, and instrumentation improvements. Projects were done as a “Guaranteed Maximum Price” Design/Build while working with contractors in some locations and the United Auto Works trades in others.
- Industrial Waste Reduction and Minimization Plan, City of Toledo, Toledo, Ohio (2006-2008): overall project manager and field inspection manager that provided inspection of 90 industries throughout the City to determine influence on the sewer system during wet weather. Assisted the City with a comprehensive Industrial Pretreatment Plan (IPP) and provided a detailed Industrial Waste Reduction and Minimization Plan for the City’s use moving forward. Report included recommendations to further reduce discharges of possible contaminants during events that would reach the combined sewer overflows.
- Bay View Water Reclamation Plant, Bay View Water Treatment Plant, City of Toledo, Toledo, Ohio (2002-2005): construction manager for the construction phase of improvements to the Bay View Pumping Station, which is the primary influent pump station to the treatment plant with a firm capacity of approximately 193 MGD. Work included coordination of construction issues with the operations staff, review of payment applications, construction progress meetings, and oversight of contractual negotiations with the contractor.
- Jones Road Railroad Grade Separation, Ohio Department of Transportation, Fostoria, Ohio (2006): project engineer for the design of relocated water main and sanitary sewer facilities as part of a new grade separation bridge over the CSX Railroad on the north side of Fostoria.
- Wastewater Treatment Plant, Brighton Township, Michigan (1999-2001): resident engineer for construction of a 2.1-MGD treatment plant. Processes included fine screening, oxidation ditches, final settling tanks, upflow filtering, and ultraviolet disinfection.
- Wastewater Treatment Plant, Village of Bridgewater, Michigan (2001): assistant designer for a small activated sludge treatment plant for approximately 110



JAMES V. RYDQUIST, PE

Central Regional Manager, Water and Wastewater

residential units within the village. Processes include equalization, aeration tanks, final settling tanks, and ultraviolet disinfection.

- Wastewater Treatment Plant Improvements, Genoa-Osceola Townships, Michigan (1998): designer for plant improvements included transforming the existing SBR treatment plant and filtration beds to a surface water discharge with activated sludge and membrane filters.
- Low Pressure Sewer System, Hamburg and Genoa Township, Michigan (1995-1996): resident engineer during the construction of low-pressure sewer systems, involving the use of grinder pumps and directional drilling procedures to provide sewer service to low elevation waterfront properties on recreational bodies of water.
- Stonebridge Development, Pittsfield Township, Michigan (1996): designed the sanitary sewer, storm sewer, water main, roadway, and drainage improvements for multiple phases of the development that provided the utilities for 105 residential homes.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Walter C. (Chas) Goblish IV, PE Lead Stormwater Analysis and Design Engineer
Project Assignment:
Water and Sewer Design Engineer
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
1.5 (10 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 2010 / Civil Engineering (Florida Atlantic University)
Active registration: Year first registered/discipline:
2016 / Professional Engineer, Georgia (041059) 2015 / Professional Engineer, Florida (80344)
Other experience and qualifications relevant to the proposed Project:
<p>Chas Goblish is a lead engineer with experience in the water/wastewater field and over 10 years of experience as a civil engineer. He has served as the project engineer for the Cobb County Water System's (CCWS) Construction Management Services (CMS) program. In this role, he oversaw three designers and managed smaller in-house water and sewer designs as well as supported the County's staff and managed their CIP and TIP projects. Chas also has extensive experience with CADD (AutoCAD Civil 3D & MicroStation with GeoPAK).</p> <p>His resume follows:</p>



WALTER C. (CHAS) GOBLISCH IV, PE

Stormwater Analysis and Design Task Lead



Years with the firm

1.5

Years total

11.5

Professional qualifications

**Professional Engineer:
Georgia (041059), 2016**

**Professional Engineer,
Florida (80344), 2015**

Areas of practice

**Stormwater analysis and
design**

Utility relocation

Permitting

Construction management

Peer review

Language

English

CAREER SUMMARY

Chas Goblisch is a lead engineer at WSP with experience in the water/wastewater field. He has 10 years of experience as a civil engineer. Prior to joining WSP, Chas was a project engineer for a leading engineering firm. Most recently, he served as the project engineer for the Cobb County Water System's (CCWS) Construction Management Services (CMS) program. Chas oversaw three designers and managed smaller in-house water and sewer designs as well as supported the County's staff manage their CIP and TIP projects. Chas also has extensive experience with CADD (AutoCAD Civil 3D & MicroStation with GeoPAK).

EDUCATION

B.S., Civil Engineering, Florida Atlantic University

2010

PROFESSIONAL EXPERIENCE

City of Atlanta, Department of Watershed (COA, DWM), Fulton County, Atlanta, GA, Project Manager/Lead Design Engineer. Project Manager and design manager for miscellaneous as-needed demand services assignments throughout the Greater Atlanta Area for water and sanitary sewer system for 157 projects and counting. Managing the design portion of the projects and helping when needed on the construction management portion of the projects. (June 2019 – Present)

City of Atlanta, Department of Watershed (COA, DWM) Stormwater Improvements, Atlanta, Georgia: head design engineer that worked with the City of Atlanta Department of Watershed Management to help improve drainage in specific problem areas around the city. Responsibilities included site visits for each site the City provided to evaluate the situation, calculated flows based on the rational method and if needed sized under sized pipes to produce maintenance drawings to fix the issues with each site.

Cobb County Water System (CCWS), Cobb County, Marietta, Georgia: project engineer for the CCWS water and sewer projects. Designed smaller water and sewer projects that are "in house" designs and managed three CAD employees. Kept the CIP and TIP projects on schedule.

Polymer Tests, Miami-Dade County, Virginia Key, Miami, Florida: field engineer that proctored the dewatering and the sludge concentration trials for four different polymer vendors, and provided a full report to Miami-Dade Water & Sewer Department to substantiate their selection.

Program Management Services, City of West Palm Beach, City of West Palm Beach, Florida: field engineer that wrote a Chlorine Gas Process Safety Plan for the City's Water Treatment Plant. Worked on organizing and recording City permits, Operation and Maintenance Manuals and re-organizing all of the water treatment plant records. Helped create specifications for a mixing and metering project. Edited and documented on-line City's QC/QA program, including all standard operating



WALTER C. (CHAS) GOBLISCH IV, PE

Stormwater Analysis and Design Task Lead

procedures. Have also helped with the Chemical Improvement Project with inspections and some project management tasks.

Reclaimed Water Facility at ECRWRF, Palm Beach County, West Palm Beach, Florida: field engineer that performed limited field inspections, and confirmed that the design of the sample pump station was correct after contractor installed wrong pump and piping. Helped the wastewater plant determine how to integrate the reuse facility with the existing injection wells during peak flow conditions. Developed project punch list for the project manager to facilitate closing-out the project.

Preventative Maintenance for the Reclaimed Water Facility at ECRWRF, Palm Beach County, West Palm Beach, Florida: field engineer that created an equipment list for the reclaimed water facility. Went on site and photographed all equipment and tag numbers to confirm equipment list. Created a maintenance task log for the plant to follow on a daily, weekly, monthly, semi-annually, and annually basis.

Construction Program Management Services, Town of Palm Beach, Palm Beach Island, Florida: project engineer that worked with the Town of Palm Beach to create a Document Organization Plan.

RAS Pump Station Valve Replacement, East Central Regional Wastewater Reclamation Facility (ECRWRF), West Palm Beach, Florida: project engineer on a team that designed valve replacement in the RAS pump stations. Project included designing the valves, writing the specifications, helping out with the drawings, and putting together a cost estimate and bid package.

CMMS Data Collection, Athens-Clark County, Athens, Georgia: field engineer that collected data from each piece of equipment at three waste water treatment facilities. Data collection consisted of taking photos of equipment, tag numbers, and data plates. Organized the photos and updated and populated the Equipment Asset Hierarchies for each plant. Also created a maintenance task log from the Operation and Maintenance Manuals for the plant staff to follow on a daily, weekly, monthly, semi-annual, and annual basis. Furthermore, created a spare parts list for each plant from the Contractor's turn over forms.

Florida Turnpike Plaza Renovations, Florida Department of Transportation (FDOT), Florida: project engineer that updated the As-Built sheets for three of the plazas. Checked to make sure grades would drain properly and put together the record drawings to be sent to the FDOT. Put together the South Florida Water Management District (SFWMD) and St. Johns River Water Management District (SJRWMD) Construction Completion forms to complete the ERPs for each site.

Gwinnett County Plan Review (Gwinnett P&D), Georgia: project engineer responsible for the water and sewer plan reviews for all developments in Gwinnett County. This included reviewing Concept Plans to Commercial and Residential developments and Final Plats and As-Built drawings. Worked closely with the Gwinnett DWR.

South Florida Regional Transit Authority (SFRTA), West Palm Beach, Florida: project engineer that helped develop the drainage system for a proposed rail maintenance yard in West Palm Beach. Used EPA SWMM 5.0 through an AutoCAD interface.



WALTER C. (CHAS) GOBLISCH IV, PE

Stormwater Analysis and Design Task Lead

I-4 Ultimate Design, Orlando, Florida: project engineer/designer that worked with the Utility team to relocate all the utilities that have conflicts with the proposed design. Using MicroStation and AutoCAD C3D to complete the plan sheets and the profile sheets for the relocations. Also helping with the Temporary Signalization team to put together the plans in MicroStation.

Kings Highway Widening, Florida Department of Transportation (FDOT), Florida: project engineer that assisted with checking and modifying the drainage design for the south part of the project (phase I). Designed the on-sight drainage system for the north part of the project (phase II). This included doing the spread calculations, sizing the pipes, and entering everything into MicroStation and ASAD.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Christopher J. Barnett, PE Technical Advisor
Project Assignment:
Technical Advisor for Water / Wastewater Systems
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
12 (28 with others)
Education: Degree(s)/Year/Specialization:
M.S. / 1980 / Technology and Policy (Massachusetts Institute of Technology, Cambridge, Massachusetts) B.S. / 1977 / Mechanical Engineering (Massachusetts Institute of Technology, Cambridge, Massachusetts)
Active registration: Year first registered/discipline:
1989 / Professional Engineer; Massachusetts (34328) 2011 / Professional Engineer; California (M35691) 2012 / Professional Engineer; Indiana (11200684) 2014 / Professional Engineer; Ontario (100207031-01)
Other experience and qualifications relevant to the proposed Project:
Christopher Barnett is a senior project manager skilled in design management and construction contract review for major capital programs. He has provided management and advisory services as a key team member for some of WSP's most noteworthy projects. His resume follows.



CHRISTOPHER J. BARNETT, PE

Senior Supervising Engineer



Years with the firm

12

Years total

40

**Professional
qualifications**

**Professional
Engineer:
Massachusetts,
1989 (34328)**

**Professional
Engineer: California,
2011 (M35691)**

**Professional
Engineer: Indiana,
2012 (11200684)**

**Ontario PEng, 2014
(100207031-01
temp)**

**Board-Certified
Environmental
Engineer
(Hazardous Waste)**

CAREER SUMMARY

Christopher Barnett is a senior project manager skilled in design management and construction contract review for major capital programs. He has provided management and advisory services as a key team member for some of WSP's most noteworthy projects.

EDUCATION

M.S., Technology and Policy, Massachusetts Institute of Technology 1980

B.S., Mechanical Engineering, Massachusetts Institute of Technology 1977

ADDITIONAL TRAINING

Hazardous Waste Operations (OSHA 40-hour course and annual 8-hour refreshers)

Nuclear Power Reactor Safety

Power Systems Operation

Utility Rate Making

Six Sigma Quality/Process Improvement (Six Sigma Champion)

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers

American Academy of Environmental Engineers

PROFESSIONAL EXPERIENCE

- **Lower Pogues Run Tunnel, Indianapolis, Indiana:** Deputy project manager for advanced facilities plan development for a system of near-surface and deep tunnel structures to address combined-sewer overflows in downtown Indianapolis, as part of a system-wide Long-Term Control Plan and consent decree. Led hydraulic design and preliminary and final design of near-surface conduits, diversion structures and drop shafts across a two-mile section of urban watershed.
- **Marblehead Force Mains Condition Assessment and Repair, South Essex Sewerage District, Salem, Massachusetts:** Principal-in-charge for fast-track evaluation of condition and repair options, design and construction services for two 6,000-foot, 20- to 24-inch diameter submarine pressure mains across an environmentally sensitive harbor and federal navigation channel. Selected option was to replace mains



CHRISTOPHER J. BARNETT, PE
Senior Supervising Engineer

with twin fused high-density polyethylene (HDPE) pipelines in a dredged trench.

- **Ridge Road Pump Station, Wichita, Kansas:** Project Engineer that managed design review and final MEP design of 75,000 gpm, 33-foot TDH storm-water/flood-control pump station, and provided review services during construction.
- **Dry Dock Modifications, Norfolk, Virginia:** Consultant on ventilation modifications to a large dry dock, being performed in preparation for a complex multi-year vessel overhaul project.
- **Charleston, South Carolina:** Project Manager for final design and bid-phase services for site preparation contract for the 280-acre site of a new container terminal. Site preparation got underway in early 2016, to meet the schedule to have terminal in operation by 2020. The site requires extensive ground improvement, to be achieved by placement of over 4 million cubic yards of surcharge fill over a system of vertical drains and drainage layer.
- **South Coast Rail, Massachusetts Bay Transportation Authority (MBTA):** Deputy Project Manager, construction, for owner's representative services, providing statutory independent oversight, peer review and advisory services to MBTA for this \$2.3 billion extension of the commuter-rail system to New Bedford and Fall River, to include 75 miles of electrified track, with 45 new or upgraded grade crossings, 36 bridges, and upgraded signal and communication systems. Work has included a review of environmental permitting schedule risks and production of monthly and annual reports on the state of the project.
- **Massachusetts Water Resources Authority, Boston, Massachusetts:** Technical Manager, responsible for technical oversight, regulatory support and day-to-day coordination between engineering, construction and procurement organizations for metropolitan water and sewer utility engaged in design and construction of a \$6 billion wastewater treatment facilities program. Planned and negotiated contracts for interim and long-term supply of electricity. Coordinated operating divisions and consultant teams for MWRA's Combined-Sewer Overflow (CSO) facilities planning effort, mandated by the U.S. District Court as part of agency's Clean Water Act compliance order. Led successful troubleshooting and start-up of scum fixation system for 300 million-gallon-per-day primary treatment plant, after specialty contractor was unable to meet milestones. Met court-ordered date for stopping discharges of scum to harbor, developed concepts of placing pipelines in lining of raw wastewater conveyance tunnel.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Roger Worthington, PE Senior Utilities Engineer
Project Assignment:
Senior Utilities Engineer
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
4 (33 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1983 / Mechanical Engineering (North Carolina State University)
Active registration: Year first registered/discipline:
1988 / Professional Engineer, North Carolina (014601)
Other experience and qualifications relevant to the proposed Project:
<p>Roger Worthington is a licensed Senior Utilities Engineer with over 35 years experience with 33 years of performing utilities engineering and coordination for highway projects. At NCDOT, as the State Utilities Engineer (1994-2016) he supervised 4 Squads (16 to 28 Engineers); managed 8 Limited Services Contract Professional Services firms (\$2 million value); provided technical expertise on utilities to all of NCDOT; and developed standards and policies for utility accommodations on NCDOT roadways. As a Utilities Squad Engineer at NCDOT (1989-1994), he supervised a squad of four Utilities Engineers and one Engineer Trainee; scheduled projects to meet DOT TIP needs; coordinated utility designs with Utility Owners; and trained other squad leaders. As a Utilities Design Engineer at NCDOT (1983-1989), Mr. Worthington was responsible for the engineering analysis for conflicts and design of relocations of utilities; developed contract developments for inclusion in Highway Project Contract; and modernized contract standards for Utility Plans and Provisions.</p> <p>His resume follows.</p>



ROGER WORTHINGTON, PE

Senior Utilities Engineer



Years with the firm

4

Years total

37

Professional qualifications

Professional Engineer, NC
(014601)

Areas of practice

Engineering design and
analysis

Utility relocation
engineering

Utilities standards and
policies development

Languages

English

CAREER SUMMARY

Roger Worthington is a licensed Senior Utilities Engineer with WSP and has 33 years of performing utilities engineering and coordination for highway projects. At NCDOT, as the State Utilities Engineer (1994-2016) he supervised 4 Squads (16 to 28 Engineers); managed 8 Limited Services Contract Professional Services firms (\$2million value); provided technical expertise on utilities to all of NCDOT; and developed standards and policies for utility accommodations on NCDOT roadways. As a Utilities Squad Engineer at NCDOT (1989-1994), he supervised a squad of four Utilities Engineers and one Engineer Trainee; scheduled projects to meet DOT TIP needs; coordinated utility designs with Utility Owners; and trained other squad leaders. As a Utilities Design Engineer at NCDOT (1983-1989), Mr. Worthington was responsible for the engineering analysis for conflicts and design of relocations of utilities; developed contract developments for inclusion in Highway Project Contract; and modernized contract standards for Utility Plans and Provisions.

EDUCATION

B.S., Mechanical Engineering, North Carolina State University,
Raleigh, NC

1983

PROFESSIONAL EXPERIENCE

Utility Routing and Coordination for Maglev train project: During the conceptual design and Environmental Impact document development for the routing of a new high-speed magnetic levitation train in Washington, DC and Maryland, coordinated with the major utility owners to determine probable impacts and re-routing. Major utilities coordinated were 16' to 54" water lines, 16" to 96" combined sewers, 113kv, 230kv and 500kv power transmission lines.

Utility Coordination and Engineering: Providing Utility Coordination and Utility Engineering on several NCDOT Division projects in Cumberland, Rutherford, Jackson, Haywood, Transylvania, and Macon counties. Coordination begins in the early design stages of the project to mitigate conflicts between the transportation design and the utility facilities and to plan for any necessary relocations. Specific project work includes:

- EB-5858 Transylvania which is currently on hold. Worked with bridge designers for routing pedestrian bridge to avoid relocating transmission power line.
- 17BP.13.R.223 Rutherford which is currently on hold. Working closely with bridge designers to avoid relocating existing 36" effluent sewer line.
- U-6001 Cumberland which is currently on hold. Coordinated power line relocation routing and identification of PUEs with alignment, drainage, and Right of Way needs to avoid existing houses and businesses.

HOT lanes I66 ITS Engineering: For the Intelligent Transportation System of tolling on the I-66 Hot Lanes P3 project in Fairfax, Virginia, assisted in designing the electrical system (conduit routing and wire sizing) and communications conduit system, performed quality control of ITS electrical designs and Toll Gantry layout.

HOT lanes I77 ITS Engineering: For the Intelligent Transportation System of tolling on the I-77 Hot Lanes P3 project in Mecklenburg County, North Carolina, designed the electrical system (conduit routing and wire sizing), performed quality control of ITS and lighting designs, and managed the quality control audit process.

North Carolina Department of Transportation (NCDOT) (1983 to 2016)



ROGER WORTHINGTON, PE

Senior Utilities Engineer

I-40 South of Winston Salem, NC. Utility Design Engineer and project manager for relocating water and sewer lines for the new Interstate South of Winston-Salem. Analyzed existing utilities for conflict with the proposed roadway, developed detailed relocation designs and contract documents for inclusion in the highway project construction work, negotiated agreements with the utility owners, obtain environmental permits, and provided technical support during construction. Project was broken into several sections and included relocating a 30" water line, a 36" raw water line, 24" sanitary sewers parallel within a box culvert for over a thousand feet, and a 54" sanitary sewer line with a portion as dual 36" inverted siphons under a relocated creek.

I-85 Reconstruction in Charlotte, NC. Utility Engineering Squad Leader for relocating water and sewer lines necessary for reconstructing I-85 through Charlotte, NC. Analyzed existing utilities for conflict with the proposed roadway, developed detailed relocation designs and contract documents for inclusion in the highway project construction work, negotiated agreements with the utility owners, obtained environmental permits, and provided technical support during construction. Project was broken into several sections and included relocating a 42" water line, and 24" and 42" sanitary sewers parallel within a box culvert.

NCDOT Rest Area Water and Sewer Service. Utility Engineering Squad Leader for new water and sewer lines to provide service to Rest Area facilities from local municipal systems. Negotiated contracts with local utility owners, designed facilities, developed contract documents, and provided technical review of construction submittals. These were complicated systems due to the sporadic flows, concentrated sewage, and long distances. Rest Area projects included I-40 Claremont, I-40 Marion, I-40 Warsaw, and I-77 Charlotte.

ARRA Rail Improvements from Charlotte to Raleigh. Project Manager for Utility Engineering and Coordination for a series of 23 projects to double track and eliminate at-grade crossings along the Railroad from Charlotte to Raleigh. Scoped and negotiated contracts with engineering firms and managed the schedules and deliverables.

NCDOT Utility Policy Re-write. As State Utilities Engineer served as Project manager, subject matter expert, and primary reviewer for updating the NCDOT Policies and Procedures for Accommodating Utilities on Highway Rights of Way. After 20 years, the policies required extensive modernization and re-formatting from the last update in 1993. Due to the many interested and impacted parties, we hired an engineering firm to conduct interviews, surveys, and meetings, organize the information, research the impacting laws and policies of the FHWA and State of NC, develop the formatting, and compile the information into an easily referenced document. The Board of Transportation approved the updated policy in 2014.

Key accomplishments at NCDOT include:

- Developed a scheduling system with over 2000 active Utilities Engineering Section projects and maintained over 95% completion rate for 150 plus projects per year.
- Developed process for handling utility conflicts on highway projects with emphasis on avoidance of relocations through proactive design coordination.
- Steered the Utilities Engineering Section transition from hand-drafted plans to CADD and other computer-based engineering and documenting systems.
- Developed the contracting process for hiring Professional Services Firms to perform Utility Engineering and Coordination for Highway Projects.
- Wrote Division 15 Utilities of the NCDOT Standard Specifications for Highway Projects.



ROGER WORTHINGTON, PE

Senior Utilities Engineer

Rewrote into Active voice and reduced size by over 25%.

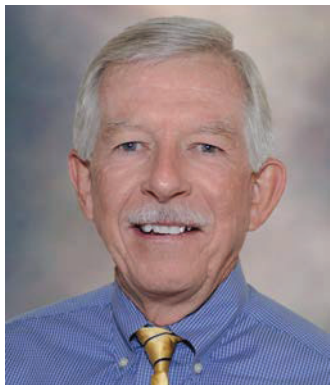
- Personally managed 23 ARRA Rail projects for Utilities issues on a fast track schedule.
- Designed miles of waterline relocations from 2" to 24", miles of sanitary sewer relocations including a dual 36" inverted siphon for a 54" gravity sewer, several pump stations and a 3-mile force main, NCDOT Utility Standard drawings, and several attachments of utilities to bridges and culverts.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
William (Sid) Riddick, Jr., PE Senior Supervising Engineer
Project Assignment:
Senior Water and Sewer Engineer / Technical Advisor
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
23 (26 with others)
Education: Degree(s)/Year/Specialization:
M.S. / 1969 / Civil Engineering (North Carolina State University, Raleigh, North Carolina) B.S. / 1965 / Civil Engineering (North Carolina State University, Raleigh, North Carolina)
Active registration: Year first registered/discipline:
1994 / Professional Engineer: Massachusetts (37937) 1992 / Professional Engineer: Vermont (6369)
Other experience and qualifications relevant to the proposed Project:
<p>Sid Riddick has designed several raw water intake, pumping, and transmission line projects. The most relevant is the 45 MGD Kings Bluff project completed for the Lower Cape Fear Water and Sewer Authority, which includes a subaqueous intake system, the pump station and 110,000 feet of 48-inch diameter raw water transmission main.</p> <p>He has also managed and designed other large diameter water line projects, many involving congested urban environments. Many of these large pipeline projects included critical tie-ins and interconnections where careful planning of the construction sequence, definition of measures to control existing flow, and preparation of detailed contract requirements are essential.</p> <p>His resume follows.</p>



WILLIAM (SID) RIDDICK, JR., PE
Senior Water and Wastewater Engineer



Years with the firm

23

Years total

49

**Professional
qualifications**

**Professional
Engineer:
Massachusetts,
1994 (#37937);
Vermont, 1992
(#6369)**

CAREER SUMMARY

Sid Riddick has designed several raw water intake, pumping, and transmission line projects. The most relevant is the 45 MGD Kings Bluff project completed for the Lower Cape Fear Water and Sewer Authority, which includes a subaqueous intake system, the pump station and 110,000 feet of 48-inch diameter raw water transmission main.

He has also managed and designed other large diameter water line projects, many involving congested urban environments. Many of these large pipeline projects included critical tie-ins and interconnections where careful planning of the construction sequence, definition of measures to control existing flow, and preparation of detailed contract requirements are essential.

Mr. Riddick has 47 years of experience working on numerous large diameter water and wastewater pipeline projects (up to 78-inch diameter). He has managed the planning, design, and construction of numerous complex multi-disciplined projects including water and wastewater (WW) pumping and treatment facilities where coordination of various design disciplines is critical. Mr. Riddick has performed and supervised planning studies for regional utility systems, and detailed alignment studies for large diameter pipelines in urban environments.

EDUCATION

MS, Civil Engineering, North Carolina State University	1969
B.S., Civil Engineering, North Carolina State University,	1965

PROFESSIONAL EXPERIENCE

- **Lower Cape Fear Water and Sewer Authority:** Project Manager on capacity and reliability upgrades to the Raw Water Pump Station. This involved a new wetwell sump and two new 25 MGD raw water vertical turbine pumps with 1,600 Hp variable speed drives. Expansion included connections to the 48" raw water suction line, provisions for a new intake, a new 48-inch discharge header, an expanded surge control system, and new medium voltage motor controls and switchgear. The upgrades will increase capacity to 50 MGD initially, and 90 MGD when a planned parallel raw water main is completed.
- **City of Morganton, NC:** Expanded an existing "run of river" intake on the Catawba River and designed a new 12.0 MGD raw water pump station for the City's water treatment facility. The new raw water pumping station was equipped with two 8,400 GPM vertical turbine pumps. A new parallel 24-inch main extended to the water treatment plant.



WILLIAM (SID) RIDDICK, JR., PE
Senior Water and Wastewater Engineer

- **Lower Cape Fear Water and Sewer Authority:** Lead Design Engineer / Project Manager on 110,000 LF of 48-inch diameter raw water piping from the intake / pump station site at King's Bluff on the Cape Fear River, to delivery points for Brunswick County and City of Wilmington. Phase I included 73,500 feet of 48-inch pre-stressed concrete cylinder pipe terminating in 3.0 MG ground storage tank. The cross country alignment paralleled an existing 30-inch pipe and a CSX railroad, and passed beneath a railroad storage yard at a paper mill. Phase III included a subaqueous crossing of the Cape Fear River.
- **Newton, NC:** 30,000 LF of 24-inch diameter ductile iron raw water pipe in NC DOT right of way connecting into the City's new raw water pump station to the existing raw water storage reservoir.
- **Newton, 64-Inch West Water Main, Charlotte Mecklenburg Utilities:** Project Manager: Planning, design, and construction of the 64-inch west water main. The \$20m high service water main extended 22000 feet through neighborhood streets, commercial / business areas, and along major thoroughfares from near the city's airport to uptown charlotte. Planning studies evaluated a number of alternative alignments to minimize impacts to residents, businesses, and traffic. The selected alignment involved construction in the travel lanes of several major thoroughfares; a 1,000-foot long tunnel under an interstate highway; and "open cut" crossings of nc designated routes. Design challenges included a relatively deep installation (10' – 15' cover) to avoid existing utility infrastructure (water, sewer, natural gas, telephone, and fiber optic cables. The project required the preparation of detailed traffic control and work staging plans, and reconstruction plans for impacted multi-lane roadways. The construction documents allowed three materials, ductile iron, pre-stressed concrete, and welded steel incorporating a passive corrosion monitoring / control system.
- **54-Inch Transmission Main, Phase II, Charlotte Mecklenburg Utilities:** Program Manager: The second phase of this project extended along major thoroughfares, beneath a major interstate expressway, and paralleled a Norfolk Southern Railroad line inside the RR right-of-way. Mr. Riddick served as the project manager for the design and construction of this 17,000-foot long PCCP high service transmission main. Design issues involved an 8-lane interstate crossing, railroad coordination, traffic control, and design of the connections to the existing high service pump station at the potable water treatment facility. Over a mile of the alignment was inside a joint City/Norfolk Southern RR easement.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Zack Isnasious, PE Technical Advisor
Project Assignment:
Wastewater Collection Systems
Name of Firm with which associated:
WSP USA Inc.
Years' experience with this Firm:
5 (33 with others)
Education: Degree(s)/Year/Specialization:
B.S. / 1977 / Civil Engineering (Alexandria University, Egypt)
Active registration: Year first registered/discipline:
2003 / Professional Engineer California, (65544) Back-flow Tester Certification: AWWA (13474) Cross Connection Control Specialist: AWWA CA and NV (02220) Pipe Condition Assessment NASSCO Certification (U-510-10682)
Other experience and qualifications relevant to the proposed Project:
<p>Zack Isnasious has 38 years of extensive experience with civil engineering for water, sewer, hydrology and storm water, flood control, recycled water, master planning, water and sewer modeling, pipe rehabilitation technologies, pump stations, reservoirs, water treatment and desalination projects. He has successfully managed project teams for numerous large award-winning projects with multi-disciplined fields, consistently completing them within budget and on-schedule.</p> <p>His resume follows.</p>



ZACK ISNASIOUS, PE

Wastewater Collection Systems



Years with the firm
5

Years total
38

Professional qualifications

Professional Engineer (Civil): California, 2003 (65544)

Backflow Tester Certification: AWWA (13474)

Cross Connection Control Specialist: AWWA CA and NV (02220)

Pipe Condition Assessment NASSCO Certification (U-510-10682)

CAREER SUMMARY

Zack Isnasious has 38 years of extensive experience with civil engineering for water, sewer, hydrology and storm water, flood control, recycled water, master planning, water and sewer modeling, pipe rehabilitation technologies, pump stations, reservoirs, water treatment and desalination projects. He has successfully managed project teams for numerous large award-winning projects with multi-disciplined fields, consistently completing them within budget and on-schedule.

EDUCATION

B.S., Civil Engineering, Alexandria University, Egypt 1977

PROFESSIONAL MEMBERSHIPS

American Water Works Association (AWWA)

American Society of Civil Engineers (ASCE)

Inland Counties Water Association (ICWA)

Water Reuse Association (WRA)

International Desalination Association (IDA)

Water Science and Technology Association

American Society of Plumbing Engineers (ASPE)

Australian Institute of Plumbing Engineers

PROFESSIONAL EXPERIENCE

- **Plant 134 Booster Station Upgrades and "Getaway" Capacity Upgrades Highland, California:** Project Manager for the accelerated design of 2,700 linear feet of 16-inch ductile iron pipeline, a hydraulic analysis and modeling, and upgrading of a booster station from 4.0 to 8.0 mgd. The project also included electrical and controls design, technical specifications and cost estimates.
- **Ontario Sewer Project, City of Ontario, California:** Project Manager for the hydraulic modeling and analysis, design and construction management of four sewer segments in the City of Ontario as part of the City's capital improvement program. The project also included preparation of technical specifications, cost estimates, and construction inspection during the construction period.
- **Al Multaa Housing Project, Kuwait:** Wet infrastructure manager for the modeling of water network, sewer collection network, and irrigation networks for a new city in Kuwait. The new city will accommodate 375,000 residents and occupies an area of 35 square miles. The project



ZACK ISNASIOUS, PE

Wastewater Collection Systems

included the detailed design for the entire city's wet utilities including the industrial waste, preparation of master planning reports, technical specifications and complete tender documents.

- **Water and Sewer Utilities Relocation, State Route (SR) 210 - Segment 9, City of Rialto, California:** Project Engineer and the co-coordinating engineer with Caltrans, the City, and the other utility owners. Saved the client \$800,000 by redesigning the utility relocations, designed and prepared plans and profiles for the water and sewer lines and the sewer lift stations (three lift stations, 2.85 cfs, 0.65 cfs, 0.31 cfs), prepared bid documents.
- **City of Rialto Sewer Project, City of Rialto, California:** Project Manager on the 18-inch large trunk sewer design which included trench load calculations, traffic control plans, sewer diversion structures, CCTV and hydrotesting of the sewer. The project deliverables included technical specifications, plans and cost estimates.
- **South Highland and Juniper Avenue Sewer Improvements, Ontario, California:** Lead Engineer for this project which consisted of the design and construction management for one mile of 10-inch VCP sewer main. Prepared preliminary design report, pipe design calculations, construction drawings, construction specifications, and cost estimates..
- **Holt Boulevard Sewer Project, City of Ontario, California:** project manager on the large trunk sewer design which included Parshall Flume design, 30-inch sewer pipe design, and trench load calculations for 35 deep trench, CCTV and hydrostatic testing. The project deliverables included special provisions, plans and cost estimate.
- **Condition Assessments, City of Riverside, California:** Project manager for this project which consisted of performing flow monitoring and preparation of field inspection, securing permits, inspection of pipelines using Closed Circuit Television (CCTV), inspection of manholes, preparation of condition assessment reports for the project phases and preparation of rehabilitation recommendations. The first phase of the project consisted of 20,000 linear feet of 21- to 36-inch gravity sewer main gravity sewer line and manholes and 19,000 linear feet of 24-inch Force Mains. Rehabilitation recommendations included preparing specifications and procedures to use CIPP, Slip Lining, Micro-tunneling, Directional Drilling (DD) and Snap-On rings. Used NASSCO certified software to prioritize repairs such as PipeTech, and Aqua Data.
- **47 Jurupa Project, City of Ontario, California:** Project Engineer responsible for the design and preparation of water, sewer, storm drain, erosion control and precise grading plans. Zack coordinated with the City of Ontario and the San Bernardino Flood Control District; obtained grading permits, and flood control permits; prepared cost estimates and bid documents.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Kenneth (Ken) Warddrip, PE Senior Supervising Electrical Engineer	
Project Assignment:	
Electrical Engineering	
Name of Firm with which associated:	
WSP USA Inc.	
Years' experience with this Firm:	
18 (27 with others)	
Education: Degree(s)/Year/Specialization:	
B.S. / 1974 / Electrical Engineering (California State University, Sacramento, California)	
Active registration: Year first registered/discipline:	
1976 / Professional Engineer; California (E9368) 2008 / Professional Engineer; Oklahoma (23558) 2009 / Professional Engineer; Texas (103216) 2011 / Professional Engineer; Wyoming (13151)	2014 / Professional Engineer; Missouri (2011024033) 2014 / Professional Engineer; Montana (20406)
Other experience and qualifications relevant to the proposed Project:	
<p>Ken Warddrip has 45 years of professional experience in electrical engineering design, construction and studies relating to electric power and control systems on projects that have included commercial and industrial buildings, substations, distribution and transmission lines, pumping plants, generation plants, transportation-related projects (roadways, tunnels, parking) and military housing.</p> <p>His resume follows.</p>	



KENNETH (KEN) N. WARDDRIP, PE

SENIOR SUPERVISING ELECTRICAL ENGINEER



Years with the firm

18

Years total

45

Professional qualifications

Professional Engineer:
California, 1977 (E9368);
Oklahoma (23558); Texas
(103216); Wyoming (13151);
Missouri (2011024033);
Montana (20406);
Washington (52027)

CAREER SUMMARY

Ken Warddrip has 45 years of professional experience in electrical engineering design, construction and studies relating to electric power and control systems on projects that have included commercial and industrial buildings, substations, distribution and transmission lines, pumping plants, generation plants, transportation-related projects (roadways, tunnels, parking), and military housing.

Ken Warddrip has experience with electrical distribution system analysis programs including Paladin DesignBase 4.0 (previously EDSA), ETAP, Arc Flash program (Arc Flash Analytics) engine generator set sizing programs (Cummins & Cat), lighting system programs such as Advanced Graphical Interface for Lighting (AGI); Computer Aided Design (ACAD Revit MEP) and other commercially available non-engineering software (spreadsheet, word processor, visual basic & database. Additional experience includes performing computer aided system studies for short circuit analysis; load analysis; arc flash analysis; voltage drop analysis; grounding system design; motor starting; protective device coordination; power plant energy production analysis; control algorithm modeling; interior and exterior lighting (parking, tunnel, roadway and security lighting), Title 24 lighting compliance design. National Electrical Code (NEC), International Electrotechnical Commission (IEC), IRC IECC code compliance.

EDUCATION

B.S., Electrical Engineering, California State University, Sacramento, 1974

PROFESSIONAL MEMBERSHIPS

Institute of Electrical & Electronic Engineers (IEEE); National Fire Protection Association (NFPA); Illuminating Engineering Society of North America (IESNA)

PROFESSIONAL EXPERIENCE

- EID Spillway 20, El Dorado County, California: electrical design for new automated emergency spillway from water delivery flume. Design includes electrical service, power design, control system and Supervisory Control and Data Acquisition (SCADA) interface.
- EID Spillway 44, El Dorado County, California: electrical design for new automated emergency spillway from water delivery flume. Design includes electrical service, power distribution, control system and SCADA interface.
- EID Spillway 23, El Dorado County, California: electrical design for new automated emergency spillway from water delivery flume. Design includes electrical standby power system, power distribution, control system and SCADA interface.
- EID Spillway 46, El Dorado County, California: electrical design for new automated emergency spillway from water delivery flume. Design includes, power distribution, control system and SCADA interface.
- Greenwood Lake Water Treatment Plant, El Dorado County, California: electrical design for a new eight-million-gallons-per-day (mgd) micro-filtration water treatment plant. New 1000A, 480V service, switchgear, feeders and controls, lighting, 20 pumps, 400kW and 20kW engine generators, and process control.
- Soquel Polo Grounds Well and Water Treatment Plant, Soquel, California: electrical design for new 400 gpm water well pump and treatment facility. This included new 480V service, MCC, feeders, lighting, a 125kW engine generator and process control.



KENNETH (KEN) N. WARDDRIP, PE
SENIOR SUPERVISING ELECTRICAL ENGINEER

- Combined Wastewater Treatment Plant Power System Update, Sacramento, California: prepared design for replacement of 5kV switchgear and underground distribution system for City of Sacramento Department of Utilities main treatment plant.
- RD1000 Pumping Plant 1A, Sacramento, California: electrical design for rehabilitation of 85-year-old pumping plant with four 600HP 2400V motors. The project involved the complete replacement of a 2,400V system.
- Wildflower Booster Pumping Station, Ione, California: electrical design for new domestic water booster pumping station. This included new 480V service, switchgear, feeders and controls, lighting, four pumps and SCADA.
- Wheeler Ranch Storm Water Pumping Plant, Yuba County, California: electrical designs for new storm drain pumping plant. This included new 480V service, switchgear, feeders and controls, lighting, four pumps and a 100kW engine generator.
- Wheeler Ranch Well No. 2, Yuba County, California: electrical design for domestic water well. This included new 480V service, switchgear, feeders and controls, lighting, three pumps, and a 300kW engine generator.
- Wheeler Ranch Water Treatment Plant, Yuba County, California: electrical design for new water treatment plant. This included new 480V service, switchgear, feeders and controls, lighting, 20 pumps and a 500kW engine generator.
- RD1000 Pumping Plant 8, Sacramento, California: electrical design for replacement of 480V feeders to four 700HP motors. Ken provided analysis of failure of the original installation. This included analysis of 480V, wye-delta, 700HP starter failure and design of plant power distribution upgrade.
- RD1000 Pumping Plant 8, Sacramento, California: electrical design for a complete restructuring of a storm drain pumping plant, including the addition of two 500HP pumps and automatic trash rakes. The project also involved new medium-voltage service, switchgear, feeders and controls.
- RD1000 Pumping Plant 2. Sacramento, California: Electrical design for a complete replacement storm drain pumping plant, including automatic trash rakes. The project also involved new medium-voltage service & switchgear plus feeders and controls. Provision for future SCADA.
- RD1000 Pumping Plant 3. Sacramento, California: Electrical design for a complete replacement storm drain pumping plant, including automatic trash rakes. The project also involved new medium-voltage service & switchgear plus feeders and controls. Provision for future SCADA.
- RD1000 Sacramento, California: Served as District Electrical Engineer since 1993. Provided consulting and trouble-shooting services, on-call basis.
- Sump 28, Sacramento, California: electrical design for a complete restructuring of a storm drain pumping plant. This included new medium-voltage service, switchgear, feeders and controls. The project also involved a new 2300V, 1MW engine generator.
- Sump 20, Sacramento, California: electrical design for a new storm drain pumping plant. This included new 480V service, switchgear, feeders and controls. The project also involved a 480V, 175kW engine generator.

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:	Nature of Firm's Responsibility:	
<p>Chippewa and Airline Drive Pumping Station Improvements Baton Rouge, Louisiana and Metairie, Louisiana</p> <p>Sara Golz Louisiana Department of Transportation and Development Public Works Hydraulic Section (225) 379-1430 Sarah.Golz@LA.GOV</p>	<p>Under a statewide retainer contract with the Louisiana Department of Transportation and Development (LADOTD), WSP provided engineering design services for rehabilitation of storm water pumping stations located in Baton Rouge, Louisiana and in Metairie, Louisiana. As part of an overall program of pumping station upgrades, WSP was the consultant for the rehabilitation efforts of these two facilities. WSP provided architectural, mechanical, electrical, and hydraulic design services and coordinated structural and civil design services from a local subconsultant.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
06/2021	\$469,000 (estimate)	\$469,000 (estimate)

PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Cross Bayou Pump Station Inspection and Improvements</p> <p>Monica Salins Gorman Pontchartrain Levee District P.O. Box 426 Lutcher, Louisiana (225) 258-4369 mgorman@leveedistrict.org</p>	<p>The Cross Bayou Pump Station is owned by the Pontchartrain Levee District. The District desires to transfer the Station to ownership of St. Charles Parish. Prior to the transfer the station will undergo an in-depth inspection and assessment of the infrastructure. WSP will also review O & M experience; develop a Rough Order Repair Estimate and develop a Scope Of Services and Plan for refurbishment of the Station. The systems included are Diesel Pump Drives, Fuel Transfer and Storage Tanks, Power Take Off and Gear Reducer, Main Pumps, Auxiliary Pumps, Standby Generator, the Trolley, Automated Bar Screen, and Telemetry and Controls.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
04/15/2021 (estimated)	\$250,000 (estimate)	\$250,000 (estimate)

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Boyd Avenue and 21st Street Pumping Station Improvements Baton Rouge, Louisiana Sarah Golz Louisiana Department of Transportation and Development Public Works, Hydraulic Section (225) 379-1430 Sarah.Golz@LA.GOV	Under a statewide retainer contract with the Louisiana Department of Transportation and Development (LADOTD), WSP provided engineering design services for rehabilitation of storm water pumping stations along the I-110 corridor in Baton Rouge, Louisiana. As part of an overall program of pumping station upgrades, WSP was the prime consultant for rehabilitation effort of the Boyd Avenue station and two stations (old and new) at 21st Street. WSP provided architectural, mechanical, electrical, and hydraulic design services and coordinated structural and civil design services from a local subconsultant.	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
12/2020	\$414,000	\$414,000

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Pump Station No. 9141 and 8-inch Force Main Replacement Miami, Florida Miami Dade County Seaport Department Becky Hope (305) 347-4972	<p>In 2015, Port-Miami contracted WSP to provide professional civil engineering design and construction administration services for upgrades to their Master Sanitary Sewage Pump Station No. 9141 and replacement of the existing 8-inch cast iron pipe force-main with a 10-inch pipe crossing underneath Biscayne Bay.</p> <p>The project also includes a new "dry" force main. The replacement force main and dry force main alignments that will cross the waterway between Dodge Island and the mainland are designed to be south of the Bascule Bridge below the Biscayne Bay Bottom, using the Horizontal Directional Drilling (HDD) method of construction. The remaining portions of the replacement force main along Dodge Island and the mainland are designed using a combination of open-cut and trenchless methods of construction.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$3,500,000	\$700,000

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Norris Cut Utility Relocation, Miami-Dade County, Florida</p> <p>Miami-Dade Water & Sewer Dept. I. Gary Clarke (786) 268-5174 gycrk@miamidade.gov</p>	<p>In late 2011, MDWASD completed the condition assessment of the existing 54-inch pre-stressed concrete force main between Miami Beach and the Central District Wastewater Treatment Plant (CDWWTP) and identified several sections of pipeline in highly distressed condition and in danger of rupturing and causing a sewage spill.</p> <p>WSP provided design review, construction management, construction engineering/inspection services for the replacement of the 54-inch sewer force main from Fisher Island to the CDWWTP at Virginia Key to ensure compliance with the design-build criteria. The project included 5300 LF of concrete segment lined tunnel, 2500 LF of open cut construction, and several hundred feet of horizontal directional drilling.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
05/2016	\$77,500,000	\$5,000,000

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Charlotte Water Progressive Design-Build Sewer Capacity Upgrades Charlotte, NC</p> <p>Matt Bedford (704) 336-1009 mbedford@ci.charlotte.nc.us</p>	<p>WSP is delivering four sewer-capacity upgrade projects using a progressive design-build delivery approach. Redevelopment of the Central Business District and the CATS Light Rail corridor put a strain on the sewer collection system that handles new and wet weather flows. When completed, a combined new capacity of over 100 mgd of peak hour flow during a 10-year wet weather recurrence interval will be available to the four sewer basins they serve. The combined length of sewer improvements is approximately 6 miles.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
09/2022 (estimated)	\$86,300,000	\$86,300,000

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>City of Atlanta 2015-2020 On-Call Contract for Architectural, Engineering and Design Atlanta, GA</p> <p>Robert Bocarro, PhD, PE, Deputy Commissioner (404) 546-3229 rbocarro@atlanta.gov</p>	<p>WSP is the prime JV partner for a five-year on-call contract for architectural, engineering and design task orders for City of Atlanta. To date, there are 42 tasks assigned under this contract with Department of Public Works and DWM, and WSP was the lead on more than 15 tasks, some of which are completed, and others are currently ongoing. Notable tasks performed under this contract with DWM included engineering design, peer review, permitting, utility coordination, cost estimating, construction management, construction inspection, administrative support/document control and risk management.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
11/2020	\$27,260,000	\$27,260,000

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Government Cut Utility Relocation Project Miami, Florida</p> <p>Miami-Dade Water & Sewer Dept. I. Gary Clarke (786) 268-5174 gyckr@miamidade.gov</p>	<p>The major driving force for replacement of the 54-inch force sanitary force main crossing under Government Cut and 20-inch water main crossing under Fisherman's Channel is the U.S. Army Corps of Engineers' (USACE's) Miami Harbor Government Cut Federal Navigation project. This USACE project was required to deepen the navigation channel into the Port of Miami. The deepening of the navigation channel required that the existing 54-inch sanitary sewage pre-stressed composite concrete pipeline and 20-inch ductile iron water main be replaced in advance of the USACE Miami Harbor project.</p> <p>WSP provided construction management services for the relocation of the 24-inch water main and 54-inch to 60-inch force main under Government Cut using horizontal directional drilling and micro-tunneling construction methods.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
09/2013	\$77,300,000	\$4,900,000

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>First Street Tunnel Design/Build Washington, DC</p> <p>DC Water Carlton Ray (202) 787-4469 carlton.ray@dcwater.com</p>	<p>WSP served as lead designer for the Skanska – Jay Dee JV (SKJD) design-build team for the First Street Tunnel (FST) project. The FST will mitigate combined sewer overflows to the Anacostia River and flooding in two urban neighborhoods in Washington, DC. The main tunnel, approximately 2,700 LF and 18.5 ft, will be excavated in soft ground from a 160-foot deep working shaft located within the historic McMillan Sand Filtration Plant site.</p> <p>WSP designed the precast concrete bolted and gasketed segmental final lining. The project included four diversion chambers to relieve the existing sewers during large storm events and to divert flow to the tunnel for storage. Diverted flows were directed to the tunnel via two drop-shafts, at approximately 90 to 110 ft. below grade, and connecting adits. Adit tunnel design included a 292 LF 84 in. ID micro-tunnel for the Adams Street Adit. A temporary below grade pumping station and shaft, which was used to de-water the tunnel, were included in the project.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
02/2016	\$157,600,000	\$5,670,000

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Marblehead Sewer Pipeline Replacement Project Marblehead, MA</p> <p>South Essex Sewerage District Alan F. Taubert (978) 744-4550, ext.127</p>	<p>The South Essex Sewerage District retained WSP to conduct a condition assessment study following the rupture of one of the District's cross-harbor pressure sewers in March of 2013. The study included the condition assessment of 12,000-feet of 20-inch and 24-inch pressure sewers that convey up to 20 CFS of wastewater beneath Salem Harbor from the town of Marblehead to the District's wastewater treatment facility in Salem, Massachusetts. The firm prepared a condition assessment report that documented the condition of the pipelines based on direct underwater observations of the pipelines, ultrasonic thickness testing, and a soils corrosivity analysis. Results of the assessment showed that the existing ductile iron pipes are severely corroded and in imminent danger of failure. WSP evaluated various alternatives for immediate replacement of the pipelines, and completed the design and permitting of two new HDPE replacement pipelines that will be installed in a shallow trench offset from the existing pressure mains, and across a one-mile length of the harbor using the float-and-sink approach. The existing mains have no redundancy, so a 6,000-ft temporary bypass was installed and connected to the upstream sewer and treatment plant before the permanent connection of the new mains to the system can be made. The project proceeded on an emergency basis to minimize the potential for further rupture and discharge of wastewater to this historic and popular recreational harbor.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
12/2016	\$11,000,000	\$1,200,000

TEC Professional Services Questionnaire

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. N/A		
2.		
3.		
4.		

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

Please see attached information.

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

Signature: Nassar, Max (nassarmj)
Digitally signed by Nassar, Max (nassarmj)
 DN: cn=Nassar, Max (nassarmj), ou=Active,
 email=Max.Nassar@wsp.com
 Reason: I agree to the terms defined by the placement
 of my signature on this document
 Date: 2021.01.27 15:29:42 -06'00'

Print Name: Max Nassar

Title: Vice President

Date: 01/28/2021

Introduction

WSP USA offers over a century of experience in the planning, design and construction management of municipal infrastructure projects, including water, wastewater, drainage and roadways nationwide. WSP is an industry leader in developing infrastructure solutions for the way we will live in the 21st century.

WSP USA Inc., is the U.S. operating company of WSP, one of the world's leading engineering and professional services firms. Nationally, our staff of 9,500 provide engineering and multidisciplinary services in a vast array of business lines, with a focus on technical excellence and client service. The firm has a **135-year** history, with roots in companies founded in the United States, the United Kingdom and Canada. WSP is committed to performing our services in a socially, ethically and environmentally responsible manner. In the United States, the firm's roots date back to 1885.

We offer expertise in every phase of project delivery, from concept to completion. Our services include strategic consulting, program management, planning, engineering design, construction management, and operations & maintenance.

Municipalities rely on us to execute projects under every form of project delivery, including design-build and public-private partnership. We employ the latest technologies and methodologies to develop infrastructure that addresses anticipated demographic, social, and economic changes, and we plan and design infrastructure systems to be resilient to the threats posed by climate change.

Our engineers and planners view municipal infrastructure planning and design as a way to improve the communities in which we live and work, and wherever possible we apply the latest concepts in sustainable development to improve social, economic and environmental conditions.

We partner with our clients to find the right solutions to their challenges through innovative planning and design, deep knowledge of the federal and local regulatory environments, and strong management of project delivery.

In addition to a full range of specialized services, we provide broad oversight and direction for complex

mega projects, working on integrated teams with our clients to deliver some of the world's largest and most well-known projects.

To every project we bring a total commitment to achieving client goals, with strict attention to schedule and budget, drawing on the multidisciplinary skills of 9,500 professionals in more than 150 offices across the U.S.

Minimum Qualifications

1. One principal who is a professional engineer who shall be registered as such in Louisiana

Michael Abrahams, PE is WSP's Technical Director for structures. He maintains his Louisiana PE (34520) and will serve as the Principal for work WSP is awarded by Jefferson Parish. He has nearly 50 years of experience and is one of the most respected engineers in the US.

2. Professional in charge of the project who is a professional engineer who shall be registered as such in Louisiana with a minimum of five (5) years' experience in the disciplines involved

Jose Rodriguez, PE will serve in the role of Project Manager. He has well over 20 years of experience in civil engineering, including the design of water and wastewater infrastructure projects. His resume is included in this submission.

3. One employee who is a professional engineer registered as such in Louisiana in the field or fields of expertise required for the project

Brian Hundt, PE is an outstanding civil engineer with ten years of diverse experience throughout the state. He has previous experience working with Jefferson Parish and is very familiar with the Parish's requirements for design and construction projects.

Evaluation Criteria

1. Professional training and experience in relation to the type of work required for the routine engineering services;

WSP has extensive experience in the design and rehabilitation of water and wastewater distribution and collection systems. This includes expertise in civil, structural and mechanical/electrical engineering. In this submission, we show projects completed by WSP where both routine and complex engineering solutions are provided to our clients.

WSP USA provides innovative solutions and technologies for planning, engineering and

management to improve the effectiveness of operations, maintenance and replacement of aging and failing drinking water and wastewater treatment and conveyance systems. We deliver a full range of planning, design and construction management services for outfalls, pipelines, pump stations, flow control facilities and other special structures related to water and wastewater— all intended to improve water quality while meeting strict environmental regulations.

We have completed planning, design and permitting of numerous municipally owned wastewater systems for new, rehabilitated or expanded wastewater treatment plants. Wastewater treatment design has involved current technologies in biological nutrient removal and advanced wastewater treatment from relatively small systems to regional wastewater treatment systems.

For water and wastewater conveyance systems, our experience includes planning, condition assessment, new and rehabilitation design, and construction management of water transmission and sanitary sewer pipeline systems, as well as outfalls, pump station and other major flow control related to the transmission and conveyance of water, wastewater, and reclaimed wastewater.

We have extensive experience in solving combined sewer overflow and sanitary sewer overflow problems includes separation of sewer and storm water collection systems, area-wide storage and transport remedies, and state-of-the-art gray and green infrastructure technologies.

2. Capacity for timely completion of newly assigned work, considering the factors of type of routine engineering task, current unfinished workload, and person or firm's available professional and support personnel.

WSP has the capacity to complete all tasks that might be assigned under this contract. The individuals identified, resumes provided, have the availability to start work immediately.

WSP prides itself in providing high quality services on time and within our clients' budgets.

Even if there is an aggressive schedule, we can provide resources quickly to meet demands. With more than 1,800 staff located in the firm's Southeast region, we can staff projects and contracts large and small, simple and complex, at a moment's notice.

3. Location of the principal office where work will be performed.

WSP's office is located at 1100 Poydras Street in New Orleans. The majority of the work will be performed from this office. There could be instances when a subject matter expert is needed, and their work could be performed remotely, but all work will undergo the strict quality control and assurance reviews in our New Orleans office. This ensures that all state and local regulations and requirements are met.

4. Adversarial legal proceedings between the Parish and the person or firm performing professional services.

WSP USA Inc. has had NO legal proceedings with Jefferson Parish.

5. Prior successful completion of projects of the type and nature of routine engineering services, as defined, for which firm has provided verifiable references;

WSP has a portfolio of experience that spans from planning, design, and construction management of large diameter pipelines, sewers, outfalls, water and force mains, separate and combined collection systems, pump stations, flow control facilities, as well as special structures related to the storage, transmission and conveyance of water, wastewater, and reclaimed water. Jefferson Parish will benefit from the lessons learned and innovative solutions we bring from similar projects. The projects included in the questionnaire all have verifiable references.

6. Size of firm, considering the number of professional and support personnel required to perform the type of routine engineering tasks, including project evaluation, project design, drafting of technical plans, development of technical specifications and construction administration.

Nationally, our staff of 9,500 provide engineering and multidisciplinary services in a vast array of business lines, with a focus on technical excellence and client service. In New Orleans, we have a staff of 21. We will assemble our teams as we see the scope of the work for any engineering tasks.

7. Past Performance by person or firm on Parish contracts.

As firm, WSP has not completed any work for Jefferson Parish, though staff with the firm do possess diverse experience with the Parish. Additionally, the staff in our New Orleans Office are currently

providing engineering services for the Bonnabel Boulevard Roadway Improvements efforts in Jefferson Parish. We have assigned our Area Manager, Max Nassar, to the role of Client Service Manager. He will assure that the Parish is receiving the highest quality of service and deliverables. Max is a native of Jefferson Parish and a life-long resident of Louisiana. He will devote his efforts to understanding the challenges faced by the Parish and will make sure that the very best individuals are assigned to exceed your expectations for our firm.