Request for Qualifications

Engineering Services for Various Projects and On-Call Services

MUNICIPAL ASSOCIATION OF SOUTH CAROLINA

October 17, 2022 5:00 PM

Submitted by:
AMERICAN ENGINEERING
CONSULTANTS, INC.
1300 12th Street, Suite A
Cayce, SC 29033
(803) 791-1400
www.aec-sc.com

AMERICAN
ENGINEERING CONSULTANTS, INC.
1300 12th Street, Suite A • P.O. Box 2299 • Cayce, SC 29171 • (803) 791-1400 • FAX: (803) 791-8110

October 17, 2022

Mr. Jake Broom
Chief Operating Office
Municipal Association of South Carolina
Post Office Box 12109
Columbia, South Carolina 29211

Reference: Request for Qualifications – Engineering Services for Various Projecs and On-Call Services

Dear Mr. Broom and Members of the Selection Committee,

American Engineering Consultants, Inc. (AEC) is pleased to present our qualifications for your review and is enthusiastic about the opportunity to be selected to provide Professional Engineering and Surveying Services for SCIIP grant projects to various local municipal governments. We greatly appreciate the MASC's initiative to spearhead the procurement of engineering professionals for the SCIIP grant projects. An early procurement will expedite the commencement of municipal utilities projects as well as facilitate their completion prior to the Federally mandated deadline of December 2026.

AEC offers a full range of civil and environmental engineering and land surveying services; however, our **area of expertise is water and wastewater utilities**. Our team has been serving clients throughout the state for nearly 45 years, providing engineering consulting to county, state, municipal, industrial and private sector clients. Principal and President Bill Bingham, Jr. is an **AAEES Nationally Board Certified Environmental Engineer** in the field of Water Supply/Wastewater Engineering. He is one of less than 10 consulting engineers in the state of SC to hold this distinction. AEC engineers have extensive experience providing all of the the services outlined in this request for qualifications to include water line extensions and replacements; sewer line rehabilitation, replacement, and extensions; wastewater lift/pump stations; force main repairs/replacement/new facilities; water treatment facility improvements; wastewater treatment facility improvements; and system condition assessments and evaluations. Cost estimating, surveying, permitting, bid and award management, contract administration, construction observation, and plant start up are also provided and are an integral part of our services. Our staff is an award-winning group of professionals with advanced degree training, solving problems with innovative solutions while providing a level of service that is unsurpassed.

AEC entered its 28th year of successful business in 2022. Our roots go back over 50 years to 1969 when our parent company, Hercules Contractors and Engineers, Inc., was established. Hercules constructed a large amount of infrastructure throughout SC, and in 1994, AEC was formed from the engineering division of Hercules. As a result, AEC Principals Bill and Kenny Bingham have a strong background in the construction field, and place a strong emphasis on drawings that are easy for our clients and contractors to interpret. The end result is that a well-developed set of drawings or plats may mean lower bids from contractors and cost savings to the client.

Our dedicated staff of twenty-four professionals is committed to providing the highest level of technical proficiency and client service. The average experience of our elite engineering team is over 30 years, providing for our clients a depth of utilities knowledge that is unparalleled. In addition, AEC staff is adept at the administration of state and federal grant funded projects, and has an established professional relationship with Executive Director Bonnie Ammons and her team at the Rurual Infrastructure Authority.

We appreciate the opportunity to provide this information, and your consideration of American Engineering Consultants, Inc. to partner with MASC to provide professional engineering and surveying services to municipalities and local governments in South Carolina. We are happy to meet with you further at any time to discuss our qualifications in greater detail.

Sincerely,

William H. Bingham, Jr., ME, PE, BCEE, LEED AP BD+C
Principal | President
American Engineering Consultants, Inc.
1300 12th Street, Suite A
Cayce, South Carolina 29033
Email: bbingham@aec-sc.com
Phone: (803) 791-1400 ext. 107
Fax: (803) 791-8110

Enclosures

TECHNICAL APPROACH/ UNDERSTANDING

WASTEWATER AND WATER UTILITIES **are areas in which our firm specializes**. Our team has vast experience in the treatment, collections and distribution of water and wastewater systems, assisting providers since the 1980's. Our staff has led technical sessions advising municipalities, special purpose districts, and counties as experts on the topics of managing assets, rate studies, rate restructuring, and funding for the Southeastern Symposium on Public Finance, the SC Water Environment Association Conference, and the SC Special Purpose District Leadership Conference. In addition, our engineers have been called upon as witnesses to provide expert testimony in legal proceedings because of our knowledge, skill, education, experience, and training in the field of water and wastewater utilities.

Wastewater and Water Treatment

Our expertise in water and wastewater treatment plants is considerable, successfully completing projects that involve design and plant start-up, plant evaluations, system evaluations, condition assessments, plant upgrades and expansions, system master planning, waste stream assessments, Pretreatment and NPDES permitting, plant operations training, water and wastewater rate studies, and development of O & M manuals and guidelines. Through our parent company, Hercules Contractors and Engineers, our principals not only designed plants, but constructed them, giving our team the unique insight of what can and can't be done in the field, as well as the ability to create a design/construction partnership unmatched by other firms.

Wastewater Collections

Our wastewater collection system experience is extensive and includes system assessments, hydraulic studies, pump station design/rehab/upgrades, design of force main and gravity sewer, sewer modeling, sewer system rehabilitation/expansion, and metering stations. Our team's high aptitude for analysis allows us to effectively visualize, conceptualize, and solve problems on projects with an ability to make sense of complex systems and spot where problems could potentially arise.

Water Distribution

Our portfolio of water distribution experience is expansive and includes the design and construction management of waterline projects of varying sizes throughout the state, booster pump station design, new water storage tanks, rehabilitation of water storage tanks, transmission mains, preliminary engineering reports, subsurface hydrology and contaminant transport. Our experienced engineers and surveyors have expertise in all aspects of Water Distribution System design and construction including: field investigation, surveying and data collection, hydraulic modeling and analysis, water quality analysis, design, permitting, bid process management, construction administration and observation, project information call line management, and community relations. AEC has successfully completed water distribution projects both large-scale and for smaller municipalities.

Engineering Consulting

The AEC team has extensive experience in Water and Wastewater Planning and Evaluation, including conducting Technical System Evaluations, Hydraulic Analysis and Modeling, Master Planning, Rate Studies, Rate Restructuring, Capacity Fee Analyses, Asset Management, Capital Improvement Plans, and Financial Feasibility Reports for our clients. Our team provides additional areas of WWTP and/or WTP consulting expertise to our clients to include Daily Operation of Systems, Technical Assistance, Industrial Pretreatment Services, and Regulatory Compliance Assistance.

The Key to our Success and client praise is our ability to complete tasks on time and within budget. We believe that our background in the construction field provides a distinct advantage over most other firms in the quality of drawings and plats that we produce. AEC principals place a strong emphasis on producing drawings that are easy for our client and contractors to interpret. Our construction background is instrumental in the collaborative process by having the knowledge of what contractors need. The end result is that a well-developed set of drawings or plats may mean lower bids from contractors and cost savings to the client. Whether it is a survey, construction observation, civil engineering or a special study, our attention to detail is a priority. In addition, our staff recognizes the importance of maintaining continual communication with our clients throughout every phase for the duration of a project. The ability to collaborate and communicate effectively with our clients and contractors is a key element of successful projects.

Budget and Schedule are important factors in the development of a project. AEC develops cost control measures at the beginning of the project, establishing individual task budgets and completion schedules that integrate into the overall project budget and schedule, and we continue to actively refine these measures throughout the duration of the project. This encourages an accelerated implementation schedule and simplified project management. AEC has the technical adroitness to investigate every alternative concept in the design of a project, and any steps within the design and construction process that can reduce the project schedule or costs, without compromising the quality of the work, will be taken.

APPROACH

Upon award of a project, American Engineering Consultants, Inc. will immediately communicate with our client to establish a single point of contact, and schedule a kickoff meeting to discuss the proposed scope of services, project goals and priorities. A contact list of personnel directly working on this project will be compiled, and individual areas of responsibility will be identified during this meeting. During the implementation of the project, our client will be informed of the progress on a routine basis; frequency of updates will be established during the initial project kick-off meeting. Based on the nature of the project and client requirements, progress reports will be provided either during project meetings or through written reports. Additionally, AEC will prepare reports for submission to either RIA or Guidehouse, as required. Upon completion of the project, AEC personnel will meet with client representatives to review the project and ensure that all objectives of the project were met to their satisfaction.

A customized approach would be developed for each client and project, while incorporating the typical approach phases for a grant funded project listed below:

- Project Coordination by our Principal and Project Team
- Conduct Kickoff Meeting with the Municipality or Local Government to Establish Project Goals
- Kick-off meeting with Funding Agency and client to establish grant milestones, requirements, and specifications
- Gather Data As Needed
- Develop Public Awareness Program, if applicable
- Perform Surveying Services
- Coordinate any Needed Sub-Consultants
- Develop Proposed Layouts
- Identify Design Conflicts
- Recommend Cost Effective Solutions
- Acquire Rights-Of-Way or Easements, if applicable, following URLAP guidelines
- Prepare Project Cost Estimates
- Prepare Permit Applications
- Prepare Construction Drawings and Specifications
- Provide Review Set to Owner
- Complete Final Design
- Prepare Final Construction Drawings, Specifications, and Bid Documents
- Submit Drawings, Specs and Bid Documents to Funding Agency for Review
- Conduct Bid Process, including a pre-bid meeting
- Review Bids and Prepare Contractor Recommendation of Award
- Submit Certified Bid Tab and Recommendation of Award to Funding Agency for Review
- Coordinate Contract Execution/Issue Notice To Proceed
- Pre-Construction Conference
- Provide Contract Administration and Loan/Grant Administration Services
- Oversee implementation of Loan/Grant requirements
- Review and process any change orders, if necessary
- Construction Observation
- Process Contractor Applications For Payment and Prepare Loan/Grant Draw Requests
- Funding Agency Project Review
- Permit to operate, if applicable
- Prepare Record Drawings
- Conduct Project Closeout/Prepare Project Closeout Report and Certifications

AEC will follow all SCIIP/ARPA Federal Requirements in the execution of all projects, and ensures the highest level of service will be provided for every project, to include ongoing communication through regular progress reports, close-out reports and certifications, and records retention.

WORK MANAGEMENT PLAN/
EXPERIENCE OF PROPOSED PERSONNNEL

A dependable experienced team of engineers and surveyors is of primary importance for successfully completed projects. The American Engineering staff is comprised of an organized team of highly skilled professionals, comprised of a total of twenty-four (24) employees, including six (6) licensed engineers, two (2) design engineers, three (3) CAD technicians, two (2) field technicians, and one (1) registered land surveyor with three (3) in-house survey crews. Due to our collaborative structure, we are able to effectively utilize our staff's extensive background in a wide range of civil engineering projects by facilitating input from those team members with the expertise most relevant to the project at hand. **This results in a team that has been working together on similar projects for over two decades, providing a wealth of experience, synergy and momentum to every project for our clients.**

WORK MANAGEMENT PLAN

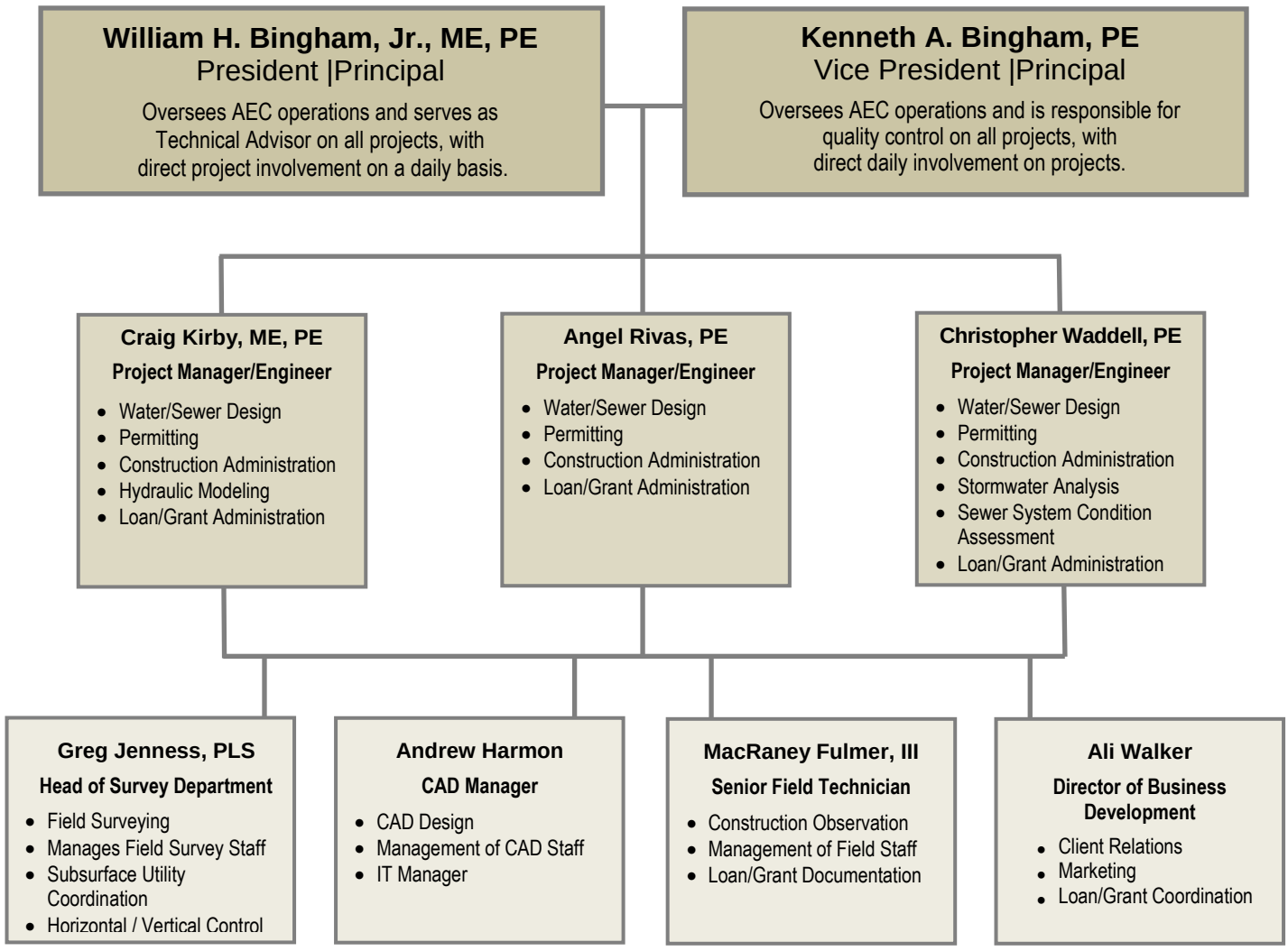
Our engineers, surveyors and field technicians have an average experience of over 30 years in their field, and our seasoned, collaborative approach enables us to offer unparalleled responsiveness and efficient project delivery**. The principals of AEC are not only involved in the overall management of a project, but are "hands-on"** from the beginning of the design phase through construction oversight and inspection, to provide specific assistance and technical support to the client as needed. **This ensures that our clients receive the highest level of expertise we have to offer.**

STAFF LOCATION

All AEC staff work in one central office location at 1300 12th Street, Cayce, SC.

STAFF CONFIGURATION

An organizational chart outlining the proposed staff, including the responsibilities of each team member, is provided below:



A distinct advantage to our clients is the level of expertise and education represented by our staff including registered professional engineers with **advanced degree training** in civil and environmental engineering. An overview of the qualifications of the Proposed Project Team, including professional field, education, license information and certifications, is provided in the table below.

TEAM MEMBER	PROFESSIONAL FIELD	HIGHEST DEGREE/ CERTIFICATION	RELATED EXPERIENCE
BILL BINGHAM, ME, PE BCEE, LEED AP BD+C Principal / President	Civil Design, Structural, Project Management, Permitting, Construction, Environmental, Water Resources, Wastewater Systems, Electrical Instrumentation and Controls Engineering	ME /BS SC PE Reg. # 15833 BCEE ID# 21-20023 LEED AP BD+C Credential ID#10848808 GA PE Reg. # PE043920 NC PE Reg. # 047782 FL PE Reg. # 84454	44 Yrs.
KENNY BINGHAM, PE Principal / Vice President	Civil Design, Structural, Project Management, Permitting, Construction, Water Resources, Wastewater Systems	BS / SC PE Reg. # 15832	41 Yrs.
CRAIG KIRBY, ME, PE Project Manager/Engineer	Civil Design, Project Management, Permitting, Hydraulic Analysis/ Modeling, Wastewater Systems, Environmental, Water Resources	ME /BS SC PE Reg. # 20939	24 Yrs.
ANGEL RIVAS, PE Project Manager/Engineer	Civil Design, Project Management, Permitting, Site Development, Environmental and Water Resources, Wastewater Systems	BS/ SC PE Reg. #20969	32 Yrs.
CHRIS WADDELL, PE Project Manager/Engineer	Civil Design, Project Management, Permitting, Hydraulic Analysis/Modeling, Stormwater Collection Systems, Pilot Study Planning and Assessment, Water Resources, Wastewater Systems, Industrial Pretreatment	BS / SC PE Reg. # 29959 NASSCO Cert. # U-0717-07008707	14 Yrs.
GREG JENNESS, PLS Head of Survey Department	Land and Geodetic Surveying, Project Management, Survey Staff Management, Boundary Surveys, Right of Way Plats, Subdivision Plats	2 Years / SC PLS Reg. # 17928	34 Yrs.
ANDY HARMON CAD Manager	CAD Design, CAD Staff Management, IT Management	Associates	27 Yrs.
MAC FULMER Senior Field Technician	Construction Inspection and Observation, NICET-Certified Building Construction Engineering Inspector, SCDHEC Certified Erosion Prevention and Sediment Control Inspector	BA / CEPSCI #12004	29 Yrs.
ALI WALKER	Director of Business Development / Client Service Specialist	BA	28 Yrs.

BRIEF RESUMES

Brief resumes of the proposed project team are provided on the following pages.

WILLIAM H. (Bill) BINGHAM, JR., ME, PE, BCEE, LEED AP BD+C

Principal | President

PROFESSIONAL FIELD

Civil, Structural, Construction, Water Resources, Sanitary Sewer, Electrical Instrumentation and Controls Engineering

EDUCATION

ME Environmental Engineering 1997
University of South Carolina
BS Civil Engineering 1981
Magna cum laude
University of South Carolina

REGISTRATION

Professional Engineer
SC PE Reg. # 15833
Also licensed in GA, NC and FL
AAEES Board Certified Environmental Engineer- Water Supply & Wastewater
Certification Number: 21-20023
LEED AP BD+C ID#10848808

Mr. Bingham has an extensive engineering background with a broad spectrum of expertise including structural analysis, roadways, land development, water resources, hydrology, environmental treatment process, electrical instrumentation, control systems, computer analysis, modeling, and design of all types of civil and environmental engineering projects. Prior to the establishment of American Engineering Consultants, Inc., he served as Vice President of Engineering for Hercules Contractors and Engineers, Inc., where he received hands-on training in construction project management, CPM project scheduling techniques, and construction cost estimating. As a result, he has gained invaluable experience in both construction management from a contractor's perspective, and project design from an engineering perspective. **Mr. Bingham is an AAEES Nationally Board Certified Environmental Engineer in the field of Water Supply/Wastewater Engineering. He is one of less than 10 consulting engineers in the state of SC to hold this distinction.**

RELATED EXPERIENCE

Wastewater and Water Master Plan, Town of Edisto Beach – Wastewater Master Plan addressed the issues related to the expansion of the existing wastewater infrastructure including the collection, treatment system, and land application of the effluent for the Town of Edisto Beach. Sewer system modeling was performed to aid in the identification of deficiencies and needed capital improvements. Water Master Plan identified potential water customers, evaluated the existing water distribution and well system, and provided recommendations for the improvements to the existing system with regard to fire protection and future demands. Hydraulic modeling of existing conditions and proposed improvements was performed.

Preliminary Engineering Report for New Wastewater System, Fairfield Joint Water and Sewer System – Consulting to assist with the acquisition of a 208 amendment and the preparation of a preliminary engineering report associated with the design and construction of a new wastewater system. Report included reviewing alternate routes for the proposed force main, assisting with site selection for the new WWTP and pump station, wetlands delineation, preparation of environmental impact assessments, surveying, preliminary investigations to identify any necessary changes and/or upgrades for the existing four pump stations, force mains, and gravity sewer lines, pump station inspections and development of a hydraulic model, preliminary calculations and layout for a new 2 MGD pump station and 2 MGD wastewater treatment plant, and preliminary calculations for a new force main. Preliminary opinion of probable costs for the new pump stations, force main and WWTP was also be provided as well as the necessary applications in order to submit for a new NPDES permit.

Water and Wastewater Rate Study, Lowcountry Regional Water System – Conducted a cost recovery analysis study including a comprehensive, independent cost recovery review of rates, fees and charges for the delivery of water and wastewater services, based on financial and customer consumption data. The analysis identified both direct and indirect costs and determine the ability of the Lowcountry Regional Water System to meet its operating expenses, cash reserves for reasonable capital improvements, cash reserves for depreciated equipment replacement schedules and the mandatory debt service coverage ratios as provided by its bonds. The development of recommended rate structures will insure that the utility may recover revenue from the customer base with fixed and variable charges that are equitable among customer classifications in a way that provides for financial stability and the maintenance of minimum cash reserves. The rate analysis included a five (5) year projection based on growth, inflationary/indexed adjustments or other factors that may have a direct or indirect impact in the development of the projections. The study provide analysis of various charges and fees including the water and wastewater rates, water and wastewater impact fees, fire service fees, water tap fees and wastewater tap fees, and provided a comparative rate schedule for regional and statewide water and wastewater providers.

Capacity Fees Study Report, City of West Columbia, SC - Following a Rate Study that AEC recently conducted for the City, a formal Capacity Fee Analysis was performed to justify the fees and a report was prepared for the City that included the calculations as a basis and rationale for the water and wastewater capacity fees recommended in the Rate Study. Recommendations were also made, and subsequently adopted, to revise the City's utility fee structure and adopt a structure that includes separate fees for taps and capacity.

KENNETH A. (Kenny) BINGHAM, PE

Principal | Vice President

PROFESSIONAL FIELD
Civil, Structural, Construction, Water Resources, Sanitary Sewer

EDUCATION
BS Civil Engineering 1984
University of South Carolina

REGISTRATION
Professional Engineer
SC Registration No. 15832

CIVIC DUTIES
- Former Member South Carolina House of Representatives
- Former Chairman, House Ethics Committee
- Former Member of the House Ways and Means Committee
- Former House of Representatives Majority Leader
- Former City of Cayce Planning Commission

Prior to the establishment of American Engineering Consultants, Inc., Mr. Bingham was employed by Hercules Contractors and Engineers, Inc. as Vice-President of Construction and Project Engineer where his primary duties included project estimating, project management, and structural design. Since the founding of AEC he has been actively involved in day-to-day operations from client relations and contract negotiation to civil engineering design and project oversight, and grant funds acquisition. In addition to his work for AEC, Mr. Bingham served in the South Carolina House of Representatives from 2000 until 2016. His experience in dealing with the public and governmental agencies as an elected official has proven invaluable when dealing with the public on sensitive issues, conducting public hearings, obtaining permits, and securing Federal and State grant funding.

RELATED EXPERIENCE

Professional Consulting Services, Town of Edisto Beach, SC – Assisted the town in the acquisition of Federal grant funding for beach refurbishment.

Professional Consulting Services for New Wastewater System, Fairfield Joint Water and Sewer System – AEC was retained to advise and assist the owner throughout the permitting process to design and construct a new wastewater system. As necessary, AEC principals meet with community leaders, community groups, governmental bodies, and regulatory entities to provide fact based educational materials on the scope of the project and the steps that are being undertaken by the owner to mitigate both the cost and environmental impacts of the project for all impacted parties.

Capital Investment Plan, City of Cayce, SC - The Capital Investment Plan for the City of Cayce is for any anticipated expenditures over a 5 year period for the City of Cayce. The Capital Budget contains the following: a listing of all of the projects proposed for all five years of the plan and its estimated total cost, a listing of the scoring criteria and its weighting, summarization of the total scores and priority ranking for all projects over the five years, the anticipated funding sources for each project for all five years of the plan, a six year debt service cost projection, a listing of all of the projects with some details including projected start date and end date and the first Capital Budget year that the project would be included, a total and a breakdown for each funding source by year, and a summary of capital improvement costs by expenditure codes for all five years of the plan. For each year of the Capital Investment Plan, project summary forms are included for each of the proposed capital expenditures with a breakdown of each year's expenses.

Water and Wastewater Rate Study and Financial Feasibility Report, City of West Columbia, SC – Evaluation of the City's current water and sewer rates to determine if they were sufficient to meet the needs of the Utilities Department, cover costs for anticipated debt, and allow for upcoming capital improvements to the water and sewer systems. Recommendations were made, and subsequently adopted, to implement a new rate structure. In conjunction with the Rate Study, a Financial Feasibility Report was also developed for use with potential investors when the City secures bonds to cover anticipated debt.

Operating Cost Analysis, for Lake Marion Regional Water Agency, Womble Bond Dickenson - Services included a complete review and financial analysis of the LMRWA's agreement with Berkeley County and the costs that Berkeley County would incur in the event they decided to withdraw from the LMRWA. This study involved the review of record drawings for the LMRWA Water Treatment Plant and the water distribution system. A financial analysis of project costs for the construction of the WTP and the corresponding water mains to serve Berkeley County. The facility was constructed and is operated by Santee Cooper Electric Cooperative. The study evaluated the current operating and maintenance costs for the water plant and made financial projections for the anticipated operational and maintenance costs that would be incurred over a twenty-year period. From the analysis, we determined Berkeley County's proportionate share of these costs as defined within their agreement with LMRWA. Incremental construction costs were computed to determine the difference between the water main sizes that were increased as necessary to serve Berkeley County, as well as the costs for additional line flushing, in terms of both volume and frequency, that must be completed as a result of the increase in water main size to serve the County. A report was prepared and presented to explain the analysis and results of the study and used in the negotiations with Berkeley County.

CRAIG A. KIRBY, ME, PE

Project Manager/Engineer

PROFESSIONAL FIELD
Civil, Water Treatment and Distribution, Wastewater Collection, Wastewater Treatment, Project Management, Permitting, Pump Stations, Hydraulic Analysis/ Modeling, Environmental, and Water Resources Engineering

EDUCATION
ME Environmental Engineering 1997
University of South Carolina
Columbia, SC
BS Civil Engineering 1995
Cum laude
University of South Carolina
Columbia, SC

REGISTRATION
Professional Engineer
SC Registration No. 20939

Mr. Kirby has a broad background in the field of environmental and water resources engineering. Since joining the staff of American Engineering Consultants in 1997, Mr. Kirby has been involved in municipal and private projects of all types and sizes. His experience includes design and analysis of water and wastewater treatment plants, design of water and wastewater distribution/collection systems and pumping stations, hydraulic analysis and modeling of municipal water and wastewater systems, industrial pretreatment, treatment facility operation and maintenance manuals, process safety management and risk management plans, industrial stormwater pollution prevention plans, site layout and design, design of stormwater collection systems and detention ponds, and air quality permitting and modeling. Prior to joining American Engineering Consultants, Inc., Mr. Kirby served as a Graduate Teaching Assistant at the University of South Carolina, while pursuing his post graduate degree in Environmental and Water Resources Engineering, and as an intern with the Waccamaw Regional Council of Governments and the SC Department of Transportation.

RELATED EXPERIENCE

Avenues Waterline Replacement and New Elevated Water Tank, City of Cayce, SC - Project Manager for design of the replacement of nearly 50 miles, or 262,000 LF, of existing water lines, including replacement of the existing Glenn Street Elevated Water Tank with a new 1,000,000 gallon elevated water tank. Services included surveying, permitting, bid, award, contract administration, and construction observation. Services provided also included the preparation and submittal of a State Revolving Fund (SRF) Loan Application and construction phase loan administration, and acquisition by AEC of approximately 67 easements. This project consisted of 7 divisions, with different general contractors for each division, each of these having multiple sub-contractors. As-built surveys were also performed on the newly installed water meters for inclusion into City of Cayce GIS utility database. In addition, AEC managed a project information line for the community to call or email with questions and concerns, wherein all inquiries are monitored and promptly addressed. **Honored by the SC Municipal Association with the 2019 Municipal Achievement Award for Public Works.**

Cromer Road Pump Station, Town of Lexington, SC - Project Manager for the design of a new 31 MGD regional pump station, including, wet well structure with submersible pumps, lime feed system, bridge crane structures, back-up power generator, and SCADA system and instrumentation. Services included surveying, permitting, bid, award, contract administration, and construction observation. The pump station was designed with two wet wells having three submersible pumps each. The wet wells were designed to operate as two separate triplex stations with an overflow weir connecting them. This project will provide for a significant increase in sewer capacity for the Town of Lexington. In addition to this project, two additional phases are in the design phase that will further increase sewer capacity for the Town. These phases include 35,500-LF of 30-Inch forcemain (phase 2) and 22,000-LF of 30-Inch forcemain (Phase 3). **This project was honored with the 2021 ACEC-SC Engineering Excellence Award.**

City of Cayce Regional Wastewater Treatment Plant, **E. H. Heustess, Jr. Facility, City of Cayce, SC** - Project Manager for the design of a new 25 Million Gallon Per Day (MGD) state of the art wastewater treatment facility. Services included surveying, permitting, bid, award, contract administration, and construction observation. The unique design for this facility included a biological nutrient removal (BNR) process capable of removing nitrogen and phosphorus from the influent wastewater as well as an advanced membrane digestion system representing an innovative, sustainable and unique approach to solids handling. In addition to the BNR and membrane digestion processes, the design also included a new headworks structure with screening and grit removal processes; new secondary clarifiers; new chlorine contact chamber and post aeration facility; new return and waste activated sludge pumping facilities; new sludge de-watering facilities; new chemical feed facilities for chlorine, sulfur dioxide, alum, and polymer; a new effluent pumping station and outfall line into the Congaree River; a sophisticated control and monitoring system; a 3.0 megawatt backup generation system; an internal road system; and other ancillary facilities and associated site work, including a flood protection berm around the entire site. In addition, the design also included a new control and laboratory building for the facility. The project involved preliminary engineering; state and federal permitting; preparation of final plans, specifications and contract documents for permitting, bid and construction; and oversight of construction from start to finish. The entire project was funded through a state revolving fund (SRF) loan and services also included SRF loan administration during construction.

ANGEL M. RIVAS, PE

Project Manager/Engineer

PROFESSIONAL FIELD
Civil, Site Development,
Water Resources, Environmental

EDUCATION
BS Civil Engineering
Technology, 1987
Southern Polytechnic University
Marietta, GA
Associate in Civil Engineering
Technology, 1984
Midlands Technical College
Columbia, SC

REGISTRATION
Professional Engineer,
SC Registration No. 20969

Mr. Rivas is responsible for the design and management of a wide range of civil engineering projects from conception through construction. His experience includes site engineering for waste water treatment plants, water treatment plants, subdivisions, roadways, and commercial developments. He also has extensive experience in water distribution systems, wastewater collection systems, grading, storm drainage, and detention pond design. Mr. Rivas's administration duties include research, budgeting, writing specifications, cost estimates, bid document preparation, project management, review of shop drawings, troubleshooting, construction observation, and preparation of construction and operating permit applications to regulatory agencies for all types of projects.

RELATED EXPERIENCE

Water Distribution Improvements, City of Camden, SC – Project Manager for the preparation of a 10 Year Water Distribution System Capital Improvements Plan for the proposed replacement of waterlines within the City of Camden's city limits and immediately surrounding areas. Emphasis was made on the replacement of asbestos-cement, cast iron, and galvanized pipes, and any needed enhancements to improve system pressures and fire flow. A review was made of all available GIS data and construction drawings and an inventory of the City's water distribution system assets was developed. Meetings with City staff to discuss areas of concern, repeat breaks, critical services, age of system, etc. and identify a "capital projects administrative review team" (CPART) to identify needs, ensure compliance, and determine existing system deficiencies and where improvements are needed. A system conditions assessment matrix and scoring system was created for use in determining pipe replacement priority based on existing conditions, and customer impact, coordination with other ongoing projects, etc. Review of the existing water model and recommendations for the existing water system capacity, as well as the ability of the system to accommodate reasonable long-term development including industrial growth. A 10 Year Water Distribution System Capital Improvements Plan was established for all anticipated water replacement projects, which identifies the financial needs over that time horizon and provides a detailed strategy for the eventual replacement of all deficient water lines within the City's water system. The engineer will assist City staff to update existing system maps where necessary, and provide maps to indicate the areas of needed system improvements. In addition, AEC prepared a SCIIP grant application for funding for the water replacement projects.

Ridgeway and Winnsboro Sewer System Connector, Fairfield County, SC – Project Manager for the installation of new pump stations, upgrades to existing pump stations, and a new wastewater forcemain to connect to the Town of Winnsboro Wastewater Treatment Plant (WWTP). Services include preliminary engineering, design, permitting, bidding, contract administration, construction observation services, and erosion control inspections. Project will include: a new pump station located at the Ridgeway WWTP; approximately 11,000 LF of 8-inch and 5000 LF of 24-inch diameter sanitary sewer forcemain along Peach Road from the Ridgeway WWTP to the existing Commerce pump station; upgrade of the existing Commerce Park pump station; approximately 20,000 LF of 24-inch diameter sanitary sewer forcemain along Peach Road from the Commerce pump station to a new 2.0 MGD Fairfield Regional Pump Station near the proposed Devils Race Track Road Industrial Park and the intersection of Peach Road and Highway 321; and approximately 42,000 LF of 16-inch diameter sanitary sewer forcemain from the intersection of Peach Road and Highway 321 at the Fairfield Regional Pump Station along Highway 321 to the Town of Winnsboro WWTP, together with all other necessary appurtenances for a complete project. This project will be designed so that the system will work as an independent system to transfer up to an average daily flow of up to 500,000 gallons per day of wastewater to the Winnsboro WWTP until such time as the new Fairfield Joint Water and Sewer System (FJWSS) WWTP and forcemain to the Broad River has been completed, and thereafter the project will be designed to transfer up to 2.0 MGD of raw wastewater based on average daily flow to the new FJWSS wastewater transport and treatment system and allow Winnsboro the ability to pump raw wastewater using the connector to the Fairfield Regional Pump Station at the intersection of Peach Road and Highway 321 which will then be transferred to and treated by the FJWSS WWTP and discharged to the Broad River.

Eastover WWTP 1.2MGD Expansion Process Review, Richland County Utilities – Project Manager for the preparation of a technical memorandum. The project consists of engineering consulting services necessary to perform an evaluation of Richland County's Eastover Wastewater Treatment Plant to assess improvements required to the existing treatment equipment and unit processes in order to increase the average treatment capacity of the facility to 1.2 MGD.

CHRISTOPHER S. (Chris) WADDELL, PE

Project Manager/Engineer

PROFESSIONAL FIELD

Civil, Storm Water, Water Treatment and Distribution, Wastewater Collection, Wastewater Treatment and Industrial Pretreatment

EDUCATION

BS Civil Engineering 2007
University of South Carolina
Columbia, SC

REGISTRATION

Professional Engineer
SC Registration No. 29959
PACP, MACP, LACP Certified with the National Association of Sewer Service Companies (NASSCO), Certificate Number U-0717-07008707

Mr. Waddell has been involved in various phases of wastewater and water related municipal and industrial projects, from conception and planning through construction and start-up, to include preparation of preliminary reports and cost estimates, preparation of plans and specifications, permitting, review of shop drawings, and project management. His project experience includes design and analysis of water and wastewater treatment plant unit processes, site design, design of water and wastewater distribution/collection systems and pumping stations, hydraulic analysis and modeling of municipal water and sewer systems. Additional duties include operational assessment and troubleshooting of pumping systems, and pilot study planning and assessment. Mr. Waddell is NAASCO certified in the evaluation of the condition of gravity sewer systems. He specializes in projects in the fields of environmental and water resources engineering.

RELATED EXPERIENCE

Lancaster CDBG Waterline Replacement, City of Lancaster, SC – Project Manager for design of the installation of approximately 5,059 LF of 6-inch water main, valves, hydrants, services, and all other necessary appurtenances along portions on South Ferguson, South Hughes, Moore, and McCardell Streets in the City of Lancaster**.** Services include preliminary engineering, surveying, permitting, bid and award, contract award, contract administration, construction observation, and erosion control inspections. **This project is funded through the Community Development Block Grant (CDBG) program, and administered in conjunction with the Catawba Regional COG.**

Chapin Force Main – Wessinger to WWTF, Town of Chapin, SC - Project Manager for design of the installation of approximately 19,500 LF of 16-Inch diameter sewer forcemain. The project corridor for the new forcemain will be located within a combination of private easements, SCDOT rights-of-way, and Lexington County rights-of-way. The new forcemain will provide additional sewer capacity for the eastern portion of the Town of Chapin's sewer system, and will be manifolded to serve seven (7) existing pump stations. The project includes development of a hydraulic model and evaluation to determine the operational implications of the new forcemain on the existing pump stations. Services include surveying, permitting, bid and award, contract administration, construction observation, and preparation of a State Revolving Loan Fund (SRF) Preliminary Engineering Report.

CWS I-20 Wastewater System Condition Assessment Report, Town of Lexington, SC - In connection with the Town's acquisition of the CWS I-20 Regional Wastewater System, a sewer system evaluation study and capital improvements plan was performed in order to identify the condition, capacity, location, and required future capital improvements for the system which includes approximately 101,000 LF of gravity sanitary sewer mains, 50,000 LF of force mains, 450 manholes, and 16 pump stations. The evaluation included development of an inspection plan and protocol. The field data collected was reviewed by NASSCO Certified Inspectors and coded accordingly. In conjunction with gravity main inspection, a thorough inspection of all sixteen (16) pump stations was performed. Following the inspection phase, the capacity of existing assets was evaluated, assets were prioritized based upon condition and criticality, a rehabilitation plan developed for each asset grouping, and a corresponding capital improvements budget was developed. Finally, a capital improvements budget was evaluated on a ten (10) year debt service cost projection, and benchmarked against the projected revenues of the system to provide insight into the financial feasibility of the proposed acquisition.

I-20 Regional Wastewater Pump Station and Lagoon Closeout, Town of Lexington – Design and construction phase services for a new regional pump station to allow for abandonment of the existing aerated lagoon that currently serves the I-20 Wastewater System. Design of the new pump station included a detailed analysis of current and future projected wastewater demand. The new I-20 Pump Station will have a capacity of 1,800-GPM and will allow for closeout of the existing aerated lagoon. Services include surveying, permitting, bid/award, contract management, and construction observation. This project is funded by the State Revolving Fund (SRF); loan application and administration services are also provided. **This project received honorable mention by the Clean Water State Revolving Fund (CWSRF) in 2021 for demonstrating excellence in Performance and Innovation in the SRF Creating Environmental Success (PISCES) program.**

ANDREW F. (Andy) HARMON

CAD Manager

EDUCATION
Associates Degree in Engineering Graphics, 1994
Midlands Technical College
Columbia, SC

Mr. Harmon joined the staff of American Engineering in September of 1994. Since joining AEC, he has gained extensive knowledge in CAD design, management, coordination, and collaboration skills. His project experience includes subdivisions, water and wastewater facilities, pump stations, water tanks, water and wastewater distribution and collection systems, road paving and resurfacing, building services (mechanical, electrical), solar farms, and commercial site work. Mr. Harmon has extensive experience in computer design software including Autodesk, ArcGIS, Eagle Point, Bentley and various other programs which aid in the design and creation of construction drawings.

Mr. Harmon is also experienced in IT management and administration. He manages networked servers, workstations and appliances. Software experience includes Microsoft Windows, Microsoft Windows Server, Exchange, SQL, IIS, Forefront TMG, Trend Micro, Symantec, Microsoft Office, Corel, and Adobe.

RELATED EXPERIENCE

Westside Water Improvements, City of Denmark, SC

Harrison Avenue Water Improvements, Town of Norway, SC

Camden Water Distribution Improvements, City of Camden, SC

Chapin Forcemain – Wessinger to WWTF, Town of Chapin, SC

Blackville Phase I Sewer System Evaluation, Town of Blackville, SC

Chapin Technology Park Wastewater Collection System, Lexington County, SC

Stanley L. Goodwin Water Treatment Plant, City of Cayce, SC

E. H. Huestess Wastewater Treatment Plant, City of Cayce, SC

GREGORY (Greg) JENNESS, PLS

Survey Manager

PROFESSIONAL FIELD
Surveying, Marketing, Project Management

EDUCATION
Western Carolina University, 1982
Cullowhee, North Carolina

REGISTRATION
Registered Professional Land Surveyor
South Carolina Registration No. 17928

Mr. Jenness joined the staff of American Engineering Consultants, Inc., as a Professional Land Surveyor in 2008, and is currently the Head of the Surveying Department. He has over 33 years of surveying experience and has been licensed as a SC Professional Land Surveyor since 1997. His experience includes boundary surveys, topographical surveys, construction staking and layout, GPS surveys, wetlands surveys, as-built surveys, route surveys, utility surveys, easement acquisition, preparation of plats and maps, business development and marketing, as well as numerous other surveying and engineering concepts. Mr. Jenness annually completes professional development hours and is the Chairman of the Education Committee for the SC Society of Professional Land Surveyors.

RELATED EXPERIENCE

Jungle Shores Drive Waterline Extension, Town of Edisto Beach, SC

Winchester Water Improvements, Town of Norway, SC

I-20 Pump Station and Lagoon Closure, Town of Lexington, SC

Stanley L. Goodwin Water Treatment Plant, City of Cayce, SC

E. H. Huestess Wastewater Treatment Plant, City of Cayce, SC

SW7-RCRC Friarsgate Park, Stevens and Wilkinson of SC

AEP Spartanburg Boundary, Affordable Equity Partners, Inc.

Savannah River Site Survey, DN Tanks

Citadel – Capers Hall Staking, Thompson Turner Construction, Charleston, SC

MCRANEY (Mac) FULMER, III

Senior Field Technician

PROFESSIONAL FIELD
Construction Inspection and Observation

EDUCATION
BS Business Administration 1981
University of South Carolina
Columbia, SC

REGISTRATION
NICET - Certified Building Construction Engineering Inspector
SCDHEC Certified Erosion Prevention and Sediment Control Inspector, CEPSCI #12004

Mr. Fulmer joined the staff of American Engineering in May of 1997. He has extensive inspection training in concrete, earthwork, drainage, structures, and site work construction. He has served as the inspector for a broad array of civil projects, including roadway construction, stormwater conveyance systems, water and wastewater distribution systems, pump stations, elevated steel storage tanks, pre-stressed concrete water tanks, and asphalt paving projects. He is also experienced in testing water and sewer pipe lines, and sampling construction materials. He is well versed in interacting with contractors, clients and citizens to foster effective communication and resolve issues in a professional manner. Mr. Fulmer is proficient in coordinating work to be completed by contractors to ensure projects are built to design specifications, as well as conducting activities in support of loan/grant administration requirements such as contractor staff interviews and supporting documentation preparation.

RELATED EXPERIENCE

Nix Street Waterline Project, Town of Hampton, SC

Asbestos Cement Water Line Replacement, Gaston Rural Community Water District

Upgrades to Pump Stations A & B, Town of Edisto Beach

64-Inch Interceptor Force Main, East Richland Co. Public Service District, SC

Williams Estate Sewer Improvements Project, City of Lancaster, SC

I-20 Pump Station and Lagoon Closeout, Town of Lexington, SC

Stanley L. Goodwin Water Treatment Plant, City of Cayce, SC

E. H. Huestess Wastewater Treatment Plant, City of Cayce, SC

ALISON J. (Ali) WALKER

Director of Business Development Client Service Specialist

PROFESSIONAL FIELD
Planning, Media Relations, Publicity, Marketing, and Community/ Government Relations
Grant Administration

EDUCATION
BA Public Relations, Advertising and Applied Communication 1990
University of Georgia
School of Journalism
Athens, Georgia

Mrs. Walker joined the team at American Engineering in June of 2017. She is a Public/Community Relations Consultant with a record of proven success in planning, media relations, publicity, marketing, and community/ government relations. She has an extensive customer service background, and has led successful grassroots campaigns for Palmetto Health garnering community and state regulatory support for the construction of Palmetto Health Parkridge Hospital, and ran the SC state operations for a national advocacy campaign for AARP. Her extensive professional relationships with the business, civic, government, and educations sectors of the community have proven to be extremely beneficial to our clients.

Ali fully recognizes the importance of client relations as a key element in the success of a project. Communication, reliability, honesty, quality engineering and service all enhance the clients' experience with our firm and are all important facets of forming long-term relationships with our clients. In addition to handling AEC's business development, Ali also handles and coordinates the grant acquisition and administration for our firm. She serves as an additional point of contact for our clients ensuring our elevated service standard, identifying and assessing client needs, and maintaining our high level of client satisfaction.

EXPERIENCE OF FIRM

Having a firm foundation of trust with an engineering firm is extremely important, and is what makes AEC ideally suited to assist local municipal governments in managing projects funded through the American Rescue Plan Act (ARPA)/SC Infrastructure Investment Plan (SCIIP) Grants. AEC provides unparalleled expertise in providing the required engineering and surveying services as outlined in the scope of this RFP, including:

- Grant/Loan Acquisition and Administration
- Financial Feasibility Studies/Reports
- Program Administration
- Master Planning
- Capital Improvement Planning
- Rate Studies, Rate Design Analysis/Rate Restructuring
- Construction/Contract Management
- Permitting
- Contract Scheduling
- Facilities Planning
- Hydrology and Hydraulics Engineering
- Site Development and Design
- Roadway/Transportation
- Water Supply/Treatment/Storage/Distribution
- Water Distribution System Analysis
- Water Quality Reporting
- Wastewater Collection/Treatment/Disposal Drainage Studies
- Water, Wastewater and Groundwater Monitoring Well Field Sampling
- On-Call Emergency Management & Disaster Recovery Assistance
- Assistance with State and Federal Regulatory Compliance
- Construction Observation/Field Inspection
- Testing Water and Sewer Pipe Lines, and Sampling Construction Materials
- Community Outreach/Project Information Call/Email Line Management
- Boundary/Site Surveys
- Topographic Surveys
- Route Surveys - Roads/Utilities
- ALTA Surveys
- Wetland Surveys
- As-Built Surveys
- Geodetic Surveys
- Closing Surveys
- Real Property Acquisition - Easements
- Horizontal/Vertical Control Surveys
- Construction Staking
- Stormwater System Design
- Floodplain/Floodway Studies
- Erosion Control/BMP Design
- Sludge Management/Handling/Disposal
- Industrial Wastewater Pre-Treatment/Treatment
- Inflow / Infiltration Analysis
- Instrumentation/Controls Design
- Concrete/Steel/Timber Design
- Plant Start-Up and Troubleshooting Services
- Solid Waste/Landfill Design Services
- Solar Site Design

CENTRAL LOCATION

The American Engineering office is centrally located in Cayce, optimally close to our state's capital city of Columbia. As a result, AEC has the capacity to provide services in any part of the state. AEC and its parent company, Hercules Contractors and Engineers, Inc., have been involved in the construction field for over 50 years, fostering a lifetime of relationships with construction firms across the state. Our engineers and professional staff have fostered long standing relationships with many municipal and county governments, with a commitment to ensure that we provide stellar client service and incomparable technical proficiency on an on-call basis.

In addition, our proximity to Columbia has allowed the AEC staff to develop close relationships with local, state, and federal agencies. Our experienced staff is well acquainted with the SC Department of Transportation, as well as the SC Department of Health and Environmental Control (DHEC), the SC Department of Commerce, Rural Infrastructure Authority (RIA) and various community development leaders. We understand that having the ability to navigate complex permitting and regulatory requirements is an important element of a successful project. The organization of our paperwork together with the promptness and efficiency in our dealing with these agencies has yielded AEC an excellent reputation for managing the project permitting process.

AEC WEBSITE

We invite you to visit our website, **https://www.aec-sc.com,** designed to provide for our clients, prospects and colleagues an easily navigable interface to learn about our firm, the services we provide, news and projects from our portfolio.

RELATED EXPERIENCE

American Engineering Consultants, Inc. is proud to showcase our client references and related projects from our portfolio as a testament to the meticulous planning, attention to detail, and combined efforts our team. The AEC professional and technical staff have been involved in a wide variety of civil engineering projects across the state of South Carolina that allow us to be well suited to meet the needs of local government projects.

FAIRFIELD JOINT WATER AND SEWER SYSTEM

c/o Fairfield County, Attn: Malik Whitaker
350 Columbia Road
Winnsboro, SC 29180
(803) 712-6501
Malik.whitaker@fairfield.sc.gov

PRELIMINARY ENGINEERING REPORT FOR NEW WASTEWATER SYSTEM

PROJECT TEAM
Bill Bingham, Jr., ME, PE, Project Manager
Kenny Bingham, PE, Vice President/Principal
Angel Rivas, PE, Project Engineer
Christopher Waddell, PE, Project Engineer
Andy Harmon, CAD Manager

Currently in progress, services include consulting to assist with the acquisition of a 208 amendment and the preparation of a preliminary engineering report associated with the design and construction of a new wastewater system. Report will include reviewing alternate routes for the proposed force main, assisting with site selection for the new WWTP and pump station, wetlands delineation, preparation of environmental impact assessments, and surveying.

Services include preliminary investigations to identify any necessary changes and/or upgrades for the existing four pump stations, force mains, and gravity sewer lines, pump station inspections and development of a hydraulic model, preliminary calculations and layout for a new 2 MGD pump station and 2 MGD wastewater treatment plant, and preliminary calculations for a new force main. Preliminary opinion of probable costs for the new pump stations, force main and WWTP will also be provided as well as the necessary applications in order to submit for a new NPDES permit.

PROFESSIONAL ENGINEERING CONSULTING SERVICES FOR NEW WASTEWATER SYSTEM

PROJECT TEAM
Kenny Bingham, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal

Recently completed, AEC advised and assisted the owner throughout the permitting process to design and construct a new wastewater system. As necessary, AEC principals meet with community leaders, community groups, governmental bodies, and regulatory entities to provide fact based educational materials on the scope of the project and the steps that are being undertaken by the owner to mitigate both the cost and environmental impacts of the project for all impacted parties.

TECHNICAL MEMORANDUM PREPARATION

PROJECT TEAM
Bill Bingham, Jr., ME, PE, Project Manager
Kenny Bingham, PE, Vice President/Principal

Completed in November 2020, project entailed a detailed review of an existing Preliminary Engineering Report (PER) in order to determine recommended items that need to be more specifically addressed to maximize the potential for approval from the Central Midlands Councils of Government EPAC Committee. The completed technical memorandum outlined specific recommendations for modification of the PER document and a review of the costs projected.

RIDGEWAY & WINNSBORO SEWER SYSTEM CONNECTORS

PROJECT TEAM
Bill Bingham, Jr., ME, PE, Project Manager
Angel Rivas, PE, Project Manager
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, his project consists of preliminary engineering, design, permitting, bidding, contract administration, construction observation services, and erosion control inspections for new pump stations, upgrades to existing pump stations, and a new wastewater forcemain to connect to the Town of Winnsboro Wastewater Treatment Plant (WWTP).

Services include design of a new pump station located at the Ridgeway WWTP; approx.11,000 LF of 8-inch and 5000 LF of 24-inch diameter sanitary sewer forcemain; upgrade of the existing Commerce Park pump station; approx. 20,000 LF of 24-inch diameter sanitary sewer forcemain to a new 2.0 MGD Fairfield Regional Pump Station near the proposed Devils Race Track Road Industrial Park and the intersection of Peach Road and Highway 321; and approximately 42,000 LF of 16-inch diameter sanitary sewer forcemain from the intersection of Peach Road and Highway 321 at the Fairfield Regional Pump Station along Highway 321 to the Town of Winnsboro WWTP. This project will be designed so that the system will work as an independent system to transfer up to an average daily flow of up to 500,000 gallons per day of wastewater to the Winnsboro WWTP until such time as the new Fairfield Joint Water and Sewer System (FJWSS) WWTP and forcemain to the Broad River has been completed, and thereafter the project will be designed to transfer up to 2.0 MGD of raw wastewater based on average daily flow to the new FJWSS wastewater transport and treatment system and allow Winnsboro the ability to pump raw wastewater using the connector to the Fairfield Regional Pump Station at the intersection of Peach Road and Highway 321 which will then be transferred to and treated by the FJWSS WWTP and discharged to the Broad River. **AEC prepared a SCIIP application for this project.**

TOWN OF LEXINGTON

Mr. Allen Lutz, Director of Utilities
111 Maiden Lane
Lexington, SC 29072
(803) 358-7261
alutz@lexsc.com

I-20 REGIONAL WASTEWATER PUMP STATION AND LAGOON CLOSEOUT

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Nearing completion, this project involves design for a new regional pump station to allow for abandonment of the existing aerated lagoon that currently serves the I-20 Wastewater System. Design of the new pump station included a detailed analysis of current and future projected wastewater demand. The new I-20 Pump Station will have a capacity of 1,800-GPM and will allow for closeout of the existing aerated lagoon. Services include surveying, permitting, bid/award, contract management, and construction observation. This project is funded by the State Revolving Fund (SRF); loan application and administration services are also provided. **This project received honorable mention by the Clean Water State Revolving Fund (CWSRF) in 2021 for demonstrating excellence in Performance and Innovation in the SRF Creating Environmental Success (PISCES) program.**

I-20 WASTEWATER SYSTEM PUMP STATION REPAIRS

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Mac Fulmer, Senior Field Technician
Andy Harmon, CAD Manager

Currently in progress, project involves improvements to 13 pump stations, including: 3 pump stations will require wet well coating/rehabilitation and pump replacement; 2 equalization lagoons with associated pump stations will be cleaned, closed-out and replaced with new submersible pump stations; 5 pump stations will be completely replaced; demolition of 1 existing sewer booster pump station that is no longer hydraulically necessary; 2 pump stations will receive site improvements2 pump stations will receive control panel replacements along with new canopies Services include surveying, permitting, bid/award, contract management, and construction observation. **This project is funded by the State Revolving Fund (SRF); loan application and administration services are also provided.**

WATERGATE WASTEWATER SYSTEM EVALUATION STUDY AND IMPROVEMENTS

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

AEC evaluated options for connecting the Watergate system with the Town's wastewater collection system including evaluation of pump station hydraulics and collection system improvements that would be required to convey the Watergate system flow to the Town's system. Based on the findings of the assessment of the existing conditions, proposed improvements and the financial feasibility study, AEC designed the installation of a regional pump station, a 13,000 LF 10-inch diameter sanitary sewer forcemain, a 7,000 LF 6 and 8-inch diameter sewer forcemain, and the replacement of the Watergate Lower Sewer Pump Station. Services include surveying, permitting, bid management, award, contract administration, and construction observation. Project is currently in the design phase. **AEC prepared a SCIIP application for this project.**

TWELVE-FOURTEEN MILE CREEK 30-INCH FORCEMAIN – DIVISION I

PROJECT TEAM
Angel Rivas, PE, Project Manager
Craig Kirby, ME, PE, Project Engineer
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, this project involves the design of approximately 35,500 LF of 30-inch force main and 5,600 LF of 24-inch force main. Services include surveying, permitting, easement acquisition, bid/award, contract administration and construction/ observation. This redundant force main was constructed alongside the Town's existing 24-inch force main and will increase the capacity of the 12/14 Mile Creek Wastewater System to 8 MGD. This system, which consists of two 31 MGD pump stations and associated force main, transports all wastewater from the Town of Lexington to the City of Cayce's 25 MGD Regional Wastewater Treatment Facility.

CITY OF CAYCE

Ms. Tracy Hegler, AICP, City Manager
1800 12th Street
Cayce, SC 29033
(803) 796-9020
thegler@caycesc.gov

EVALUATION OF SLUDGE DISPOSAL OPTIONS

PROJECT TEAM
Craig Kirby, ME, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal

Currently in progress, involves the development of a Preliminary Engineering Report (PER) to evaluate options for disposal or beneficial reuse of biosolids resulting from the activated sludge treatment process at the Cayce Regional WWTP, as well as disposal of solids generated from septage and grease processing at this facility. The PER will evaluate existing sludge disposal practices and anticipated significant cost escalations for the continuation of these practices and identify alternative practices and technologies that could be implemented in order to determine the most feasible sludge treatment and disposal method in terms of viability and economics for current and future sludge production levels.

AVENUES DRAINAGE STUDY AND IMPROVEMENTS

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Joey Privette, PE, Project Engineer
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager

As a result of persistent localized flooding in the Avenues portion of the City of Cayce, a study of the existing storm drainage conveyance system including pipes and ditches was conducted. The study resulted in the first phase of improvements including the design for the replacement of three separate existing SCDOT roadway drainage culvert crossings, each with improved 60-inch diameter reinforced concrete pipe culverts.

The culvert improvements provide additional stormwater flow capacity to mitigate roadway overtopping and property damage that are currently resulting from the existing undersized drainage culverts. Services include stormwater hydrologic/hydraulic analysis and design, roadway design, utility coordination, SCDOT encroachment permitting, easement acquisition assistance, land disturbance permitting, US Army Corps of Engineers Nationwide Permitting, bid/award, and construction management/observation. This is the first phase of a multi-year program of stormwater improvements in the City of Cayce's Avenues Neighborhood, and stems from previous evaluation studies performed by AEC. These improvements are being funded by a grant from the Rural Infrastructure Authority (RIA). AEC is the engineer of record for these improvements, and assisted the City with the RIA grant application. Construction is currently in progress**. AEC prepared a SCIIP application for this project.**

TOWN OF WAGENER

Mike Miller, Mayor
P.O. Box 400
Wagener, SC 29164
(803) 564-3412
mayormikemiller@gmail.com

WAGENER WWTP MODIFICATIONS

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, project involves design and engineering services in connection with proposed wastewater treatment plant modifications as a result of a consent order for permit violations related to ammonia limits and its lack of an influent bar screen. Services include surveying, preparation of a PER (Preliminary Engineering Report), permitting, design, bid/award, and construction management/observation. **AEC prepared a SCIIP application for this project.**

EAST RICHLAND COUNTY PUBLIC SERVICE DISTRICT

Mr. J. Edward Schooler, PE, Deputy Director
704 Ross Road
Columbia, SC 29223
(803) 788-1570
eschooler@ercpsd.net

RE-ROUTE OF GRAVITY SEWER AT 3 LOCATIONS

PROJECT TEAM
Craig Kirby, ME, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, this project involves design for the relocation of existing gravity sewer lines to improve hydraulic efficiency in the system at three locations: (1) Decker Boulevard (2) Firelane Road/O'Neil Court and (3) Springwood Lake Drive in Columbia, SC. Services include surveying, permitting, bid/award, contract administration, and construction management/observation.

SEWER BASIN STUDY

PROJECT TEAM
Craig Kirby, ME, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Andy Harmon, CAD Manager

Currently in progress, this project includes engineering study to develop a wastewater service plan for an area consisting of approximately 500 acres bounded by SC Highway 277 to the east, Norfolk Southern Railway to the west, Parklane Road / Norfolk Southern Railway to the north and Interstate 20 to the south. The study will be completed in two phases. The scope of work for phase I includes an analysis of the proposed area to be served and will include the development of future average and peak flowrates from the basin(s) as well as a generalized plan of service. A future Phase II of the study will consist of an analysis of improvements to the downstream gravity system that may be necessary to accommodate the increased flow and/or the use of a pump station and force main for conveyance of the proposed flows to a point in the downstream gravity system where sufficient capacity is available.

TOWN OF SUMMERTON

Ms. Amanda Silka, Town Administrator
10 Main Street
Summerton, SC 29148
(803) 485-2525
financedirector@townofsummerton.com

GOAT ISLAND WATER SYSTEM IMPROVEMENTS

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, project involves design for the installation of approximately 6,000 LF of 10-inch and 4-inch diameter water mains, and construction of a new elevated water storage tank at the Town's existing tank site on Mabe Drive. Services include surveying, permitting, bidding, contract administration, construction administration, and construction observation services. AEC will conduct preliminary investigations and perform the necessary electrical and geotechnical designs for the project. Services will also include a waters/wetlands delineation, submittal of US Army Corps of Engineers (USAGE) Jurisdictional Determination Package, and permitting wetland impacts through USACE. **AEC prepared a RIA and SRF Principal Forgiveness grant application for this project.**

GASTON RURAL COMMUNITY WATER DISTRICT

Mr. Steven Spires, Manager
1133 Mack Street
Gaston, SC 29053
(803) 603-6444
grcwd@att.net

ASBESTOS CEMENT WATER LINE REPLACEMENT

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, this project involves design for the installation of approximately 14,000 LF of water lines along multiple streets in Gaston. Services include preliminary engineering, design, permitting, bid/award, contract administration, construction management/ observation, and erosion control inspections. Project permits include CSX Railway Occupancy, SCDOT Encroachment, Lexington County Land Disturbance, and USACE Jurisdictional Determination. **This project is funded by the State Revolving Fund (SRF) Principal Forgiveness Loan; application and loan administration services are also provided.**

DOWD DRIVE & MEADOWFIELD ROAD WATER LINE REPLACEMENT

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, this project involves design for the installation of approximately 5,000 LF of water lines along multiple streets in Gaston. Services include preliminary engineering, USDA-RD PER, design, permitting, bid/award, contract administration, construction management/ observation, and erosion control inspections. Project permits include SCDOT Encroachment, Lexington County Encroachment, and Lexington County Land Disturbance. **This project is funded by a USDA Rural Development Loan; application and loan administration services are also provided.**

NEW WELL AT OLIN RICKARD ROAD SITE

PROJECT TEAM
Chris Waddell, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Currently in progress, this project involves engineering services for construction of a new 400-GPM groundwater well. Project scope includes design, permitting, and construction administration services for a new Type III groundwater production well in accordance with SCDHEC requirements.

TOWN OF EDISTO BEACH

Ms. Iris Hill, Town Administrator
2414 Murray Street
Edisto Beach, SC 29438
(843) 869-2505 Ext. 211
ihill@townofedistobeach.com

UPGRADES FOR PUMP STATIONS A & B

PROJECT TEAM
Angel Rivas, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Design for upgrades to Pump Station A and Pump Station B, including replacements to existing pumps and controls in order to increase the pumping capacity of these stations. Services include a preliminary investigation, surveying, permitting, bid/award management, contract administration, and construction observation. **Assistance in the application preparation, submittal, and management of a Rural Infrastructure Authority (RIA) Grant was also provided.**

RICHLAND COUNTY

Mr. William (Bill) Davis, Director of Utilities
7525 Broad River Road
Irmo, SC 29063
(803) 576-2132
davis.bill@richlandcountysc.gov

EASTOVER WWTP 1.2 MGD EXPANSION PROCESS REVIEW

PROJECT TEAM
Angel Rivas, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Mac Fulmer, Senior Field Technician
Andy Harmon, CAD Manager

Currently in progress, this project involves the preparation of a technical memorandum. The project consists of engineering consulting services necessary to perform an evaluation of Richland County's Eastover Wastewater Treatment Plant to assess improvements required to the existing treatment equipment and unit processes in order to increase the average treatment capacity of the facility to 1.2 MGD. **AEC prepared a SCIIP application for this project.**

EASTOVER WWTP NEW SODIUM HYPOCHLORITE SYSTEM

PROJECT TEAM
Angel Rivas, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Mac Fulmer, Senior Field Technician
Andy Harmon, CAD Manager

Currently in progress, this project involves engineering consulting and design services necessary to upgrade the existing Sodium Hypochlorite System to expand the treatment capacity of the existing Eastover WWTP to 1.2 MGD. Services include bidding, award, and construction administration.

TOWN OF HOLLY HILL

Billy N. Chavis, Mayor
8423 Old State Road, Suite 1
Holly Hill, SC 2059
(803) 496-3330
mayorofhollyhill@gmail.com

HOLLY HILL WWTP, GRAVITY SEWER AND SCIIP GRANT APPLICATION

PROJECT TEAM
Bill Bingham, Jr., ME, PE, Project Manager
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Mac Fulmer, Senior Field Technician
Andy Harmon, CAD Manager

This project involves engineering consulting and design services for upgrades to the Town's sanitary sewer system. The Town of Holly Hill is located in Orangeburg County, approximately 30 miles from the Charleston metropolitan area and close to the major thoroughfares of I-95 and I-26. Upgrades to the existing system are critical in order to enable the future commercial, industrial and residential growth of the area. The project scope includes the design of a 0.5 MGD Membrane Bioreactor (MBR) wastewater treatment plant with Biological Nutrient Removal (BNR), and easily expanded to 1 MGD in the future. The MBR plant will include flat plate membrane units, internal recycle pumps, permeate pumps, piping, concrete tanks, system controls, instrumentation and SCADA monitoring. Services include surveying; site evaluation for the new plant; coordination of NPDES, wetlands and other permits as required; coordination of soil investigation reports as needed; coordination of meetings with community leaders, community groups, governmental bodies, and regulatory entities; bid and award management; and construction management and observation. In addition, AEC is providing engineering consulting services for the rehabilitation of the existing gravity sewer lines, which include conducting preliminary investigations and coordinating CCTV inspection of the system in order to identify the necessary changes and upgrades to the existing gravity sewer lines. AEC recently prepared a SCIIP grant application for this project.

CITY OF CAMDEN PUBLIC WORKS AND UTILITIES

Mr. Raymond Peterson, Deputy Director of Public Works
1000 Lyttleton Street
Camden, SC 29020
(803) 425-6045
rpeterson@camdensc.org

WATER DISTRIBUTION IMPROVEMENTS

PROJECT TEAM
Angel M. Rivas, PE, Project Manager
Bill Bingham, Jr., ME, PE, President/Principal
Kenny Bingham, PE, Vice President/Principal

Currently in progress, this project consists of a 10 Year Water Distribution System Capital Improvements Plan for the proposed replacement of waterlines within the City of Camden's city limits and immediately surrounding areas. Emphasis will be made on asbestos-cement, cast iron, galvanized, and any needed enhancements to improve water age, system pressures and fire flow. A review will be made of all available GIS data and construction drawings. Based on the review, an inventory of the City's water distribution system assets will be developed.

The engineer will conduct meetings with City staff to discuss areas of concern, repeat breaks, critical services, age of system, etc. and identify a "capital projects administrative review team" (CPART) to identify needs, ensure compliance, and determine existing system deficiencies and where improvements are needed. A system conditions assessment matrix and scoring system will be created for use in determining pipe replacement priority based on existing conditions, and customer impact, coordination with other ongoing projects, etc. In conjunction with the CPART, the engineer and the water system department staff members will score all identified projects according to the scoring matrix. The engineer will review the existing water model and include in the plan its recommendations for the existing water system capacity, as well as the ability of the system to accommodate reasonable long-term development including industrial growth. The engineer will consolidate all the scoring and develop a replacement schedule. A 10 Year Water Distribution System Capital Improvements Plan will be established for all anticipated water replacement projects, which will identify the financial needs over that time horizon and provide a detailed strategy for the eventual replacement of all deficient water lines within the City/system. The engineer will assist City staff to update existing system maps where necessary, and provide maps to indicate the areas of needed system improvements. In addition, assistance with applications for grants and loans established for potential funding for the water replacement projects will be provided during the first phase of design of the water line replacement projects as identified in the Water Distribution System Capital Improvements Plan. **AEC prepared a SCIIP application for this project.**

TOWN OF BLACKVILLE

Ms. Morgan Lightsey, Town Clerk
5983 Lartigue Street
Blackville, SC 29817
(803) 284-2444
townclerk@townofblackville.com

JEFFERSON DAVIS ACADEMY SUBDIVISION WATERLINE REPLACEMENT

PROJECT TEAM
Bill Bingham, Jr., ME, PE, Project Manager
Craig Kirby, ME, PE, Project Engineer
Kenny Bingham, PE, Vice President/Principal
Greg Jenness, PLS, Survey Manager
Andy Harmon, CAD Manager
Mac Fulmer, Senior Field Technician

Completed in 2020, this project involved design for the installation of approximately 7,200 LF of 6-inch PVC waterline, 160 LF of 2-inch PVC waterline, gate valves, fire hydrant assemblies, air release valves, fittings, services, and all other necessary appurtenances. Services included preliminary engineering, design, permitting, bid/ award, contract management, construction observation, and erosion control inspections. **AEC provided RIA grant fund application services for this project, which was completed well under budget and within the original schedule provided to RIA.**

FAMILIARITY WITH FEDERAL FUNDING REQUIREMENTS

The AEC Team has extensive experience with all aspects of state and federally funded projects. Our engineers are adept at ensuring the timeline for completion of tasks meets the client's schedule for agency compliance. We have a long track record of success in not only the acquisition of grants via preparation of applications for projects, but also in the administration of state and federally funded projects including those funded through the **Rural Infrastructure Authority (RIA), Community Development Block Grant (CDBG), USDA, HUD, and State Revolving Funds (SRF).** Ongoing communication with our client and the funding agency is integral and maintained throughout the project with regular progress meetings, monthly schedule updates, and progress reports as necessary. Our involvement on CDBG, RIA, SRF and other state and federally funded projects has varied from ensuring compliance with federal requirements in the bid stage of a project to acquisition of funds and full administration of grants and loans. Our engineers and administrative staff regularly attend DHEC/RIA/SRF program workshops which provide the technical and financial information necessary to apply for infrastructure project funding, as well as managing all requirements in the administration of the Clean Water and Drinking Water SRF and RIA Programs. Our staff has had extensive training through HUD on the federal requirements for agency administration, URLAP, contractors, bidding, labor standards, and Equal Employment Opportunity/Disadvantaged Business Enterprise. We are fully aware of pitfalls to avoid, and we ensure that the appropriate labor standards, including Davis-Bacon requirements, EEO/DBE, AIS, and Build America/Buy America requirements are clearly outlined in project specifications. Our ability to accurately document and administer program-specific requirements that are associated with grants and federal funds has proven to be invaluable to our clients. Confidence in our abilities is reflected in the fact that the AEC team prepared and submitted sixteen (16) SCIIP grant applications on behalf of clients.

The ability to navigate complex regulatory specifications in order to administer program-specific requirements associated with state or federally funded projects is an essential element to ensure successful completion. Our staff is adept at handling sensitive matters, such as discrepancies with certified payrolls and labor standard interviews because of our extensive training and knowledge. AEC has earned an excellent reputation with RIA, SRF and SCDHEC for managing projects funded through state and federal government grants or loans.

Provided below is a list of the many loan and grant funded projects that AEC has successfully managed for our clients:

USDA RURAL DEVELOPMENT GRANT

Gaston Rural Community Water District
- Dowd Drive & Meadowfield Road Waterline Replacement

CDBG

City of Denmark
- Westside Water Improvements

City of Lancaster
- CDBG Waterline Replacement
- Williams Estate Sewer Improvements
- PER for Williams Estate Sewer Improvements

Town of Hampton
- Nix Street Neighborhood Waterline Replacement

Town of Norway
- Winchester Avenue Water Improvements
- PER for Harrison Avenue Water Upgrade

Joint Municipal Water & Sewer Commission
- AAA Utilities Connections (also SRF)
- Boiling Springs Road Waterline Connector

Richland County
- Lower Richland WWTF
- State Park, Hollywood Hills & East Bluff Sewer & Water Project

RIA

City of Cayce
- Avenues Drainage Improvements
- PER for Michaelmas Avenue Drainage Improvements

City of Lancaster
- PER for North Market Street Water Improvements

Town of Blackville
- Jefferson Davis Academy Subdivision Waterline Replacement

Town of Edisto Beach
- Upgrade of Pump Stations A & B

Town of Summerton
- Goat Island Water System Improvements

SRF

City of Cayce
- Septage Receiving Station Improvements
- Highway 321 Waterline Replacement
- Sanitary Sewer Expansion for Springdale
- Wastewater Treatment Plant Upgrade and Expansion to 25 MGD
- Avenues Waterline Replacement & New Elevated Water Tank
- 9.5 MGD WWTP Closeout & Receiving Station

City of West Columbia
- Lake Murray WTP Expansion
- Riverside WTP Upgrade

East Richland County Public Service District
- 64-Inch Interceptor Sewer Line

Gaston Rural Community Water District
- Asbestos Cement Waterline Replacement

Joint Municipal Water & Sewer Commission
- Boiling Springs Road Waterline Connector and Booster Pump Station
- AAA Utilities Connections (also CDBG)

Town of Lexington
- I-20 Wastewater Pump Station and Lagoon Closeout
- I-20 Wastewater System Pump Station Repairs

Town of Norway
- Principle Forgiveness Grant Application for Water System Infrastructure Sustainability Plan

Town of Summerton
- Principle Forgiveness Grant Application for Goat Island Water System Improvements

Town of Blackville
- Phase 1 Sewer System Evaluation

C-FUNDS

Town of Lexington
- Roadway Improvements to Elbert Taylor Road
- Roadway Improvements to Jim Rucker Road
- Roadway Improvements to Payne Lane
- Roadway Improvements to Sandy Ridge Lane

AMERICAN ENGINEERING CONSULTANTS, INC.
1300 12th Street, Suite A
Cayce, SC 29033
(803) 791-1400
www.aec-sc.com