



Routine Engineering Services for Drainage Projects in
Jefferson Parish – Resolution No. 138811



March 30, 2022

Jefferson Parish Council
General Government Building
200 Derbigny Street, Suite 6700
Gretna, Louisiana 70053

RE: Routine Engineering Services for Drainage Projects in Jefferson Parish - Resolution No. 138811

Dear Selection Committee:

Ardurra Group, Inc. is excited to submit this statement of qualifications in response to the above referenced Request for Qualifications. As you evaluate the submittals, please keep the following key advantages of Ardurra in mind:

We Know and Understand Jefferson Parish. Ardurra has completed more than 20 projects for Jefferson Parish, dating back to the 1980s. Recent projects include drainage improvements to Bonnabel Canal, Hoey's Pump to the River Economic Study, Jefferson Parish West Esplanade Ave Crossing of Elmwood Canal, and various design projects within the Parish's Drainage CIP. Ardurra is a known quantity to Jefferson Parish and has proven to be an excellent steward of the public trust.

100% Local Staff. Ardurra is headquartered within Jefferson Parish in Metairie, just minutes from Parish offices and facilities. Key proposed project personnel are local and boast a career focused on water, wastewater, drainage, and streets in the greater New Orleans area. 100% of the work will be performed in Ardurra's Metairie office.

On Target Experience. With 44 years of experience in engineering assessments, design, construction, and program management in the greater New Orleans area, we know the myriad of issues that are involved with executing design and construction services as they relate to the local authorities, U.S. Army Corps of Engineers (USACE) and FEMA. Since 1994, Ardurra has served as program manager for the SELA urban drainage program. This work includes serving as Jefferson Parish's representative in the development and execution of engineering and construction contracts; meetings with USACE, CPRA, utility companies and private landowners; and development, implementation and execution of the Parish's annual Drainage CIP budgets and schedules.

We trust that the enclosed qualification package clearly demonstrates the Ardurra team's qualifications as they relate to your program. Should you have any questions or concerns, please contact us at 504.454.3866.

Sincerely,



Joseph Becker, PE
Client Service Manager

Technical Evaluation Committee (TEC) Questionnaire

Instructions

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

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

**Routine Engineering Services for Drainage Projects for Jefferson
Parish Resolution No. 138811**

B. Firm Name & Address:

ARDURRA Group, Inc.
3012 26th Street
Metairie, Louisiana 70002



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

Ann Springston Shires, PE
Principal-in-Charge
Ardurra Group, Inc.
504-454-3866
aspringston@ardurra.com

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

Ann Springston Shires, PE
Principal-in-Charge
Ardurra Group, Inc.
504-454-3866
aspringston@ardurra.com

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

<u>204</u> Administrative	<u>7</u> Estimators	<u> </u> Specification Writers
<u>16</u> Architects (Licensed)	<u> </u> Geologists	<u>12</u> Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u>68</u> Graduate Engineers
<u>194</u> Civil Engineers	<u> </u> Interior Designers	<u>81</u> Project Managers
<u>104</u> Construction Inspectors	<u>6</u> Landscape Architects	<u>18</u> Clerical
<u>4</u> Ecologists	<u>95</u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u>2</u> Electrical Engineers	<u>2</u> Mechanical Engineers	<u>43</u> Sanitary Engineers
<u>8</u> Engineer Intern	<u>18</u> Environmental Engineers	
<u>45</u> Professional Land Surveyors		<u>927</u> TOTAL

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

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

TEC Professional Services Questionnaire

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

1. N/A

2.

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

YES ☐ NO ☐

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

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

J. Please specify the total number of support personnel that may assist in the completion of this Project:
We will specify this number when we learn the size and scope of the project.

TEC Professional Services Questionnaire

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Ann Springston Shires, PE
Principal-in-Charge

Project Assignment:

Principal-in-Charge

Name of Firm with which associated:

ARDURRA Group, Inc.

Years' experience with this Firm:

29 (39 years total)

Education: Degree(s)/Year/Specialization:

Bachelor of Science / 1982 / Civil Engineering

Active registration: Year first registered/discipline:

1992 / Professional, Civil, Environmental Engineer Louisiana
2008 / Civil Engineer Texas
2015 / Professional Engineer New York
2019 / Professional Engineer Florida

Other experience and qualifications relevant to the proposed Project:

Ann has 39 years of experience in civil engineering planning and design throughout Louisiana, with a focus on open channel hydraulics, pipeline hydraulics, hydrologic analyses, computer modeling and pump stations. Relevant experience includes:

Sewerage & Water Board of New Orleans Urban Flood Control Project, New Orleans, LA. Ann served as the hydraulics engineer for this project which included upgrading an existing SWMM computer model, processing drainage improvements and making improvement recommendations. Ann was also responsible for project scheduling; coordination with the owner and the U.S. Army Corps of Engineers; development of the Orleans Parish Feasibility Study; field data collection for structure inventory and hydrologic modeling; hydraulic modeling; report design plates and hydraulic write-up; development of GIS based overflow maps using the SWMM model results to aide in cost-benefit analyses; review of FEMA repetitive flood damage and rate structure information.

Big Island Mining and Atchafalaya Sediment Delivery Projects. Ann served as hydraulic engineer for this project which included setting up a FASTTABS finite element computer model and processing alternate channel alignments to determine which alignment best diverted flows and sediment for marsh creation.

TEC Professional Services Questionnaire

St. Charles Parish East Bank Master Drainage Plan, St. Charles Parish, LA. For four years Ann served as project engineer for this project with a study area of more than 7,000 acres. Her responsibilities included coordination of topographic mapping with subcontract photogrammetric mapping services, field data collection, hydrologic and hydraulic analyses using the HEC-1 and HEC-2 and final recommendations for drainage improvements. She developed the final master drainage plan which outlined modeling efforts, existing conditions, recommended improvements, and GIS based flood overflow maps for existing and improved conditions for the 10, 50, and 100-year storms. She subsequently provided expanded data from this study for the FEMA Hazard Mitigation Grant Program for project funding.

Ann performed hydraulic analyses to indicate impact to existing drainage from proposed subdivision installations and impact of installation of new pumps at pump stations in St. Charles Parish and acted as project manager during construction of these subdivisions.

US Army Corps of Engineers SELA Project, Hydraulic Analyses and Improvements to Canal Systems in Jefferson and Orleans Parish, LA. This project reconstructs the open canal system by means of concrete flumes and trapezoidal sections and reconstructs multiple bridge crossings. Ann utilized HEC-18 and WSPRO to determine the effects of roadway and utility crossings and canal intersections.

Southeast Louisiana Drainage Project, New Orleans, LA. Ann served as program manager for this \$460M program. She was responsible for the coordination of construction and design contracts as well as maintaining a public information program. The project involved a 30-minute television program, "Underground Rivers", which aired on PBS and traced the history and future of drainage in the City of New Orleans.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Joseph Becker, PE Client Service Manager (CSM)
Project Assignment:
Quality Assurance/Quality Control (QA/QC)
Name of Firm with which associated:
<i>ARDURRA Group, Inc.</i>
Years' experience with this Firm:
3 (34 Total)
Education: Degree(s)/Year/Specialization:
Management Development / 1995 Bachelor of Science / 1985 / Civil Engineering
Active registration: Year first registered/discipline:
1992 / Professional Civil Engineer Louisiana 1992 / Professional Environmental Engineer Louisiana
Other experience and qualifications relevant to the proposed Project:
<p>Joseph has 34 years of engineering experience in engineering planning, design, program management, emergency response, disaster recovery and federal consent decree compliance. Joseph worked for the Sewerage and Water Board of New Orleans for over thirty years and was the General Superintendent of the Sewerage and Water Board for his last ten years at the agency.</p> <p>General Superintendent. 2008-2017. As the General Superintendent, Joseph was the Chief Technical Officer for an agency of over 1,100 personnel. His responsibilities included direction, management, and supervision of all aspects of Sewerage and Water Board operations, maintenance and design for sanitary sewer, potable water, storm drainage as well as power generation and distribution. These responsibilities included the Departments of Operations, Engineering, Networks, Facility Maintenance, Environmental Affairs, Emergency Management, Support Services and Plumbing.</p> <p>Sanitary Sewer Consent Decree. 1998-2017. Owner's representative for over 20 years. Intimately involved with Consent Decree negotiations between the Sewerage and Water Board of New Orleans and the Federal Government from 1996 through 1998 and with the compliance to that decree from 1998 through 2017. He was the Board expert in several areas of both construction and management and played a key role in the development and implementation of the Board's Preventive Maintenance Manual as well as the Emergency Response Manual, both of which are included in the final consent decree. From 1998 through 2017, he was intimately involved in daily consent decree compliance as well as review of quarterly and annual compliance reporting. Through this effort, Joe cultivated a positive relationship with the Department of Justice and the EPA regional offices.</p>

TEC Professional Services Questionnaire

Disaster Recovery. 2005-2017. Extensive experience negotiating with Federal Emergency Management Agency and the state of Louisiana. Assisted in obtaining, and ensuring compliance with all accounting and tracking requirements, over \$2 billion in federal recovery dollars for both the City of New Orleans and the Sewerage and Water Board since the federal levee failures following Hurricane Katrina. Additional similar experience with other federal agencies have assisted in obtaining an additional \$1.5 billion in recovery funds.

SELA Orleans. 2000-2017. Owners' manager and representative to the \$1.4 billion Corps of Engineers South East Louisiana (SELA) program to increase interior drainage capacity in the New Orleans area. This effort included daily monitoring of construction, supervision of design, as well as program coordination with the Corps of Engineers, neighbors, and residents, and petitioning for funding from the federal government in Washington DC.

Department Manager. 1990-2007. From 1987-1999 was responsible for supervision of activities associated with sewer, water and drainpipe repair and appurtenances within the city of New Orleans. Responsible for a staff of over 150 positions, including engineers, clerical staff, and construction crews, and an Operating and capital budget of over \$10 million annually. From 1999-2007 was responsible for engineering design and submittal review for all sewer, water and Board maintained drainage within the City of New Orleans. This review included any private, city, state or federal project involving utilities in the public right of way within the city of New Orleans. Worked closely with a wide variety of both local and out of state consulting firms, as well as both large and small contractors, to ensure compliance with Board specifications.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Adam Faschan, PhD, PE Civil/Environmental Engineer
Project Assignment:
Senior Civil and Environmental Engineer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
8 (36 Total)
Education: Degree(s)/Year/Specialization:
PhD / 1992 / Civil & Environmental Engineering Master of Science / 1989 / Civil Engineering Bachelor of Science / 1987 / Civil Engineering
Active registration: Year first registered/discipline:
1993 / Civil and Environmental Engineer Louisiana 1998 / Professional Engineer Mississippi 2014 / Environmental Engineer Texas 2015 / Professional Engineer New York 2015 / Professional Engineer South Carolina
Other experience and qualifications relevant to the proposed Project:
<p>Adam has 36 years of experience in civil/environmental engineering for public infrastructure projects. He has been responsible for technical assistance and oversight of infrastructure design projects for the largest water and wastewater treatment facilities in Louisiana and Mississippi. Relevant experience includes :</p> <p>Baptiste Collette Navigation Channel Improvements, Plaquemines Parish, LA. Adam served as senior technical advisor for the analysis and design for a deepening, widening and redirection of 16 miles of navigation channel to serve the Port of Venice. The Parish, under a Section 203 USACE authorization is preparing a feasibility study to determine the cost effectiveness of deepening the existing 16-foot channel to 22 feet and widening the 150-foot sections to 200 feet. These improvements will allow a wider range of oil field service vessels to reach new oil leases in the eastern Gulf of Mexico.</p> <p>Administrative Program Management Assistance for FEMA Repairs, St. Bernard, LA. Adam served as senior technical advisor for St. Bernard Parish to manage the implementation of all the FEMA funded infrastructure repairs within the Parish. Adam's grant administration duties included reviewing and revising Project Worksheets as well as completing and maintaining all documentation required to ensure full and expeditious reimbursement of all eligible funds. This program helped increase grant funding to the Parish from \$117M to \$400M. Adam assisted directly with a \$20M increase to the WW consolidation program.</p>

TEC Professional Services Questionnaire

Blind River Freshwater Diversion, Louisiana Department of Natural Resources, St. James Parish, LA.

Adam provided technical oversight of the analysis and design for a 3,000 cubic feet per second diversion from the Mississippi River to the Maurepas Swamp and Lake Pontchartrain for the Office of Coastal Protection and Restoration. The \$100M project includes a diversion structure using culverts with automated gates and a conveyance facility using culvert and earthen channel sections. The distribution system to the swamp includes detailed hydraulic modeling with both HEC-RAS and EFDC models. The objective of this project is to rejuvenate the swamp and to propagate cypress trees that have been stressed from lack of freshwater and nutrients for 50 years. The project includes construction of three 10'x10' culverts through the USACE flood control levee on the Mississippi River. The installation drawings included roadway relocations, temporary levee relocations, levee reconstruction details and special details for prevention of leakage along through levee structures.

Munster Wastewater Treatment Plant Expansion, St. Bernard Parish, LA. Adam served as senior technical advisor for this project that included consolidation of all the Parish's facilities to one major plant - a \$60M wastewater consolidation effort funded substantially through FEMA. The consolidation reduces the Parish's long-term operational costs by \$500K annually, reduces staff requirements and minimizes the need to finance improvements through Parish funds. Work included expansion of the Munster WWTP to an average daily capacity of 15 MGD and a peak capacity of 50 MGD. The WWTP expansion consisted of the design of influent and effluent pump station capacity upgrades, new headworks, new aeration basins, two new final clarifiers, RAS/WAS facilities, new digesters, and associated yard piping.

Shoreline Protection Emergency Restoration Project, Louisiana Coastal Protection and Restoration Authority (CPRA), LA. Adam served as senior technical advisor for this project that provides protection to areas where marsh vegetation was highly impacted by the Deepwater Horizon oil spill in order to avoid additional irreversible losses and reduce the continuing threat to the natural resources. Adam provided senior technical oversight through a conceptual planning phase, coordinating between numerous agencies, stakeholders and interested parties. Adam provided oversight of the project team through data collection, permitting and final design.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Gerald Preau, PE Civil Engineer
Project Assignment:
Senior Civil Engineer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
8 (43 years total)
Education: Degree(s)/Year/Specialization:
Master of Science / 1978 / Civil Engineering Bachelor of Science / 1975 / Civil Engineering
Active registration: Year first registered/discipline:
1980 / Civil & Environmental Engineer Louisiana 1983 / Civil Engineer Alabama
Other experience and qualifications relevant to the proposed Project:
<p>Gerry has 43 years of experience in engineering design and for public works facilities throughout Louisiana. For 15 years, Gerry was employed with the New Orleans S&WB responsible for oversight of all aspects of drainage, sewer, and water projects. He served as program manager for the Southeast Louisiana Urban Flood Control Program and the Sewer System Evaluation and Rehabilitation Program, two of the largest S&WB programs prior to Hurricane Katrina. Relevant experience includes:</p> <p>Sewerage & Water Board, City of New Orleans Department of Public Works Paving Program, New Orleans, LA. Gerry served as program coordinator, responsible for review and/or management of every paving project in Orleans Parish for impact on S&WB facilities. Work included evaluation of existing utilities within project limits and design of utility improvements, which were added to the paving projects under a cost sharing agreement between the S&WB and the City. Gerry was involved in each project from inception/preliminary cost estimates through design, construction, and final closeout. In this capacity, Gerry was instrumental in the development of the 1992 City of New Orleans Department of Public Works Standard Specifications for Street Paving.</p> <p>City of New Orleans Department of Public Works Capital Improvement Program, New Orleans, LA. Gerry was asked to serve as program manager for the City's \$160M capital program, as a result of his extensive experience with the DPW paving program. This included management of design, construction, scheduling, budgeting and coordination with S&WB and other utilities. He was responsible for initial implementation of the City's DBE Participation Policy on a DPW paving project.</p>

TEC Professional Services Questionnaire

Sewerage & Water Board of New Orleans Sewer System Evaluation and Rehabilitation Program, New Orleans, LA. Gerry served as program manager from program inception until 2000. The program involved a citywide sewer system evaluation study; repair of defects noted in the study; development of a computer model to evaluate capacity deficiencies; design and construction of projects to alleviate deficiencies in the sewerage system; development of standards, budgeting, scheduling, controls, and quality assurance. This was the first S&WB program to leverage scheduling and program control tools to track progress.

Sewerage & Water Board of New Orleans Southeast Louisiana Urban Flood Control Program, New Orleans, LA. Gerry served as program manager for this SELA urban flood control program, which was largely funded by the USACE. The \$400M program included development of a computer model of the stormwater drainage system to evaluate areas subjected to repeated flooding from storm water runoff, as well as design and construction of drainage projects to alleviate flooding. Gerry was responsible for all aspects of the program including development of standards, evaluation of the existing drainage system, design, construction, budgeting, and scheduling.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
David Dodgen, PE Civil Engineer
Project Assignment:
Senior Civil Engineer
Name of Firm with which associated:
<i>ARDURRA Group, Inc.</i>
Years' experience with this Firm:
22 (34 Total)
Education: Degree(s)/Year/Specialization:
Bachelor of Science / 1987 / Civil Engineering
Active registration: Year first registered/discipline:
1994 / Civil Engineer Louisiana
Other experience and qualifications relevant to the proposed Project:
<p>David has 34 years of experience in civil infrastructure planning, design, and construction throughout Louisiana. He has focused his career on coastal restoration, flood protection and hydraulic modeling. Relevant experience includes:</p> <p>Expanded Small Scale Physical Model (ESSPM) of Lower Mississippi River, LA. The ESSPM simulates sediment transport and diversions of the Lower Mississippi River and replaces the SSPM that David and Ardurra completed in 2003. The ESSPM is 90-feet by 120-feet and will utilize cutting edge technology as a computer numerically controlled router will cut the model bed into foam panels.</p> <p>Louisiana Master Plan for Hurricane Protection, LA. After Hurricane Katrina, David assisted the Integrated Planning Team of the Coastal Protection and Restoration Authority to develop a Master Plan for hurricane protection integrated with coastal restoration.</p> <p>Atchafalaya River Flows, LA. David prepared a design report and subsequent construction documents to enlarge three natural distributary channels to enhance river sediment flow from the Atchafalaya River into the East Pass Delta Lobe. The design also included extension of the natural distributary channels configured to create three slack water coves in the contiguous shallow waters of Atchafalaya Bay to promote marsh creation.</p> <p>Mississippi River Diversion Project, LA. David prepared a hydraulic study to examine the feasibility of diverting freshwater from the Mississippi River, overland through the Bonnet Carré Spillway wetlands, for filtration prior to entering Lake Pontchartrain. He developed overland flow scheme, applied hydraulic modeling using HEC-2, prepared cost estimates, developed conceptual design, prepared report, and presented findings to the Technical Group of the Bonnet Carré Steering Committee and the New Orleans District Corps of Engineers.</p>

TEC Professional Services Questionnaire

United States Army Corps of Engineers Hurricane Protection Projects, LA. David prepared designs for multiple hurricane protection projects for the Corps under their accelerated program to restore protection to the City of New Orleans by 2011.

Hurricane Andrew East Timbalier Island Breach, LA. Unconfined hydraulic dredging operations were ineffective in repairing the breach of East Timbalier Island. David completed design report and prepared construction documents for closure of the breach with a rock dike to cut off tidal flows so that the dredged material could be placed.

Marvin J. Braud Pumping Station East Ascension Consolidated Drainage Board, LA. David prepared the design for the enlargement of all the bayous within the watershed of the Marvin J. Braud Pumping Station. The project encompassed one-third of the watershed of Ascension Parish.

Salinity Control Structures, LA. David furnished engineering planning and design services for multiple salinity control structures in coastal Louisiana including a sheet pile structure with 60-inch combination flap/slucice gate configuration near Hopedale, and offset rock dikes configured within Grand Bayou to choke tidal interchange.

Ascension Parish Drainage Improvements, LA. David served as technical advisor to the Ascension Parish Planning Commission to review and approve all subdivision, drainage, and development improvements within the Parish. He also prepared technical appeal of revised FEMA flood study and maps.

Sorrento Flood Protection, LA. David prepared the design for five miles of earthen levee to provide flood protection for the Town of Sorrento. The project included multiple drainage structures retrofits in wetland environments including two runs of 60" x 225' long culvert siphons installed by tunneling under ten existing gas pipelines.

Bonnabel Canal Drainage Improvement Project, Jefferson Parish, LA. This project involves planning and design for canal dredging, widening and bank stabilization to improve drainage through the Bonnabel Canal.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Mark Arnold, PE Mechanical Engineer
Project Assignment:
Senior Mechanical Engineer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
20 (37 Total)
Education: Degree(s)/Year/Specialization:
Bachelor of Science / 1982 / Mechanical Engineering
Active registration: Year first registered/discipline:
1989 / Mechanical & Environmental Engineer Louisiana 2013 / Mechanical Engineer Florida
Other experience and qualifications relevant to the proposed Project:
<p>Mark has 37 years of experience in engineering planning, design, and program management of public works projects with a focus on stormwater pump stations, wastewater pump stations, water purification plants and wastewater treatment plants. Prior to joining Ardurra, Mark was employed for 17 years by the Sewerage and Water Board of New Orleans. Relevant experience includes:</p> <p>Jefferson Parish Sewerage Capital Improvements Program, Jefferson Parish, LA. Mark serves as program manager for the Parish's Sewerage Capital Improvements Program. His responsibilities include management of design and construction schedules to keep projects on track; review of comments submitted by engineers; construction status updates for reporting and scheduling; and overall support to the Dept. of Sewerage Director. Mark managed the following Jefferson Parish projects:</p> <ul style="list-style-type: none"> — master design and construction plan for the \$500M parish wide I&I management plan — master plan for regionalization of future sewage pumping stations and the consolidation of existing redundant sewage pumping stations for the Westbank — design and construction of \$14M five MGD expansion to the Marrero WWTP including rehabilitation of existing headwork's facility and construction of new primary clarifier, secondary clarifier, and trickling filter — design and construction of new \$5.5M gravity sewer and water system along Harvey Canal industrial area <p>Sewerage & Water Board of New Orleans East Bank of New Orleans Municipal Water Treatment Plant, New Orleans, LA. Mark was responsible for review and coordination of design plans and specifications for the rehabilitation of a headwork's facility at the East Bank's 120 MGD WWTP. Work included rehabilitation of mechanically raked bar screens, screenings conveying, air diffuser system, grit pumping, washing and removal, valves, and piping.</p>

TEC Professional Services Questionnaire

Sewerage and Water Board of New Orleans Various Projects, New Orleans, LA (1984-2001). Mark was responsible for direction and supervision of the S&WB's mechanical engineering department; preparation and supervision of designs, plans and specifications of water, sewage and drainage pumping stations; review of contract submittals; coordination of projects with consulting engineering firms; administration of construction projects; hydraulic testing of pumps; and preparation of budgets for capital programs. Select projects include:

- preparation and supervision of design and review of technical submittals for the mechanical systems for two new 1,700 GPM sewage pumping stations
- preparation and supervision of design for a facility to dry vacuum truck collected sludge to allow for disposal
- review and coordination of design and specifications for rehabilitation of a trickling filter and construction of a primary and secondary clarifier at Westbank of New Orleans 40 MGD WWTP



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:
Bhuban Ghimire, PhD, PE Hydraulic Engineer
Project Assignment:
Hydraulic Engineer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
9 (22 Total)
Education: Degree(s)/Year/Specialization:
PhD / 2012 / Civil Engineering, Water Resources Master of Science / 2003 / Hydraulic Engineering Bachelor of Science / 1992 / Civil & Industrial Engineering
Active registration: Year first registered/discipline:
2012 / Professional Engineer Virginia 2015 / Civil Engineer Louisiana
Other experience and qualifications relevant to the proposed Project:
<p>Bhuban has 22 years of experience in engineering studies, planning and design for civil infrastructure projects throughout Louisiana. Relevant experience includes:</p> <p>Expanded Small Scale Physical Model (ESSPM) of Lower Mississippi River, LA. The ESSPM simulates sediment transport and diversions of the Lower Mississippi River and replaces the SSPM that Ardurra completed in 2003. The ESSPM is 90-feet by 120-feet. Bhuban developed plans for automatic control of sediment and water during model runs. He designed a data acquisition system and instrument control using Lab VIEW software from National Instruments.</p> <p>Water Resources Modeler, Feasibility Study to Upgrade Drainage and Pump Stations in the Bayou Segnette-Lake Cataouatche Watershed of Jefferson Parish, LA. Bhuban conducted an engineering feasibility study to upgrade drainage and pump Stations in the Bayou Segnette-Lake Cataouatche watershed of Jefferson Parish. He performed hydraulic and hydrologic analysis of the existing drainage deficiencies using EPA SWMM5 model and analyzed alternative improvements plans.</p> <p>Southeast Louisiana Urban Flood Control, LA. Bhuban converted updated HEC-HMS hydrologic and HEC-RAS hydraulic models for New Orleans East and New Orleans metro basins to US EPA SWMM dynamic rainfall-runoff models using PCSWMM. This effort was part of engineering and design support services for the development of O&M Manuals and related model updates for the Southeast Louisiana Urban Flood Control project. He reviewed and updated HEC-HMS models for New Orleans East Basin using South Regional Climate Center (SRCC97) rainfall data. He updated HEC-RAS model of the same basin by incorporating the improvements under Southeast Louisiana Urban Flood Control project.</p> <p>Water Resources Modeler, Comprehensive Stormwater Modeling in Jefferson Parish, LA. Bhuban</p>

TEC Professional Services Questionnaire

developed a comprehensive EPA SWMM5 model for Eastbank of Jefferson Parish that incorporated the latest FEMA Digital Flood Insurance Rate Map (DFIRM) model data, USACE Southeast Louisiana (SELA) Urban Flood Control Project improvements, and storm drainage infrastructure included in Jefferson Parish's GIS drainage database that is larger than 36 inches in diameter. He utilized high resolution LiDAR (Light Detection and Ranging) topographic data acquired for the USACE Hurricane Storm Damage Risk Reduction System (HSDRSS) to reflect surface features and storage, as well as new hydrology based on 2011 National Land Cover Database percent developed imperviousness data.

Water Resources Modeler, Conversion and Validation of Stormwater Models as Part of SELA UFC Engineering & Design Support Services, Orleans Parish, LA. Bhuban converted SELA HEC-HMS hydrologic and HEC-RAS hydraulic models to EPA Storm Water Management Model (SWMM) 5.0 for the following two Orleans Parish basins: New Orleans East Basin and New Orleans Metro Basin, as a part of SELA UFC Engineering & Design Support Services, Orleans Parish.

Water Resources Modeler, Model Review and Update of Orleans Parish, USACE New Orleans District, LA. Bhuban reviewed and updated HEC-HMS models for the New Orleans East Basin using South Regional Climate Center (SRCC97) rainfall data. He updated HEC-RAS models of the same basin by incorporating the improvements made under the Southeast Louisiana Urban Flood Control project.

Water Resources Modeler, Engineering and Economic Study of the Hoey's Basin Pump to the River Plan, Jefferson Parish, LA. Bhuban conducted hydrologic and hydraulic analyses of five alternative pump to the river plans for Hoey's Basin using HEC-RAS and HEC-HMS models.

Department of Water Induced Disaster Prevention and Department of Irrigation, Ministry of Water Resources, Nepal. Bhuban performed hydrologic and hydraulic analysis for various river flood control and channel improvement projects in Nepal. He designed and implemented flood control and channel improvement works in large and medium rivers, including a 20-km flood embankment, gabion dikes and spurs in Mahankali and Girubari Rivers. He also prepared detailed design drawings for flood control, flow diversion and canal work for ADB-funded Rajanpur Irrigation Project. He performed hydrologic and hydraulic analysis of the watershed.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ryan Ruiz, Resident Inspection/CADD Designer
Project Assignment:
Resident Inspection and CADD Designer
Name of Firm with which associated:
ARDURRA Group, Inc.
Years' experience with this Firm:
8 (24 Total)
Education: Degree(s)/Year/Specialization:
Bachelor of Science / 2006 / Information Technology Associate of Science / 2004 / Computer Network and Security Technology
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Ryan has 24 years of experience in construction inspection, debris monitoring and database management. He played a key role in Katrina cleanup and debris management efforts responsible for development of procedures, database management, map software training and debris monitoring of commercial and residential areas as well as monitoring at debris drop off locations. Project experience includes:</p> <p>Site Inspector, Bonnabel Canal Drainage Improvement Project, Jefferson Parish, Louisiana. This project involves planning and design for canal dredging, widening and bank stabilization to improve drainage through the Bonnabel Canal.</p> <p>Site Inspector, Lake Hermitage Marsh Creation Project, Plaquemines Parish, Louisiana. Ardurra was selected to furnish engineering planning, design, and construction phases services for this project. Construction Restoration</p> <p>Resident Inspector, Gretna Boat Launch on the Mississippi River Project, Jefferson Parish, Louisiana. Resident Inspector responsible for daily site inspections. Project entails driving pipe piles, concrete pile cap formations, steel girder installations, and electrical component relocation and installations. Work includes issuing daily reports, conduct Davis Bacon payroll interviews, coordinate with Kostmayer Construction on any project operation issues that may deviate from the contract plans and specifications, and review invoices and payment applications.</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
William “Billy” Blackwell Construction Manager
Project Assignment:
Construction Manager
Name of Firm with which associated:
<i>ARDURRA Group, Inc.</i>
Years’ experience with this Firm:
39 (59 Total)
Education: Degree(s)/Year/Specialization:
Multiple CM/I Certifications
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Billy’s successful career working in both the engineering consulting and construction fields has made him an invaluable team member. He supervises all Ardurra’s construction work and resident inspectors. He is certified as a class IV sewer plant operator with the Louisiana Department of Health & Human Resources, holds a wastewater collection systems class III and water distribution class IV, and is a licensed electrician. Billy has extensive experience in both the design and construction of major drainage pumping stations. He collaborated in the design and supervised the construction of Cousins Pumping Station in Jefferson Parish. Relevant experience includes:</p> <p>Jefferson Parish Replacement and Point Repair of Sewer Mains, Jefferson Parish, LA. This project consisted of the development of specifications and standard plans for construction, to be bid on an annual basis, for the replacement and point repair of sewer mains throughout Jefferson Parish. Billy assisted in development of contract documents and was responsible for coordinating the functions of contractor crews, field inspection personnel and Jefferson Parish Department of Sewerage personnel.</p> <p>Jefferson Parish Sewerage Improvements South New Orleans Subdivision, Jefferson Parish, LA. Billy served as project manager for the construction of 25,000 LF of gravity main sewer line, three lift stations and 4,500 LF of force mains and manholes. Work included restoration of concrete and asphalt roadway, driveways and sidewalks, dewatering, waterline relocations, connecting 9,900 LF of house service liner, and relocation of fire hydrants and miscellaneous hidden infrastructure.</p> <p>Jefferson Parish Manhattan Boulevard Phases I and II, SP No 742-01-41, FAP No. 86199004, Jefferson Parish, LA. Billy was responsible for daily supervision of contractor operations and the inspection and testing for construction of this major four-lane arterial roadway. Work included verification and recording of all pay quantities to LDOTD standards and the preparation and negotiation of change orders.</p>

TEC Professional Services Questionnaire

Jefferson Parish Various Roadway and Bridge Projects, Jefferson Parish, LA. Billy was responsible for daily supervision of contractor activities and inspection laboratory on roadway and bridge projects in Jefferson Parish. Projects included multi-span bridge structures for Vintage Drive crossing the Duncan Canal and Canal No. 17; type II AASHTO girder structures on Breaux Street crossing Convent Canal and Patriot Street crossing Canal A.

Jefferson Parish Cousins Pumping Station, Jefferson Parish, LA. Billy served as project engineer for the construction of this \$7.3M drainage pumping station. Duties included interpretation of plans and specifications and verification of installation tolerances on mechanical equipment.

Jefferson Parish Westbank and Eastbank Sewerage Mini Systems, Jefferson Parish, LA. Billy was instrumental in the design of these two systems including evaluation of existing sewerage lift stations, I&I investigations and design of new pump and control systems.



TEC Professional Services Questionnaire

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

PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:						
<p>Drainage Capital Improvement Program / SELA Program</p> <p>Jefferson Parish Department of Public Works 1221 Elmwood Park Blvd., Suite 906 Jefferson, LA 70123</p> <p>Neil Schneider 504.736.6833</p>	<p>Several large rainfall events from 1970's through early 1990's caused over \$1B in damages. As a result, the Federal government authorized and funded the SELA program – the first federally funded urban drainage program. Ardurra was hired as the program managers at program inception in 1994 to develop and implement the program activities to accomplish this task include, but are not limited to the following:</p> <ul style="list-style-type: none"> — Coordination and review of Reconnaissance, Feasibility and 533(d) Engineering Report and Environmental Information Document to obtain Federal and Statewide Flood Control (SFC) Funding. — Coordinate and oversee land acquisition and utility modifications. — Develop and execute engineering and construction contracts on behalf of Jefferson Parish. — Represent Jefferson Parish in meetings with USACE, CPRA, utility companies, and private landowners. — Coordinate OMRR&R Manual preparation for program. — Develop, implement, and execute \$8M Jefferson Parish annual Drainage Capital Improvement budgets and schedules for the SELA and SFC programs. 						
Completion Date (Actual or estimated):	Estimated Cost:						
	<table> <tr> <th style="text-align: center;">Entire Project:</th><th style="text-align: center;">Work for which Firm was Responsible:</th></tr> <tr> <td style="text-align: center;">Ongoing</td><td> <table> <tr> <td style="text-align: center;">\$1,320/year (fee)</td><td style="text-align: center;">100%</td></tr> </table> </td></tr> </table>	Entire Project:	Work for which Firm was Responsible:	Ongoing	<table> <tr> <td style="text-align: center;">\$1,320/year (fee)</td><td style="text-align: center;">100%</td></tr> </table>	\$1,320/year (fee)	100%
Entire Project:	Work for which Firm was Responsible:						
Ongoing	<table> <tr> <td style="text-align: center;">\$1,320/year (fee)</td><td style="text-align: center;">100%</td></tr> </table>	\$1,320/year (fee)	100%				
\$1,320/year (fee)	100%						

PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:						
<p>Drainage Improvements to Bonabel Canal</p> <p>Jefferson Parish Department of Public Works 1221 Elmwood Park Blvd., Suite 907 Jefferson, LA 70123</p> <p>Mitchell T. Theriot 504.736.6851</p>	<p>This project involves planning and design for canal dredging, widening and bank stabilization to improve drainage through the Bonabel Canal. Ardurra prepared an engineering alternative report to evaluate various alternatives for improvements to Bonabel Canal; prepared preliminary design and cost estimates to evaluate various alternatives; and prepared plans and specifications for the selected alternative. Alternatives included full u-shaped concrete flume; concrete flume with low walls and upper banks slope paved; concrete lined trapezoidal section; and sheet pile with rock lined side slopes. Ardurra followed up with complete plans and specifications for a reach of the canal.</p>						
Completion Date (Actual or estimated):	Estimated Cost:						
	<table> <tr> <th style="text-align: center;">Entire Project:</th><th style="text-align: center;">Work for which Firm was Responsible:</th></tr> <tr> <td style="text-align: center;">2020</td><td> <table> <tr> <td style="text-align: center;">\$717K</td><td style="text-align: center;">100%</td></tr> </table> </td></tr> </table>	Entire Project:	Work for which Firm was Responsible:	2020	<table> <tr> <td style="text-align: center;">\$717K</td><td style="text-align: center;">100%</td></tr> </table>	\$717K	100%
Entire Project:	Work for which Firm was Responsible:						
2020	<table> <tr> <td style="text-align: center;">\$717K</td><td style="text-align: center;">100%</td></tr> </table>	\$717K	100%				
\$717K	100%						

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
<p>Hoey's Basin Pump to the River</p> <p style="text-align: center;">Jefferson Parish Department of Public Works 1221 Elmwood Park Blvd., Suite 907 Jefferson Parish, LA 70123</p> <p style="text-align: center;">Mitchell T. Theriot, PE 504.736.6851</p>	<p>Ardurra developed a plan to divert 1400cfs to 1600cfs from the Hoey's Canal at a location near Iris Avenue where it crosses Jefferson Highway to make up for the deficit reduction (9,480cfs-7,800cfs) at Drainage Pump Station No. 6. At this location a pump station would be constructed and 5,500 linear feet of triple 84" steel discharge pipes laid to discharge into the Mississippi River. The steel pipes would be laid above ground as much as possible. The crossings of Jefferson Hwy. and River Road would be aerial crossings to reduce construction costs. This plan would use vacant land along a railroad for the construction of the discharge lines. The benefits would be experienced in both Jefferson Parish and Orleans Parish because the new station would relieve flooding in Hoey's Basin and reduce the inflow to Drainage Pump Station No. 6 on a permanent basis. The estimated construction cost for this second diversion project is \$50M to \$55M and with contingencies, engineering, construction administration and supervision the project cost increases to \$70M.</p>	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2013	\$70M (estimated construction)	100%

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>USACE Fronting Protection Bonabel and Suburban Pumping Stations</p> <p style="text-align: center;">U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118</p> <p style="text-align: center;">Darryl Bonura, PE 504.862.2653</p>	<p>Ardurra prepared a design report and subsequent plans and specifications for fronting protection across the entire width of the discharge areas of the Bonabel and Suburban Pump Stations. The design consists of a combination of gate monoliths and T-wall monoliths, including positive cutoff gates to include sluice gates and butterfly valves. Tie-in floodwalls were designed to connect the new fronting protection to the existing levee sections on each side of the pump stations. The design of floodwalls utilized new guidelines established post Hurricane Katrina. Ardurra evaluated the benefits of providing a breakwater at the Bonabel Pump Station. Ardurra subsequently prepared the structural design and plans and specifications for a new breakwater at the station. Ardurra also provided construction phase services including construction oversight.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2008	\$160M	100%

TEC Professional Services Questionnaire

PROJECT NO. 5

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>USACE West Closure Complex Gulf Intracoastal Waterway</p> <p>U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118</p> <p>Nancy Powell, PE 504.862.2449</p>	<p>Ardurra developed hydraulic design requirements for intake and discharge basins for large drainage pumping stations located at the West Closure Complex. Ardurra was responsible for the development of basic intake and discharge basin design as well as design criteria for four large drainage pump stations - 12,000, 16,000, 20,000 or 25,000 cfs which would constitute the largest known capacities in the US, Canada and possibly the world. To accomplish this task on a fast-track schedule, the design had to include all necessary geometry to proceed to a 2D hydro-dynamic model to best determine approach velocities and possible flow separation problems that could affect hydraulics at the pumps. The basis for design was EM-1110-2-3102 and EM-1110-2-3105.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2008	\$1B (estimated construction)	100%

PROJECT NO. 6

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Harahan Pump to the River Feasibility Study</p> <p>Jefferson Parish Department of Public Works 1221 Elmwood Park Blvd., Suite 907 Jefferson Parish, LA 70123</p> <p>Neil Schneider, PE 504.736-6833</p>	<p>Ardurra performed civil, mechanical, and hydraulic engineering analysis of an urban flood control plan for the Harahan, River Ridge Community in Jefferson Parish. The region includes an inflow channel, three high-head vertical lift pumps, 9,000 feet of force mains/pipes, an MR&T Levee crossing, and a discharge basin at the Mississippi Riverbank. Ardurra prepared feasibility level design for a 1,200 cfs pumping station to include a shelter building, overhead crane system, suction basin, trash screens, discharge pipes, dry weather pumps, and prepared real estate drawings, discharge pipe routes, layout, cost estimates and technical report. The hydraulic and hydrologic analysis included computing of runoff volume, inflow characteristics, stage lowering's achieved, velocities of approach at confluences, pipe losses, pumping rates required, storage routing with and without the project in-place, and priming rate of flow. Ardurra also performed a two-dimensional flow analysis of inflow to suction basin in order to best locate the suction canal. The civil analysis included a cost analysis, geotechnical analysis, influence zones, structural analysis, and concrete design. The mechanical analysis included pump selection, system curve analysis, horsepower requirements, day-tank sizes, siphonic recovery, pipe sizing, dry-weather pumps, start-up valve selection and automation.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2008	\$300K	100%

TEC Professional Services Questionnaire

PROJECT NO. 7

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
USACE Temporary Closure Structures and Pump Stations Orleans and London Outfall Canals U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118 Jim St. Germain 504.862.2499	Ardurra designed temporary sluice gated structures and pumping capacity at the Orleans and London outfall canals in Orleans Parish to protect against backflow from hurricane surges from Lake Pontchartrain and from rainfall drainage flooding in the City of New Orleans when gates were temporarily closed to protect the City. In order to supply the proper number of pumps and prime movers, Ardurra modeled the entire interior drainage system in Orleans Parish west of the Industrial Canal and forecasted any adverse impacts related to flood potential if insufficient pumping was provided. Ardurra carried out structural design of gates, pump platforms, pump discharge piping and fuel storage systems. Ardurra selected the type, size, spacing and number of pumps required to meet the needs of each canal and furnished construction inspection and supervision services.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2007	\$575K	100%

PROJECT NO. 8

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Sewerage & Water Board of New Orleans Master Drainage Plans New Orleans, Louisiana Sewerage & Water Board of New Orleans 625 St. Joseph Street New Orleans, LA 70165 Ron Spooner 504.865.0411	Ardurra prepared a detailed Master Drainage Report of the Uptown, Holly Grove and Carrollton water sheds that are tributary to Drainage Pump Stations 1 and 6. The Project was carried out in four phases: Phase I Data Collection. Ardurra obtained the surface drainage "unit" sheets from SWB, ground surface elevation data from LIDAR data, and GIS maps available from LSU for the purpose of creating a surface water model of Drainage Pump Station Nos. 1 and 6. Phase II Model Development. Reviewed availability of several unsteady flow surface water modeling systems. Selected a model system and constructed both a Hydrologic & Hydraulic Module for the purpose of evaluating existing drainage system and future drainage system improvements. Using historical rainfall data for the May 8 and 9, 1995 flood, and pumping station operating logs, calibrated the modeling system to the water shed characteristics. Phase III Evaluated Current Drainage and Tested Solutions. Using the calibrated model to develop existing conditions, flagged all deficiencies in the watershed and tested alternative channel improvements on Palmetto, Monticello, and Claiborne Avenue Channels and Canals, and Audubon St. Selected several neighborhood street drainage systems in uptown area, i.e., Galvez & Prytania & evaluated the system. Applied larger pipe sizes to inadequate systems and developed unit costs for improvements. Phase IV Documentation. Summarized all activities carried out during study prosecution in a Master Drainage Report. Presented existing conditions overflow maps and maps with improvements, and costs and design drawings, and comparative water surface profiles on major culvert/canals with and without improvements. Made recommendations, prioritized sequence of construction, and outlined a funding stream to carry out the plan.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2005	\$1.1M	100%

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>USACE Hurricane Katrina Related Projects</p> <p>U.S. Army Corps of Engineers New Orleans District 7400 Leake Avenue New Orleans, LA 70118</p> <p>Carl Balint, PE 504.862.2706</p>	<p>Ardurra provided professional engineering services for several projects related to restoration of damages resulting from Hurricane Katrina. A listing of these services follows:</p> <ul style="list-style-type: none"> — Bayous Bienvenue & Dupre Control Structures — IHNC Floodwall Breaches — London Avenue & Orleans Avenue Outfall Canals — Levee/Floodwall Assessment for the Westbank — Bonnabel & Duncan Pump Stations — Louisiana Coastal Protection & Restoration Study — Hydraulic Analyses of Pumping Capacity at the 17th Street London/Orleans Outfall Canals 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2006	\$100M	100%

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Fisher School Basin Flood Protection Project</p> <p>Lafitte Area Independent Levee District 2654 Jean Lafitte Blvd. Lafitte, LA 70067</p> <p>Mayor Tim Kerner 504.689.2208</p>	<p>Ardurra prepared Design Reports and plans and specifications to construct floodgates, floodwalls, and levees to provide flood protection for the Fisher School Basin of the City of Lafitte, Louisiana. The project consists of approximately 15,500 linear feet of flood protection features. Design consisted of surveying and mapping the project site, incorporating relocation data into the design documentation and plans, accurately locating the final alignment of the various flood protection features, determining the right-of-way requirements and traffic detour plans, determining the construction sequence, locations of disposal and borrow areas and preparation of construction cost estimates. The structural features of the projects included pile founded T-walls, cantilever pile I-walls, swing gates, bottom roller gates, pedestrian gates, and bulkheads. Ardurra is also responsible for providing engineering support during advertisement and construction.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020	\$2.7M	100%

TEC Professional Services Questionnaire

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

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

TEC Professional Services Questionnaire

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

ABOUT ARDURRA GROUP, INC.

Headquartered in Metairie, Ardurra has been providing engineering services throughout Louisiana since 1987. The firm has developed an expertise in civil works projects - specifically drainage, flood control, sewer, water, wastewater, and streets for local public agencies. In this regard, Ardurra's staff of over 350 professional and technical personnel have completed in excess of \$2B in assessment, design, development of O&M manuals, construction management and program management of related facilities in the region.

1. PROFESSIONAL TRAINING & EXPERIENCE

Ardurra has carefully crafted a team of seasoned professionals with the experience and capabilities to lead a successful project. Proposed personnel have been extensively involved in the hydraulic modeling of numerous drainage basins in Jefferson and Orleans Parishes. Notable experience includes hydraulic design of the Harahan Pump to the River project involving pumping 1,200 cfs through over 8,700 LF of triple pressure pipes, hydraulic design for City of New Orleans master drainage plan, and urban flood control projects for Jefferson Parish involving feasibility studies for canal and roadway drainage. Key personnel:

Gerald Preau, PE, Senior Civil Engineer

- 43 years of experience in civil engineering planning, design, and construction
- worked with S&WB for 15 years overseeing all aspects of drainage, sewerage, and water projects
- program manager for Sewerage & Water Board (S&WB) of New Orleans SELA and SSERP, two of the largest S&WB programs prior to Hurricane Katrina

Adam Faschan, PhD, PE, Senior Civil & Environmental Engineer

- 36 years of experience in assessment and design of drainage, water, sewer, and wastewater treatment facilities
- held senior technical and oversight roles for infrastructure design projects at the largest water and wastewater treatment facilities in LA and MS
- implemented hazard mitigation for a variety of water and wastewater infrastructure
- led third party damage assessments of the S&WB's entire infrastructure post-Katrina

David Dodgen, PE, Senior Civil Engineer

- 34 years of experience in drainage, water, sewer and street planning, design, and construction oversight
- key role in drainage projects in Jefferson Parish and improvements to Bonnell Canal
- technical advisor to Ascension Parish Planning Commission for drainage projects
- planned and designed enlargement of all bayous without the Marvin Braud Pumping Station for the East Ascension Consolidated Drainage Board

Mark Arnold, PE, Senior Mechanical Engineer

- 37 years of experience in assessment and design of local drainage, water, and wastewater facilities
- served as program manager for the Jefferson Parish Sewer CIP
- managed the design and construction of Jefferson Parish's \$500M I&I plan, \$14M five MGD expansion to Marrero WWTP, new \$5.5M gravity sewer and water system along the Harvey

TEC Professional Services Questionnaire

Canal Industrial area; and prepared a master plan for consolidation of sewage pumping stations on the Westbank

- employed by S&WB for 17 years where he managed mechanical engineering department

Bhuban Ghimire, PhD, PE, Hydraulic Engineer

- 22 years of experience in engineering studies, planning and design for civil infrastructure projects
- developed plans for automatic control of sediment and water during model runs
- designed a data acquisition system and instrument control using Lab VIEW software from National Instruments
- Bhuban converted updated HEC-HMS hydrologic and HEC-RAS hydraulic models for New Orleans East and New Orleans metro basins to US EPA SWMM dynamic rainfall-runoff models using PCSWMM

Billy Blackwell, Construction Manager

- 59 years of construction related experience and cost estimating experience in southeast Louisiana
- extensive experience in the construction of roadway, water, sewer, and drainage projects in Jefferson Parish

EDUCATION & EXPERTISE OF PROPOSED STAFF

Name	Years of Exp	Education	Expertise	Jefferson Parish Experience
Ann Springston Shires, PE	39	BS in Civil Engineering	Program Management, Water, Sewer, Drainage	Yes
Joseph Becker, PE, CSM	34	BS in Civil Engineering	Program Management, Water, WW, Sewer, Hazard Mitigation	Yes
Adam Faschan, PE	36	PhD, MS & BS in Civil Engineering	Water, WW, Hazard Mitigation	Yes
Gerald Preau, PE	43	MS & BS in Civil Engineering	Roadway, Drainage, Sewer, Water	Yes
David Dodgen, PE	34	BS in Civil Engineering	Drainage, Water, Sewer, WW	Yes
Mark Arnold, PE	37	BS in Mechanical Engineering	Drainage, Water, Sewer, Pump Stations, Process Engineering	Yes
Bhuban Ghimire, PE	22	PhD, MS & BS in Civil Engineering	Hydrology, Hydraulics, Modeling	Yes
Ryan Ruiz	24	AutoCAD 1, 2, 3 & 12 Upgrade	Roadway, Drainage, Sewer, Water, WW, Streets, Inspection	Yes
Billy Blackwell	59	Multiple CM/I Certifications	Roadway, Construction, O&M	Yes

TEC Professional Services Questionnaire

2. CAPACITY FOR TIMELY COMPLETION OF NEWLY ASSIGNED WORK

Ardurra's professional, technical, construction and support personnel proposed for Jefferson Parish projects are currently available and mobilized to begin work. Ardurra has multiple contracts that are in the final stages of completion, which makes available several professional and construction personnel. Ardurra's significant newly assigned work includes disaster recovery work, which draws upon a different skillset than required for Jefferson Parish routine engineering services. Ardurra's track record with Jefferson Parish projects is a testament to our project managers' and professional staff's ability to deliver projects on time and within budget.

3. LOCATION OF PRINCIPAL OFFICE WHERE WORK WILL BE PERFORMED

All work will be completed in Ardurra's office located at **3012 26th Street, Metairie Louisiana 70002 in Jefferson Parish.**

4. ADVERSARIAL LEGAL PROCEEDINGS BETWEEN THE PARISH & THE FIRM

Ardurra is not involved in any current, or previous legal proceedings with Jefferson Parish.

5. PRIOR SUCCESSFUL COMPLETION OF PROJECTS OF THE TYPE AND NATURE OF ROUTINE ENGINEERING SERVICES

Ardurra has provided program management services to Jefferson Parish for the \$52M CIP, which includes routine engineering services related to drainage and flood control. These services were expanded to include program management for the federally funded and cost shared Southeast Louisiana Flood Control Program. Since 1997 the program has invested \$500M in drainage improvements for which Ardurra has led the interface with the United States Army Corps of Engineers (USACE). Other routine engineering services contracts and similar projects include:

Project	Description	Client Reference
USACE New Orleans District Hurricane Katrina Flood Protection Projects	Design of floodwalls along Inner Harbor Navigation Canal, design of control structures for Bayous Bienvenue and Dupre, and design of temporary closure structures at several outfall canals	Chris Dunn, 504.862.1799
USACE New Orleans District West Esplanade Ave Crossing of Elmwood Canal	Preliminary and final design as well as construction supervision of this canal crossing	Chris Dunn, 504.862.1799
Ascension Parish \$63M Sewer Capital Program	Part of program management team, design and construction oversight for WWTP improvements	Bill Roux, 225.450.1340
South Florida Water Management District S-5A Pump Station Refurbishment	Design report for feasibility of modernization of existing horizontal drainage pumps and their driver machinery and automation of station operations at this pumping station. Design and construction oversight for refurbishment of pumping station	Richard Virgil, 561.682.6759

TEC Professional Services Questionnaire

6. SIZE OF FIRM

Ardurra has ample manpower, professional qualifications, and direct and relevant experience to furnish Jefferson Parish with routine engineering tasks to include project evaluation, design, drafting of technical plans, development of technical specifications and construction administration. Nationwide, Ardurra has 900+ staff in 48 offices which includes the following staff by discipline:

Discipline	# Staff
Administration, Accounting, CADD, Drafting, Designers, IT, HR	204
Civil Engineers	194
Structural Engineers	12
Environmental Engineers	18
Mechanical Engineers	2
Engineering Interns & Engineers in Training	76
Project Managers	81
Environmental Professionals & Scientists	21
Ecologists	4
Landscape Architects	6
Land Surveyors	95
Grant Fund / Disaster Recovery Specialists	28
Construction Managers & Inspectors	104
Other	82
Total	927

7. PAST PERFORMANCE ON PARISH CONTRACTS

For 44 years, Ardurra has been providing engineering services within the metropolitan area to include multiple Parishes, the Sewerage & Water Board of New Orleans, and the city of New Orleans Public Works Department. Ardurra has successfully completed more than 20 projects for Jefferson Parish and is currently furnishing program management services for Jefferson Parish's Drainage \$1B CIP/ SELA program. Other recent Jefferson Parish work includes drainage improvements to Bonabel Canal and Hoey's Pump to the River Economic Study. In each case, Ardurra completed projects on time, without cost overruns, and without design inadequacies. Ardurra has delivered multiple projects efficiently and within expectations. Ardurra personnel have not been held at fault for errors or omissions on previous projects.

Some of Ardurra's Jefferson Parish projects include:

- Power Boulevard Phase I West Esplanade Avenue to Vintage Drive
- Power Boulevard Phase II I-10 to West Esplanade Avenue
- West Esplanade Avenue at Houma Boulevard
- Drainage Improvements Suburban Canal Veterans Blvd. to West Esplanade Avenue
- Drainage Improvements Huey P. Long Bridge Westbank Traffic Circle
- Cousins Pumping Station Addition

TEC Professional Services Questionnaire

- Intersection Improvements Clearview Parkway/West Metairie Avenue
- Manhattan Boulevard Phase I Gretna Boulevard to Lapalco Boulevard
- Manhattan Boulevard Phase II West Bank Expwy. to Gretna Boulevard



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

Signature: Joseph R. Becker **Print Name:** Joseph R. Becker, PE

Title: Client Service Manager **Date:** March 30, 2022



www.ardurra.com