

Municipal Association of South Carolina

Engineering Services for Various Projects and On Call Services

October 17, 2022

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Jake Broom Chief Operating Officer Municipal Association of South Carolina PO Box 12109 Columbia, South Carolina 29211

RE: Engineering Services for Various Projects and On Call Services

Dear Mr. Broom,

The Municipal Association of South Carolina is seeking a trusted advisor to be a partner to the state's 271 incorporated municipalities. Through this on-call, municipalities will be able to address water and sewer projects that have fallen through the cracks due to a lack of funding, resources, and/or programs.

Davis & Floyd's (D|F) water resources engineers have assisted numerous municipalities throughout South Carolina. Our team has worked extensively with water resources projects funded through grant and loan programs distributed through RIA. Included within this submittal, we have outlined D|F's unique qualifications, including our previous project experience and our team of knowledgeable experts. Upon review of the enclosed, we trust that our unique qualifications and experience will be evident.

Our proposal presents an introduction to our firm and specific qualifications, including overall experience, project team, approach, familiarity with potential funding opportunities, related project experience, and knowledge of local water and sewer systems.

As a generational firm embedded deep in the heart of South Carolina, we understand the needs and challenges of the communities in which we live, work, and study. Across the life of our company, D|F's leadership, employees, and engineers have always focused on one thing—the people in our community who will utilize the systems we design. On behalf of D|F, I am pleased to submit our firm's qualifications for this important opportunity.

Respectfully Submitted,

Davis & Floyd, Inc.



Michael Horton PE, CFM, LEED[®] AP Chief Engineering Officer

> **1940 Algonquin Road, Suite 301 • Charleston, SC 29405 O:** (843) 554-8602

> > WWW.DAVISFLOYD.COM



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LETTER OF INTEREST

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Augusta Road Water Main



Cheraw WWTP



Sumter WTP No. 6



TECHNICAL APPROACH AND UNDERSTANDING

Brief History & Organization of the Firm

D|F provides professional engineering and design services, delivering solutions for water resources, infrastructure, transportation, industrial development, land planning, landscape architecture, structures, and construction administration and inspection across the Southeast. Having provided engineering and planning solutions for 68 years, our leaders approach each project with the understanding that a lasting connection is the goal. Our mission is to challenge our team to deliver sustainable solutions for our clients and community. From bidding assistance to design, from grant administration to construction inspection, our firm has the resources and staffing to assist our clients through each stage of a project's development.

Location of Offices & Authorized Personnel

With six offices located throughout South Carolina, we are proud to call South Carolina home. Due to our statewide presence, we are familiar with state and local requirements and regulations. It is advantageous to utilize a local engineering firm that is intimately involved with the local agencies having jurisdiction over projects in various counties across the state. Having an extended presence in the region also gives us an advantage in maintaining sensitivity to the local politics, policy, public impressions, demographics, and regional business climate, all of which factor into leading a successful project from planning to completion



Prior Experience & Qualifications

Our water and wastewater experience ranges from small- and large-diameter line extensions and force mains to major pump stations, storage tanks, and treatment plants. We provide technical consulting services for environmental reports, design, permitting, regulatory reviews, engineering, and operation of wastewater treatment systems. Our services include waterline design; conceptual planning; feasibility analyses; master planning designs; preparation of construction plans and specifications; contract bidding and award assistance; construction services; and resident inspection. This expertise includes assistance in securing project funding, environmental evaluations, permitting, and public involvement. We routinely interact with governmental and regulatory agencies at local, state, and federal levels. One factor we have deemed critical to the success of any contract is a strong professional relationship with federal, local, and state government. D|F has developed sound and long-lasting working relationships with the federal and state agencies that oversee construction of state projects such as SCDHEC, SCDOT, and USACE. We have also established a good reputation with local agencies across the state, earning a level of trust, which helps expedite the local approval process. Our established relationships with both local and state agencies are unmatched and will serve communities in the Municipal Association well.

Our proposed team has extensive experience working on water distribution and water and wastewater systems as well as wastewater treatment plant projects. Since our beginning in 1954, designing water distribution and wastewater collection systems has been a staple for D|F. As a company founded to practice civil engineering, water and wastewater projects have always been a focus. We have the necessary team members throughout our six South Carolina offices to assist on projects to meet your needs. Our team of water resources engineers has the capability, availability, and support necessary to meet the needs of municipalities across South Carolina. We have the knowledge, staff, and experience, and are ready to serve you.



Philosophy & Approach to On-Call Projects

We have a long history of providing on-call engineering services for local government agencies across South Carolina. This experience has allowed us to become familiar with the needs and challenges of these agencies as they struggle with aging infrastructure and limited funding. For any on-call program, our strategy is to effectively manage, communicate, and implement the requirements of the project plan as well as support the client in accomplishing its project objectives. D|F has participated in several IDC and on-call service agreements, affording us the opportunity to gain extensive experience with multiple cities, counties, and governmental agencies across the state of South Carolina.

From the definition of the project to project closeout, we have a system in place known companywide as the **Project Delivery Model (PDM)**, which is followed by D|F project managers. The steps within this system are time-proven, are the result of decades of experience, and consist of four major categories: Definition, Planning, Execution, and Closeout.

Definition

The PDM begins before a contract is signed by clearly defining the scope of services. This is based on the vision and expectations of the client, regulatory and governmental regulations and processes, and general assumptions based on experience. Once the scope is agreed upon by both parties and a contract is executed, initial meetings occur to more clearly define the parameters of the project. This is when the planning process begins.

Planning

This process begins within the company to determine staff utilization based on the project schedule. This Planning phase is a busy and exciting time when stakeholder input is collected, regulatory and governmental requirements are identified, utility coordination meetings with service providers occur, design sequencing is determined, goals are set, coordination among design disciplines is established, and risks are evaluated. Ultimately, as a result of this effort, a final conceptual design is produced.

Execution

During this phase, the conceptual design evolves into a schematic design. This is a time when utility conflicts are resolved, regulatory issues are finalized, owner and designer decisions are made in response to construction cost estimates, and all vertical and horizontal aspects of the design are finalized to comply with regulations and eliminate conflicts. This approach implements open communication among all parties with regularly scheduled design development meetings. The result of schematic design is the foundation of the construction documents. The construction documents include plans, front-end specifications, and technical specifications. During the development of the construction drawings, the schematic design is refined into a document that provides the contractor with the information required to construct the project. During this refining process, the owner will receive periodic plan sets for review and comment. As with the schematic design process, cost impacts to the budget are monitored and corrected based on owner input and updates of real construction costs that fluctuate with the market. The project manual is created during this production phase. Our technical and engineering staff will develop technical specifications and bidding documents using industry standard documents for construction contracting with the the goal of providing direction to the contractor, defining the terms of the contract and bidding process, and creating a document that minimizes exposure and risks to the owner, design team, and contractor.

Construction management is also included in the execution phase of the PDM. During the construction process, normal administrative tasks occur including the pre-construction meeting, answering of requests for information (RFIs), site visit documentation, submittal review, review of payment applications, processing of change orders, and generation of the substantial completion inspection punch list. During construction, our construction manager conducts regularly scheduled Owner, Engineer,



Contractor Meetings to identify and rapidly respond to situations as they occur during construction.

Closeout

This phase of work begins when administrative tasks are completed. Operational manuals are provided, record drawings are finalized, final inspection occurs, final payment is made, and permits are closed. In the closeout phase, the project is completed to the satisfaction of the owner. The closing process does not stop at this point, however. After the project has been fully completed, our team members have a debriefing meeting to discuss lessons learned, evaluate the overall performance of our team, and identify areas of improvement. We also solicit critical feedback from the owner. This process helps to keep us on an upward trajectory towards client satisfaction, efficiency, and expansion of our knowledge base.

Quality Control

Quality Control is built into our PDM approach. Each week, project managers meet to discuss project milestones and how best to adjust staff utilization to accomplish goals. Due to the size of the firm and our experience of working with each other as a team, we do whatever is necessary for the success of the project. Not only is the best knowledge-based information available at all times, but because of this, time savings are realized and efficiency is greatly maximized.

Each project manager meets regularly with members of the various design disciplines to make adjustments in sequencing work to ensure that information is available at the time it is needed. Throughout the entire process, the project manager works closely with the support staff. The project manager and discipline leaders conduct redline reviews during the development of schematic plans, construction drawings, and specifications. Once addressed, another review is performed to ensure that previous comments were addressed and other revisions made if needed. Finally, we greatly value the trust and confidence that clients have in our expertise, creativity, and talents. Because of this, our team strives to provide them with the best ideas and services available to ensure a successful project that is on time and under budget.

This figure further indicates our project delivery process explained above:





WORK MANAGEMENT PLAN/EXPERIENCE OF PROPOSED PERSONNEL

D|F has been committed to providing innovative engineering, planning, construction, consulting, and management solutions throughout South Carolina since 1954. Headquartered in Greenwood, SC, we have strategically expanded our physical presence regionally across the state, with branch offices in Beaufort, Charleston, Columbia, Florence, and Greenville, to better serve our clients.

As proud South Carolinians, we love what we do. It just means more that we are not only afforded the opportunity to conceptualize, design, and construct creative solutions for clients, but also able to provide these services within the communities that we love, and the neighborhoods where we live, work, and play.

Leadership

Our leaders approach each project with the goal of establishing a sound relationship and a lasting connection with our client. We design + engineer innovative solutions that enrich the world around us.



Stephen Davis Chief Executive Officer sldavis@davisfloyd.com



Josh Fowler, PE President jfowler@davisfloyd.com



Jason Eppley, PE Chief Operating Officer jeppley@davisfloyd.com



Michael Horton, PE, CFM, LEED® AP Chief Engineering Officer mhorton@davisfloyd.com

Davis & Floyd's Firm Contact Person

D|F's firm contact person for this contract will be **Michael Horton**, **PE**, **CFM**, **LEED AP**, our Chief Engineering Officer, who will serve as principal-in-charge. He is the past president of the American Council of Engineering Companies of South Carolina (ACEC-SC) board of directors and past chairman of the advisory board for the Glenn Department of Civil Engineering at Clemson University. He came to D|F over 27 years ago after earning his Master of Engineering in Applied Fluid Mechanics, and he has worked with us ever since. Principal-in-Charge over D|F's largest and most complex water and wastewater projects, he is intimately familiar with the structure and capabilities of our firm, talents and specializations of our staff, and standards and procedures that govern the work we produce for our clients. His contact information is below:

Michael Horton, PE, CFM, LEED AP

1940 Algonquin Road, Suite 301

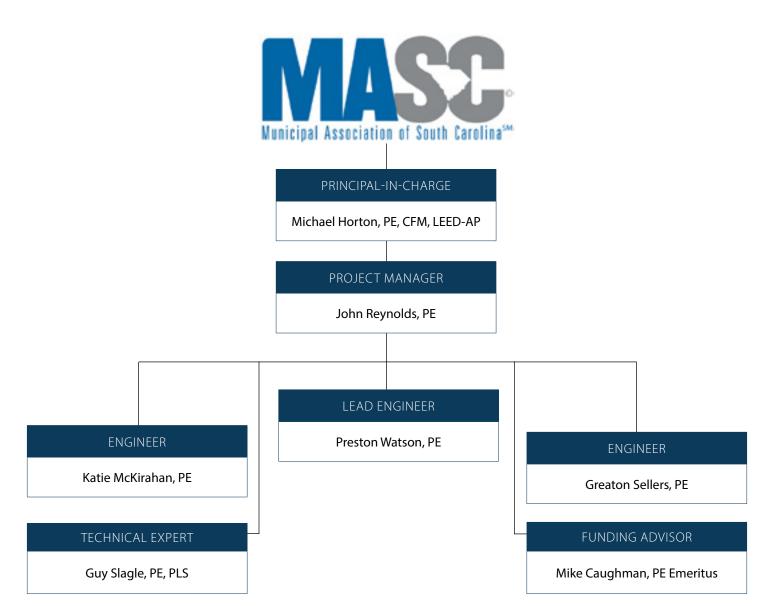
Charleston, SC 29405

(843) 554-8602 (ext. 2162)

mhorton@davisfloyd.com



ORGANIZATION CHART







INDUSTRY EXPERIENCE: 41 years

DAVIS & FLOYD: 2009 - Present

OFFICE LOCATION: Florence, SC

EDUCATION:

BS, Civil Engineering, Cum Laude, Clemson University, 1981

REGISTRATIONS: Professional Engineer: SC 11138

MEMBERSHIPS: American Public Works Association

Water Environment Federation

John Reynolds, PE Project Manager

John's experience includes project management, design, and construction of water and wastewater collection and distribution systems, treatment plants, pumping stations, storage tanks, stormwater systems, roadway improvements, parking lot improvements, and various other environmental and site infrastructure. He manages projects for major manufacturing clients, assisting with their built environment facilities, as well as national commercial property developers, facilitating property development projects. He serves as a construction administrator for many projects of multiple complexity, including water and wastewater plant projects with multiple primes and divisions.

Relevant Experience

Georgetown County Water & Sewer District (GCW&SD) Pleasant Hill Community Water System Improvements – Georgetown County, SC

Project manager for phased rural community water system improvements project. Project includes preparation of environmental assessments and preliminary engineering report (PER) and design for USDA Rural Development loan and grant program project, which involves over 50 miles of water mains, an elevated tank, and new deep well. Phase I project includes 28 miles of 6"-, 8"-, and 10"-diameter water mains. Phase II involves over 22 miles of 6"-, 8"-, and 10"-diameter mains.

Rembert Water System Improvements – Sumter, SC

Project manager for project to connect existing Rembert Water System in northern Sumter County with High Hills Rural Water System in order to achieve compliance with SCDHEC consent order for violation of MCLs on radium. Project involved installation of approximately 15,800 LF of 8" water main including over 480 LF of directional bores under wetlands and altitude valve to control tank levels between systems. Project funding is through SCRIA grant and SRF forgivable loan program.

State Park Road Sewer Extension – Greenville, SC

Part of the team providing survey, design, permitting, and limited construction administration services for ReWa's plan to eliminate the existing State Park Road Pump Station and replace it with a new gravity sewer trunk. The new gravity line will transport wastewater from upstream of the State Park Road Pump Station to the existing 15' PVC gravity sewer trunk running parallel to Beaverdam Creek, which is owned and operated by Metropolitan Sewer Sub-District. The gravity sewer line will be constructed by ReWa, and turned over to Metropolitan Sewer Sub-District after completion for operation and maintenance. The State Park Gravity Sewer project consists of the approximately 483 LF of 12' DIP gravity sewer, 723 LF of 12' PVC gravity sewer, 956 LF of 10' PVC gravity sewer and 12 sewer manholes.

Oconee County I-85 Corridor Sewer Master Plan – Oconee County, SC

He served as project manager for development of a feasibility study and master plan for unserved areas along the I-85 corridor from the Georgia/SC state line to Exit 4 in Oconee County. From this master plan, grant applications have been prepared and submitted to various agencies.





INDUSTRY EXPERIENCE: 35 years

DAVIS & FLOYD: 2009 - Present

OFFICE LOCATION: Florence, SC

EDUCATION: BS, Civil Engineering, University of South Carolina, 1987

REGISTRATIONS: Professional Engineer: SC 14533

MEMBERSHIPS: American Water Works Association Water Environment Federation

Preston Watson, PE Lead Engineer

Preston's background includes water and wastewater planning, reports, studies, design, construction administration, and project management. His work involves treatment plants, pumping stations, pipelines, storage tanks, overview of NPDES 201 plans, and PERs. His extensive experience with utility coordination and utility relocation design makes him an ideal candidate for coordination with utility providers on projects to avoid conflicts and facilitate utility relocations where required.

Relevant Experience

US 521 Water & Sewer Improvements – Sumter County, SC

Design engineer for water and sewer system improvements on the new US 521 South industrial corridor to serve an existing industrial park site and to provide utility service for the new Continental Tire, Inc. facility. Efforts included flow projections, modeling of extensions, permitting, design, and construction administration. Project included new 16" water mains, 12" water mains, a new water booster pumping station, a new 500,000-gallon elevated water tank, a 2,030 GPM triplex submersible pump station, 14" force mains, and 18" and 15" gravity sewer mains.

Raw Waterline and Pump Station – Cheraw, SC

Project manager, engineer, and construction administrator responsible for plans, specifications, and permitting for the 6 MGD raw water intake and 20" line. Project scope included a new 6 MGD dual, vertical turbine pumping station with static screen on new intake site, and 7,000 LF of 20" PVC and DIP raw waterline paralleling river through flood plain. Permitting included SCDHEC stormwater, SCDHEC construction, water intake, USACE wetland, SCDOT encroachment, and SCDHEC Permit to Operate.

Kershaw Water & Sewer Improvements – Town of Kershaw, SC

Project manager and engineer for the design, permitting, and construction administration for a water and sewer improvements that would serve a new gold mine. Project included design of a 250,000 GPD storage tank, 5,500 LF of 12" waterline, improvements to and expansion of the existing water booster pump station, improvements to the existing sewer pump station, and 4,100 LF of 3" force main.

Lowcountry Regional Water System PER Brunson WWTP – Brunson, SC

Project manager and engineer for the development of the PER for the expansion of the existing wastewater plant. The project was funded by rural development grants.

Ladson III Pump Station & Force Main – North Charleston, SC

Design engineer for the design and permitting of the sewer improvement. Project scope includes design and permitting of 8,000 LF of 14" PVC and DIP force main and new 1,100 gpm duplex, submersible pump station with grinder constructed within existing pump station site. Permitting including SCDHEC and local stormwater, SCDHEC construction, SCDOT encroachment, R/R encroachment, USACE wetlands, state wetlands, and SCDHEC Permit to Operate.





INDUSTRY EXPERIENCE: 14 years

DAVIS & FLOYD: 2022 - Present

OFFICE LOCATION: Greenville, SC

EDUCATION: MS, Civil Engineering, Clemson University, 2008

MBA, Clemson University, 2008

BS, Civil Engineering, Clemson University, 2005

REGISTRATIONS: Professional Engineer: SC 30410

MEMBERSHIPS: Water & Environmental Association of South Carolina (WEASC)

Organization Water Environment Foundation (WEF)

Greaton Sellers, PE

Registered professional engineer with proven background and achievements in civil engineering management roles for small, medium, and large capital projects. Balanced expertise in technical and analytical skills with the leadership to manage complex projects, guiding multiple stakeholders to complete a project while accomplishing all objectives pertaining to quality, performance, schedule, and budget.

Relevant Experience

*Lake Hartwell Water Treatment Plant and Raw Water Transmission Main – Westminster, SC

Managed the construction and permitting of new 2.5 MGD to 5 MGD water treatment facilities on Lake Hartwell Water for Pioneer Rural Water District along with 20,000 LF of new raw water transmission main. He managed the complexities of constructing a greenfield water treatment plant for a public utility that formerly purchased all its water to allow the utility to be a self-sustaining entity. He also assisted clients with the administration of the USDA funding and approval process.

*Oconee State Park Wastewater Treatment Plant Upgrades – Phase 1 & 2 – Seneca, SC

Managed the planning, final design, permitting, and construction for new on-site WWTP facilities at Oconee State Park including the decommissioning and demolition of existing WWTP facilities and all permitting required. Wastewater improvements consisted of the installation of 19 septic tank effluent pumping systems and associated piping and electrical work, installation of 8,950 LFof forcemain, installation of one equalization basin, two Stage 1 treatment basins, and one Stage 2 treatment basin well as all necessary piping and appurtenances.

*City of Newberry Waterline and Sewer Line Replacement – Newberry, SC

Managed the design, permitting, bidding and construction for the Evans Street Waterline and Sewer Line Replacement Project consisted of water and wastewater improvements. Water improvements included 1,150 LF of distribution main and related connections to existing lines. Wastewater improvements included 1,350 LF of 8" PVC gravity sewer line with eight new manholes and related connections as well.

*Peach Valley Area System Improvements – Chesnee, SC

As project manager, Greaton oversaw the design, permitting, bidding, and construction administration for the project. This project included design for replacing a portion of the water distribution network along Burns Road, Lynwood Road, Mount Pleasant Road, Sims Lane, Sha Lane, and Webb Drive in Chesnee, South Carolina. The project consisted of approximately 11,250' of 6" DIP and 3" PVC water lines, along with system connections and resident service connections.

*Projects prior to joining D|F





INDUSTRY EXPERIENCE: 7 years

DAVIS & FLOYD: 2022 - Present

OFFICE LOCATION: Greenville, SC

EDUCATION:

BS, Civil and Environmental Engineering, University of Illinois at Urbana – Champaign, 2017

REGISTRATIONS: Professional Engineer: IL 062073289, SC 40233

Katie McKirahan, PE

Katie is an experienced water resources engineer with a strong technical and practical knowledge of the design of utilities and other water/wastewater systems. An effective communicator, she easily coordinates with manufacturers, municipal officials, plant operators, contractors, electrical engineers, and control integrators. Specializing in hydraulic calculations, her primary responsibilities as a water resources engineer include generating planning reports for loan/grant applications, preparing drawings/technical specifications, developing probable costs for construction, presenting worth life cycle cost analyses, and completing tasks at all stages of projects including studies, design, permitting, bidding, and construction administration services.

Relevant Experience

Pageland WWTP – Pageland, SC

Civil engineer responsible for putting together operation and maintenance manuals for wastewater treatment plant. Summarized operation of treatment processes and equipment developed plantwide calendar of maintenance tasks.

York WWTP PER – York, SC

Civil engineer that completed the PER. Assessed the existing treatment processes and equipment and recommended improvement projects, including new screening equipment, secondary clarifiers, sludge belt press, and aerobic digestion equipment. Provided engineer's opinion of probable construction cost.

Pine Hills Sewer Study – Rockingham, NC

Evaluated existing sewer infrastructure including pump stations, force mains, and gravity sewer mains. Identified issues with current infrastructure such as undersized force main and I&I, and recommended field tests such as pump drawdown tests to better understand the existing issues. Provided recommendations and cost opinion for sewer upgrades and extensions to serve potential industries andRockingham Speedway, which currently relies on septic systems.

*Ludlow Water System Improvements – Ludlow, IL

Completed planning report and application, which resulted in the Village's qualifying for an IEPA loan including 67% principal forgiveness of the total project cost. Designed alignment of replacement water main to minimize utility conflicts. Designed improved layout for treatment plant equipment and piping, taking into consideration continued use of well water and recommended temporary bypass. Recommended dosage and feed rates of chlorine, fluoride, and potassium permanganate.

*Catlin Wastewater Treatment Plant Improvements – Catlin, SC

Civil engineer that completed a PER and application, which resulted in the Village's receiving a United States Department of Agriculture (USDA) grant of more than \$2.5 million.

*Projects prior to joining D|F





INDUSTRY EXPERIENCE: 49 years

DAVIS & FLOYD: 2009 - Present

OFFICE LOCATION: Columbia, SC

EDUCATION: MS, Civil Engineering, University of South Carolina, 1985

BS, Mechanical Engineering, University of South Carolina, 1973

MEMBERSHIPS: Water Environment Association of South Carolina



INDUSTRY EXPERIENCE: 47 years

DAVIS & FLOYD: 2009 - Present

OFFICE LOCATION: Florence, SC

EDUCATION:

MS, Environmental Systems Engineering, Clemson University, 1970

BS, Civil Engineering, Clemson University, 1969

REGISTRATIONS: Professional Engineer: SC 6143; NC 014773

Professional Land Surveyor: SC Tier A

MEMBERSHIPS: Water Environment

Mike Caughman, PE Emeritus Funding Advisor

Throughout his career, Mike has provided financial and regulatory compliance assistance. For several years, he served as technical assistance manager for Local Government Division of SC Budget and Control Board. In this position, he provided financial, engineering, and regulatory assistance to various SC governments in assessment and development of water and sewer infrastructure needs. His responsibilities included assessing local government needs for enhancing their abilities to attract industries to locate in specific geographic areas and determining technical requirements necessary for related projects.

Relevant Experience

Town of Mayesville Well Replacement - Mayesville, SC

The City of Sumter is responsible for the Mayesville water system operation. In 2016, Mike secured funding for the replacement of a well, which was contaminated with naturally occurring Radium 226/228. An application was made to the SC RIA and a \$222,000 grant was successfully obtained for the needed replacement well and appurtenances.

Rembert Water System Improvements – Rembert, SC

Project consisted of design, permitting, and construction of approximately 15,900 LF of 6" water main to connect the Rembert Water System to the High Hills Water System to eliminate issues with high radium levels using SRF and SCRIA funding. Project role included securing the funding to cover 100% of the project cost.

Guy Slagle, PE, PLS Technical Advisor

Focusing on water and wastewater infrastructure, Guy is experienced in facility planning, project financing, treatment process design, system design, and construction administration. He assists clients with treatment facility operation; cost of service and user rate studies; industrial wastewater pretreatment programs; and intergovernmental agreements. He served as an engineer for the Water Programs Division of the US EPA, where he assisted local governments in obtaining grants for construction of wastewater treatment works. Guy has participated in the study, process design, and construction of over 40 WTP/WWTP projects

Relevant Experience

Pocotaligo WWTP – Sumter, SC

Project director for the upgrade and expansion of the Pocotaligo WWTP from a capacity of 12 to 15 MGD. Project included fine bubble aeration system, clarifier improvements, and a biosolids drying facility using waste wood as a heat source.

West Georgetown Regional WWTP – Georgetown, SC

Served as project director for the planning, design, and construction of the 12 MGD Sequential Batch Reactor WWTP. Facility included new headworks, three SBR basins, disinfection, and effluent storage for hydrograph control release of treated effluent.

EXPERIENCE OF THE FIRM

D|F is recognized as a leader in assisting local and regional governments meet their on-call engineering goals. We have worked with hundreds of county and municipal governments in South Carolina on projects involving streets and roadways, wastewater, water, stormwater, planning, land development, streetscapes, environmental science, and parks and recreation.

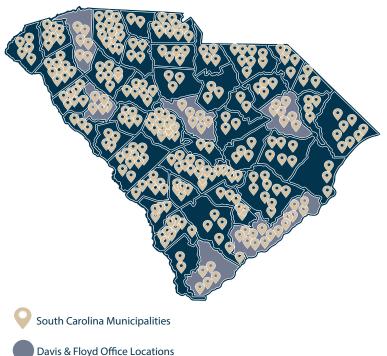
Our mission is to challenge our team of engineers to deliver sustainable solutions for our clients and communities based on a foundation of expertise, innovation, and integrity. Over 80% of our business is from repeat clients, indicating our clients' satisfaction with our creativity and insight. As a firm, D|F has worked hard to solidify our name in the communities in which we have worked and built relationships prior to projects. We look forward to experiencing this philosophy with the municipalities across the state.



Experience with South Carolina Municipalities

With six offices located throughout South Carolina, we are proud to call South Carolina home. Due to our statewide presence, we are familiar with state and local requirements and regulations. It is advantageous to utilize a local engineering firm that is intimately involved with the local agencies having jurisdiction over projects in various counties across the state. Having an extended presence in every region also gives us an advantage in maintaining sensitivity to the local politics, policy, public impressions, demographics, and regional business climate, all which factor into leading a successful project from planning to completion.

We have been fortunate to work on many projects across the state, which has exposed us to the local permitting processes, familiarity with staff, knowledge of community concerns, and a desire to work on future improvements. Our experience and strategic office locations have allowed us to work with, or in, **185 municipalities** across the state.





Prior Experience

Our experience on municipal projects ranges from small-diameter sewer line extensions and force mains to major pump stations and water supplies. We provide technical consulting services for PERs, environmental reports, design, permitting, regulatory reviews, engineering, and operation of wastewater treatment systems. Our services include conceptual planning; feasibility analysis; master planning; PERs; designs; preparation of construction plans and specifications; contract bidding and award assistance; construction services; and resident inspection. This expertise includes assistance in securing project funding, environmental evaluations, permitting, and public involvement. We routinely interact with governmental and regulatory agencies at local, state, and federal levels.

Our team of water resources engineers has the capability, availability, and support necessary to meet the needs of the municipalities in the Municipal Association of South Carolina. We have the knowledge, staff, and experience, and are ready to serve you.

BRUNSON WW	BRUNSON WWTP & PUMP STATION MODIFICATION & SEWER REHABILITATION - BRUNSON, SOUTH CAROLINA					
Project Manager	Preston Watson, PE	The existing Brunson 0.11 MGD lagoon and hydrograph control release lagoon (HCRL) treatment system was constructed in 1990 and could not meet proposed SCDHEC NPDES limits. The collection system also exhibited excessive inflow and infiltration. D F prepared				
Technical Designer	John Reynolds, PE	a Rural Development PER/Environmental report to determine if wastewater should be transferred to another facility for treatment, or if upgrading and expanding the existing facility would be the best option. Although negotiations with DHEC produced improved effluent limits and a PER was completed positioning the plant for an expansion to 0.3 MGD through conversion of the existing lagoon treatment to a "Dr. Rich" system, market condition pushed the alternative analysis to conclude that pumping wastewater to the nearby Hampton WWTP would be the best option. This Rural Development and SRF funded option consist of over 30,900 LF of 8" force main between the Towns of Brunson and Hampton. To reduce peak flows being pumped, D F worked with a line Cleaning and TV contractor to log and determine what sewers (lines and pump stations) in the Town of Brunson should be rehabilitated. The services provided by D F for this Rural Development and EDA funded project included determining scope of rehabilitation and method of repair, with completion of a PER, design, permitting, bid administration, construction phase services for the upgrade of 3 pump stations, 47 point repairs, 10,000 LF of CIPP, 1,300 LF of sewer replacement, manhole repairs, service reconnections, paving.	Lowcountry Regional Water System Brian Burgess General Manager brian.burgess@ lowcountrywater. com (803) 943-1006			

GIFFORD WATER MAIN UPGRADE - GIFFORD, SOUTH CAROLINA					
Project Manager	Preston Watson, PE	The project consisted of the installation of approximately 2,970 LF of 2" waterline, 870 LF of 6" waterline, 2,680 LF of 8" waterline, 24 new services, 11 services with existing meter boxes, and associated valves and hydrants along the roads of	Lowcountry Regional Water System Brian Burgess		
Construction Administrator	Richard Byrd, PE	Murdaugh Street, Walters Place, Wesley Street, Risher Street, and Isiah Henry Loop. Funding for this project was provided through a Community Development Block Grant.	General Manager brian.burgess@ lowcountrywater.com (803) 943-1006		



TOWN OF P	AGELAND WI	NTP - PAGELAND, SOUTH CAROLINA	
Project Manager	Preston Watson, PE	The project consists of consolidating two aged, existing wastewater treatment plants into a new 1.5 MGD facility with a 10" transfer force main to connect the facilities. The Town of Pageland contracted with D F to evaluate wastewater treatment options in a rural development PER and to provide design, permitting, bidding, and construction-phase services for the selected solution needed to meet Pageland's sewer needs for the decades to come. Assisted with project funding technical documents for USDA Rural Development, SCRIA, and CDBG. D F developed a phased construction approach during design to accommodate the construction of a new WWTP within the confines of an existing facility without interrupting operations of the existing facility and phasing the construction of the EQ basin, pump station, and transfer force main to be placed into operation after the new 1.5 MGD WWTP was operational. The team determined that consolidation of the two existing treatment plants into one 1.5 MGD SBR facility was the most cost-effective option during the PER. We decommissioned Northwest WWTP by converting the existing aeration basin to an EQ basin with transfer pump station and force main and designed the new 500 gpm pump station and 17,700 LF 10"-diameter force main to convey wastewater flow to the Southeast WWTP for treatment. The Southeast WWTP design involved upgrading and expanding to 1.5 MGD utilizing the SBR treatment process. The WWTP upgrades consisted of some components similar to a complex conveyance pump station/force main and includd an influent pump station, beltpress sludge dewatering, and new operations/laboratory facility.	Town of Pageland Cecil Kimry Town Administrator ckimrey@shtc.net (843) 672-7292

NOVA WATI	ER AND SEWER	EXTENSIONS - SUMTER, SOUTH CAROLINA		
Project Manager & Lead Engineer	John Reynolds, PE	The project included a duplex wastewater pump station and force main and new 12" potable water. The project included a duplex wastewater pump station, force main, and main to serve a new industry on Racetrack		
Quality Control	Preston Watson, PE	Road (Nova Molecular, Inc.) D F assisted the client with a grant application for funding from SCRIA and the Department of Commerce. D F is familiar with the city's infrastructure and permitting process to get quick turnaround times for the permitting process.	City of Sumter Bill Rozier City Engineer brozier@ sumtersc.gov (803) 436-2558	



TOWN OF CHER	AW WWTP & COLLEC	TION SYSTEM IMPROVEMENTS - CHERAW, SC	
Project Manager	Preston Watson, PE	The Town of Cheraw hired D F to convert/upgrade two pump stations from 800 gpm to a submersible 1,600 gpm triplex and a 1,620 gpm duplex station to provide increased capacity for an existing industrial park and to maximize existing force mains. In addition to pump stations, the project involved 4,000 LF of 10", 12", and 15" gravity sewer, 11,000 LF of 21" gravity sewer, 5,300 LF of 24" gravity sewer, and additional WWTP improvements, easements, encroachments, permitting, construction administration, construction observation, PER, and design modification per owner. D F assisted with acquiring a SRF loan and RIA funding. WWTP improvements include new headworks grit piping arrangement and new suction lift pump, new clarifier drives, minor pavement repairs, and a new vac truck receiving station.	Town of Cheraw Mike Smith Administrator msmith@cheraw. com (843) 537-8400

FISHING CREE	FISHING CREEK WWTP GAP ANALYSIS AND PER - YORK, SOUTH CAROLINA				
Project Manager	John Reynolds, PE	The City of York owns, operates, and maintains the Fishing Creek WWTP to serve the city's wastewater customers. The Fishing Creek WWTP is approximately 40 years old and is currently permitted to discharge up to 4 MGD. The city			
Lead Process Engineer	Preston Watson, PE	enlisted D F to evaluate the current conditions of the WWTP to figure out the remaining lifetime of the current WWTP and equipment. After the evaluation, the city developed a PER that detailed the current condition of the WWTP	City of York Ben Wright Utilities Director		
Process Engineer	Katie McKirahan, PE	and recommended improvements, as well as associated preliminary cost opinions, schedules and regulatory permitting for any proposed upgrade recommendations. This PER included capital improvements planning as well as in pursuit of project funding for the proposed WWTP upgrades.	bwright@yorksc.gov (803) 684-2341		

AUGUSTA ROAD WATER MAIN - GREENVILLE, SOUTH CAROLINA

Project Manager Staff Engineer	John Reynolds, PE Ryan Love, EIT	D F is nearing the end of construction on Greenville Water System's Augusta Road Water Main project. This large-scale water resources project involved the		
Field Survey	Jeffrey Poole, PE, PLS	installation of new 6", 8", 12", and 24" water mains to connect gaps along Greenville Water System's existing network in the congested Donaldson Center area. The project included installation of 8,261 LF of 24", 4,028 LF of 12", 120 LF of 8", and 175 LF of 6" ductile iron water main. It also involved installation of one 24" inline butterfly valve in a concrete vault as well as hydrants and valves on 12" water main. Additionally, the project included appurtenances and resurfacing work on US 25.	Greenville Water Nancy Barrett, PE Project Manager nbarrett@ greenvillewater. com (864) 241-6132	



FAMILIARITY WITH FEDERAL FUNDING REQUIREMENTS

We commonly work with projects funded from a wide range of agencies and methods, often multiple sources managed sequentially or concurrently across more than one project phase, each having its own terms, conditions, and restrictions. Whether local, state, or federal in origin, we work with clients to see that every available dollar is applied. The graphic below outlines the total amount of funding that each of your project leaders has assisted clients in obtaining and managing:



PRESTON WATSON, PE \$40,000,000 MIKE CAUGHMAN, PE EMERITUS \$10,000,000

D|F has ample experience with both state and federal funding sources. We make it a priority to foster relationships with these funding agencies to better understand funding requirements and opportunities. This knowledge allows us to connect our clients with the right agencies for their needs. Additionally, we work with The Ferguson Group, a grant assistance firm in Washington, DC, to provide our clients with grant consultant and writing services. The chart below highlights a few projects on which we have helped our clients to obtain funding from a variety of funding agencies:

RECENT WATER RESOURCES PROJECTS FUNDED THROUGH RIA, EDA, SRF, SCOR, RURAL DEVELOPMENT				
PROJECT	GRANT AMOUNT			
Town of Turbeville - Cypress Street Well Replacement	\$500,000 (RIA) \$789,456 (SRF)			
City of Sumter - Mayesville Water Treatment Plant - New Well No. 4 Replacement	\$222,480 (RIA)			
Town of Pageland WWTP	\$500,000 (RIA) \$19,680,000 (RD)			
Dalzell Water District - Ground Water Well No. 3	\$190,781 (RIA)			
Town of Kershaw - Water & Sewer Improvements	\$500,000 (RIA)			
Town of Cheraw Raw Water Intake	\$824,000 (EDA)			
Lowcountry Regional Water System Brunson WWTP Improvements Upgrade	\$1,694,000 (EDA) \$1,000,000 (SRF) \$4,847,000 (RD)			
Oconee Joint Regional Sewer Authority I-85 Sewer Line Extension	\$3,700,000 (EDA) \$935,566 (RIA)			
Town of Cheraw Drainage Improvements	\$197,587 (FEMA) \$9,402,858 (SCOR)			
Town of Ehrhardt Sewer Extension	\$485,000 (EPA) \$337,157 (RIA)			
Town of Cheraw WWTP & Sewer System Improvements	\$500,000 (RIA) \$5,883,000 (SRF)			
Kershaw County South Loop Sewer Improvements	\$2,700,000 (SRF)			
Town of Cheraw Emergency Connection - Booster Pump Station	\$330,000 (SRF)			
Oswego Rural Water Company System Expansion	\$1,390,000 (RD)			
Kershaw County WWTP Administration Building	\$730,000 (SRF)			
City of Sumter NOVA Water & Sewer Extensions	\$500,000 (RIA)			
Clarendon County Walker Gamble Elementary School Flood Mitigation Study	\$75,070 (SCOR)			
City of Sumter Rembert Water System Improvements Connection to HHRWS	\$297,000 (RIA) \$281,000 (SRF)			

The table below highlights more of D|F's experience with funding sources:

	FUNDING AGENCY / METHOD						
PROJECT		EDA	EPA	FEMA	RIA	SRF	USDA RURAL DEVELOPMENT
Town of Pageland WWTP	•				•		•
GCWSD Pleasant Hill Water Improvements							•
Lowcountry Regional Water System Brunson WWTP Improvements Upgrade		•				•	•
Oconee Joint Regional Sewer Authority I-85 Sewer Line Extension		٠			•		
Oswego Rural Water Co. Oswego Rural Water System Expansion							•
Town of Cheraw Drainage Master Plan				•		•	
Town of Cheraw Regional Stormwater Improvements	•			•			
Town of Cheraw WWTP & Sewer System Improvements					•	•	
Town of Ehrhardt Sewer Extension			•		•		
Town of Kershaw Elevated Tank & Water System Improvements					•		
City of Sumter Burgess Glenn MHP Pump Station & Force Main					•	•	
Town of Turbeville WWTP Sewer Line Upgrade	•						
Town of Cheraw Raw Waterline and Intake Improvements	•	•					
Lowcountry Regional Water System Gifford Waterline Extensions	•						
Lowcounty Regional Water System Salkahatchie Road Sewer Upgrade	•						

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