



Barowka and Bonura
Engineers and Consultants, L.L.C.

COASTAL ENGINEERING CONSULTING SERVICES

Resolution No.: 144205

SOQ No. 24-020

**Deadline: Tuesday, July 16, 2024
at 3:30 PM**

Barowka and Bonura Engineers and Consultants, L.L.C.
209 Canal Street
Metairie, Louisiana 70005

Jeffrey Bonura, P.E., Sole Member
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Collaborate. Innovate. Implement.

July 16, 2024

Jefferson Parish Purchasing Department
c/o Mr. Mark BATTERY, Purchasing Specialist II
General Government Building
200 Derbigny Street, Suite 4400
Gretna, LA 70053

SUBJECT: Coastal Engineering Consulting Services (Resolution No. 144205)

Dear Mr. BATTERY:

Barowka and Bonura Engineers and Consultants, L.L.C. (BBEC) appreciates the opportunity to submit this Statement of Qualifications (SOQ) to provide Coastal Engineering Consulting Services for Jefferson Parish (Resolution No. 144205).

BBEC is an engineering consulting firm specializing in coastal engineering, program management, grant management and compliance, civil engineering design and construction management, project management, and computer consulting services. Our experience includes managing various public works projects through construction and ensuring that a quality project is completed on time, within budget, while minimizing disruption to the surrounding public.

As evidenced in the attached SOQ, BBEC is prepared to perform the following services:

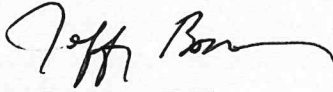
- Marsh and ridge restoration
- Shoreline stabilization and Protection
- Beneficial use of dredge material
- Living shoreline design
- Hydrologic and hydraulic modeling
- Design Analysis and reports
- Biological and environmental assessments of wetlands
- Technical evaluations
- Cost estimates
- Opinions of probable construction cost and field investigations
- Coastal grant writing
- Outreach and educational support
- Development of associated marketing materials

We have extensive knowledge of Geographic Information Systems (GIS), and their use with engineering planning, design, and implementation projects, and to display information retained in the document management system.

**Barowka and Bonura
Engineers and Consultants, L.L.C.**

Once again, we sincerely appreciate the opportunity to submit this Statement of Qualifications to Jefferson Parish, and we look forward to serving you.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jeff Bonura", with a long horizontal flourish extending to the right.

Jeffrey Bonura, P.E.
Sole Member

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Coastal Engineering Consulting Services (Resolution # 144205)

B. Firm Name & Address:

**Barowka and Bonura Engineers and Consultants, L.L.C.
209 Canal Street, Metairie, LA 70005**

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:

**Jeffrey A. Bonura, P.E.
Sole Member
Office: (504) 828-0030
Fax: (504) 828-8006
Email: jbonura@bbecllc.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.

**Jeffrey A. Bonura, P.E.
Sole Member
Office: (504) 828-0030
Fax: (504) 828-8006
Email: jbonura@bbecllc.com**

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

<u>5</u> Administrative	<u>0</u> Estimators	<u>0</u> Specification Writers
<u>0</u> Architects (Licensed)	<u>0</u> Geologists	<u>2</u> Structural Engineers
<u>0</u> Chemical Engineers	<u>0</u> Geotechnical Engineers	<u>1</u> Graduate Engineers
<u>4</u> Civil Engineers	<u>0</u> Interior Designers	<u>2</u> Project Managers
<u>1</u> Construction Inspectors	<u>0</u> Landscape Architects	<u>2</u> Clerical
<u>0</u> Ecologists	<u>0</u> Land Surveyor	<u>4</u> Grant/Funding Specialist
<u>1</u> Electrical Engineers	<u>0</u> Mechanical Engineers	<u>0</u> Sanitary Engineers
<u>1</u> Engineer Intern	<u>0</u> Environmental Engineers	<u>3</u> Drafters
<u>0</u> Professional Land Surveyors		
		<u>26</u> TOTAL

F. Is this submittal by a JOINT-VENTURE? Please check: YES ☐ NO ☒
If marked "No" skip to Section I. If marked "yes" complete Sections G-H.

TEC Professional Services Questionnaire

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

1. N/A

2. N/A

**H. Has this JOINT-VENTURE previously worked together? Please check: N/A
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. BBEC will obtain prior approval from the Parish before utilizing a subconsultant should one be deemed necessary. Further, we will work with any sub-consultant or support consultant assigned to us for a specific project.		
2.		
3.		

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

22

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:

**Jeffrey Bonura, P.E.
Sole Member**

Project Assignment:

Supervising Professional / Project Manager

Name of Firm with which associated:



**Barowka and Bonura
Engineers and Consultants, L.L.C.**

Years' experience with this Firm:

27

Education: Degree(s)/Year/Specialization:

B.S. / 1991 / Civil Engineering

Active registration: Year first registered/discipline:

1995 / Civil

Other experience and qualifications relevant to the proposed Project:

Mr. Bonura's experience includes working on various coastal projects or public works projects in or in the vicinity of marsh and other wetlands areas in southeast Louisiana, primarily in Jefferson, Plaquemines, and St. Bernard Parishes. Mr. Bonura worked on levee projects and floodwall projects in marsh areas and along the Mississippi River, he's managed debris removal operations in marsh areas, he designed water, sewer, drainage, and roadway projects in the various coastal parishes, and addressed the necessary environmental permits for the projects. Mr. Bonura also has extensive experience with hydraulic and hydrologic modeling of large drainage basins and major projects utilizing databases for support, analysis, and record storage.

Mr. Bonura has performed engineering services for over **\$200 million in Public Works projects** including coastal. His responsibilities include work plan preparation, budgeting, cost control, and monitoring, team supervision, engineering design, permitting and construction management. Mr. Bonura's grant management experience includes project formulation, cost estimation, fund accounting, and pursuit of a broad range of federally funded grants.

TEC Professional Services Questionnaire

Projects with detailed descriptions of work are provided below:

Northshore Living Shorelines, St. Tammany Parish, LA, 01/2022 - present

Mr. Bonura is serving as the Supervising Engineer for this project which consists of conducting a feasibility study and preliminary design of an approximately 2-mile-long living shoreline structure in Lake Pontchartrain off the coast of Goose Point, a cape located at the edge of Big Branch Marsh National Wildlife Refuge in St. Tammany Parish. The feasibility study included a biological/ecological study to identify submerged aquatic vegetation (SAV) and other fauna present in the project area, identifying critical engineering data gaps and information needed to further the project into the funding phase, evaluating options for material type/size and deployment of the protective structures, and identifying permits required for the implementation of the project. He oversaw the researched materials and deployment methods for the living shoreline structure, compiling of the research that subconsultants provided during the feasibility study, the drafting of the feasibility report presenting the information, and the design of the living shoreline structure cross section based on input from the client and the determination of the optimal alignment of the structure that will promote biological growth in the project area while also protecting the shoreline

Barataria Basin Barrier Island Shoreline Restoration Study at Caminada Headland, Project No. 2503-05-49, Lafourche Parish, LA, 2005-2007

Mr. Bonura served as BBEC officer in charge over the project and provided quality assurance review of deliverables and provided guidance to the project engineer on the project. The project was part of a feasibility level engineering and design effort to develop a plan to restore and/or protect the natural barrier island system and thereby create a sustainable ecosystem in the Barataria Basin. BBEC managed a surveying firm and a geotechnical firm in the performance of a geotechnical investigation to assess the subsurface conditions of the beach and the marsh in the project area so that the design of earthen containment levees and fill areas could be completed. BBEC coordinated the work of the surveyor and geotechnical engineer with the landowner and LDNR to ensure that the concerns of all parties were addressed and that the required data was generated to facilitate the final design of the marsh creation project.

Braithwaite to White Ditch Levee Improvements, Public Project No. 09-01-04A, 09-01-04D, Plaquemines Parish, LA, 2012-2018

Mr. Bonura served as Project Manager for the inspection of this project which consisted of clearing and grubbing, earthen levee degrading to +2', Installation of high strength geotextile fabric, install of levee embankment at a 1 on 3 slope to a +12.5', Steel sheet pile driving, and construction of an aggregate roadway to access the project.

Dedicated Dredging on the Barataria Basin Landbridge, Project No. 2503-08-34, Jefferson Parish, LA, 2008-2010

Mr. Bonura served as BBEC officer in charge over the project and provided quality assurance review of deliverables and provided guidance to the project engineer on the project. The project consisted of constructing and maintaining containment dikes for two designated fill areas, and then pumping dredged material from designated and permitted borrow areas into the fill areas for approximately 2,800 acres of marsh creation and nourishment. The project was located in Jefferson Parish, along the southeastern shoreline of Bayou Rigolettes and Bayou Perot on either side of the Harvey Cut, approximately 2 miles south of the town of Lafitte. BBEC performed Construction Administration and Construction Inspection services including conducting progress meetings, reviewing pay applications, preparing progress reports, coordinating submittal review and change order development, and monitoring the progress of the work to ensure compliance with the project plans and specifications.

West Bank Water Treatment Plant Raw Water Intake Levee Crossing, Jefferson Parish, LA, 1991

Mr. Bonura designed and managed through construction the Gretna Raw Water Intake and Sludge Discharge Levee Crossing project for the West Bank Water Treatment Plant, prepared all permits, plans, and specifications

TEC Professional Services Questionnaire

required for the project and aided the Parish in securing federal funding for a portion of the work. The project consisted of a levee crossing for 36-inch, 24-inch, and 10-inch diameter pipe, a vacuum system for priming raw water intake pumps, and lining an existing raw water line with a cast-in-place pipe liner. The levee crossing consisted of installing steel sheet piles at the core of the levee, installing sleeves through the steel sheet piles for the pipe to penetrate the levee, perform the necessary earthwork on the levee per USACE standards, the installation of concrete pipe supports, and to finish the river side surface with sloped paving. All work was coordinated with an on-going sloped-paving project performed under the USACE that was occurring on both sides of the project.

During the construction phase of the project, the existing 24-inch raw water pipe was found to be severely corroded and required replacement or rehabilitation. Mr. Bonura evaluated the options, including the applicability of CIPP lining of portable water mains, and designed a CIPP system to rehabilitate the existing 24-inch pipe through a series of bends under a state highway and connecting to flanged fittings on both ends.

Reggio Canal Flood and Erosion Protection, St. Bernard Parish, LA, 2006

The project consisted of structural design of the steel sheet pile bulkhead wall and tieback systems, design of drainage systems, connection and coordination with a levee project adjacent to the proposed bulkhead, maintenance dredging of the existing canal, utility relocations, roadway and other site restoration, traffic maintenance, and all incidental work. Mr. Bonura performed all phases of the project, including design of bulkhead and drainage system, construction supervision throughout the project and coordination with local and state agencies for disposal of spoil. Mr. Bonura supervised and worked with an engineering intern in all design aspects of the project.

Ring Levee Improvements, St. Bernard Parish, LA, 2003-2005

Mr. Bonura served as Project Engineer assisting St. Bernard Parish in identifying low segments of their existing levees for approximately 12 miles of Parish-maintained levees. BBEC utilized existing aerial photographs and GPS elevations obtained from a surveyor to determine the low areas as compared to the permitted levee. BBEC provided the Parish with cross sections, fill estimates, and construction details to repair the settled levees. St. Bernard Parish repaired the levees themselves.

Evaluation of Using Sunken Vessels for the Reduction of Storm Surge in the Mississippi River Gulf Outlet, Project No. 2503-05-04, 2006

The purpose of the project was to evaluate the feasibility of sinking ships to create a closure of the Mississippi River Gulf Outlet. The use of ships for closure was proposed as a near-term, temporary means for closing the channel in preparation for hurricane season until the construction of a long-term closure is completed. BBEC investigated the requirements for such a closure project including ship acquisition, ship remediation/ environmental considerations, the longevity of the closure, construction methodology, project costs and schedule, other project considerations such as permitting and attractive nuisance, and alternative projects. The report concluded that a conventional closure was preferable since it can be constructed at least as expediently, is specifically designed for its function, virtually eliminates risks to the environment and public safety, and lasts much longer than a ship breakwater closure. Mr. Bonura served as BBEC officer in charge over the project and provided quality assurance review of deliverables and provided guidance to the project engineer on the project.

H&H MODELING AND MASTER PLANNING OF DRAINAGE SYSTEMS

The projects listed demonstrate Mr. Bonura's vast experience with H&H models:

Avondale/Bridge City Drainage Evaluation (Area between the Mississippi River and the Union Pacific Railroad, from Huey P. Long Bridge to Avondale Garden Road), Jefferson Parish, LA, 04/2021-Present

Mr. Bonura is serving as Supervising Engineer for the development of a hydraulic and hydrologic model of the

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Project Area between the Mississippi River and the Union Pacific Railroad, from the Huey P. Long Bridge to Avondale Garden Road; and, developing various alternatives for improvements with cost estimates for the alternatives. The alternative analysis will also include an evaluation of rights-of-way in place or needed for the alternatives and coordination with the railroad companies. BBEC will provide alternatives for evaluation and cost estimates including two alternate channels to drain the Host Facility and rail yard area, two alternatives to drain the Training Facility, two locations for storage as an alternative to transmission, for the project area, and two alternatives to drain the Bridge City residential area. BBEC will provide drawings, specifications, and contract documents, and oversee lab inspections of materials and equipment.

Bissonet Plaza Master Drainage Plan (A/E Project No. 20-1708), Jefferson Parish, LA, 05/2018-05/2021

Mr. Bonura served as the Supervising Engineer for this project where BBEC developed a hydrologic and hydraulic (H & H) model of a 180 acre residential (zoned R1) area in Jefferson Parish, Louisiana, said area bounded by Power Boulevard, Kawanee Avenue, West Esplanade Avenue, and the Elmwood Canal. BBEC developed a limited scope of services for the necessary topographical survey; provided oversight and reviewed the final topographic survey; developed the H & H model using third party software; coordinated the model with the Parish's own parish-wide H & H model; and provided the running model to others for evaluation of improvements.

Waggaman Area Drainage Study (Project No. 2011-03-DR), Jefferson Parish, LA, 02/2013-01/2016

Mr. Bonura served as Supervising Engineer to perform a hydrologic study for three separate residential subdivisions in Waggaman, Louisiana: Waggaman, South Kenner, and Manor Lane. The Waggaman subdivision is bounded by River Road to the north, Live Oak Boulevard to the south, Saul's Canal to the west, and Dandelion Ditch to the east. South Kenner subdivision is bounded by River Road to the north, North Railroad Canal to the south, Saul's Canal to the east, and another subdivision to the west. The Manor Lane subdivision is bounded by River Road to the north, North Railroad Canal to the south, Latigue Road Ditch to the west, and Modern Farms Road Ditch to the east. BBEC used the Storm Water Management Model (SWMM) to evaluate the existing subsurface drainage capacities for each subdivision and to examine if the existing system was able handle a 10-year design storm. BBEC developed a hydrologic and hydraulic model for each area and recommended subsurface improvements based on the SWMM model to handle a 10-year design storm.

Harvard Avenue Drainage Improvements, Project No. 99-046-046-DR and 99-046A-DR, Jefferson Parish, LA, 04/2000-06/2006

Mr. Bonura designed approximately 6,000 linear feet of 24-inch to 72-inch drainpipe in Jefferson Parish, Louisiana. BBEC used Intergraph's Storm and Sanitary SelectCAD modeling software to determine the surface runoff and the pipe sizes. Data from the existing Parish's GIS was used to develop the surface terrain for the basis of the model. The project requires that the various drain lines be installed within 50-foot Parish right-of-ways in commercial and residential areas, existing utilities throughout the length of the project are maintained, and the site is restored, including roadways, to its before construction condition. The project also required three separate jack-and-bores, from 30-inches to 72-inches in diameter, across a three-lane roadway to discharge into a canal. The estimated construction cost is \$2,430,000.

Lake Avenue and Carrollton Avenue Drainage Study, Jefferson Parish, LA, 04/2003-07/2005

Project included an extensive drainage and traffic control study on Lake and Carrollton Avenues in the Bucktown area of Jefferson Parish, Louisiana. Hydraulic modeling of the entire area was performed and drainage improvements were recommended in conjunction with the findings of the traffic study. Mr. Bonura performed the hydraulic model, coordinated with the traffic engineer and designed the proposed drainage improvements.

Cleary Avenue Roadway and Drainage Improvements, Jefferson Parish, LA, 01/1998-06/2005

The construction project included reconstruction of approximately 4000 feet of concrete roadway, redesign of existing drainage system and general improvements to existing infrastructure on Cleary Avenue from Veterans Boulevard to West Esplanade Avenue. The project area modeled included Cleary Avenue from Veterans

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Boulevard to West Esplanade Avenue, including neighbor streets connecting to Cleary's drainage trunk line. Mr. Bonura performed the modeling, design, evaluation (drainage under roadway), and plans and specifications. The project is complete through construction.

LA-45 Evacuation Route Basin Drainage Improvements, Lafitte Area Independent District, LA, 02/2020-Present

Mr. Bonura is serving as Supervising Engineer for BBEC, performing as sub-consultant, which has been tasked with developing a current H&H rainfall runoff models for the LA-45 Evacuation Route Basin, both for existing conditions and to reflect the proposed Lafitte Tidal protection project. The analysis will locate and quantify areas subject to internal drainage problems resulting from the completion of the Tidal Protection project, including the location and sizing of nominally three pump stations or gravity flood gates, to be designed under separate contract. BBEC is developing the H&H model for both the current conditions and the proposed Tidal Protection conditions, determining canal, culvert, and storm sewer capacity requirements, providing an AutoCAD drawing delineating drainage basins, improvements alignments, and sump requirements for both gravity and pumped discharge, and providing a letter report of the findings of the study. BBEC will also prepare preliminary plans which will include Drainage Maps, Conceptual Storm Sewer Routing Plans to show ditches and storm sewer locations, and sized required, and identify an potential problem areas, plans and profiles, required right-of-way and construction access, and any impacts to existing properties. BBEC will provide Drainage Map, coordination with Engineer on the results of the H&H Study, and Jefferson Parish Public Works Standard Details, as requested. BBEC will prepare final plans and technical specifications which will consist of a full set of construction plans including final plans and profiles, detailed Drainage Map, standard structural and grading details, and cross sections, along with a cost estimate of construction quantities and the estimate of probable cost. Technical Specification will be included in a complete set of Contract Documents. BBEC will perform construction management for the project.

Widening / Stabilization of Congressman Hebert, Creely, and Bluebird Canals (Hazard Mitigation Grant Program (HMGP), St. Bernard Parish, LA, 01/2015-Present

Mr. Bonura serves as the supervising professional and project engineer on the hydraulic and hydrologic model phase of the entire project and the design of the Congressman Hebert Canal replacement portion of the project. The project includes increasing the capacity and improves the stability of Congressman Hebert, Creely, and Bluebird Canals, that consists of 11,600 linear feet of open canal and culverts ranging from 4-feet bottom width to 16-feet bottom width channels. Mr. Bonura coordinated with St. Bernard Parish, Lake Borgne Basin Levee District, and the Louisiana Department of Transportation and Development to obtain information regarding the existing drainage plan. BBEC performed a hydrologic and hydraulic analysis of the existing system to evaluate the entire area for the 5-year, 10-year, and 25-year storms. BBEC established the design cross sections for the channels, which included concrete u-channels, concrete box culverts, and round and arched pipe, and concrete lined trapezoidal sections, depending on the availability of land and other conditions.

Cypress Park Subdivision Drainage Evaluation, St. Tammany Parish, LA, 11/2016-12/2017

Mr. Bonura served as the supervising professional and project engineer on the hydraulic and hydrologic study of the Erindale Heights and Cypress Park Subdivisions (about 450 acres of single family residential property). The study consisted of developing a computer model of the hydrology and drainage system consisting of natural channels, open ditches, closed conduits, and culverts. BBEC evaluated the 5, 10, 25, 50, and 100 year storms, and developed several alternatives for addressing the flooding concerns. BBEC provided pros and cons, permitting concerns, and construction cost estimates related to the alternatives. The alternatives considered included elevation adjustments to open channels, increased closed conduit usage and size of existing closed conduits, levees, and pump stations.

HMGP Elevation of Coast Guard Road, Phase I (Project No. 1603x-075-0010), Plaquemines Parish, LA (Funding Source: FEMA Hazard Mitigation Grant Program), 09/2013-06/2016

Mr. Bonura worked with Plaquemines Parish Government to design the two-foot elevation and stabilization of

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Coast Guard Road. As Supervising Engineer, he oversaw the design of the upgrades to the existing drainage system, a Hydrologic and Hydraulic (H & H) Study to identify the existing drainage system, the need for upgrades, and to assess the reduction of flooding due to contemplated improvements to Coast Guard Road. He performed calculations, modeling, and analysis to assess the hydraulic capacity of the existing drainage system and provided recommendations for improvements that will increase system capacity and reduce the risk of flooding. As part of the H&H evaluation, Mr. Bonura included an analysis of Mississippi River elevations data to identify periods when the improvements would be inundated by the river effects, and what depths would be encountered. Mr. Bonura oversaw the surveying and environmental review process.

Map Modernization Project (DFIRM) (Contract No. EMT-2005-CA-0110), St. Bernard Parish, LA, 03/2005-12/2008

Mr. Bonura oversaw and assisted FEMA to develop St. Bernard Parish's flood insurance rate maps as part of FEMA's map modernization program. Mr. Bonura prepared the project scoping document for St. Bernard Parish and received FEMA approval in accordance with FEMA document Guidance for Scoping Flood Mapping Projects. Mr. Bonura incorporated the Parish's hydraulic features into the GIS. Mr. Bonura performed the necessary hydraulic and hydrologic studies and analyses necessary for the implementation of the map modernization project by using USCAE's hydraulic and hydrologic modeling software HEC-RAS and HEC-HMS. Mr. Bonura incorporated the results of the hydrologic and hydraulic studies GIS to develop the necessary flood plains. Mr. Bonura prepared a Base Map for the project (streets, ditches, benchmarks, etc.) from St. Bernard Parish's existing GIS, modifying the format to FEMA standards. Mr. Bonura has submitted all hydraulic and hydrologic and survey work for independent QA/QC, and is currently developing DFIRM base maps. All work associated with the development of the DFIRMs were in strict compliance with the National Flood Insurance Program.

Bayou Gauche Drainage Analysis, St. Charles Parish, LA, 01/2003-12/2005

Mr. Bonura served as Design Engineer for the project which included updating the Parish's existing hydraulic and hydrologic computer models with current developments for the Sunset Drainage District watershed in St. Charles Parish. The Parish's existing HEC -1 and HEC-2 hydraulic models were evaluated and revised to include infrastructure improvements throughout the drainage district. The existing models were converted to HEC-RAS and HEC-HMS for use in this study and future evaluations. Model runs were performed to verify the need for drainage pump station improvements in the area and determine the improved capacity of the pump station.

Guichard Canal Area Drainage Evaluation, St. Bernard Parish, LA, 03/2004-04/2005

The project consisted of evaluating the ability of an existing drainage system in St. Bernard Parish, Louisiana to handle the 10-year storm for a 200 drainage basin in a residential area primarily consisting of open ditches and miscellaneous culverts with multiple outfalls into the Guichard Canal. The area is bounded by the Guichard Canal on the west, Paris Road on the east, Judge Perez Drive on the south, and Patricia Street on the north. The area also contained two drainage pump stations that were designed to drain the subsurface system, while the main volume of flow during the rain events utilized roadside ditches and some subsurface drain lines. Mr. Bonura supervised the development of a drainage layer in the Parish's GIS, supervised the surveying of elevations of the drainage features, developed a hydrologic and hydraulic model for the area, modeled the area and determined all deficient drain lines. Mr. Bonura made recommendations for the necessary improvements to cover the 10-year storm.

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA, 11/2014-Present

Mr. Bonura is currently supervising the design of the 40 mgd remote high service pumping station, site paving, grading, and drainage, and yard piping.

- The remote high service pump station consists of 3 installed and the complete set up for 1 future 20-inch vertical turbine pumps mounted in a "can" installation. The controls will be connected to other plant functions so the station will be operated through the main plant's control system. The structure will be a cast in place concrete substructure with a CMU wall superstructure.

TEC Professional Services Questionnaire

- The paving, grading, and drainage is a two-phased project for an almost 9-acre plant site. The work includes connecting to existing and new buildings, connecting to existing pavement and utilities, and the design of parking facilities and delivery and loading facilities.
- The yard piping consists of about 2,500 feet of 36-inch to 54-inch pipe, and several thousand feet of smaller pipe, navigating the through a site congested with many conflicts. The work is being designed to connect to existing systems with automated remote controlled valves and valve boxes and by minimizing disruption to plant services.

The work also includes coordinating with other engineering disciplines (structural, geotechnical, mechanical, architectural, electrical, and instrumentation) and the project owner.

East Bank Water Treatment Plant Expansion, Jefferson Parish, LA, 1992

Mr. Bonura was Project Engineer and Construction Manager for the 17 MGD expansion to the East Bank Water Treatment Plant. Throughout the construction phase of the project, Mr. Bonura coordinated the construction and implementation of the automation system that could and would monitor and operate the complete function of the water treatment plant remotely. During the start-up phase of the project, Mr. Bonura managed the instrumentation technicians developing the various interface and interface screens to connect the PC-based software to the remote terminal units.

The project included a new raw water venturi flow meter, rapid mix basin (designed for 68 MGD), two new precipitator basins (designed for 8.5 MGD each), renovations to the ten existing sand filters to dual media filters (new capacity of 68 MGD), new high service pumping facilities and clearwell (designed for 51 MGD), and modifications to the existing high service pumping facilities to become a transfer station to storage. The entire facility received a new DCS control system, which is completely automated. The overall project increased the plant capacity from 34 MGD to 51 MGD and left the necessary piping and valves to simplify a future 17 MGD expansion by only adding two new precipitator basins and two new high service pumps. The project also left provisions for connection to a new disinfection system in anticipation of new EPA Safe Drinking Water Act regulations.

The project included constructing or renovating various buildings and structures to house the water treatment improvements. The building construction included the removal of existing masonry walls, connecting to the existing walls, roof, and foundation, and expanding the office building portion of the complex. The project also included the construction of new cmu buildings and concrete structures, and associated foundations. A test pile program was implemented for the project to determine the optimum foundation for the project structures.

West Bank Water Treatment Plant Sludge Pumping Facilities, Jefferson Parish, LA

As Project Engineer and Construction Manager for the West Bank Water Treatment Plant Sludge Pumping Facilities project, Mr. Bonura prepared plans and specifications required to completely renovate and upgrade the existing sludge pumping facilities to a capacity of 28 MGD, and to allow for the existing sludge and raw water lines to be interchangeable.

Drainage Station Evaluation, St. Bernard Parish, LA

Evaluation of condition and hydraulic capacity of 18 existing pump stations, perform preliminary design services, identify alternatives for improvements. The evaluation considered the hydraulic performance of the pumps, the conditions of the incoming channel, automation/control capabilities, and projected flows.

Harvey Wastewater Treatment Plant Sluice Gates and Bar Screens, SCIP No. D3121, Harvey Wastewater Treatment Plant Grit Chamber, SCIP No. D3121A, Jefferson Parish, LA, 11/2012-04/2020

Mr. Bonura served as the Supervising Engineer on the project which consisted of the rehabilitation of the bar screens and sluice gates at the Harvey Wastewater Treatment Plant, including the removal and replacement of the bar screens, access hatches for the bar screens, existing sluice gates, and the force main gate valve, cleaning and

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painting of interior (grit) piping, rehabilitation of the existing motor control center, and providing electric and manual actuators for the gates and an electric actuator for the gate valve. The replaced slide gates include (6) 4'x9' gates, (1) 2'x5' gate, and (1) 5'x5' gate. The (6) 4'x9' are electrically actuated. In addition to the replacement of gates, the project also included the rehabilitation of (4) 14'x4' gates with new actuators and gearboxes.

An automation system was developed for the operation of the bar screens that measured the headloss across the screen so the screens would automatically rake themselves clean. The system was also designed with automation such as in the event of a control system failure the screens would automatically run so that flow was maintained.

The project included building renovations including replacing doors, windows, ventilations, electrical lighting and fixtures, roof sections, and roof hatches. BBEC performed the design, bidding, construction administration, and resident inspection services for the project. Mr. Bonura also assisted the Parish in securing a Community Development Block Grant to fund the construction of the work and addressed all grant requirements in its plans and specifications. Mr. Bonura served as the supervising professional for the overall project.

Oakville to La Reussite Levee, Plaquemines Parish, LA, 2013

Mr. Bonura served as Program Manager for this project which is to provide frontal protection for the Oakville to La Reussite Levee. The work consisted of installing temporary access roads, drainage structures, traffic control, installing steel sheet piling, Install of TRS (Temporary Retaining Structure) steel H-piling, constructing concrete floodwall, placement of compacted fill in an approximate 8 mile segment of embankment, concrete slope pavement, and extending eight (8) existing seventy two (72) inch diameter discharge pipes used for the Mississippi River Diversion.

ENVIRONMENTAL

The projects listed demonstrate Mr. Bonura's vast experience with environmental projects:

Louisiana Land Trust Demolition Program, St. Bernard Parish, LA, 01/2009-06/2013

Mr. Bonura was instrumental in compliance with the EPA's requirements for stormwater erosion control prevention by providing daily inspections and weekly compliance reporting. Mr. Bonura provided information to LDEQ to show its compliance with its storm water preventions plan and permits.

Mr. Bonura coordinated with LDEQ for regulatory compliance for the abatement of structures and slabs included in the Louisiana Land Trust's residential demolition and slab removal program. BBEC provided contract management services as well as an accredited asbestos inspector to ensure that the Contractor was in full compliance with the LDEQ Air Quality Emissions Standards and LDEQ's protocol for the recycling of slabs resulting from the demolition of Hurricane Katrina damaged structures.

Demolition of Structures and Debris Removal, St. Bernard Parish, LA, 10/2006-06/2016

BBEC coordinated with the EPA and LDEQ for compliance with the EPA's plan for the abatement of residual oil deposits resulting from the spillage of oil in and throughout areas of St. Bernard Parish as a result of damage to one of the oil tanks at Murphy Oil Refinery during and following Hurricane Katrina. BBEC ensured that the required abatement was completed and that the EPA certified that the removal was complete prior to the Parish issuing the property for demolition.

FEMA Hazard Mitigation Grant Village Square Site Clearance, Phase I, St. Bernard Parish, LA, 2011-2015

BBEC managed the St. Bernard Parish Village Square Site Clearance, Phase I project that consisted of the removal and recycling of concrete slab foundations and other pavement, removal of hazardous trees, clearing sites, and fill and grade of sites to promote proper drainage. In preparation for concrete recycling, BBEC ensured that the contractors complied with all regulatory requirements for the disposal of concrete slab foundations and

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other pavement in a recycling facility. BBEC managed the project from scope development through reimbursement for the purpose of meeting all requirements of the FEMA Hazard Mitigation Grant Program. Those requirements included, but were not limited to: collecting and reporting the scope of disaster, scope of services to be covered, cost estimate based on cost reasonableness in accordance with the Code of Federal Regulations (44 CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments). Subsequent coordination with the Governor's Office of Homeland Security secured the necessary funding allocated to this work. The contract value for this project was \$720,000.

FEMA Hazard Mitigation Grant Village Square Site Clearance, Phase II, St. Bernard Parish, LA, 2011-2015

BBEC managed the St. Bernard Parish Village Square Site Clearance, Phase II project that consisted of the removal and recycling of concrete slab foundations and other pavement, removal of hazardous trees, clearing sites, and fill and grade of sites to promote proper drainage. In preparation for concrete recycling, BBEC ensured that the contractors complied with all regulatory requirements for the disposal of concrete slab foundations and other pavement in a recycling facility. BBEC managed the project from scope development through reimbursement for the purpose of meeting all requirements of the FEMA Hazard Mitigation Grant Program. Those requirements included, but were not limited to: collecting and reporting the scope of disaster, scope of services to be covered, cost estimate based on cost reasonableness in accordance with the Code of Federal Regulations (44 CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments). Subsequent coordination with the Governor's Office of Homeland Security secured the necessary funding allocated to this work. The contract value for this project was \$250,000.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Kevin Forschler, P.E. Project Engineer
Project Assignment:
Project Engineer / Model Development
Name of Firm with which associated:
 Barowka and Bonura Engineers and Consultants, L.L.C.
Years' experience with this Firm:
9
Education: Degree(s)/Year/Specialization:
B.S. / 2014 / Civil
Active registration: Year first registered/discipline:
2020 / Civil
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Forschler is currently working on projects for the City of New Orleans, St. Bernard Parish, St. Tammany Parish and Jefferson Parish. The projects he is working on involve roadway restoration, drainage modeling and design, off-system bridges, walkway design, lift station design, and water and wastewater treatment. Mr. Forschler has utilized Autodesk Storm and Sanitary Analysis and SWMM modeling programs to develop drainage models for multiple areas in Jefferson Parish, including certain sections of Waggaman and the Bissonet Plaza neighborhood. He is currently working on a drainage model for the Avondale and Bride City using SWMM V.5 area in order to determine possible drainage improvements in the area. In addition to drainage modeling, Mr. Forschler also has experience using the HYDRWIN application to design drainage systems for roadways. Mr. Forschler has experience working with various municipalities, coordinating with other entities such as the levee districts, LADOTD, and railway companies to resolve conflicts and ensure that proposed designs meet the entities' guidelines.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>Northshore Living Shorelines, St. Tammany Parish, LA, 03/2021-Present</p> <ul style="list-style-type: none">• Feasibility Study Mr. Forschler researched materials and deployment methods for the living shoreline structure, compiled the research that subconsultants provided during the feasibility study, and drafted the feasibility report presenting the information.• Preliminary Design

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Mr. Forschler designed the living shoreline structure cross section based on input from the client and determined the optimal alignment of the structure to promote biological growth in the project area while also protecting the shoreline from erosion due to waves. Mr. Forschler worked with drafters to develop a set of preliminary design plans for the living shoreline rubble mound structure

- **Final Design**

Mr. Forschler used data from the wave analysis conducted during the feasibility study to update the cross section of the rubble mound structure to include the necessary aggregate sizes for the core and armor layers so that the structure will withstand average wave conditions in the project area. Mr. Forschler reviewed the project specifications to make sure that they provided clear instructions regarding the project's design and performance. Mr. Forschler is currently working with associate engineers and drafters to develop a set of final plans for construction.

- **Grant Applications**

Mr. Forschler has assisted the St. Tammany Parish Grants Department apply for multiple funding opportunities to design and construct extensions of the Goose Point living shoreline including applications for funding from CPRA, Louisiana Wildlife and Fisheries, and the Lake Pontchartrain Basin Restoration Program in conjunction with the EPA. Mr. Forschler provided project information relevant to the goals outlined in each different Notice of Funding Opportunity. St. Tammany Parish was awarded a partnership with CPRA to construct a 505-foot long section of living shoreline through one of the funding opportunities that Mr. Forschler helped apply for. Mr. Forschler is currently assisting the St. Tammany Parish Grants Department with this partnership by providing a project schedule, engineering and construction budget estimates, and information about the goals of the project.

Waggaman Hydraulic Study, Jefferson Parish, LA, 02/2013-01/2016

Mr. Forschler performed a hydrologic study for three separate residential subdivisions in Waggaman, Louisiana, Waggaman, South Kenner, and Manor Lane. The Waggaman subdivision is bounded by River Road to the north, Live Oak Boulevard to the south, Saul's Canal to the west, and Dandelion Ditch to the east. South Kenner subdivision is bounded by River Road to the north, North Railroad Canal to the south, Saul's Canal to the east, and another subdivision to the west. The Manor Lane subdivision is bounded by River Road to the north, North Railroad Canal to the south, Latigue Road Ditch to the west, and Modern Farms Road Ditch to the east. Mr. Forschler utilized the Storm Water Management Model (SWMM) to evaluate the existing subsurface drainage capacities for each subdivision and to examine if the existing system can handle a 10-year design storm. He developed a hydrologic and hydraulic model for each area and recommended subsurface improvements based on the SWMM model to handle a 10-year design storm. Mr. Forschler ran the Parish's existing West Bank drainage model in SWMM to determine the discharge water surface elevation of the project.

Braithwaite to White Ditch Levee Improvements (Public Works Project No. 09-01-04A, 09-01-04D), Plaquemines Parish, LA, 08/2015-06/2018

Mr. Forschler provided inspection services to complete QAQC for some of the work performed by the contractor on this project. The project consisted of clearing and grubbing, earthen levee degrading to +2', Installation of high strength geotextile fabric, install of levee embankment at a 1 on 3 slope to a +12.5', Steel sheet pile driving, and construction of an aggregate roadway to access the project.

Technical Assistance for Floodplain Management, Community Rating System and Hazard Mitigation Related Services (Project No. 0352)), Jefferson Parish, LA, 01/2017-06/2020

Mr. Forschler provided Asset Inventory Assessments of Parish and Municipal structures for evaluation of risk vulnerabilities and mitigation opportunities in preparation of an updated multi-jurisdictional hazard mitigation plan.

Craig Avenue Drainage Improvements, Public Works Project No. 2019-022-DR, Jefferson Parish, LA, 05/2020-Present

Mr. Forschler assisted with the development of plans for the addition of new drain line on this road. The project contains the area of Craig Ave. from Kawanee Ave. to Gillen St. The scope of the project includes the installation

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of a new trunk line, connecting the lateral drain lines to the new trunk line, and the removal and replacement of existing water mains and isolation valves and concrete roadway. Mr. Forschler helped in the design of the proposed drain line, determining the correct vertical and horizontal alignment to avoid conflicts with existing utilities. He also designed the vertical profile for the proposed roadway repairs.

Bissonet Plaza Master Drainage Plan (A/E Project No. 20-1708), Jefferson Parish, LA, 05/2018-05/2021

Mr. Forschler met with Jefferson Parish personnel to identify and discuss flood prone streets within the study area. He worked with a CAD technician to develop a map highlighting these flood prone areas and utilized Jefferson Parish GIS and Autodesk Storm and Sanitary Analysis software to create an accurate drainage model of the project area. The drainage model provided analysis of the area's interior drainage system for a 10-year storm event. Mr. Forschler ran the Parish's existing East Bank drainage model in SWMM to determine the discharge water surface elevation of the project.

Widening / Stabilization of Congressman Hebert, Creely, and Bluebirds Canals, St. Bernard Parish, LA, 01/2015-Present

Mr. Forschler used Autodesk Storm and Sanitary Analysis software to create accurate drainage models of the project area for both pre-mitigation and post-mitigation conditions. The drainage model provides analyses of the area's interior canal system for a 10-year, 50-year and 100-year storm event. The results of the model were then compared to the existing house slab elevation data provided by St. Bernard Parish for each of the storms in order to determine the impact that the improvements have on flooding of the properties in the project area.

Project Worksheet 20824 – Storm Drains, Jean Lafitte Parkway Drainage Line Repairs/Replacement, St. Bernard Parish, LA, 06/2014-11/2019

Mr. Forschler estimated the cost of the replacement of drain lines along Jean Lafitte Parkway from Judge Perez Dr. to the outfall at Hermitage Dr. The scope of work for the project included the removal and replacement of drain lines; removal and replacement of roadway pavement section, sidewalks, and driveways; and the improvement of the outfall at Hermitage Dr.


FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), Project Management for 2013 FMA Grant Funding, City of New Orleans, LA, 01/2017-Present

Mr. Forschler visited 11 sites to gather information about the history of the buildings. Using this information, he developed a scope of work for the installation of permanent generators and automatic transfer switches at each site. He then created cost estimates outlining the budget for the installation of the permanent generators and automatic transfer switches. He also provided specifications for generators and automatic transfer switches that were suitable for each site.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard, (2017-059-RBP), Jefferson Parish, LA, 05/2018-Present

Mr. Forschler is developing plans and specifications for the construction of a bike path around the Avondale Shipyard area. The project contains the area of River Rd. from east of Avondale shipyard to LA 18 and the stretch of LA-18 up until the existing bike path access ramp west of the shipyard. The project includes the installation of a bike path on top of the levee, restriping existing shoulder to be repurposed as a bike path, widening the road to allow for bike travel, and addition of subsurface drainage in areas indicated by Jefferson Parish. Mr. Forschler is also currently developing the necessary details to cross active railroads at 3 locations and working with the railroad company and LDOTD to obtain construction permits.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Madan Kamboj, P.E. Project Engineer
Project Assignment:
Project Engineer / Project Development
Name of Firm with which associated:
 Barowka and Bonura Engineers and Consultants, L.L.C.
Years' experience with this Firm:
3.5
Education: Degree(s)/Year/Specialization:
M.S. / 1978 / Civil Engineering: Structures/Soil Mechanics B.S. / 1967 / Civil Engineering
Active registration: Year first registered/discipline:
1977 / Civil - Environmental
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Kamboj has more than 42 years of experience performing project design, construction administration, and project monitoring for general civil projects including drainage, utilities, streets, highways and bridges, buildings, water and sewer treatment plants, multi-story parking garages; airport taxiways, traffic separation facilities, bike paths, and overhead pedestrian walkways at high traffic intersections.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>Northshore Living Shorelines, St. Tammany Parish, LA, 03/2021-Present</p> <p>Mr. Kamboj calculated settlement and consolidation due to the weight of the proposed rubble mound structure and determined what foundation reinforcement is necessary to prevent failure of the existing soil. He developed a set of project specifications making sure all project items were accounted for and adhered to local and state requirements and is currently working with associate engineers and drafters to develop a set of final plans.</p> <p>Gloria Drive Pump Station, Project No. 20-2022A, Lafitte Area Independent Levee District Drainage, Town of Jean Lafitte, LA., 02/2021 – Present</p> <p>Mr. Kamboj is providing Structural and Foundation design of Gloria Drive Pumping Station and approximately 70 Ft. long Steel Sheet Pile wall supported by ASTM D25 Timber Piles. The Pump Station design incorporates designing foundations supported by 14"X 14" PPC Piles, Concrete Base Level, Middle Level and Roof Slabs, Concrete Enclosure Walls & Structural Supports for Pump Station Screens. The present Generator Structure will</p>

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be enlarged and strengthen ally to accommodate new electrical equipment.

CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA, 10/2020-Present

Mr. Kamboj is preparing drainage improvements by the Jack & Bore method of multiple culvert sites to improve frequent flooding in Luling, St. Charles Parish. Multiple culverts employing Jacking Method are to be rammed under the road embankment by using 72", 60" and 48" metal pipes. The ditches on inlet and outlet shall be improved by providing Conspan Culvert Bridges and these ditches shall be provided with G.C.C.M. lining to improve flow of rain discharge. The project cost is \$6.2M.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard, (2017-059-RBP), Jefferson Parish, LA, 12/2020-Present

Mr. Kamboj is designing a 2.3 milelong bike path along River Road and finishing on the top of Mississippi River Levee. The bike path is designed to provide separated path to the pedestrians and shall provide safety by separating bike and pedestrian traffic. The project cost is \$350,000.


Florida Avenue Bridge Extension, New Orleans, LA, 04/2003-10/2004

Mr. Kamboj served as Project Manager/Senior Civil Engineer for the following:

Planned E.I.S. documents for \$135 million, Florida Avenue bridge crossing over Inter-Coastal Waterway, in New Orleans LA. The main span for the crossing is 450 ft with side spans of 275 ft. each, the clearance over the channel is 156 ft. vertical and 350 ft. horizontal. Multi-directional interchanges at Alvar Street/ Poland Ave., Caffin Avenue and Tupelo Streets. The roadway continues into St Bernard Parish and ties at-grade to Paris Road (LA 47).

His responsibilities included line and grade studies, public input for E.I.S. document, plan profile of various alternates, cost estimation, utility relocations, right-of-way studies, traffic, noise impacts, and maritime traffic studies for movable and fixed span bridge structures.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
John J. Housey, Jr., P.E. Project Engineer
Project Assignment:
Project Engineer / Project Development
Name of Firm with which associated:
 Barowka and Bonura Engineers and Consultants, L.L.C.
Years' experience with this Firm:
13
Education: Degree(s)/Year/Specialization:
M.S. / 1965 / Structural Engineering B.S. / 1964 / Civil Engineering
Active registration: Year first registered/discipline:
1966 / Civil
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Housey has been working as an engineer in the public works industry for over 55 years. His experience includes bridges, buildings, roadways, and utility (water, sewer, and drainage) construction. He has substantial experience in project management, steel building detailing, bridges, barges and parts for offshore platforms. As a steel fabricator, Mr. Housey oversaw the fabrication of steel buildings, steel bridges (stationary and movable), barges, various parts of offshore platforms including girders, piling and legs, floor and wall framing, various parts of ships including bulkheads and framing members. Over the past 55 years, he has been responsible for the design of crane runways, spreader bars, lifting frames, and hydraulic jacking of heavy structures and barges.</p> <p>Mr. Housey is a past Board Member and President of the Southern Association of Steel Fabrication. He served as a member on AISC committee regarding quality control. As a member and past Chairman of the ASCE/SEI Structures Committee in New Orleans for several years, he is familiar with the design of bridges, buildings and residential structures. He is familiar with fabrication specifications of API, AWS, AREA, AISC and ABS</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>Lower 45 Evacuation Route Basin, Lafitte Tidal Protection, Lafitte Area Independent District, LA, 05/2018-Present As Project Manager, Mr. Housey provides design alignment and earthen levee.</p> <p>Repair of Venice Marina, Plaquemines Parish, LA, 2013-2015</p>

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Mr. Housey designed the Venice Marina project located in Plaquemines Parish in Venice, Louisiana. The project consisted of repairs to the damages of the Venice Marina caused by Hurricane Isaac.

Repair of Buras Marina, Plaquemines Parish, LA, 2013-2015

Mr. Housey designed the Buras Marina project located in Plaquemines Parish in Buras, Louisiana. The project consists of repairs of the damages to the Buras Marina caused by Hurricane Isaac.

Access Ways & Ladders at Drainage Pump Stations; Project No. 2014-022-DR, Jefferson Parish, LA, 11/2014-Present

Mr. Housey has prepared cost estimates and designed ladders, stairs, and elevated walkways to be installed in 16 drainage pump stations to connect elevated structures or allow personnel to access the top of structures within Jefferson Parish. Design included analysis and details to retrofit new items to existing structures.

Widening / Stabilization of Congressman Hebert, Creely, and Bluebird Canals, St. Bernard Parish, LA, 01/2015-Present

The project includes increasing the capacity and improving the stability of Congressman Hebert, Creely, and Bluebird Canals, that consists of 11,600 linear feet of open canal and culverts ranging from 4-feet bottom width to 16-feet bottom width channels. Mr. Housey coordinated with St. Bernard Parish, Lake Borgne Basin Levee District, and the Louisiana Department of Transportation and Development to obtain information regarding the existing drainage plan. BBEC established the design cross sections for the channels, which included concrete u-channels, concrete box culverts, and round and arched pipe, and concrete lined trapezoidal sections, depending on the availability of land and other conditions. Mr. Housey is currently designing 2,500 linear feet of large diameter reinforced concrete pipe box culverts, and U-channels for the project.

Project Worksheet 20824 – Storm Drains, Jean Lafitte Parkway Drainage Line Repairs/Replacement, St. Bernard Parish, LA, 06/2014-11/2019

Mr. Housey prepared the damage assessment to adjacent existing roadway.

Hurricane Katrina Roadway Restoration, St. Bernard Parish, LA, 05/2011-08/2017

Mr. Housey provided Construction Administration services and Supervised Resident Inspectors for over \$40 Million in roadway repair for 436 streets. Mr. Housey developed plans and construction cost estimates as well as managed the construction of facility repairs. He reviewed contractor submittals for conformity, resolved construction issues and led field progress meetings. Mr. Housey was BBEC's on-site engineer for BBEC's (18) project \$100 million street and drainage repair program. Mr. Housey coordinated with the Contractor, Parish, and inspectors to troubleshoot issues in the field, resolved neighbor complaints, interpreted design specs to maintain the quality and standards of the work, and ensured that the work is satisfactorily completed. Mr. Housey reviewed all test reports for conformity to specifications, performed substantial and final completion walk-throughs for acceptance, reviewed as-builts for work completed, and reviewed contractor's monthly invoices and quantities. The project lasted 11 years and consisted of up to 18 construction inspectors at one time.

Lakefront Pedestrian Path (Suburban Canal to Causeway), State Project No. H011780, JP Project No. 2015-010-RB, Jefferson Parish, LA, 05/2020-Present

Mr. Housey reviews test reports for asphalt binder with DOTD and Barriere Construction for approval, verifies all quantities with Inspector's daily reports, resolves asphalt quantities based on drawings, truck deliveries and DOTD specifications, prepares final change order to resolve actual quantities for payment, and prepares closeout documents. Mr. Housey also provided guidance and oversight to the resident inspector.

Private Residential Structure Elevation Project, Statewide (HMGP Project), 10/2012-02/2014

The project included performing plan review for grant compliance and some technical aspects of the elevation of residential structures throughout south Louisiana. The project also includes performing periodic inspections of the construction work to verify compliance with the project plans. Mr. Housey was responsible for providing

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professional engineering, program management, construction monitoring, observation of construction methods, code enforcement compliance, and general monitoring technical assistance services in association with construction contractors elevating and/or reconstructing residential structures for eligible construction activities through the Hazard Mitigation Grant Program (HMGP).

Orleans Materials & Equipment Company, Inc., City of New Orleans, LA, 1967-2011

As Project manager, Mr. Housey was responsible for interpreting plans and specifications, interacting with owner, engineer and contractor, resolving discrepancies, ensuring quality of construction and maintaining construction schedule. Many projects included modifications to existing structures for increased load capacity, replacement of existing structural members, connections or other requirements. Requirements for pumping stations usually included all steel requirements including columns, crane runways, bar screens and floor grating.

Sample projects completed by Mr. Housey include:


Bulkheads

- H-Piling for T-Wall at the Industrial Canal (Cajun Contractors)
- Sheet Piling for Gate at Bayou Bienvenue (Manson Construction Company)
- Sheet Piling for Louisiana Citrus at Venice, LA

Bridges

- **Sunshine Bridge, St. James Parish, LA**
Removal and replacement of concrete and steel bridge decking across the entire span of Sunshine Bridge including all field measurements required to replace steel gussets and floor beams.
- **Bayou Milhome Swing Span Bridge, St. Martin Parish, LA**
Complete new bridge structure including floor beams, grating, pivot girder, and related items.
- **Bayou Lafourche Lift Span Bridge, Larose, LA**
Complete new bridge structure including floor beams, grading, lift girders, and related items.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Matthew Hahn, PE Professional Engineer
Project Assignment:
Design / Project Management
Name of Firm with which associated:

Years' experience with this Firm:
2
Education: Degree(s)/Year/Specialization:
B.S. / 2016 / Civil Engineering
Active registration: Year first registered/discipline:
2020 / Civil
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Hahn has over eight (8) years of experience in the field of civil and consulting engineering with a strong background in water resources, civil/site design, project management, and land surveying. His vast knowledge includes but is not limited to water distribution systems, hydrologic modeling and drainage design, sewerage and wastewater treatment, site development and planning, structural design, public speaking, topographic land surveying, boundary surveying, floor elevation surveying, earthwork balancing and site grading, recreation facilities/athletic fields, public bid process, permitting, and construction administration and management.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>Drainage Evaluation of Metairie Road, Jefferson Parish, LA, 10/2017-03/2020 As Project Manager, Mr. Hahn used EPA SWMM software to complete a drainage assessment of a 2-mile segment of Metairie Road from Causeway Boulevard to Focis Street. Mr. Hahn modeled the drainage system, developed improvement alternatives, and prepared a report of findings.</p> <p>U.S. Highway 51 Drainage Improvements, Town of Amite, LA, 02/2021-08/2021 As Project Manager, Mr. Hahn used EPA SWMM software to complete a drainage assessment of a 1-mile segment of U.S. Highway 51 in Amite City, LA. Mr. Hahn developed conceptual design of drainage improvements, sidewalk improvements, and developed cost estimates and a report of findings.</p> <p>CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA,</p>

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04/2022 – Present

As a project engineer, Mr. Hahn is developing the plans, specifications, and cost estimates for this project which includes the construction of several new drainage culverts crossing and/or adjacent to the CN railroad in Destrehan, St. Charles Parish, LA. Mr. Hahn is also preparing the CN Railroad permitting documents for the new drainage improvements.

Venice Port Complex Bulkheads, Plaquemines Parish, LA, 11/2019-02/2022

Mr. Hahn performed structural computations of a steel sheet-pile retaining wall as part of design of bulkhead improvements at the Venice Port Complex in Venice, LA. Mr. Hahn also performed a lateral earth pressure assessment in conjunction with this work.

Phillips 66 Alliance Refinery Floodwall Assessment, Plaquemines Parish, LA, 01/2022-04/2022

Mr. Hahn provided technical and field support in conjunction with an assessment of sheet-pile floodwalls at the Alliance Refinery in Belle Chasse, LA. Mr. Hahn conducted site visits, field measurements and surveying, and developed a report of findings.


Woodpark Waterline Relocation, Myrtle Grove, LA, 06/2016-01/2020

Mr. Hahn assisted with development of the plans and specifications for construction of over 2,000 feet of new 12" potable water main, including fire hydrants, valves, and service connections in the Woodpark community in Myrtle Grove, LA, in conjunction with design of new floodwall improvements performed by the U.S. Army Corps of Engineers.

Jump Basin Road Improvements, Venice, LA, 06/2021-04/2022

Mr. Hahn developed conceptual designs of new roadway improvements of Jump Basin Road located near the Venice Port Complex in Venice, LA. in Jefferson Parish, LA. Mr. Hahn performed surveying work, design and cost estimating as part of this project.

TEC Professional Services Questionnaire

Name & Title:
Craig Comeaux Certified Floodplain Manager
Project Assignment:
Floodplain Analysis and Funding Options
Name of Firm with which associated:
 Barowka and Bonura Engineers and Consultants, L.L.C.
Years' experience with this Firm:
22
Education: Degree(s)/Year/Specialization:
M.A. / In Progress / Public Policy and Administration B.S. / 1996 / Mathematics
Active registration: Year first registered/discipline:
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Comeaux joined Barowka and Bonura Engineers and Consultants, L.L.C., in 2000. Since that time, Mr. Comeaux has successfully managed or been significantly involved in nearly 100 federal recovery projects in a program management capacity throughout South Louisiana. These projects involve FEMA Public Assistance Grants, FEMA Hazard Mitigation Grants, and U.S. Department of Housing and Urban Development Community Development Block Grants. Mr. Comeaux worked extensively in coordination with FEMA, GOHSEP, Office of Community Development, and local Parish groups to manage over \$750 million in project funds, including oversight of project inspection.</p> <p>In addition to program management, Mr. Comeaux has experience in grant management which includes project formulation, cost estimation, fund accounting, and closeout of a broad range of public assistance and hazard mitigation grants. Mr. Comeaux has experience as an educator and school administrator which includes conducting professional development and community outreach opportunities for employees, parents, students, and other constituent groups.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present</p> <p>Mr. Comeaux has participated in this project since 2021. In his role, he has prepared the application for PA grants in the aftermath of Hurricane Ida. In addition, Mr. Comeaux currently assists the Parish in its efforts for Public Assistance program funding as a result of Hurricane Zeta. Mr. Comeaux also provides technical assistance services to the Public Safety Grants & Administration Department related to FEMA Public Assistance Insurance and Cost Analysis issues. He has also worked with the Jefferson Parish Department of Ecosystem and Coastal</p>

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Management and the Department of Water to prepare a Building Resilient Infrastructure and Communities grant subapplication for the Fiscal Year 2023 submission. Mr. Comeaux has been involved in the development of the following projects:

- Jefferson Parish BRIC 2023 Grand Isle Water Line Project.....\$50,000,000.00
- Project # 672271 Grand Isle Library Building Project \$700,362.90
- Project # 672861 East Bank Animal Shelter Project \$216,000.00
- Project # 673136 VFD - Lafitte Barataria Crown Point Fire Truck Project..... \$720,000.00
- Project # 673857 Fire Station NO. 11 Repair Project \$675,000.00
- Project # 674336 Terrytown Golden Age Center \$18,900.00
- Project # 674343 Pontiff Golden Age Center \$10,296.00
- Project # 674955 Traffic Engineering Office \$45,000.00
- Project # 674957 Traffic Engineering Sign Shop \$51,898.50
- Project # 674972 Traffic Engineering Shop Contents Project \$43,200.00
- Project # 674974 Traffic Engineering Trucks Project..... \$38,352.60

Technical Assistance for Floodplain Management, Community Rating System, and Hazard Mitigation Related Services, (Project No. 0352), Jefferson Parish, LA, 01/2017-06/2020

Mr. Comeaux managed the 2016 Technical Assistance services contract with the Jefferson Parish Department of Floodplain Management and Hazard Mitigation. He worked with local officials to assist with Education and Outreach projects, activities to assist with meeting CRS points, edits and updates to flood maps, analysis of NFIP policies, and the planning process for the Parish's multi-jurisdictional Hazard Mitigation Plan.

In preparation for the Parish's CRS visit, Mr. Comeaux coordinated the review of Elevation Certificates, flood zone determination letters, preparation of required maps and table, and the review of various sections of the CRS manual to evaluate the Parish's compliance with meeting the requirements. As part of the Parish's Hazard Mitigation Plan update, Mr. Comeaux coordinated the evaluation of critical facilities, the preparation of the Hazard Mitigation Plan Advisory Committee, the revision and development of hazard profiles, and the development of draft resolutions to be enacted by the various jurisdictions.

To assist the Parish with meeting its educational and outreach requirements in accordance with its Program for Public Information, Mr. Comeaux coordinated the design and publication of various public information media, including videos, brochures, websites, and vehicle decals and billboards.

Mr. Comeaux also assisted with the preparation and review of materials for the public meetings as required for the Hazard Mitigation Plan update. Mr. Comeaux attended several of the meetings while coordinating the activities with the responsible parties of the BBEC team.

Program Management 2014 Hazard Mitigation Assistance Grant Funding, Jefferson Parish, Louisiana (HMGP PROJECT), 04/2015-04/2019

Mr. Comeaux managed the 2014 Hazard Mitigation Assistance Grant for home elevation and reconstruction for Jefferson Parish. In his role as Project Manager, Mr. Comeaux planned and prepared for grant kickoff meetings hosted by Jefferson Parish. He worked with homeowners preparing grant required paperwork, contracts, and all other documentation required for grant application. Additionally, Mr. Comeaux worked closely with parish officials to prepare program guidance, forms, and processes to guarantee proper accounting and funding of home elevation and reconstruction project.

As Project Manager for elevation and reconstruction projects for Jefferson Parish, Mr. Comeaux coordinates activities between homeowners, contractors, construction management firm, and the parish. As part of the coordination process, Mr. Comeaux is responsible for reviewing contracts for grant compliance, preparing cost reasonable analysis for the work proposed, and applying for reimbursement for the funds allocated to each project.

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These projects resulted in approximately \$12.6 million in federal grant funding to the parish in reimbursements.

Mr. Comeaux has been directly involved in the management of the following projects:

- Jefferson Parish, FY14, FMA Elevations\$3,121,877.50
- Jefferson Parish, FY14, FMA Elevations\$3,698,327.00
- Jefferson Parish, FY14, FMA Non-Residential Elevation..... \$928,220.00
- Jefferson Parish, FY14, PDM Wind Retrofit Project.....\$3,757,904.00
- Jefferson Parish, FY14, FMA Reconstruction.....\$1,051,822.00

Grant Management Program Administration, St. John the Baptist Parish, LA, 05/2022-Present

For St. John the Baptist Parish, Mr. Comeaux has been highly involved in the development of a pre-application and the application for the Reserve Relief Canal Pump Station Improvements with US Department of Housing and Urban Development CDBG funding, the State of Louisiana's Office of Community Development, the Louisiana Watershed Initiative, the CDBG Mitigation Recovery Program, and the Local and Regional Projects and Programs Grant - Round 2: Policies and Procedures. By ensuring a seamless flow of information, feedback, and updates, Mr. Comeaux contributed significantly to the success of the pre-application aligning the efforts of the local and state entities. This approach not only adhered to the grant program requirements but also facilitated a more efficient and responsive development of the application for the project in St. John the Baptist Parish.

FEMA Hazard Mitigation Program Services, Restore Louisiana Resilient Communities Infrastructure Program, St. John the Baptist Parish, LA, 05/2022-Present

Within the framework of managing the allocations for St. John the Baptist Parish, Mr. Comeaux exhibited exceptional skills in maintaining working relationships with the Louisiana Office of Community Development Staff. His commitment to effective collaboration and open communication fostered a synergistic partnership between the local initiatives and the state-level offices. By ensuring a seamless flow of information, feedback, and updates, Craig contributed to the success of the Recovery Proposal and Public Comment meetings, aligning the efforts of the local and state entities. This collaborative approach not only adhered to the grant program requirements but also facilitated a more efficient and responsive implementation of resilience projects in St. John the Baptist Parish, reflecting Craig's dedication to fostering effective inter-agency relationships.

FEMA FMA (Flood Mitigation Assistance) and BRIC (Building Resilient Infrastructure and Communities) Programs (2022 Contract), Terrebonne Parish, LA, 11/2022 - Present

As Project Manager, Mr. Comeaux develops and administers grant programs stemming from non-disaster grant opportunities for the Flood Mitigation Assistance and Building Resilient Infrastructure and Communities Grant Programs as well as the Hazard Mitigation Grant Program following declared disasters. The scope of services includes coordinating with the Parish the application for Infrastructure and Restoration grants that may include critical facility hardening, pump station improvements, coastal restoration and planning. Mr. Comeaux developed and submitted 20 applications on behalf of Terrebonne Parish Government for the HMGP 4611 Disaster following Hurricane Ida. In addition, he prepared five applications for the BRIC grant program. While some of the same projects were submitted under both programs, he worked with the Parish to prepare grant applications that specifically addressed the eligibility requirements of each program.

- Terrebonne Parish, FY 22 HMGP TLCD Saferoom..... \$393,024.00
- Terrebonne Parish, FY 22 BRIC TLCD Saferoom \$393,223.95
- Terrebonne Parish, FY 22 HMGP ADVANCED ASSISTANCE: TP Microgrid HUB and Portable Energy \$412,885.00
- Terrebonne Parish, FY 22 HMGP ADVANCED ASSISTANCE: TP Downtown Culvert Replacement \$525,000.00
- Terrebonne Parish, FY 22 HMGP ADVANCED ASSISTANCE: Microgrid Study for Various Locations within Terrebonne Parish \$525,000.00
- Terrebonne Parish, FY 22 HMGP Hidalgo Drive Drainage Improvements..... \$962,347.84

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- Terrebonne Parish, FY 22 HMGP Terrebonne General Hospital Wind Retrofit\$1,150,068.00
- Terrebonne Parish, FY 22 HMPG Terrebonne Parish North Treatment Plant Safe Room\$1,216,728.00
- Terrebonne Parish, FY 22 HMGP Fletcher Community College Microgrid Installation\$1,288,669.00
- Terrebonne Parish, FY 22 BRIC North Treatment Plant Safe House\$1,447,750.00
- Terrebonne Parish, FY 22 FMA Project Scoping for Bayou Grand Caillou Pump Station\$1,663,215.75.00
- Terrebonne Parish, FY 22 FMA Project Scoping for Houma Heights Drainage Improvements\$1,663,215.75
- Terrebonne Parish, FY 22 FMA Project Scoping for Miter Gates\$1,663,215.75
- Terrebonne Parish, FY 22 HMGP Generator Project for Critical Facilities...\$1,827,000.00
- Terrebonne Parish, FY 22 HMGP Houma Heights Drainage Improvements\$1,857,721.00
- Terrebonne Parish, FY 22 HMGP Terrebonne Parish North Campus Safe Room\$2,407,650.00
- Terrebonne Parish, FY 22 BRIC North Campus Public Works Safe Room..\$2,411,650.00
- Terrebonne Parish, FY 22 HMGP Houma Fire Department Safe Room Construction\$2,532,233.00
- Terrebonne Parish, FY 22 HMGP Bayou Cane Fire Department Safe Room Construction\$3,798,349.00
- Terrebonne Parish, FY 22 HMPG Bayou Terrebonne/Bayou Cane Berm Project\$6,393,492.00
- Terrebonne Parish, FY 22 HMGP Terrebonne Parish Courthouse Safe Room Construction\$7,152,884.00
- Terrebonne Parish, FY 22 HMGP Bayou Terrebonne Mite Gate.....\$7,282,877.00
- Terrebonne Parish, FY 22 HMGP Company Canal Miter Gate.....\$7,282,877.00
- Terrebonne Parish, FY 22 HMGP Terrebonne Parish Health Center Wind Retrofits\$8,183,643.00
- Terrebonne Parish, FY 22 BRIC Justice Complex Internal Saferoom.....\$16,890,000.00
- Terrebonne Parish, FY 22 HMPG Terrebonne Parish Correctional Center/Safe Room/Flood Mitigation Relocation Project.....\$47,686,579.00
- Terrebonne Parish, FY 22 BRIC Criminal Justice Center Safe Room Construction Project\$48,653,049.85
- Terrebonne Parish, FY 22 HMGP Bayou Grand Caillou Pump Station.....\$98,385,000.00

FEMA Hazard Mitigation Assistance (HMA) Programs (2021 Contract), Terrebonne Parish, LA, 08/2021 - Present

In his role, Mr. Comeaux has prepared and is managing grant applications submitted for the FMA and BRIC grants in the Fiscal Year 2021 cycle. Mr. Comeaux coordinated with Local and State representatives during the development and selection processes. Mr. Comeaux has directly been involved in the application development of the following project:

- Terrebonne Parish, FY 2021 Saferoom Construction \$393,224.00

Project Management and Technical Services, 2020 Application Development, Terrebonne Parish, LA, 09/2020 - Present

In his role, Mr. Comeaux has prepared and is managing grant applications submitted for the FMA and BRIC grants in the Fiscal Year 2020 cycle. Mr. Comeaux coordinated with Local and State representatives during the

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development and selection processes. Mr. Comeaux has directly been involved in the application development of the following projects:

- Terrebonne Parish, FY 2020 FMA SRL Elevation \$953,245.00
- Terrebonne Parish, FY 2020 FMA RL Elevation..... \$179,412.00

Grant and Project Management Consulting Services for the RESTORE Act, Plaquemines Parish, LA, 09/2020-Present

Mr. Comeaux assists Plaquemines Parish by providing consultant services associated with grant writing, administration, technical support, application, monitoring and post-grant requirements of the Restore Act to Plaquemines Parish Government and all Treasury guidelines and federal grant regulations and those additional grant consulting services required of the professional with the Restore Act as required by Plaquemines Parish Government and the U.S. Treasury. Mr. Comeaux has directly been involved in the application development, approval and/or management of the following projects:

- Bayou Eau Noire Ridge Restoration and Marsh Creation Phase 1 and 2....\$3,254,150.13
- Bay Adams Headland Restoration and Marsh Creation Phase 1\$1,222,250.00
- Eastbank Landbridge Project – Phoenix to Lake Leary Phase 1 \$500,000.00
- Multiyear Implementation Plan Update Assistance..... \$100,000.00

Hazard Mitigation Grant Program Grant Administration Services, City of Zachary, LA, 02/2020-Present

Mr. Comeaux assists the City in preparing and submitting grant amendments for its generator project. The amendment consists of aligning the scope of projects to actual projects scheduled for completion by the City. Mr. Comeaux has directly been involved in the administration of the following project:

- City of Zachary, DR-4277 HMGP Generator \$855,477.00

Application Development and/or Project Management of FEMA HMA Grant Programs Lafourche Parish, LA, 11/2019-Present

Mr. Comeaux assists the Parish in preparing and submitting grant applications for the Flood Mitigation Assistance (FMA) and Pre-Disaster Mitigation (PDM) grant programs. He has also been assisting the Parish with preparing and submitting grant applications to FEMA's new Building Resilient Infrastructure and Committees (BRIC) Grant Program. In his role, Mr. Comeaux assists the Parish in identifying projects that meet all grant requirements and works on the required Benefit Cost Analysis. Mr. Comeaux has been directly involved in the application development and approval of the following projects:

- Lafourche Parish, FY 2023 FMA Elevations \$409,092.00
- Lafourche Parish, FY 2022 FMA SRL/RL Elevations \$796,960.00
- Lafourche Parish, FY 2022 FMA Swift Current SRL Elevations..... \$195,729.00
- Lafourche Parish, FY 2021 FMA SRL/RL Elevations \$691,087.00
- Lafourche Parish, FY 2019 FMA SRL/RL Elevations \$749,891.00

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2017-023, Lafourche Parish, LA, 05/2019-Present

Mr. Comeaux manages the grant for the elevation of seven projects in Lafourche Parish. Mr. Comeaux works with local officials to plan and prepare grant kickoff meetings, prepare grant required paperwork, and to process reimbursement requests and payment requests through GOHSEP. Mr. Comeaux also works with homeowners to assist with contractor selections and meeting all FMA grant requirements.

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- Lafourche Parish, FY 2017 FMA Elevations\$1,040,209.00

Project Management and Technical Services, 2018 Application Development, Terrebonne Parish, LA, 11/2018 - Present

In his role, Mr. Comeaux has prepared and is managing grant applications submitted for the FMA and PDM grants in the Fiscal Year 2017 and 2018 cycles. During the 2017 cycle, the Parish presented Mr. Comeaux with several projects to be evaluated for application development. After reviewing the projects and the best available information concerning these projects, Mr. Comeaux determined the available projects would not get approved. However, in 2018, Mr. Comeaux was able to assist the Parish in identifying projects that had a better likelihood of being selected and prepared and submitted those applications. Mr. Comeaux coordinate with Local and State representatives during the development and selection processes. Mr. Comeaux has directly been involved in the application development and approval of the following projects:

- Terrebonne Parish, FY 18 FMA SRL Elevation \$255,455.00
- Terrebonne Parish, FY18 PDM St. Louis Canal Road Drainage Improvements\$1,779,298.00

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2016-003 Award, Lafourche Parish, LA, 07/2018-Present

Mr. Comeaux manages the grant for the elevation of eight projects in Lafourche Parish. Mr. Comeaux works with local officials to plan and prepare grant kickoff meetings, prepare grant required paperwork, and to process reimbursement requests and payment requests through GOHSEP. Mr. Comeaux also works with homeowners to assist with contractor selections and meeting all FMA grant requirements. One of the projects in this grant contained a CDBG-LMI component that Mr. Comeaux assisted the Parish with collecting and preparing the required documents. Mr. Comeaux also participated in and responded to requests for information in the program audit upon project completion.

- Lafourche Parish, FY 2016 Elevations\$1,399,280.00
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FEMA Hazard Mitigation Assistance Consultant (Project No. 2130-02035), City of New Orleans, LA, 08/2017-Present

Mr. Comeaux is currently the project manager for the City of New Orleans hazard mitigation assistance grants managed by the Office of Hazard Mitigation. Mr. Comeaux works with the City of New Orleans to prepare and submit applications for funding to FEMA's Hazard Mitigation Assistance (HMA) Programs, including but not limited to the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) Grant Program, State Generator Program, and the Pre-Disaster Mitigation (PDM) Grant program. It is also the responsibility of Mr. Comeaux to implement the HMGP program for the City. Mr. Comeaux has also been involved in the preparation and review of Benefit Costs Analysis reports for Green Infrastructure projects for the City of New Orleans, including the Mirabeau Gardens Green Infrastructure, the Broadmoor Drainage Improvements project and the City Park Green Infrastructure projects. In this role, Mr. Comeaux has managed the collection of data necessary to calculate the benefit cost ratio and assisted in the preparation of the Benefit Costs Analysis and report for FEMA review. Mr. Comeaux has directly been involved in the approval and/or management of the following projects:

- FY23 FMA Elevation - Structures\$12,161,763.00
- FY22 FMA Elevation - SRL Structures\$1,351,521.00
- FY22 FMA Elevation - RL Structures\$7,367,738.00
- FY22 FMA Elevation - Structures\$2,116,962.00
- FY22 FMA Elevation - SRL Structures\$379,552.00
- FY22 FMA Elevation – SRL/RL Structures\$2,622,301.00
- FY22 FMA Elevation - Structures\$1,306,568.00
- FY22 FMA Elevation - SRL Structures\$142,987.00
- FY22 FMA Elevation - RL Structures\$970,452.00
- FY22 FMA Elevation - Structures\$881,286.00

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• FY22 FMA Elevation - SRL Structures	\$5,484,501.00
• FY22 FMA Elevation – SRL/RL Structures	\$11,743,752.00
• FY22 FMA Elevation - Structures	\$3,571,161.00
• FY22 FMA Swift Current SRL Structure Elevation.....	\$834,258.00
• FY22 FMA Swift Current SRL Structure Elevation.....	\$3,142,140.00
• FY22 FMA Swift Current SRL Structure Elevation.....	\$607,059.00
• FY22 FMA Swift Current SRL Structure Elevation.....	\$2,536,585.00
• FY21 FMA SRL Structure Elevation	\$10,730,860.00
• FY21 FMA SRL/RL Structure Elevation.....	\$11,684,737.00
• FY21 FMA RL Reconstruction.....	\$205,835.00
• FY20 FMA SRL Structure Elevation	\$14,200,582.00
• FY20 FMA SRL Structure Reconstruction	\$475,151.00
• FY19 FMA Residential Historic Elevation	\$8,438,022.00
• FY19 FMA Residential Non-Historic Elevation	\$6,308,246.00
• FY18 1786 Statewide Generator Application.....	\$1,131,195.00
• FY18 FMA Residential Historic Elevation.....	\$4,227,236.00
• FY18 FMA Residential Non-Historic Elevation	\$4,172,098.39
• FY18 FMA Non-Residential Elevation	\$337,150.00
• FY18 SRL-PJ-06-LA-2012-009	\$1,792,928.00
• FY17 FMA Elevation (52 properties)	\$12,451,579.52
• FY 17 Multi-Jurisdictional Hazard Mitigation Plan Project.....	\$345,150.00
• FY 2013 FMA Elevation (36 properties)	\$7,410,818.00
• 1603/1607 HMGP (8 grant applications, 50+ properties).....	\$21,349,250.00
• 1607 HMGP Mirabeau Gardens Stormwater Management and Flood Mitigation BCA	\$23,469,698.00
.....	
• 1603 HMGP Broadmoor Stormwater Drainage BCA	\$55,666,026.00
• 1603 HMGP City Park/Lakeview Drainage Project BCA.....	\$2,316,000.00
• 1603 HMGP St. Roch Drainage Project BCA	\$7,500,000.00

FEMA Public Assistance and Hazard Mitigation Program Services, St. Charles Parish, LA, 08/2017-Present

Mr. Comeaux has managed this project since 2017. In his role, he has prepared the application for FMA and PDM grants in the Fiscal Year 2017 cycle. In addition, Mr. Comeaux currently manages the Parish's efforts for Public Assistance program funding as a result of Hurricane Barry. Mr. Comeaux also provides technical assistance services to the Grants Department. Mr. Comeaux has directly been involved in the application development and approval of the following projects:

• St. Charles Parish, FY23 FMA Elevation (4 properties).....	\$775,200.00
• St. Charles Parish, FY22 FMA Swift Current SRL Elevation (5 properties)....	\$889,966.00
• St. Charles Parish, FY22 FMA Swift Current SRL Elevation (16 properties)\$2,986,354.00	
• St. Charles Parish, FY22 FMA Swift Current Elevation (4 properties)	\$598,280.00
• St. Charles Parish, FY21 FMA SRL Elevation (36 properties)	\$6,367,899.00
• St. Charles Parish, FY20 FMA SRL Elevation (34 properties)	\$6,055,422.00
• St. Charles Parish, FY19 FMA Elevation (31 properties).....	\$5,605,602.00
• St. Charles Parish, FY17 FMA Elevation (11 properties).....	\$1,606,584.00
• St. Charles Parish, FY17 Multi-Hazard Mitigation Plan Update	\$63,450.00.00

Hazard Mitigation Assistance, Elevation of Four (4) Residential Structures (HMGP # 1786-057-0007, Lafourche Parish, LA, 09/2016-Present

Mr. Comeaux manages the grant for the elevation of four projects in Lafourche Parish. Mr. Comeaux works with local officials to plan and prepare grant kickoff meetings, prepare grant required paperwork, and to process


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reimbursement requests and payment requests through GOHSEP. Three of the projects in this grant contained a CDBG-LMI component that Mr. Comeaux assisted the Parish with collecting and preparing the required documents. Mr. Comeaux also participated in and responded to requests for information in the program audit upon project completion.

- Lafourche Parish, FY 2016 HMGP Elevations..... \$621,376.00



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Ethan Jones, EI Engineer Intern	
Project Assignment:	
Modeling	
Name of Firm with which associated:	
 Barowka and Bonura Engineers and Consultants, L.L.C.	
Years' experience with this Firm:	
2	
Education: Degree(s)/Year/Specialization:	
B.S. / 2022 / Civil Engineering	
Active registration: Year first registered/discipline:	
2022 / EI	
Other experience and qualifications relevant to the proposed Project:	
<p>Mr. Jones is a recent graduate from Louisiana State University where he obtained a Civil Engineering degree in May of 2022 and became an Engineer Intern in June of 2022. He is currently working on gathering measurements and doing calculations to find velocity through pipes for the selection of pumps and creating plan sets for submittals of Wastewater Treatment Plants, assisting with cost estimates for clients for roadway and drainage projects, and he is utilizing WaterGEMS to model and analyze water systems for St. Tammany Parish. Additionally, Mr. Jones worked on aeration analysis for Flow Equalization Basins and is currently working on raw water intake for St. John the Baptist Parish. Mr. Jones visited sites to gather measurements for sketches and worked on volumetric cut and fill calculations for clearing residential canals in Lafitte.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>East St. Tammany Water Consolidation, 2022 Contract, St. Tammany Parish, LA, 08/2022-Present This project includes development and analysis of a hydraulic model of water distribution systems in St. Tammany Parish, LA. As an Engineer Intern, Mr. Jones developed a hydraulic model to simulate existing conditions of the system in WaterGEMS. Mr. Jones performed calibration field testing of the water system by flow testing fire hydrants at selected locations in order to better calibrate the model. Mr. Jones assisted in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system.</p> <p>Laplace Water Intake Pump Station and Pre-Treatment Facility, St. John the Baptist Parish, LA, 02/2023-Present</p>	

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Mr. Jones is working on raw water intake for LaPlace where two alternatives are being considered. One on the river and one on the dry side of the levee. Mr. Jones is assisting in modeling the project, as well as selecting the pumps and pipe sizes to bring clean drinking water to the citizens of the Parish.

Water Hydraulic Modeling in East St. Tammany Parish, 2023 Contract No. 23-048, St. Tammany Parish, LA, 04/2023-Present

This project includes continuing the development of the East St. Tammany Cross Gates water model. The existing model will be combined with other subdivisions to consolidate the water distribution system. Mr. Jones performed calibration field testing of the water system to be added to the Cross Gates water model by flow testing fire hydrants at selected locations in order to better supplement the hydraulic model and recommend improvements to the system. Mr. Jones assisted in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system.

Water Hydraulic Modeling in West St. Tammany Parish, 2023 Contract No. 23-042, St. Tammany Parish, LA, 04/2023-Present

This project includes developing and analyzing a hydraulic model of water distribution systems in West St. Tammany Parish, LA for the Bedico Creek System and the Faubourg Water System. The system includes 14 wells, some of which will be taken out of service upon construction of the improvements. Other wells will be kept to provide water. Mr. Jones performed calibration field testing of the water system by flow testing fire hydrants at selected locations in order to better calibrate the model. Mr. Jones assisted in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system.

CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Charles Parish, LA, 06/2022 – Present

Mr. Jones worked on completing the cost estimate and making additions to the specifications for this project which includes the construction of several new drainage culverts crossing and/or adjacent to the CN railroad in Destrehan, St. Charles Parish, LA. Mr. Jones also assisted in preparing the CN Railroad permitting documents for the new drainage improvements.

Water & Wastewater Utilities, Multiple Parishes, LA, 06/2022-Present

Mr. Jones provided technical and field assistance for this project, which includes investigation, evaluation, and assessment of existing wastewater systems to be procured by the client. Mr. Jones assisted in the design for improvements to be made to the sites. Mr. Jones performed site investigations of individual treatment facilities, collection, and distribution systems to assess structural conditions, equipment operation, evidence of process issues, and overall general operational conditions.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 06/2022-Present

Mr. Jones calculated dredge volume estimates for residential canals in Barataria near Jean Lafitte, LA by using Civil 3D and Excel. This project includes the processing of FEMA reimbursements, based on federal and state requirements and development of closeout documentation for the Parish of Jefferson. In addition to this Mr. Jones completed FEMA's Category G files and photo forms for Jefferson Parish Bus Stops.

FEMA 2021 Hazard Mitigation Consultant, City of New Orleans, LA, 07/2022 – Present

Mr. Jones completed site assessments and developed sketches from the measurements obtained in the field. Upon returning to the office, he prepared the sketches in an orderly manner to be given to the CAD Technician for a final drawing. This project includes the preparation and submittal of applications for funding to FEMA's Hazard Mitigation Assistance (HMA) Programs, including but not limited to the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), the Pre-Disaster Mitigation Grant (PDM) Program, and the Building Resilient Infrastructure and Communities (BRIC) Grant Program on behalf of eligible residential National Flood Insurance program (NFIP) policyholders in Orleans Parish and the City of New Orleans and to manage and implement said program for the City.

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FEMA Reimbursement for Hurricane Ida Damage, Grand Isle, LA, Jefferson Parish, LA, 10/2022 – Present


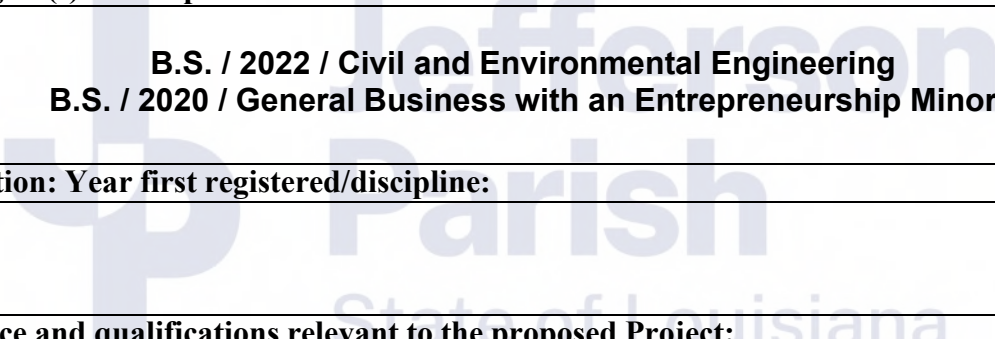
Mr. Jones assisted in developing a cost analysis for work completed to restore potable water to Grand Isle following Hurricane Ida. Mr. Jones organized the invoices, gathered data needed for the cost analysis, and formatted the invoices in an orderly fashion to develop the cost analysis.

GIS Engineering, LLC, Baton Rouge, LA, 05/2021 – 08/2021

As an Engineer Intern, Mr. Jones Gained experience using AutoCAD, Civil 3D and SACS, performed cost estimates for projects using LA DOTD's cost estimating tool, and used ArcGIS for mapping of projects to provide quality visuals for clients.



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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Ashton Bonura Graduate Engineer
Project Assignment:
Construction Services
Name of Firm with which associated:
 Barowka and Bonura Engineers and Consultants, L.L.C.
Years' experience with this Firm:
10
Education: Degree(s)/Year/Specialization:
B.S. / 2022 / Civil and Environmental Engineering B.S. / 2020 / General Business with an Entrepreneurship Minor
Active registration: Year first registered/discipline:

Other experience and qualifications relevant to the proposed Project:
<p>Mr. Bonura is a recent graduate from the University of New Orleans where he obtained a Civil and Environmental Engineering degree in December 2022. He has assisted the licensed engineers within the company for approximately 2 years prior to earning his degree. Mr. Bonura has worked on projects that involve water and wastewater treatment, lift station design, roadway rehabilitation and drainage improvements, and sanitary landfill permit renewals.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>Eden Isles Water Main Repair, St. Tammany Parish, LA, 05/2020-Present The project included developing a hydraulic model of the distribution system to determine the impact of additional development on the overall distribution system. Mr. Bonura performed house counts and water demand calculations to develop a hydraulic model of the water distribution system using WaterCAD.</p> <p>Sanitary Landfill 2019 Solid Waste Permit Application, Jefferson Parish, LA, 12/2018-08/2019 Mr. Bonura assisted with preparing the Landfill Permit Renewal Application by gathering needed documentation to be included in the new application.</p> <p>Grant Management Services for Federal and State Grants, Town of Jean Lafitte, LA, 10/2013-Present BBEC is currently providing grant management services for the Town of Jean Lafitte and the Lafitte Area</p>

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Independent Levee District project to close out almost \$3.9M in FEMA Public Assistance Grants. Mr. Bonura also assisted in maintaining a master spreadsheet tracking status of RRF's and status of payments, and reviewed invoices for accuracy. Mr. Bonura worked with Town of Jean Lafitte employees to compile the necessary documents to justify work performed and funds obligated according to FEMA guidelines. Mr. Bonura utilized an electronic document management system to store project records.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present

This project includes the processing of FEMA reimbursements, based on federal and state requirements and development of closeout documentation. Mr. Bonura assisted the licensed engineers in Conducting comprehensive facility damage assessments for disaster damaged structures, contents, vehicles, pump stations, sewer lift stations, and other parish-owned facilities. Mr. Bonura generated maps in ArcGIS pro and other documentation to help maximize federal funding for this project which includes program management services to assists the Parish with the review and implementation of procurement policies, ensuring that all potential emergency contracts comply with federal requirements and guidelines set forth in the Public Assistance Program.

Water Hydraulic Modeling in East St. Tammany Parish, 2023 Contract No. 23-048, St. Tammany Parish, LA, 04/2023-Present

St. Tammany Parish Government (Parish) retained Barowka and Bonura Engineers and Consultants (BBEC) to develop and analyze a computer model of existing potable water systems in Slidell, LA, as part of the Parish's East St. Tammany Water Consolidation Project Phase 2 (PPSL-VSF 23-19-5). This project has been phased into 3 tasks. The scope of Task 1 included development and calibration of an existing conditions model of the Cross Gates, Meadow Lake, and River Oaks water systems using WaterGEMS software. The model includes a detailed water distribution network including pipes, well pumps, storage tanks, valves, fittings, and fire hydrants, all based on site visits and information provided by St. Tammany Parish. Field testing was performed including fire hydrant flow and pressure tests to document system performance and calibrate and validate the water model to match field conditions. The existing conditions model was analyzed to determine water age/water quality, water pressure, and velocity parameters. Results of the model analysis and improvement recommendations were compiled in a report of findings. Task 2 of this project includes modeling and hydraulic analysis of the water system improvements, including two (2) new elevated storage tanks and several water main interconnections. Task 3 of this project includes updating, re-validating and calibrating the system model to reflect the water system improvements constructed.

Mr. Bonura assisted the key personnel in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system. Mr. Bonura also assisted in the field testing of fire hydrants to better calibrate the model.

Water Hydraulic Modeling in West St. Tammany Parish, 2023 Contract No. 23-042, St. Tammany Parish, LA, 04/2023-Present

St. Tammany Parish Government (Parish) retained Barowka and Bonura Engineers and Consultants (BBEC) to develop and analyze a computer model of existing potable water systems in West St. Tammany Parish, as part of the Parish's West St. Tammany Water Consolidation Project (PPSL-VSF 23-20-5). This project has been phased into 3 tasks. The scope of Task 1 included development and calibration of an existing conditions model of the Faubourg Coquille and Bedico Creek water systems using WaterGEMS software. The model includes a detailed water distribution network including pipes, well pumps, storage tanks, valves, fittings, and fire hydrants, all based on site visits and information provided by St. Tammany Parish. Field testing was performed including fire hydrant flow and pressure tests to document system performance and calibrate and validate the water model to match field conditions. The existing conditions model was analyzed to determine water age/water quality, water pressure, and velocity parameters. Results of the model analysis and improvement recommendations were compiled in a report of findings. Task 2 of this project includes modeling and hydraulic analysis of the water system improvements, including water main improvements to interconnect the Faubourg Coquille and Bedico Creek systems, and interconnect the Bedico Creek system to the Fox Branch Subdivision. New elevated storage tanks at the Bedico Creek water system and other areas were also assessed. Task 3 of this project includes updating, re-validating

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and calibrating the system model to reflect the water system improvements constructed. Mr. Bonura assisted the key personnel in the development of an engineering report of findings to supplement the hydraulic model and recommend improvements to the system. Mr. Bonura also assisted in the field testing of fire hydrants to better calibrate the model.

Westbank Mississippi River Bike Trail, Around Avondale Shipyard, (2017-059-RBP), Jefferson Parish, LA, 08/2019-Present


Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. The project contains the area of River Rd. from east of Avondale shipyard to LA 18 and the stretch of LA-18 up until the existing bike path access ramp west of the shipyard. The project includes the installation of a bike path on top of the levee, restriping existing shoulder to be repurposed as a bike path, widening the road to allow for bike travel, and addition of subsurface drainage in areas indicated by Jefferson Parish.

Cleary Improvements (Veterans Blvd. to West Esplanade Ave.) (Council District 5) Jefferson Parish, LA, Public Works No. 2017-014-RBP, 08/2019-06/2021

Mr. Bonura assisted on this project by reviewing the plans and creating quantity take-off for the construction cost estimate, addressed client comments, and worked with drafters and engineers for plan revisions. Mr. Bonura worked with the resident inspector to reviewed plans and field work to verify the work performed by the contractor to verify final contract quantities. The project contains the area of Cleary Ave. from Veterans Blvd. to W. Esplanade Ave. The repairs to be made include removing and replacing the existing concrete roadway, adding improvements to the subsurface drainage system, and relocating any utilities that were conflicts.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Pete Foret Computer Aided Drafting
Project Assignment:
Drafting
Name of Firm with which associated:
 Barowka and Bonura Engineers and Consultants, L.L.C.
Years' experience with this Firm:
4
Education: Degree(s)/Year/Specialization:
B.S. / 1995 / Business Administration with a Computer Science Option and Management Minor
Active registration: Year first registered/discipline:
Parish
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Foret is a multi-discipline AutoCAD drafter and designer with experience in the Civil, Structural, Architectural, Electrical and GIS/Mapping fields. He has a combined 31 years of experience generating alignments, plan and profile sheets, cross sections, contour maps, structural and architectural plans and details and electrical one-line diagrams. He has been the drafting coordinator for multiple firms and has been responsible for developing drafting standards for a consistent and quality drawing set.</p> <p>Projects with detailed descriptions of work are provided below:</p> <p>Northshore Living Shorelines, St. Tammany Parish, LA, 03/2021-Present</p> <p>Mr. Foret organized the survey CAD files developed for the project area and drafted plans showing the proposed alignment of the living shoreline. Mr. Foret also drafted the alternative typical sections that were included as part of the Feasibility Study as well as the typical section for the rubble mounds that the engineer designed. Mr. Foret is currently drafting details for foundation reinforcement, navigational aids, and stone size for the rubble mound structure.</p> <p>Gloria Drive Pump Station, Project No. 20-2022A, Lafitte Area Independent Levee District Drainage, Town of Jean Lafitte, LA, 02/2021-Present</p> <p>Mr. Foret set up the survey and generated a preliminary site plan for a drainage pump station.</p> <p>CN Railroad Culverts in Ormond, Project No. P200801, Ordinance No. 20-9-5, St. Tammany Parish, LA, 10/2020-Present</p>

TEC Professional Services Questionnaire

Mr. Foret set up the survey reference file with a baseline supplied by the railroad and created site plans for 6 proposed construction sites including a plan/profile sheet for a new 425' long 60" drainpipe connecting two sites. He also generated multiple cross sections through the 6 construction sites as well as other details.

Craig Avenue Drainage Improvements, Public Works Project No. 2019-022-DR, Jefferson Parish, LA, 10/2020-Present

Mr. Foret updated the plan/profile sheets with a new proposed roadway grade line.

Ames Boulevard Rehabilitation, West Bank Expressway to Happy Street, (Public Works Project No. 2013-033-RB) (DOTD No. H.011797), Jefferson Parish, LA., 07/2020-Present

Mr. Foret was involved with the 98% and 100% Final submittal of roadway design plans to the LADOTD. This involved updating the project border on all sheets to the current LADOTD border while maintaining LADOTD standards. The drawing set included a standard LADOTD title sheet as well as plan sheets, typical sections, cross sections, core boring sheets, LADOTD and Jefferson parish special detail sheets and associated summary and quantities table sheets.

Texaco, Inc., New Orleans, LA., 05/1990-11/1994

Mr. Foret's job duties at Texaco included the drafting of geologic structures and civil/GIS mapping using Microstation. This involved scanning large scale maps and inserting the raster image into the design file in order to digitize the data for digital manipulation.

RR176 – St. Roch Group North Group A (PMOI), City of New Orleans, LA., 07/2020-Present

Mr. Foret generated the 100% submittal drawings on this project. This drawing submittal contained plan and profile sheets that included proposed centerline and gutter line profiles as well as existing centerline, gutter line, sidewalk, right of way and utilities grades and profiles in the project area. Mr. Foret was also responsible for ensuring that the drawing set conformed to City of New Orleans Department of Public Works drawing standards.

RR177 – St. Roch Group North Group B (FRC), City of New Orleans, LA., 07/2020-Present

Mr. Foret generated the 100% submittal drawings on this project. This drawing submittal contained plan and profile sheets that included proposed centerline and gutter line profiles as well as existing centerline, gutter line, sidewalk, right of way and utilities grades and profiles in the project area. He also generated cross sections based on project guidelines. Mr. Foret was also responsible for ensuring that the drawing set conformed to City of New Orleans Department of Public Works drawing standards.

RR178 – St. Roch Group North Group C (FRC), City of New Orleans, LA., 07/2020-Present

Mr. Foret generated the 100% submittal drawings on this project. This drawing submittal contained plan and profile sheets that included proposed centerline and gutter line profiles as well as existing centerline, gutter line, sidewalk, right of way and utilities grades and profiles in the project area. He also generated cross sections based on project guidelines. Mr. Foret was also responsible for ensuring that the drawing set conformed to City of New Orleans Department of Public Works drawing standards.

N-Y Associates (DOTD Projects), Metairie, LA., 12/2002-12/2004

Mr. Foret was hired by N-Y Associates to work on a study for the East-West corridor for the LADOTD. This project involved the widening of Airline Highway and the relocation of necessary utilities for an overhead expressway, as well as, a possible lightrail system between New Orleans and Baton Rouge. He then became the project lead for another LADOTD study to replace the Florida Avenue bridge over the Industrial Canal. This project involved generating multiple proposed alignments for DOTD review. As the project lead, he was responsible for coordinating the drafting between multiple engineers, technicians and drafters.

While at N-Y, Mr. Foret also worked on various other projects, including LADOTD plan/profile roadway projects, street resurfacing projects for the City of New Orleans, a new street grid through the Guste housing redevelopment

TEC Professional Services Questionnaire

and all necessary plan/profile sheets, a study to replace the outdated Causeway overpass over Airline Highway and various other street and drainage improvement and pump station projects.

H2O Water Projects, St. Tammany Parish, LA, 09/2020-Present

Mr. Foret did some minor markups and checked for drafting standards/consistency.

Acadiana Water and Sewer, Lafayette, LA, 08/2020-Present

Mr. Foret created figures for the Engineer reports for the water and wastewater systems for Belleville, Garden Heights, Mark Ridge and Village Quest subdivisions. He drafted the site plan and profile for the Belleville water system. He also generated the site plans, mechanical plans and structural plans for the repairs and improvements to the Belleville, Garden Heights and Mark Ridge wastewater treatment plants.

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA., 07/2020-Present

Mr. Foret was responsible for plan preparation following established project standards. Plans included a site layout for the routing of new chemical feed lines over an existing survey and avoiding existing utilities. Drawings also included details necessary for the proper routing and installation of the new feed lines.

Southwood Ridge, Tangipahoa Parish, LA, 08/2020-Present

Mr. Foret created figures for Engineer's report.

Artesian, St. Tammany Parish, LA, 08/2020-Present

Mr. Foret created figures for Engineer's report.

Coast Water Projects, St. Tammany Parish, LA, 07/2020-Present

Mr. Foret created the site plans and demolition plans as well as the plans, sections, structural foundation details and typical details for the proposed chemical feed buildings and the details for the chemical feed system itself at the Eden Isles, Meadows and Belair disinfection sites. He coordinated with our electrical sub for the drafting of the electrical one line and riser diagrams as well as his equipment layouts on the site plans for the three sites. Mr. Foret drafted the plan/profile sheet and cross sections for the proposed new waterline crossing the marina bay as well as the standard details for the Eden Isles Water Main Repair.

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:

**Avondale/Bridge City
Drainage Evaluation
(Area between the
Mississippi River and
the Union Pacific
Railroad, from Huey P.
Long Bridge to
Avondale
Garden Road),
Jefferson Parish, LA**

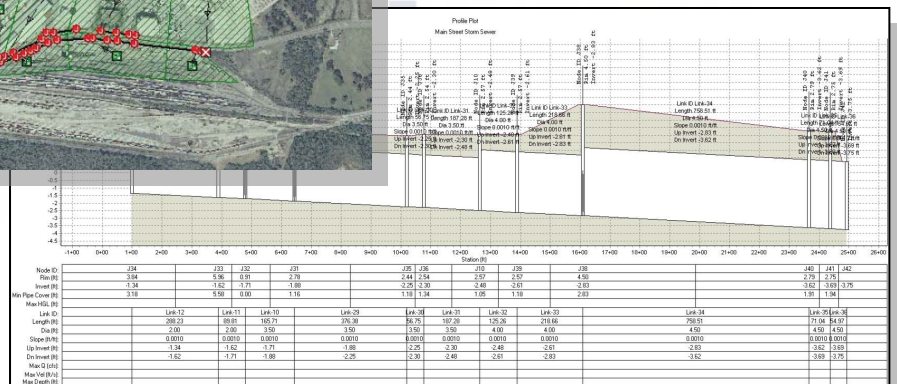
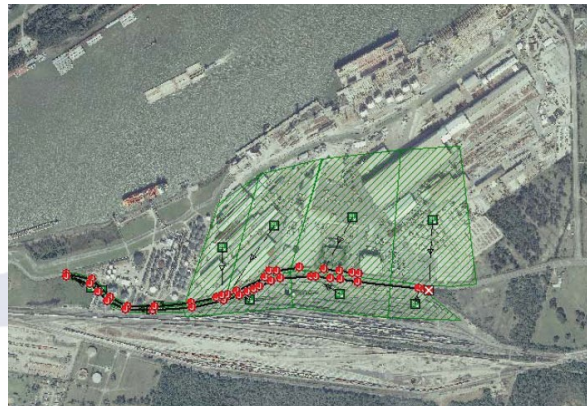
**Jefferson Parish
Government
Mitchell Theriot, P.E.,
Director
Department of Drainage
1221 Elmwood Park
Blvd., Suite 907
Jefferson, LA 70123
MTheriot@jeffparish.net
(504) 736-6753**

Applicable Experience

- Utilize Parish Data
- Model Results Mapping
- Alternatives Review
- Project Development
- Floodplain Analysis

BBEC developed the topographical survey scope for the project and manages the surveyor for the Parish. BBEC is developing a hydraulic and hydrologic model using SWMM v.5 of the Project Area between the Mississippi River and the Union Pacific Railroad, from the Huey P. Long Bridge to Avondale Garden Road; and, developing various alternatives for improvements with cost estimates for the alternatives. BBEC will provide alternatives

and associated cost estimates for improvements, including alternate channels to drain the Host Facility and rail yard area, alternatives to drain the Training Facility, potential locations for storage as an alternative to transmission, and alternatives to drain the Bridge City residential area.



**Completion Date
(Actual or
estimated):**

Estimated Cost:

Entire Project:

Work for which Firm was Responsible:

2024 (Actual)

\$237,342 (fee)

\$237,342 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 2

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

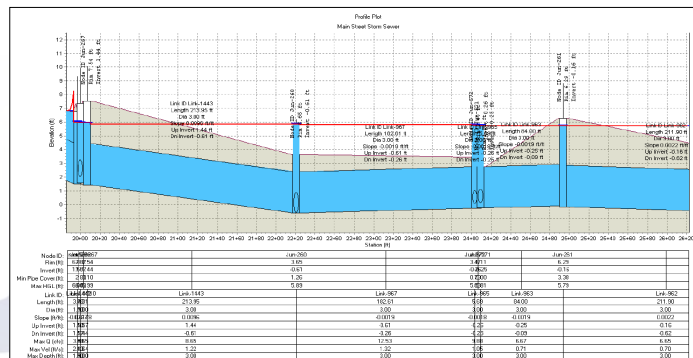
**Waggaman Area
Drainage Study
(Project No. 2011-03-
DR),
Jefferson Parish, LA**

**Jefferson Parish
Government
Mitchell Theriot, P.E.,
Director
Department of Drainage
1221 Elmwood Park
Blvd., Suite 907
Jefferson, LA 70123
MTheriot@jeffparish.net
(504) 736-6753**

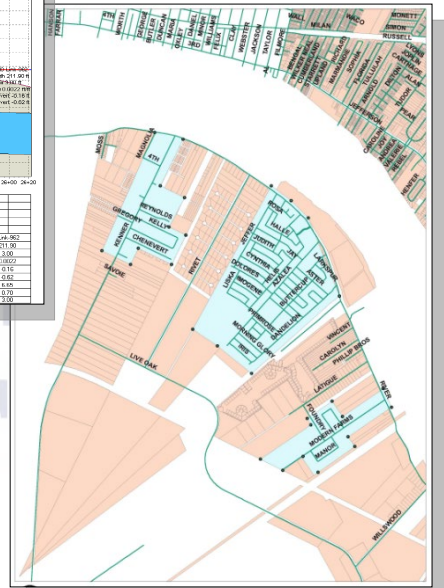
Applicable Experience

- Utilize Parish Data
- H&H Modeling
- Model Results Mapping
- Alternatives Review
- Project Development

BBEC performed a hydrologic study for three separate residential subdivisions in Waggaman, Louisiana: Waggaman, South Kenner, and Manor Lane. The Waggaman subdivision is bounded by River Road to the north, Live Oak Boulevard to the south, Saul's Canal to the west, and Dandelion Ditch to the east. South Kenner subdivision is bounded by River Road to the north, North Railroad Canal to the south, Saul's Canal to the east, and another subdivision to the west. The Manor Lane subdivision is bounded by River Road to the north, North Railroad Canal to the south, Latigue Road Ditch to the west, and Modern Farms Road Ditch to the east. BBEC used the Storm Water Management Model (SWMM) V.5 to evaluate the existing subsurface drainage capacities for each subdivision and to examine if the existing system was able handle a 10-year design storm. BBEC developed a hydrologic and hydraulic model using the existing Parish GIS for each area and recommended subsurface improvements based on the SWMM model to handle a 10-year design storm.



BBEC developed the survey scope of work and managed the surveyor to obtain the needed data for the model. BBEC performed multiple model runs to determine the most cost-effective means to drain the 10-year storm for each subdivision. BBEC developed recommended project scopes and construction cost estimates for each



**Completion Date
(Actual or
estimated):**

Estimated Cost:

Entire Project:

Work for which Firm was Responsible:

2016

\$300,000 (fee)

\$300,000 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 3

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

**FEMA Hazard Mitigation
Assistance Consultant
(Project No. 2130-
02035), Project
Management for 2013
FMA Grant Funding,
City of New Orleans, LA**

**City of New Orleans
Ryan Mast, Hazard
Mitigation Administrator
Office of Homeland
Security and Emergency
Preparedness
Hazard Mitigation Office
1300 Perdido Street, 9th
Floor
New Orleans, LA 70112
rcmast@nola.gov
(504) 658-8740**

Applicable Experience

- Land Use
- Basis for Development
- Stormwater Management Standards
- Problem Areas Constraints and Opportunities
- Coordinate with Other Agencies
- Public Outreach
- Funding Assistance
- CRS Compliance
- GIS

BBEC, in its role as FEMA Hazard Mitigation Assistance Consultant, works with the City of New Orleans to prepare and submit applications for funding to FEMA's Hazard Mitigation Assistance (HMA) Programs, including but not limited to the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), the Pre-Disaster Mitigation Grant (PDM) Program, and the Building Resilient Infrastructure and Communities (BRIC) Grant Program on behalf of eligible residential National Flood Insurance program (NFIP) policyholders in Orleans Parish and the City of New Orleans and to manage and implement said

program for the City.

BBEC's services also include:

- Prioritizing eligible properties for flood mitigation activities; and
- Conducting comprehensive property risk analyses for participating RL & SRL properties for mitigation remedies including elevation to or above the current effective Base Flood Elevation (or "best available data"), dry flood proofing for historic structures, or reconstruction when traditional elevation cannot be completed. The participating properties and their respective mitigation undertakings are chosen in such a way to optimize flood risk reduction and cost effectiveness; and
- Designing, implementing, and monitoring the consultation process to inform eligible property owners of program requirements, collecting technical information, determining mitigation preferences, case managing each individual property, and providing preliminary mitigation estimates; and
- Conducting individualized meetings with eligible property owners during the contractor selection process. These meetings focus on program requirements and mitigation activities. Attendance by representatives from the City of New Orleans is coordinated for all such meetings; and
- Performing project management of mitigation offers to individual (i.e. "address level") eligible property owners; and
- Holding monthly status meetings with the City's Mitigation Director, Project Delivery Unit Manager, and Chief Resilience Officer or designee, to update grant status and status of individual properties. Status tracking is provided to the City in spreadsheet format either before the monthly status meetings or at the meetings.

TEC Professional Services Questionnaire

	Projects currently being managed by BBEC:	
	<div><ul style="list-style-type: none">FY23 FMA Elevation – SRL/RL Structures\$12,161,763.00FY22 FMA Elevation - SRL Structures\$1,351,521.00FY22 FMA Elevation - RL Structures\$7,367,738.00FY22 FMA Elevation - Structures\$2,116,962.00FY22 FMA Elevation - SRL Structures\$379,552.00FY22 FMA Elevation – SRL/RL Structures\$2,622,301.00FY22 FMA Elevation - Structures\$1,306,568.00FY22 FMA Elevation - SRL Structures\$142,987.00FY22 FMA Elevation - RL Structures\$970,452.00FY22 FMA Elevation - Structures\$881,286.00FY22 FMA Elevation - SRL Structures\$5,484,501.00FY22 FMA Elevation – SRL/RL Structures\$11,743,752.00FY22 FMA Elevation - Structures\$3,571,161.00FY22 FMA Swift Current SRL Structure Elevation\$834,258.00FY22 FMA Swift Current SRL Structure Elevation\$3,142,140.00FY22 FMA Swift Current SRL Structure Elevation\$607,059.00FY22 FMA Swift Current SRL Structure Elevation\$2,536,585.00FY21 FMA SRL Structure Elevation\$10,730,860.00FY21 FMA SRL/RL Structure Elevation\$11,684,737.00FY21 FMA RL Reconstruction\$205,835.00FY20 FMA SRL Structure Elevation\$14,200,582.00FY20 FMA SRL Structure Reconstruction\$475,151.00FY19 FMA Residential Historic Elevation\$8,438,022.00FY19 FMA Residential Non-Historic Elevation\$6,308,246.00FY18 1786 Statewide Generator Application\$1,131,195.00FY18 FMA Residential Historic Elevation\$4,227,236.00FY18 FMA Residential Non-Historic Elevation\$4,172,098.00FY18 FMA Non-Residential Elevation\$337,150.00FY18 HMGP Mirabeau Gardens Stormwater Management and Flood Mitigation BCA\$23,469,698.00FY18 HMGP Broadmoor Stormwater Drainage BCA\$55,666,026.00FY18 HMGP City Park/Lakeview Drainage Project BCA\$2,316,000.00FY18 HMGP St. Roch Drainage Project BCA\$7,500,000.00FY17 FMA Elevation (52 properties)\$12,451,579.00FY17 Multi-Jurisdictional Hazard Mitigation Plan Project\$345,150.00FY13 FMA Elevation (36 properties)\$7,410,818.00FY12 SRL-PJ-06-LA-2012-009\$1,792,928.00FY09 HMGP Elevation/Reconstruction\$2,266,529.00FY09 HMGP Elevation/Second Story Conversion\$2,234,743.00FY09 HMGP Elevation/Second Story Conversion\$16,847,978.00</div>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2026 (E)	\$205,406,739	\$205,406,739

TEC Professional Services Questionnaire

PROJECT NO. 4

**Project Name,
Location and Owner's
contact information:**

Nature of Firm's Responsibility:

**Map Modernization
Project (DFIRM)
(Contract No. EMT-2005-
CA-0110) (2003
Contract), St. Bernard
Parish, LA**

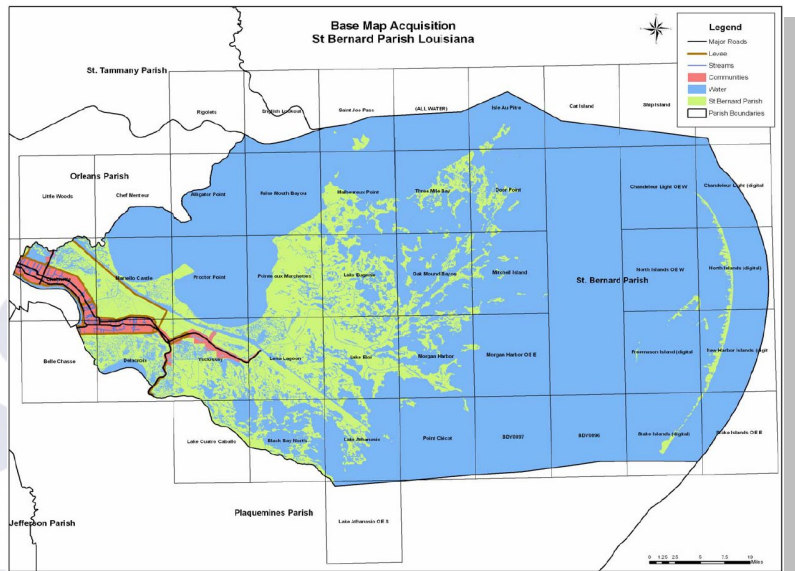
**St. Bernard Parish
Government
Donald R. Bourgeois,
Capital Projects
Manager
Department of Public
Works
1125 E. St Bernard Hwy.
Chalmette, LA 70043
dbourgeois@sbpg.net
(504) 278-4250**

Applicable Experience

- H & H Modeling
- Model Results Mapping
- Floodplain Analysis
- Funding Development
- Funding Assistance
- Utilize Parish Data

BBEC assisted FEMA develop St. Bernard Parish's flood insurance rate maps as part of FEMA's map modernization program. BBEC prepared the project scoping document for St. Bernard Parish and received FEMA approval in accordance with FEMA document Guidance for Scoping Flood Mapping Projects. BBEC incorporated the Parish's hydraulic features into the GIS. BBEC performed the necessary hydraulic and hydrologic studies and

analyses necessary for the implementation of the map modernization project by using USCAE's hydraulic and hydrologic modeling software HEC-RAS and HEC-HMS. BBEC incorporated the results of the hydrologic and hydraulic studies GIS to develop the necessary flood plains. BBEC prepared a Base Map for the project (streets, ditches, benchmarks, etc.) from St. Bernard Parish's existing GIS, modifying the format to FEMA standards. BBEC has submitted all hydraulic and hydrologic and survey work for independent QA/QC and is currently developing DFIRM base maps. All work associated with the development of the DFIRMs were in strict compliance with the National Flood Insurance Program.



**Completion Date
(Actual or
estimated):**

Estimated Cost:

Entire Project:

Work for which Firm was Responsible:

2008


\$536,163 (fee)

\$536,163 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Lower LA 45 Evacuation Route Basin, Lafitte Tidal Protection, Lafitte Area Independent District, LA</p> <p>Lafitte Area Independent Levee District</p> <p>Tim Kerner, Mayor 2654 Jean Lafitte Blvd. Lafitte, LA 70067 (504) 233-1109 tkerner@townofjeanlafitte.com</p>	<p>The project proposes to construct a new levee embankment parallel to and east of LA 45, which will be an integral part of the planned system that will protect LA 45 from overland flooding originating from Goose Bayou and the wetlands located east of the highway.</p> <p>BBEC is responsible for a portion of the design of the proposed project that encompasses approximately 27,500 linear feet of levee fill to elevation 8.5 MSL along several sections along the northern and eastern perimeter.</p> <p>During the Preliminary Design Phase, BBEC conducted site visits to note any limits and any design or construction challenges. BBEC determined the right-of-way, access easements, and limits-of-construction and designed the new required earthen levees. BBEC provided a preliminary cost estimate outlining all expected bid items and CAD drawings to Prime.</p> <p>Currently, in the Final Design Phase, BBEC is revising plans, addressing comments, and will submit final plans, specifications and final cost estimate to Prime. BBEC is also assisting in permit applications for submission to local, state, and federal authorities.</p> <p>BBEC will assist in the BID and Construction Phases of the project.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2025 (estimated)	\$1,650,000	\$274,600

TEC Professional Services Questionnaire

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Dedicated Dredging on the Barataria Basin Landbridge (Project No. 2503-08-34), Jefferson Parish, LA</p> <p>Office of Coastal Protection and Restoration (OCP&R) CERM George Boddie, P.E. 2045 Lakeshore Drive, Suite 309 New Orleans, LA 70122 (504) 280-4067</p>	<p>The project consisted of constructing and maintaining 68,200 linear feet of containment dikes for two designated fill areas, and then pumping 5,232,648 cubic yards of dredged material from designated and permitted borrow areas into the fill areas for approximately 1,211 acres of marsh creation and nourishment. Since there was surplus dredge material in the permitted borrow areas, an additional 4,132,352 cubic yards of material was placed in adjoining fill areas to nourish about 1,578 additional acres of marsh, for a total re-creation of 2,789 acres of marsh.</p> <p>The project is located in Jefferson Parish, along the southeastern shoreline of Bayou Rigolets and Bayou Perot on either side of the Harvey Cut, approximately 2 miles south of the town of Lafitte. BBEC performed Construction Administration and Construction Inspection services including conducting progress meetings, reviewing pay applications, preparing progress reports, coordinating submittal review and change order development, and monitoring the progress of the work to ensure compliance with the project plans and specifications. BBEC also worked with the Department to develop a plan to utilize the surplus 4,132,352 cubic yards to nourish additional areas of marsh.</p> <div style="text-align: center; opacity: 0.5; font-size: 2em; margin-top: 20px;">  </div>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2010 (A)	\$35,381,690	\$35,381,690

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Northshore Living Shorelines, (Contract No.: 21-128), St. Tammany Parish, LA</p> <p>St. Tammany Parish Government Gina Hayes, Chief Administration Officer 21490 Koop Drive, Mandeville, LA 70471 (985) 898-2445</p>	<p>The project consisted of conducting a feasibility study, preliminary design and final design for an approximately 2-mile-long living shoreline structure in Lake Pontchartrain off the coast of Goose Point, a cape located at the edge of Big Branch Marsh National Wildlife Refuge in St. Tammany Parish. The feasibility study included a biological/ecological study to identify submerged aquatic vegetation (SAV) and other fauna present in the project area, identifying critical engineering data gaps and information needed to further the project into the funding phase, evaluating options for material type/size and deployment of the protective structures, wave analysis within the project area, and identifying permits required for the implementation of the project. Under our role as the prime consultant, BBEC researched materials and deployment methods for the living shoreline structure, compiled the biological research and wave analysis that our subconsultants provided during the feasibility study, and drafted the feasibility report presenting the information. BBEC designed the living shoreline structure cross section based on input from the client and determined the optimal alignment of the structure to promote biological growth in the project area while also protecting the shoreline from erosion due to waves. BBEC drafted a set of preliminary design plans for the living shoreline structure. BBEC is currently drafting a set of final plans and specifications for the rubble mound structure. During the final design BBEC determined the necessary aggregate size for the core and armor layers of the rubble mounds based on the wave analysis, determined the foundation reinforcement necessary to minimize settling and prevent failure of the soil due to the weight of the rubble mounds, and developed project specifications to ensure that the living shoreline is constructed in a way that aligns with local and state requirements while also providing the most beneficial outcome within the project area.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2022 (E)	\$342,755.12 (fee)	\$342,755.12 (fee)


TEC Professional Services Questionnaire

PROJECT NO. 8						
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:					
<p>Gloria Drive Pump Station, Project No. 20-2022A, Lafitte Area Independent Levee District Drainage, Town of Jean Lafitte, LA</p> <p>Lafitte Area Independent Levee District 2654 Jean Lafitte Boulevard Lafitte, LA 70067 Timothy P. Kerner, Jr., Interim Mayor timkerner@townofjeanlafitte.com (504) 689-2208</p>	<p>BBEC is providing Design Engineering Services for the Gloria Drive Pump Station Improvement Project which consists of expanding the existing pump station by doubling its capacity from 45 cfs to 90 cfs.</p> <p>The existing pump station has one pump on a pile supported structure, adjacent to an existing levee. The existing pump discharge pipe runs through the levee, discharging on the other side. On the pump station side, the levee is supported by a timber bulkhead, part of which has deteriorated over time. When constructed, the levee project provided for a second pipe penetration in anticipation of this project. The pump station has an existing stand-by generator, which was appropriately sized for the single pump.</p> <p>The proposed scope of the 45 cfs expansion includes:</p> <ul style="list-style-type: none"> Installing a new 45 cfs pump in line with the second discharge pipe provided by the levee project Constructing a new reinforced concrete pump station structure for both pumps, with bar screens (mechanical if funding allows) at the entrance. The new structure will replace the deteriorating timber bulkhead, as well. Repairing or replacing the timber bulkhead wall not addressed by the pump station structure. Installing a new generator structure and generator sized to run both pumps and incidental equipment. Extending the new pump discharge pipe as required and providing for scour protection at the outfall. Building the project in phases to utilize the existing pump during construction or providing temporary pumping during construction. 					
<p>Completion Date (Actual or estimated):</p>	<p style="text-align: center;">Estimated Cost:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; padding: 5px; text-align: center;">Entire Project:</th> <th style="width: 50%; padding: 5px; text-align: center;">Work for which Firm was Responsible:</th> </tr> <tr> <td style="width: 50%; text-align: center; padding: 5px;">2023 (E)</td> <td style="width: 50%; text-align: center; padding: 5px;">\$3,210,468</td> </tr> </table>		Entire Project:	Work for which Firm was Responsible:	2023 (E)	\$3,210,468
Entire Project:	Work for which Firm was Responsible:					
2023 (E)	\$3,210,468					


TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Braithwaite to White Ditch Levee Improvements (Public Works Project No. 09- 01-04A, 09-01-04D), Plaquemines Parish, LA</p> <p>Plaquemines Parish Government Ken Dugas, Parish Engineer Department of Engineering and Public Works 333 F. Edward Hebert Blvd., Bldg. 500 Belle Chasse, LA 70037 kdugas@ppgov.net (504) 297-5343</p>	<p>BBEC performed construction inspection services for the Parish's Levee Improvements Project, Braithwaite to White Ditch. Our role on this project was to be the QAR for the design engineer and Plaquemines Parish. BBEC was responsible for the day to day construction quality assurance inspections to ensure the project is built to the designed specifications. The work consists of clearing and grubbing, earthen levee degrading to +2', Installation of high strength geotextile fabric, install of levee embankment at a 1 on 3 slope to a +12.5', Steel sheet pile driving, and construction of an aggregate roadway to access the project. BBEC performed the following Construction Inspection Services:</p> <ul style="list-style-type: none"> Reviewing progress schedule, schedule of shop drawing and sample submittals, and schedule of values prepared by contractor and consult with the Engineer. Attending meetings with the contractor, including preconstruction conferences, progress meetings, job conferences and other project related meetings, and prepare and circulate copies of minutes. Assisting with providing information regarding the intent of the contract documents. Obtaining additional information when required for proper execution of the work. Considering and evaluating suggestions from contractor and reporting to Engineer. Preparing and submitting decisions in writing to contractor. Conducting on-site observations of contractor's work in progress to assist Engineer in determining if the work is proceeding in accordance with the contract documents. Reporting to Engineer any work in progress believed to be unsatisfactory, defective or will imperil the integrity of the design concept of the completed project. Consulting with Engineer in advance of scheduling major inspections, tests, and systems startups. Observing, recording, and reporting to Engineer appropriate details relative to test procedures and start-ups. Maintain correspondence, reports of job conferences, contract documents, change orders, field orders, work change directives, addenda, and additional drawings. Drafting and recommending proposed change orders, work change directives, and field orders and obtaining back up material. Notifying Engineer of site accidents, emergencies, damage to property, or any other concerns requiring immediate attention. Reviewing applications for payment with contractor for compliance. Verifying that certificates, maintenance and operation manuals, and other data required to be assembled and furnished by the contractor were applicable to the items actually installed and in accordance with the contract. Upon completion, the inspector participated in substantial completion inspection, and prepared the lists of items to be completed or corrected. He also assisted with the final inspection and verified all items were completed or corrected and made recommendations to the Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work. 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018	\$41,818,469	\$41,818,469

TEC Professional Services Questionnaire

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Technical Assistance for Floodplain Management, Community Rating System and Hazard Mitigation Related Services (Project No. 0352), Bucktown Marina Vision Plan Preparation, Jefferson Parish, LA,</p> <p>Jefferson Parish Government Maggie Talley, Director Department of Floodplain Management and Hazard Mitigation 1221 Elmwood Park Boulevard, Suite 310 Jefferson, LA 70123 mtalley@jeffparish.net (504) 736-6540</p>	<p>BBEC oversaw the preparation of the Vision Plan for the Bucktown Marina Harbor. The study started with an existing conditions assessment which included pre-work data collection including boundary and topographical survey, aerial photography, Bathymetric data, studies, reports and/or condition surveys of in-water facilities and other existing buildings and facilities found at the project site, studies and information on the quality and condition of site environmental habitat, regulations pertaining to local land use, environmental protection, watershed protections, storm water detention, and other related data, studies, reports, and mapping on internal and external roadways and traffic volumes, planned roadway improvements, design criteria and other related information, studies, reports, mapping and/or other engineering information on site infrastructure serving the site, potable water and wastewater plant capacities, utilities design criteria and other related data, and site ownership and easements. A project kick-off meeting was then held to confirm project communication chain of command, goals and objectives, project schedule and issues discussion, present early base maps and graphics for review, and complete initial inventory of project stakeholders. An existing conditions analysis was then done using the assembled data. Upon completion of the analysis, a market assessment was then prepared reviewing the Marina and other related marine activities. Upon completion of the market assessment, research began to determine the needs for Bucktown Marina and the Lakefront. Based on all of the research an Initial and then final Bucktown Marina Vision Plan was completed and submitted.</p> <div style="text-align: center; opacity: 0.5; font-size: 2em; font-weight: bold;">  <p>Jefferson Parish State of Louisiana</p> </div>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018 (A)	\$90,800 (fee)	\$90,800 (fee)

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	N/A	BBEC's firm nor its staff has had any litigation with Jefferson Parish.
2.		
3.		
4.		
N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.		
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;">  </div> <div> <p>Founded in 1997, BBEC is an engineering and computer consulting firm specializing in civil and environmental engineering, construction management, and grant pursuit and administration. BBEC became solely owned by Jeffrey Bonura, PE in January of 2023. As the sole member, Mr. Bonura oversees and manages all projects from implementation to completion.</p> <p>BBEC has substantial experience in all aspects of public works projects. Our staff has specific experience in project development, marsh creation, levee construction, levee repairs and hardening, development of living shorelines, drainage design, construction management, hydraulic and hydrologic modeling and alternative project evaluation. Our project experience also includes the necessary environmental permitting and property acquisition necessary to get any project done.</p> </div> </div> <div style="background-color: yellow; margin-top: 10px; padding: 5px;"> 1. PROFESSIONAL TRAINING AND EXPERIENCE IN RELATION IN RELATION TO COASTAL ENGINEERING </div> <p>BBEC staff have been involved in the cost-effective analysis, design, construction, and operation of hydraulic systems, including overflow control structures, for over 30 years. We have also been involved in the designs of levees and other water and earth retaining systems; concrete bridges; concrete and steel bulkheads; timber and compost pier repairs; wetlands restoration by marsh creation; and shoreline protection by living shorelines development as well as foreign material deposits.</p>		

TEC Professional Services Questionnaire

Mr. Jeffrey Bonura, P.E. leads our engineering staff in all engineering-related projects. Mr. Bonura has over 37 years of extensive experience in the design and management of public works projects in Jefferson and its surrounding Parishes. He also has similar experience in the City of Baton Rouge, the City of Lafayette, and the City of Houston. Mr. Bonura has experience in performing and managing design, bidding, construction (including inspector training and oversight), and as-built drawing phases of over \$100 million in FEMA funded roadway and drainage projects in the last 15 years alone, along with several pump station and levee construction projects in other areas, and has performed engineering services for over \$200 million in Public Works projects; construction projects that included earthwork and site development, roadway and drainage construction, erosions control and bank stabilization structures and features, earthen levees, and flood walls and gates. Mr. Bonura has substantial experience coordinating the work with construction contractors and other engineering firms, as well as local, state, and federal agencies.

COASTAL

Our biggest coastal restoration project was the Dedicated Dredging in the Barataria Landbridge Project, which consisted of marsh creation by means of beneficial use of dredged material. In short, the project created (recreated) about 500 acres of new marsh, and cost about \$35 million. Other coastal projects include:

- Braithwaite to White Ditch Levee Improvements, Plaquemines Parish, LA
- Barataria Basin Barrier Island Shoreline Restoration Study at Caminada Headland (Project No. 2503-05-49), Lafourche Parish, LA
- Dedicated Dredging on the Barataria Basin Landbridge (Project No. 2503-08-34), Jefferson Parish, LA
- Reggio Canal Flood and Erosion Protection, St. Bernard Parish, LA
- Evaluation of Using Sunken Vessels for the Reduction of Storm Surge in the Mississippi River Gulf Outlet (Project No. 2503-05-04)
- Northshore Living Shorelines, (Contract No.: 21-128), St. Tammany Parish, LA
- Grant and Project Management Consulting Services for the RESTORE Act, Plaquemines Parish, LA

Further, BBEC has performed engineering services on many other public works projects that require flow control facilities similar to these used in coastal projects, such as gravity and pressure hydraulic systems, large diameter flow control valve gates, weirs, and structures that contain them. Similar projects also include flow and level sensing devices and the necessary controls to adjust the flow and water levels. Similar, "non-coastal" projects include:

- West Bank Water Treatment Plant Raw Water Intake Levee Crossing, Jefferson Parish, LA
- Ring Levee Improvements, St. Bernard Parish, LA
- Program Management Services to the Department of Public Works (2003 Contract), St. Bernard Parish, LA
- East Bank Water Treatment Plant Improvements, Jefferson Parish, LA
- East Bank Water Treatment Plant Expansion, Jefferson Parish, LA
- West Bank Water Treatment Plant Sludge Pumping Facilities, Jefferson Parish, LA
- West Bank Water Distribution System Improvements, Jefferson Parish, LA
- Water Master Plan, Jefferson Parish, LA
- West Bank Water Treatment Plant 5MG Ground Storage Tank, Jefferson Parish, LA
- Sanitary Landfill Stormwater Detention, Jefferson Parish, LA
- Primrose Box Culverts
- Harvard Avenue Drainage Improvements, Jefferson Parish, LA
- Boutte Drainage Improvements, St. Charles Parish, LA
- West Napoleon Avenue – Cleary Avenue to Severn Avenue, Jefferson Parish, LA (SPN: 742-07-0088)
- Ames Boulevard Roadside Drainage Improvements, Jefferson Parish, LA
- Manson Ditch and Lower Kraak Outfall System Improvements, Jefferson Parish, LA

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- Guichard Canal Area Drainage Evaluation, St. Bernard Parish, LA
- Lake Avenue and Carrollton Avenue Drainage Study, Jefferson Parish, LA
- Cleary Avenue Roadway and Drainage Improvements, Jefferson Parish, LA
- Drainage Station Evaluation, St. Bernard Parish, LA
- Operation and Maintenance Management, Jefferson Parish, LA
- Wastewater Program, Greater Houston, TX
- Harvey Wastewater Treatment Plant Sluice Gates and Bar Screens, Jefferson Parish, LA
- Lift Station Modeling, Jefferson Parish, LA
- Sanitary Landfill Phase I and II Expansion, Jefferson Parish, LA
- Drainage Pump Station Secondary Containment, Jefferson Parish, LA
- Vintage Street Bridge at Duncan Canal, City of Kenner, LA
- Westbank Mississippi River Levee Bike Path, Jefferson Parish, LA

HYDROLOGIC AND HYDRAULIC MODELING

BBEC has substantial experience with hydrologic and hydraulic modeling utilizing modeling software coupled with GIS information to design optimum drainage systems. Sample projects include:

- Cleary Roadway and Drainage Improvements
- Guichard Canal Drainage Evaluation
- St. Bernard Parish Map Modernization Program (modeled to FEMA flood mapping specifications)
- Harvard Avenue Drainage Improvements Lake/Carrollton Avenue Drainage Evaluation
- Jefferson Parish Sanitary Landfill Site Drainage
- Ames Boulevard Drainage Improvements
- Sunset Drainage District (Convert HEC-1 and HEC-2 models to HEC-RAS and HEC-HMS models)
- Manson Ditch/Lower Kraak Outfall Improvements

GEOGRAPHIC INFORMATION SYSTEMS/MAPPING

BBEC has extensive knowledge of Geographic Information Systems (GIS). Drawings and data developed from the GIS showing site topography could be used to develop site plans for construction, traffic detour plans, preliminary cost estimates, project presentations, tracking operations, and many other uses. BBEC assisted Jefferson Parish develop its GIS (utilities, cadastre, contours, etc) under an annual contract for 18 years. Similarly, BBEC upgraded St. Bernard Parish GIS to include contours, drainage, water, sewer, buildings, and addresses. BBEC upgraded both Jefferson's and St. Bernard's GIS's so that the GIS's could be used to develop both Parish's Digital Flood Insurance Rate Maps (DFIRMs) and developed and submitted the DFIRM to FEMA for both Parishes in accordance with FEMA standards. BBEC's GIS experience included detailed use and development in Oracle, the database behind the GIS software, as well. Both Jefferson and St. Bernard Parishes use ESRI and Oracle products for their GIS's. We have used these services to prepare detailed zone maps for streets, drain lines, sewer systems, and canals. We have also prepared progress reports of construction services by showing street-by-street progress of crews through a zone, and we published the information on the web daily for some of our clients.

GRANT MANAGEMENT

BBEC has substantial experience in program management and grant management projects. BBEC currently provides program management services to Plaquemines Parish for its RESTORE ACT funded projects. BBEC has performed program management services for over \$750 million in federal grant funded projects.

Our training and experience are directly embedded in our staff. What follows is a list of key individuals anticipated for the project with brief resumes. Complete resumes are provided elsewhere in this SOQ.

In addition to Mr. Bonura:

TEC Professional Services Questionnaire

- **Mr. Kevin Forschler, P.E.**, (9.5 years of experience), has been designing and administering the construction of typical public works projects (sewer, drainage, and roadway); including the recent completion of the hydrologic and hydraulic modeling of the area associated with our Waggaman Hydraulic Study and the completion of the Bissonet Plaza Master Drainage Plan in Jefferson Parish. He is currently working on the Widening/Stabilization of Congressman Hebert, Creely, and Bluebird Canals in St. Bernard Parish and the Drainage and roadway improvements described herein.
- **Mr. Madan Kamboj, P.E.** (43.5 years of experience) has been performing project design, construction administration, and project monitoring for general civil projects including drainage, utilities, streets, highways and bridges, buildings, water and sewer treatment plants, multi-story parking garages; airport taxiways, traffic separation facilities, bike paths, and overhead pedestrian walkways at high traffic intersections.
- **Mr. John J. Housey, Jr. P.E.**, (57 years of experience), has been administering the construction of over \$40 million in roadway and drainage improvements for the last several years. Working on projects such as Hurricane Damage Katrina Roadway Improvements and Drainage Repair in St. Bernard Parish, Drainage Pump Stations in Jefferson Parish, the Widening/Stabilization of Congressman Hebert, Creely, and Bluebird Canals in St. Bernard Parish, and the Lower 45 Evacuation Route Basin for the Lafitte Area Independent District.
- **Mr. Matthew Hahn, P.E.**, (8 years of experience), has over eight years of experience in the field of civil and consulting engineering with a strong background in water resources, civil/site design, project management, and land surveying. His vast knowledge includes but is not limited to water distribution systems, hydrologic modeling and drainage design, sewerage and wastewater treatment, site development and planning, structural design, public speaking, topographic land surveying, boundary surveying, floor elevation surveying, earthwork balancing and site grading, recreation facilities/athletic fields, public bid process, permitting, and construction administration and management.
- **Mr. Craig Comeaux, MPPA, C.F.M.** (27 years of experience) has successfully managed or been significantly involved in nearly 100 federal recovery projects in a program management capacity throughout South Louisiana. These projects involve FEMA Public Assistance Grants, FEMA Hazard Mitigation Grants, and U.S. Department of Housing and Urban Development Community Development Block Grants. Mr. Comeaux worked extensively in coordination with FEMA, GOHSEP, Office of Community Development, and local Parish groups to manage over \$700 million in project funds, including oversight of project inspection. Mr. Comeaux recently completed the Technical Assistance for Floodplain Management, Community Rating System, and Hazard Mitigation Related Services for Jefferson Parish where he worked with local officials to assist with Education and Outreach projects, activities to assist with meeting CRS points, edits and updates to flood maps, analysis of NFIP policies, and the planning process for the Parish's multi-jurisdictional Hazard Mitigation Plan.
- **Mr. Ethan Jones, E.I.**, (2.5 years of experience), is a recent graduate from Louisiana State University where he obtained a Civil Engineering degree in May of 2022 and became an Engineer Intern in June of 2022. He is currently working on projects for Wastewater Treatment where he is gathering measurements and doing calculations to find velocity through pipes for the selection of pumps and creating plan sets for submittals. Mr. Jones has also done Grant Management where has visited sites to gather measurements for sketches and worked on volumetric cut and fill calculations for clearing residential canals in Lafitte. Mr. Jones has also worked on Roadway and Drainage projects where he has assisted with cost estimates for clients. Mr. Jones has used WaterGEMS to model and analyze water systems for St. Tammany Parish. Additionally, Mr. Jones worked on aeration analysis for Flow Eq Basins. Mr. Jones is currently working on raw water intake for St. John the Baptist Parish.
- **Mr. Ashton Bonura** (10 years of experience), is a recent graduate from the University of New Orleans where he obtained a Civil and Environmental Engineering degree in December 2022. He has assisted the licensed engineers within the company for several years prior to earning his degree. Mr. Bonura

TEC Professional Services Questionnaire

has works on projects that involve water and wastewater treatment, lift station design, roadway rehabilitation and drainage improvements, and sanitary landfill permit renewals.

- **Mr. Pete Foret** (34 years of experience), is a multi-discipline AutoCAD drafter and designer with experience in the Civil, Structural, Architectural, Electrical and GIS/Mapping fields. He has a combined 31 years of experience generating alignments, plan and profile sheets, cross sections, contour maps, structural and architectural plans and details and electrical one-line diagrams. He has been the drafting coordinator for multiple firms and has been responsible for developing drafting standards for a consistent and quality drawing set.

2. SIZE OF FIRM, CONSIDERING NUMBER OF PROFESSIONAL AND SUPPORT PERSONNEL REQUIRED TO PERFORM THE TYPE OF ENGINEERING TASKS:

BBEC staff consists of 26 (including 6 licensed civil/structural engineers) professional, technical, and clerical personnel capable of handling all project and administrative tasks; all of which are available to work on the project. Mr. Bonura will manage projects through completion, making sure that all requirements of the projects are met. We have sufficient licensed and experienced engineers, junior engineers, technicians, and GIS and drafting support to effectively perform work with its existing staff.

3. CAPACITY FOR TIMELY COMPLETION OF NEWLY ASSIGNED WORK, CONSIDERING THE FACTORS OR TYPE OF ENGINEERING TASK, CURRENT UNFINISHED WORKLOAD, AND PERSON OF FIRM'S AVAILABLE PROFESSIONAL AND SUPPORT PERSONNEL:

Over the years, BBEC successfully performed well over \$100 million in fees of engineering and engineering related projects for various entities and municipalities throughout southeast Louisiana. The work performed included surveying management, H & H modeling, project design and development, floodplain analysis and hazard mitigation, geographic information systems, and others.

We, and our sub-consultants, have substantial experience in working on many public works projects, coastal and otherwise, in Jefferson Parish. We have worked as a company for the Parish for 27 years, and Mr. Bonura worked an additional 10 years on Parish projects prior. Our experience includes performing coastal management consulting and funding assistance to Jefferson Parish and the surrounding parishes.

Our wealth of experience with public works type project in Jefferson Parish allows us to provide the Parish with the necessary knowledge of keeping the Project on schedule and within budget, adhering to the standards set forth by the Parish. BBEC can begin work immediately and devote the necessary manpower to continue with the work through completion within any reasonable schedule required by the Parish. BBEC has never failed to meet or exceed our clients' expectations on any of our projects.

Mr. Bonura will manage the project through completion, making sure that all the requirements of the project are met. BBEC has sufficient licensed and experienced engineers, junior engineers, technicians, and GIS and drafting support to effectively perform work with its existing staff and meet any schedules reasonably set by the Parish.

4. PAST PERFORMANCE BY PERSON OR FIRM ON PARISH CONTRACTS:

As noted throughout this Professional Services Questionnaire, BBEC and its staff members have an excellent history of service to Jefferson Parish, its departments, and its citizens. Our projects range from the smallest \$5,000 fee project to our largest \$60,000,000 fee project. Project descriptions are included in this qualifications submittal to substantiate our experience in previous contracts. We invite further scrutiny of our track record with the Parish through discussion with any of the Departments noted elsewhere in this

TEC Professional Services Questionnaire

document. BBEC has not been faulted for any time delays, cost overruns, and / or design inadequacies.

BBEC staff have performed several related projects for Jefferson Parish, namely, Harvard Avenue Drainage, Bucktown Drainage, Cleary Avenue Drainage, Digital Flood Insurance Rate Map, and Waggaman Drainage. Mr. Bonura also managed the parish-wide drainage model for St. Bernard Parish to update its FIRMs and performed similar multi-subdivisions drainage projects for other parishes. Mr. Forschler has drainage experience, working on many of the projects with Mr. Bonura. Mr. Forschler also performed BBEC's portion of the Bissonet Drainage Master Plan in gathering data, reviewing the Parish's existing SWMM model, and developing the existing conditions model for the watershed. Mr. Forschler is currently performing the modeling and master planning services for the Avondale/Bridge City project, too.

BBEC's staff has performed and managed design, bidding, construction (including inspector training and oversight), and as-built drawing phases of about \$50 million in Jefferson Parish Department of Public Works construction projects that included all aspects of construction similar to those in the project sought such as marsh and ridge restoration, shoreline stabilization and protection, beneficial use of dredge material, living shoreline design, hydrologic and hydraulic modeling, design analysis and reports, environmental assessments, technical evaluations, cost estimates, opinions of probable construction cost and field investigations, grant writing, and public awareness and relations. BBEC's reputation for performance in Jefferson Parish is second to none.

Previous relevant projects completed by BBEC specifically for Jefferson Parish include:

- Avondale/Bridge City Drainage Evaluation (Area between the Mississippi River and the Union Pacific Railroad, from Huey P. Long Bridge to Avondale Garden Road), Jefferson Parish, LA, 04/2021-Present
- Ames Boulevard Roadside Drainage Improvements, 01/2004-12/2005
- Bissonet Plaza Master Drainage Plan (A/E Project No. 20-1708), 05/2018-05/2021
- Canal Monumentation Program, 01/2004-12/2005
- Lake Avenue and Carrollton Avenue (Bucktown) Drainage Study, 04/2003-07/2005
- Cleary Avenue Roadway and Drainage Improvements, 01/1998-06/2005
- Harvard Avenue Drainage Improvements, Project No 99-046-DR and 99-046A-DR, (Funding Source: Community Development Block Grant), 04/2000-06/2006
- Waggaman Area Drainage Study (Project No. 2011-03-DR), 02/2013-01/2016
- 2014 Hazard Mitigation Assistance (HMA) Grant Management Services, 04/2015-04/2019
- Technical Assistance for Floodplain Management, Community Rating System and Hazard Mitigation Related Services (Project No. 0352), 01/2017-06/2020
- Drainage Pump Station Fuel Storage Secondary Containment, 09/2002-06/2004
- Labarre Road Back-to-Back U-Turn Intersection Improvements (West Esplanade Avenue/North Labarre Road), LA, 2004
- Manson Ditch and Lower Kraak Outfall System Improvements, 06/2004-09/2008
- West Napoleon Avenue Improvements, Cleary Avenue to Severn Avenue, (LA DOTD Project No. 742-07-0088), 02/2003-08/2005
- Design of Access Ways and Ladders at Drainage Pump Stations, Project No. 2014-022-DR, 11/2014-11/2019
- Sanitary Landfill Stormwater Detention, 1998
- Underground Storage Tank Improvements Program, 1995
- Digital Flood Insurance Rate Map, 03/2005-12/2008
- Westbank Mississippi River Levee Bike Path, Segments 2, 3, and 4, (Project No. DOTD PN: 744-026-019 FAP NO: ENH-2601(506)), 07/1999-10/2006
- Whitney Avenue Improvements, West Bank Expressway to Stumpf Boulevard, SPN # 98-031-RBI, 2006

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BBEC performed many other unrelated engineering projects for Jefferson Parish; therefore, they are not listed.

5. LOCATION OF PRINCIPAL OFFICE WHERE WORK WILL BE PERFORMED:

BBEC's main office is located at 209 Canal Street in Metairie, Louisiana, which is where the work will be performed.

6. ADVERSARIAL LEGAL PROCEEDINGS BETWEEN THE PARISH AND THE PERSON OR FIRM PERFORMING PROFESSIONAL SERVICES, IN WHICH THE PARISH PREVAILED, OR ANY ONGOING PROCEEDINGS BETWEEN PARISH AND THE PERSON OR FIRM:

BBEC's firm nor its staff has had any litigation with Jefferson Parish.

7. PRIOR SUCCESSFUL COMPLETION OF THE PROJECTS OF THE TYPE AND NATURE OF THE ENGINEERING SERVICES, AS DEFINED, FOR WHICH FORM HAS PROVIDED VERIFIABLE REFERENCES:

We offer the following references that can attest to our previous work history regarding coastal projects.

For Jefferson Parish projects completed by BBEC inclusive of the below listed projects, we offer the following references:

- **Mitch Theriot, P.E., Director of Drainage Department • Jefferson Parish •** 1221 Elmwood Park Blvd., Suite 907, Jefferson, LA. 70123 • 504-736-6751
- **Michelle Gonzales, CFM Director of Ecosystem and Coastal Management • Jefferson Parish •** 1221 Elmwood Park Blvd., Suite 310, Jefferson, LA. 70123 • 504-736-6653
- **Neil Schneider, P.E., Director of Capital Projects • Jefferson Parish •** 1221 Elmwood Park Blvd., Suite 906, Jefferson, LA. 70123 • 504-736-6833
- **Mark Drewes, Director of Public Works • Jefferson Parish •** 1221 Elmwood Park Blvd., Suite 904, Jefferson, LA. 70123 • 504-736-6783

For recent projects we have performed that have similar detailed aspects for other clients, we offer the following references:

- **Gina Hayes, Chief Administration Officer • St. Tammany Parish •** 21490 Koop Drive, Mandeville, LA 70471 • 985-898-2445
- **Miles Bingham, P.E., Director of Public Works • St. Charles Parish •** 15045 River Road, Hahnville, LA. 70057 • 504-736-8753
- **Louis Pomes, Parish President • St. Bernard Parish •** 8201 W. Judge Perez Drive, Chalmette, LA 70043 • 504-278-4227
- **Timothy P. Kerner, Jr., Mayor, Lafitte Area Independent Levee District • Town of Jean Lafitte •** 2654 Jean Lafitte Blvd, Lafitte, LA 70067 • 504-689-2208

GIS SERVICES

BBEC has been performing general GIS services for Jefferson Parish for over 20 years. While much of the services addressed other utilities, parcel and subdivision mapping, database and software licensing and upgrades, BBEC performed drainage specific projects relevant to drainage modeling

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- BBEC assisted the Department develop the drainage layer, adding drainage structures from aerial photography and developing the subsurface piping network from the Parish's paper unit sheets.
- BBEC assisted the Parish develop its canal monumentation project by managing the survey and abstracting effort to identify many of the Parish canals' right-of-way boundaries, and installed x, y, z survey monuments for use by the maintenance crews.
- BBEC assisted and continues to assist the Parish in updating its aerial photography and LIDAR information, whether Parish funded or obtained from other agencies.

CAD SERVICES

BBEC has sufficient drafting support personnel currently on staff to work on design projects with their lead drafter having over 30 years of experience in Civil, Structural, Architectural, Electrical and GIS/Mapping fields.

COST ESTIMATING

BBEC has in-depth knowledge and experience with accurate cost estimates for Jefferson Parish and surrounding Parishes projects. Our staff members include personnel skilled in estimates that perform detailed cost estimates for the majority of our projects, including coastal restoration and similar work. We adhere to national cost estimating standards to prepare "fair and reasonable" construction cost estimates. Our team also provides extensive construction expertise to augment and ground-truth cost estimating, scheduling, and constructability review activities.

Cost estimates developed for specific projects are covered in the individual projects addressed in other sections of this SOQ.

PERMITTING

BBEC has done many permits where we obtained CPRA Coastal Use Permits, USACE of Engineers Section 10, Section 404, and Section 408 permits along with Levee Board Permits from the Pontchartrain Levee District and Permits from LDOTD for roadway clearances and tie-ins/driveway permits as well as others. Our team has successfully secured all of these permits on many previous projects.

In addition to our experience with the permit shown above which includes the aforementioned permits from the USACE, as well as DHH (now LDH), DEQ, DOTD and other State agencies, we have also obtained dozens of DHH permits for water treatment and wastewater treatment facilities. BBEC has the experience and solid reputation with all of the regulatory agencies to assist the Parish in obtaining all the necessary permits noted.

GRANT WRITING, OUTREACH AND EDUCATIONAL SUPPORT AND DEVELOPMENT OF ASSOCIATED MARKETING MATERIALS

BBEC is fully versed in the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP), including the Flood Mitigation Assistance Program (FMA); in addition, we are experienced in other federal grant programs, such as the FEMA's Public Assistance (PA) Grant Program, U.S. Department of Transportation's Emergency Road Program under the Federal Highway Administration (FHWA), and the HUD Community Development Block Grant Program (CDBG). BBEC has considerable experience in the execution of federal grant-funded projects and adhering to the requirements and standards of the grant administering agency. BBEC provided various stages of grant assistance for FEMA and HUD funded projects for over \$750 million in grants.

AGENCY COORDINATION

Our experience includes managing and procuring contractors and coordinating the work with the Environmental Protection Agency (EPA), FEMA, Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), U.S. Department of Housing and Urban Development (HUD),

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Louisiana Department of Environmental Quality (LDEQ), State Historic Preservation Office (SHPO), U.S. Army Corps of Engineers (USACE), U.S. Department of Transportation (USDOT) and other State and Federal agencies. We have substantial experience in working with all agencies in developing, processing, and obligating the necessary project worksheets so that funding of the project occurs.

BBEC has also assisted its clients in obtaining its federal grants, maintaining compliance with the grants, securing the reimbursements, and addressing comments generated by the audits at close-out of the grants when necessary. Our administrative, accounting, and computer programming staff are very familiar with the record-keeping necessary for FEMA funded projects. BBEC has automated record keeping, tracking and document management systems in place that we developed specifically for FEMA and HUD projects.

Relevant projects in addition to those described in Section L include:

Barataria Basin Barrier Island Shoreline Restoration Study at Caminada Headland (Project No. 2503-12-21), Lafourche Parish, LA, 2005-2007

The project was part of a feasibility level engineering and design effort to develop a plan to restore and/or protect the natural barrier island system and thereby create a sustainable ecosystem in the Barataria Basin. BBEC managed a surveying firm and a geotechnical firm in the performance of a geotechnical investigation to assess the subsurface conditions of the beach and the marsh in the project area so that the design of earthen containment levees and fill areas could be completed. BBEC coordinated the work of the surveyor and geotechnical engineer with the landowner and LDNR to ensure that the concerns of all parties were addressed and that the required data was generated to facilitate the final design of the marsh creation project.

Evaluation of Using Sunken Vessels for the Reduction of Storm Surge in the Mississippi River Gulf Outlet (DNR Contract No. 2503-05-49), 2006

The purpose of the project was to evaluate the feasibility of sinking ships to create a closure of the Mississippi River Gulf Outlet. The use of ships for closure was proposed as a near-term, temporary means for closing the channel in preparation for hurricane season until the construction of a long-term closure is completed. BBEC investigated the requirements for such a closure project including ship acquisition, ship remediation/environmental considerations, the longevity of the closure, construction methodology, project costs and schedule, other project considerations such as permitting and attractive nuisance, and alternative projects. The report concluded that a conventional closure was preferable since it can be constructed at least as expediently, is specifically designed for its function, virtually eliminates risks to the environment and public safety, and lasts much longer than a ship breakwater closure.

Reggio Canal Flood and Erosion Protection (Contract No. 716-44-0012), St. Bernard Parish, LA, 2006

The scope of BBEC's work was to provide full engineering services, including evaluation of alternatives, preliminary design, final design, bidding, construction administration, construction inspection, and as-built drawing services, for the construction of a flood and erosion control structure along the Reggio Canal. The area adjacent to the Reggio Canal was subject to frequent flooding and constant erosion. The purpose of the project was to eliminate the flooding and erosion problems and preserve the existing concrete roadway adjacent to the canal. The design of the bulkhead allows residents to access the canal via removable flood gates and also allows an existing boat launch to remain in use in conjunction with the flood and erosion protection measures. The project consisted of structural design of the steel sheet pile bulkhead wall and tieback systems, design of drainage systems, connection and coordination with a levee project adjacent to the proposed bulkhead, maintenance dredging of the existing canal, utility relocations, roadway and other site restoration, traffic maintenance, and all incidental work.

Repair of Buras Marina, Plaquemines Parish, LA, 2013-2015

The project consisted of repairs of the damages to the Buras Marina caused by Hurricane Isaac. BBEC oversaw the design for the repairs, bidding services, and construction management for the project.

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Repair of Venice Marina, Plaquemines Parish, LA, 2013-2015

The project consisted of repairs of the damages to the Venice Marina caused by Hurricane Isaac. BBEC oversaw the design for the repairs, bidding services, and construction management for the project.

Emergency Levee Repairs, St. Bernard Parish, LA, 2005

BBEC flew 4.5 miles of damaged levees and identified breaks by GPS. BBEC assisted St. Bernard Parish procure an emergency construction contract to make the repairs in advance of pending Hurricane Rita. BBEC worked with the Parish and Lake Borgne Basin Levee District to secure a suitable levee material. BBEC's project engineer, Mr. Jeffery Bonura, P.E., stayed on site 16 hours per day directing levee repair crews, making sure damaged areas were properly cleaned of grass and debris and filled and compacted with suitable borrow material.

Levee/Pump Station Improvements, Plaquemines Parish, LA

BBEC provided Resident Inspection Services serving as the liaison between the Corp of Engineers and Plaquemines Parish. BBEC worked with members of CPRA in the review and QA process for the following projects:

- Wilkinson Pump Station
- Diamond Pump Station
- Oakville to Reussite Levee
- Ollie Pump Station
- Duvic Pump Station

Our role was to inspect the work from Plaquemines Parish's perspective, verifying that the work was installed in accordance with the contract documents and suitable for future maintenance y Plaquemines Parish.

H&H MODELING AND MASTER PLANNING OF DRAINAGE SYSTEMS

Cypress Park Subdivision Drainage Evaluation, St. Tammany Parish, LA, 11/2016-12/2017

BBEC performed a hydraulic and hydrologic study of the Erindale Heights and Cypress Park Subdivisions (about 450 acres of single-family residential property). The study consisted of developing a computer model of the hydrology and drainage system consisting of natural channels, open ditches, closed conduits, and culverts. BBEC evaluated the 5, 10-, 25-, 50-, and 100-year storms, and developed several alternatives for addressing the flooding concerns. BBEC provided pros and cons, permitting concerns, and construction cost estimates related to the alternatives. The alternatives considered included elevation adjustments to open channels, increased closed conduit usage and size of existing closed conduits, levees, and pump stations.

HMGP Elevation of Coast Guard Road, Phase I (Project No. 1603x-075-0010), Plaquemines Parish, LA (Funding Source: FEMA Hazard Mitigation Grant Program), 09/2013-06/2016

Approximately 0.2 miles of the existing section of Coast Guard Road in Venice, beginning with its intersection with Tidewater Road, between longitude/latitude 29.258072/-89.367031 and 29.253624/-89.35847, was addressed under this project. The work included the design for the addition of appropriate earth materials to elevate the roadway base with stabilization from its current elevation of +3' NGVD to an elevation of +5' NGVD. In its previous condition, this roadway experienced overtopping with flood waters regularly whenever the stage of the Mississippi River at Venice exceeds +4' NGVD. Additionally, the existing drainage system was upgraded in order to increase the outflow capacity, replacing the current 24"/30" diameter piping with 36" piping.

In accordance with Executive Order 11988, Plaquemines Parish Government determined that the entirety of the project area is located within the 100-year floodplain, and in accordance with Executive Order 11990, that the project had the potential to impact the wetlands in the area.

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Phase I of the HMGP Elevation of Coast Guard Road consisted of:

- Hydrologic and Hydraulic (H&H) study to identify the existing drainage system, the need for project upgrades, and the anticipated benefits to be derived from the proposed upgrades,
- Environmental review,
- Design the upgrades including the recommendations of the H&H Study and prepare the bid and construction documents, and
- Preliminary and revised cost estimates.

East Bank Water Treatment Plant Improvements, Jefferson Parish, LA, 12/2016-Present

BBEC is currently designing the 40 mgd remote high service pumping station, site paving, grading, and drainage, and yard piping.

- The remote high service pump station consists of 3 installed and the complete set up for 1 future 20-inch vertical turbine pumps mounted in a “can” installation. The controls will be connected to other plant functions so the station will be operated through the main plant’s control system. The structure will be a cast-in-place concrete substructure with a CMU wall superstructure.
- The paving, grading, and drainage is a two-phased project for an almost 9-acre plant site. The work includes connecting to existing and new buildings, connecting to existing pavement and utilities, and the design of parking facilities and delivery and loading facilities.
- The yard piping consists of about 2,500 feet of 36-inch to 54-inch pipe, and several thousand feet of smaller pipe, navigating through a site congested with many conflicts. The work is designed to connect to existing systems with automated remote-controlled valves and valve boxes and by minimizing disruption to plant services. Water carried includes raw river water, clarified water, filtered water, and finished water throughout the treatment facility.

The work also includes coordinating with other engineering disciplines (structural, geotechnical, mechanical, architectural, electrical, and instrumentation) and the project owner.

Widening / Stabilization of Congressman Hebert, Creely, and Bluebird Canals (Hazard Mitigation Grant Program), St. Bernard Parish, LA, 01/2015-Present

The project includes increasing the capacity and improves the stability of Congressman Hebert, Creely, and Bluebird Canals, that consists of 11,600 linear feet of open canal and culverts ranging from 4-feet bottom width to 16-feet bottom width channels. BBEC coordinated with St. Bernard Parish, Lake Borgne Basin Levee District, and the Louisiana Department of Transportation and Development to obtain information regarding the existing drainage plan. BBEC performed a hydrologic and hydraulic analysis of the existing system to evaluate the entire area for the 5-year, 10-year, and 25-year storms. BBEC established the design cross sections for the channels, which included concrete u-channels, concrete box culverts, and round and arched pipe, and concrete lined trapezoidal sections, depending on the availability of land and other conditions. BBEC obtained the necessary USACE, LDNR, SLFPA-E, and CPRA permits required to construct the contract. 90% Final Designs have been submitted to the client.

Bissonet Plaza Master Drainage Plan (A/E Project No. 20-1708), Jefferson Parish, LA, 05/2018-05/2021

BBEC developed a hydrologic and hydraulic (H & H) model of a 180-acre residential (zoned R1) area in Jefferson Parish, Louisiana, said area bounded by Power Boulevard, Kawanee Avenue, West Esplanade Avenue, and the Elmwood Canal. BBEC developed a limited scope of services for the necessary topographical survey; provided oversight and reviewed the final topographic survey; developed the H & H model using third party software; coordinated the model with the Parish’s own parish-wide H & H model; and provided the running model to others for evaluation of improvements.

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Bayou Gauche Drainage Analysis, St. Charles Parish, LA, 01/2003-12/2005

The project included updating the Parish's existing hydraulic and hydrologic computer models with current developments for the Sunset Drainage District watershed in St. Charles Parish. The Parish's existing HEC -1 and HEC-2 hydraulic models were evaluated and revised to include infrastructure improvements throughout the drainage district. The existing models were converted to HEC-RAS and HEC-HMS for use in this study and future evaluations. Model runs were performed to verify the need for drainage pump station improvements in the area and determine the improved capacity of the pump station.

Guichard Canal Area Drainage Evaluation, St. Bernard Parish, LA, 03/2004-04/2005

The project consisted of evaluating the ability of an existing drainage system to handle the 10-year storm for a 200-drainage basin in a residential area primarily consisting of open ditches and miscellaneous culverts with multiple outfalls into the Guichard Canal. The area is bounded by the Guichard Canal on the west, Paris Road on the east, Judge Perez Drive on the south, and Patricia Street on the north. The area also contained two drainage pump stations that were designed to drain the subsurface system, while the main volume of flow during the rain events utilized roadside ditches and some subsurface drain lines. BBEC developed a drainage layer in the Parish's GIS, surveyed elevations of the drainage features, developed a hydrologic and hydraulic model for the area, modeled the area and determined all deficient drain lines. BBEC made recommendations for the necessary improvements to cover the 10-year storm.

Plaza Drive Area Drainage Evaluation, St. Bernard Parish, LA, 2005

The project consisted of evaluating the ability of an existing drainage system to handle the 10-year storm for a 150 drainage basin in a residential area primarily consisting of open ditches and miscellaneous culverts with multiple outfalls into the drainage trunk line under Judge Perez Drive to the north and the drainage canal along St. Bernard Highway to the south. The area includes three parallel streets, including Plaza Drive. The area also contained two drainage pump stations that were designed to drain the subsurface system, while the main volume of flow during the rain events utilized roadside ditches and some subsurface drain lines. BBEC developed a drainage layer in the Parish's GIS, surveyed elevations of the drainage features, developed a hydrologic and hydraulic model for the area, modeled the area and determined all deficient drain lines. BBEC made recommendations for the necessary improvements to cover the 10-year storm.

Grant Consulting Services, Jefferson Parish, LA, 03/2023-Present

BBEC is assisting with the development of grant applications for nineteen projects for Jefferson Parish's CDBG Resilient Communities Infrastructure Program (RCIP) which includes the development of project scope of work descriptions, construction cost estimates, project schedules, ground disturbance maps, and maintenance program estimates for the Jefferson Parish's CDBG-RCIP Grant Applications. BBEC assists in the development of a variety of grant applications, including applications for potable water improvements, drainage improvements, sewer lift station upgrades, bridge and roadway repairs, green infrastructure improvements, parks and recreation projects, all of which will provide natural disaster mitigation and resiliency to underserved communities across Jefferson Parish. Our extensive knowledge and experience with civil construction projects allows us to develop detailed project scopes of work and cost estimates to support the CDBG Grant Applications.

• Manhattan Boulevard Water Loop Path	\$3,361,103.75
• Sewer Project D6-6.....	\$1,000,000.00
• Paillet Drainage Improvements.....	\$1,800,000.00
• 6 th Street Bridge Replacement.....	\$2,000,000.00
• JEDCO Food Incubator	\$500,000.00
• Gretna Green-Infra-Distressed Mixed-Use Corridors	\$1,700,000.00
• Sala Avenue Historic Drainage Improvements.....	\$2,000,000.00
• Community Centers Resiliency	\$1,000,000.00

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• Fat City Leisure Park and Playground.....	\$2,710,618.38
• Mike Miley: More than a Playground	\$2,000,000.00
• Distressed Corridor Façade Improvements (Gretna and Kenner)	\$3,000,000.00
• Unified Devel Code.....	\$1,500,000.00
• Homedale Pocket Park, Harvey, LA.....	\$1,149,762.00
• Bucktown Green Infrastructure & Complete Streets Retrofit Phase 1	\$3,184,821.74
• S. Kenner Revitalization A.P. Clay Resource Center	\$4,200,000.00
• Kenner Laketown Park / Harbor Improvements	\$1,036,690.00
• Lift Station L 12-2 Reconstruction	\$1,100,000.00
• Abby Road Lighting Project	\$500,000.00
• Ames Boulevard Lighting Project.....	\$1,500,000.00

In addition, BBEC assists in the planning and coordination for the Jefferson Parish Hometown Revitalization and Resilient Communities Infrastructure Programs. BBEC presents ideas to inform the public about the programs, which encompass the community needs and the resources available to address the public's concerns. We assist with the planning and conducting of the Citizen Participation Plan, which includes public hearings, marketing of events, community surveys, the presentation of CDBG and RCIP information, and the documentation of all such hearings and events. BBEC assist with researching project ideas that align with the Hometown Revitalization and Resilient Communities Infrastructure Programs.

FEMA Public Assistance Grant and Program Management, Jefferson Parish, LA, 10/2021-Present

This project includes the processing of FEMA reimbursements, based on federal and state requirements and development of closeout documentation. BBEC works with Parish officials to collect disaster-related documentation and to prepare applications as required. BBEC also assists with providing broad based support services designated to help maximize federal funding, expedite the process, and retain funds during the closeout process. In addition to services performed for Hurricane Ida, BBEC also assists the Parish with performing the same services for Hurricane Beta. This project also includes program management services which assists the Parish with the review and implementation of procurement policies, ensuring that all potential emergency contracts comply with federal requirements and guidelines set forth in the Public Assistance Program.

BBEC's services also include:

- Prioritizing eligible properties for public assistance funded activities; and
- Conducting comprehensive facility damage assessments for disaster damaged structures, contents, vehicles, pump stations, sewer lift stations, and other parish-owned facilities; and
- Designing, implementing, and monitoring the consultation process to inform the Parish of program requirements, collecting technical information, determining mitigation preferences, case managing each individual project, and providing preliminary damage repair or replacement estimates; and
- Conducting status meetings with the Parish during the grant application development process. These meetings focus on program requirements and repair activities; and
- Performing program management of recovery efforts afforded to the Parish through the use of Public Assistance funds; and
- Coordinating response and recovery efforts between the local municipalities to maintain compliance with the funding programs and maximize federal funding for all parties; and
- Holding weekly status meetings with the Parish's Grant Administrator, Finance Director, GOHSEP, and FEMA to update grant status and status of individual projects. Status tracking is provided to the Parish either before the monthly status meetings or at the meetings.

2014 Hazard Mitigation Assistance (HMA) Grant Management Services, Jefferson Parish, LA, 04/2015-

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04/2019

BBEC provided grant management services for Jefferson Parish Hazard Mitigation Assistance grant program. As part of this project, BBEC provided guidance to Jefferson Parish, in regards to FEMA guidelines including elevation requirements, construction requirements, and grant application requirements as described in FEMA's program guidance. Additionally, BBEC assisted Jefferson Parish by assisting homeowners through the process of home elevation and/or reconstruction by assisting with the bidding process, preparation of contractor agreements, and the processing of payment requests and reimbursements. BBEC also prepared quarterly reports, tracked the grant budget, and retained and maintained all grant related documentation for Parish closeout. To assist in this process, BBEC developed a project specific database, document management system, and dashboard reporting component that provided electronic data concerning the project to Jefferson Parish.

In addition to managing the grant for elevating structures, BBEC was involved in the management of the FEMA HMGP funded reconstruction program. As part of this program in this grant year, homeowners were given the option to select reconstruction in lieu of elevating the existing structure. BBEC provided professional engineering, program management, construction monitoring, code enforcement compliance, and general monitoring services for the work funded by the Hazard Mitigation Grant Program.

Application Development and/or Project Management of FEMA HMA Grant Programs, Lafourche Parish, LA, 11/2019-Present

BBEC is assisting Lafourche Parish in the development and administration of grant programs stemming from non-disaster grant opportunities announced beginning in 2019. BBEC consults with property owners to obtain all required data, provides updates throughout the process while the application is being processed, and meets with homeowners to discuss the process and/or obtain documentation.

BBEC prepared and submitted a grant application and Benefit Cost Analysis (BCA) along with adequate documentation for a complete review and analysis for a mitigation project for the elevation of 4 structures in FY 2019 which was approved by FEMA in 2021. During the Fiscal Year 2021 cycle, BBEC prepared and submitted a grant application and BCA for the elevation of 3 structures which was approved by FEMA in 2023. During the Fiscal Year 2022 Swift Current cycle, BBEC prepared and submitted a grant application and BCA for the elevation of 1 structure. During the Fiscal Year 2022 cycle, BBEC prepared and submitted a grant application and BCA for the elevation of 4 structures.

- Lafourche Parish, FY 2023 FMA SRL/RL Elevations\$409,092.00
- Lafourche Parish, FY 2022 FMA SRL/RL Elevations\$796,960.00
- Lafourche Parish, FY 2022 FMA Swift Current SRL Elevations\$195,729.00
- Lafourche Parish, FY 2021 FMA SRL/RL Elevations\$691,087.00
- Lafourche Parish, FY 2019 FMA SRL/RL Elevations\$749,891.00

As part of the Application Development services performed, BBEC:

- Conducts public and individual meetings to assist homeowners with the program requirements for applying;
- Conducts application planning and site drawings for the application;
- Prepares a Benefit Cost Analysis using FEMA's BCA Toolkit 6.0;
- Prepares the application in FEMA's eGrants Mitigation module or FEMA GO (2020 and later applications);
- Collects from the homeowner required documents, including but not limited to: application form, flood insurance policy declaration page, elevation certificate, proof of loss history report, and physician's certification for ADA access facility.

Project Management Services for Hazard Mitigation Grant, SRL/RL Elevation Project, Elevation of

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Four (4) Residential Structures (HMGP #1786-057-0007), Lafourche Parish, LA (2016-Present)

The FEMA Hazard Mitigation Grant for the Elevation of Four (4) Residential Structure project includes all professional services necessary for the implementation of the FEMA HMGP #1786-057-0007 grant. The properties included in this project are located in Bayou Blue, Des Allemands, Lockport and Thibodaux and require that the structure be elevated to or above the base flood elevation. BBEC's services include Grant Administration and Construction Observation.

As part of the Grant Administration services performed, BBEC:

- Conducts public and individual meetings to assist homeowners with the program requirements for elevation
- Coordinates with the Governor's Office of Homeland Security and Emergency Preparedness and FEMA for elevations
- Complies with all grant program mandates and documentation requirements for elevations
- Reviews detailed drawings submitted by property owners showing character and extent of the work to be performed by the Contractor
- Prepares specifications
- Furnishes the Parish with documents and design data as may be required
- Advises the Parish of any adjustments of the cost estimate for the project; and
- Prepares proposal forms and assist in the preparation of contract documents.

As part of the Construction Observation services performed, BBEC:

- Conducts pre-construction planning for compliance with building codes and coordinates with the Permit Office for any specialized design issues
- Makes project eligibility determinations for elevations
- Conducts contract closings between homeowner, contractors, and Lafourche Parish
- Conducts financial tracking of program funds and homeowner payments
- Inspects construction for compliance with program requirements and to approve milestone payment requests from contractors
- Conducts change orders requested by homeowner
- Conducts final inspection
- Develops and submit progress reports to the Parish and the State; and
- Provides in Progress Reviews as required to keep the Parish informed on project progress.

Program Management Services Related to Natural or Manmade Disasters, Hurricane Isaac, Grant Management (2013 Contract), St. Bernard Parish, LA (2013-Present)

The Grant Administration and Closeout Services provided by BBEC included the grant administration and closeout of grants from Hurricane Isaac. BBEC provides assistance to the Finance Department in processing FEMA reimbursements, based on federal and state requirements and developing close out documentation. BBEC consults with Parish officials and prepares documentation and applications as required. In our capacity as Grant Manager, BBEC provides the broad-based support services designated to help maximize federal funding, expedite the process and retain funds during the closeout process. Services performed by BBEC included but are not limited to the following:

- Assisting the Finance Department with cash flow, advance, and reimbursement requests and documentation in anticipation of future audits
- Developing a comprehensive tracking method of project worksheets
- Creating a filing system that will enhance the ability to substantiate grant fund during an audit
- Working with the state and FEMA to properly formulate large project worksheets
- Reviewing project worksheets previously written by FEMA and augment them with proper information regarding eligibility, scope and cost via version requests
- Identifying and correcting inappropriate insurance reductions

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- Maximizing and formulating Section 406 hazard mitigation projects
- Assisting with reconciling internal records to the project worksheets
- Providing guidance in dealing with FEMA and State personnel and policies
- Reviewing St. Bernard Parish procurement policies, ensuring that all potential emergency contracts comply with federal requirements and guidelines set forth in the Public Assistance Program.
- Challenging, where applicable, FEMA on their previous work, eligibility determination, cost valuations, project formulation and inaccurate statements on the Public Assistance Program.

Grant and Project Management Consulting Services for the RESTORE Act, Plaquemines Parish, LA, 09/2020-Present

Barowka and Bonura Engineers and Consultants, LLC works with Plaquemines Parish to perform grant writing, administration, technical support, application, monitoring, and post-grant requirements services with respect to the Restore Act Direct Component allocation from the U.S. Treasury Department. BBEC has assisted with the identification of eligible activities, amendments to existing grants, and the development of new grant applications during the open award period. BBEC continues to monitor project progress, providing the U.S. Department of the Treasury with semi-annual financial and progress monitoring reports. BBEC is also assisting Plaquemines Parish with the revision to its Multi-year Implementation Plan. By identifying projects that meet the RESTORE Act goals and assisting the Parish with identification of match funding, Plaquemines Parish is able to identify projects that utilize the RESTORE Act funds to their greatest benefit of the Parish. BBEC has directly been involved in the application development, approval and/or management of the following projects:

- Bayou Eau Noire Ridge Restoration and Marsh Creation Phase 1 and 2.....\$3,254,150.13
- Bay Adams Headland Restoration and Marsh Creation Phase 1\$1,222,250.00
- Eastbank Landbridge Project – Phoenix to Lake Leary Phase 1\$500,000.00

Public Assistance Grant Administration, 2016 Louisiana Severe Storms, City of Baker, LA (2016-Present)

The project includes providing consulting and representation services in support of the FEMA PA Program Services related to declared disaster events. In this role, BBEC acts as a liaison with the Governor's Office of Homeland Security and Emergency Preparedness and FEMA officials by serving as the Parish's representative. BBEC has also assisted the City of Baker with preparing hazard mitigation grant applications, benefit cost analyses, and other services related to the Hazard Mitigation Grant Program to assist the City with rebuilding to prevent future losses.

FEMA Hazard Mitigation Grant Village Square Site Clearance, Phases 1, 2 and 3, St. Bernard Parish, LA (2011-2015)

BBEC managed the Village Square Site Clearance, Phases I, II and III, a project that consisted of the removal and recycling of concrete slab foundations and other pavement, removal of hazardous trees, clearing sites, fill and grade of sites to promote proper drainage. In preparation for concrete recycling, BBEC ensured that the contractors complied with all regulatory requirements for the disposal of concrete slab foundations and other pavement in a recycling facility. BBEC managed the project from scope development through reimbursement for the purpose of meeting all requirements of the FEMA Hazard Mitigation Grant Program. Those requirements included, but were not limited to: collecting and reporting the scope of disaster, scope of services to be covered, cost estimate based on cost reasonableness in accordance with the Code of Federal Regulations (44 CFR Part 13, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments). Subsequent coordination with the Governor's Office of Homeland Security secured the necessary funding allocated to this work.

BBEC managed the project from scope development through reimbursement for the purpose of meeting all requirements of the FEMA Hazard Mitigation Grant Program for the abatement and removal of 123 building

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slabs and 3 structures (Phase I: 89 Slabs, Phase II: 31 Slabs, Phase III: 3 Slabs and 3 Structures). The project included specifying requirements of a SWPPP and overseeing the implementation of that plan.

Private Residential Structure Elevation Project Statewide, Louisiana, (HMGP PROJECT), (2012-2014)

The project includes performing plan review for grant compliance and some technical aspects of the elevation of residential structures throughout south Louisiana. The project also includes performing periodic inspections of the construction work to verify compliance with the project plans. As Supervising Engineer, Mr. Bonura oversaw and performed technical reviews of the plans and supervision of the field personnel. Mr. Bonura managed the professional engineering, program management, construction monitoring, observation of construction methods, code enforcement compliance, and general monitoring services in association with construction contractors elevating and/or reconstructing residential structures for eligible construction activities through the Hazard Mitigation Grant Program (HMGP).

Project Management Services for the Implementation of FEMA – FMA-PJ-06-LA-2016-003, Elevation of eight (8) structures under SRL/RL Elevation Project, Lafourche Parish, LA (2018-Present)

BBEC is responsible for grant administration for the elevation of eight structures in Lafourche Parish. BBEC's work includes meeting with the homeowners to explain grant program requirements and required documentation, the bidding and contractor selection process, the construction process, and the process for grant closeout. While the application consisted of eight structures previously determined as eligible for the elevation grant program, BBEC worked with the Parish to identify one structure where flood insurance had not been maintained and was voluntarily removed from the project. BBEC continues to work with homeowners to ensure they are meeting requirements for the homeowner cost share, work elements, and flood insurance deed restrictions and compliance.

As part of the Grant Administration services performed, BBEC:

- Conducts public and individual meetings to assist homeowners with the program requirements for elevation
- Coordinates with the Governor's Office of Homeland Security and Emergency Preparedness and FEMA for elevations
- Complies with all grant program mandates and documentation requirements for elevations
- Reviews detailed drawings submitted by property owners showing character and extent of the work to be performed by the Contractor
- Prepares specifications
- Furnishes the Parish with documents and design data as may be required
- Advises the Parish of any adjustments of the cost estimate for the project; and
- Prepares proposal forms and assist in the preparation of contract documents.

As part of the Construction Observation services performed, BBEC:

- Conducts pre-construction planning for compliance with building codes and coordinates with the Permit Office for any specialized design issues
- Makes project eligibility determinations for elevations
- Conducts contract closings between homeowner, contractors, and Lafourche Parish
- Conducts financial tracking of program funds and homeowner payments
- Inspects construction for compliance with program requirements and to approve milestone payment requests from contractors
- Conducts change orders requested by homeowner

Grant Closeout for Federal Declared Disasters, 2014 Contract, FEMA Public Assistance Category A and B Projects, St. Bernard Parish, LA (2014-Present)

The Grant Administration and Closeout Services provided by BBEC included the grant administration and closeout of grants from Hurricanes Katrina and Rita. BBEC provides assistance to the Finance Department in

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processing FEMA reimbursements, based on federal and state requirements and developing close out documentation. BBEC consults with Parish officials and prepares documentation and applications as required. In our capacity as Grant Manager, BBEC provides the broad-based support services designated to help maximize federal funding, expedite the process and retain funds during the closeout process. Services performed by BBEC included but are not limited to the following:

- Assisting the Finance Department with cash flow, advance, and reimbursement requests and documentation in anticipation of future audits
- Developing a comprehensive tracking method of project worksheets
- Creating a filing system that will enhance the ability to substantiate grant fund during an audit
- Working with the state and FEMA to properly formulate large project worksheets
- Reviewing project worksheets previously written by FEMA and augment them with proper information regarding eligibility, scope and cost via version requests
- Identifying and correcting inappropriate insurance reductions
- Maximizing and formulating Section 406 hazard mitigation projects
- Assisting with reconciling internal records to the project worksheets
- Providing guidance in dealing with FEMA and State personnel and policies
- Reviewing St. Bernard Parish procurement policies, ensuring that all potential emergency contracts comply with federal requirements and guidelines set forth in the Public Assistance Program.
- Work with St. Bernard Parish employees to compile the necessary documents to justify work performed and funds obligated according to FEMA guidelines.
- Review contracts and invoices to reconcile total project costs for completed projects and write version requests to obtain funding for FEMA approved work.
- Challenging, where applicable, FEMA on their previous work, eligibility determination, cost valuations, project formulation and inaccurate statements on the Public Assistance Program.
- Working with GOHSEP to obtain required documents for grant close-out, provide assistance to GOHSEP Document Review Specialist and Team Leads on a daily basis, and attend meetings on behalf of St. Bernard Parish.
- Provide documentation to the Louisiana Legislative Auditors in an effort to speed up the closeout process and generate final versions for projects.

Federal Emergency Management Agency Public Assistance Program Services, St. Charles Parish, LA (2017-Present)

The project includes providing consulting and representation services in support of the FEMA PA Program Services related to declared disaster events including Hurricane Barry and COVID-19. In this role, BBEC acts as a liaison with the Governor's Office of Homeland Security and Emergency Preparedness and FEMA officials by serving as the Parish's representative. BBEC is currently performing program administrative/management services for the FEMA PA program due to Hurricane Ida. BBEC has also assisted St. Charles Parish with preparing hazard mitigation grant applications, benefit cost analyses, and other services related to the Hazard Mitigation Grant Program and Pre-Disaster Mitigation grant program. BBEC assisted St. Charles Parish with the preparation of two applications in the Fiscal Year 2017 cycle and one for the 2019 cycle.

Grant Management Services for Federal and State Grants, Town of Jean Lafitte, LA (2013-Present)

BBEC is currently providing grant management services for the Town of Jean Lafitte and the Lafitte Area Independent Levee District project to close out almost \$3.9M in FEMA Public Assistance Grants. The scope of work managed includes:

- Serve as liaison as PW Specialist for Town of Jean Lafitte Administration to GOHSEP and FEMA.
- Maintain master spreadsheet tracking status of RRF's and status of payments.
- Utilize LouisianaPA.com daily to track projects, upload required documents, complete reports such as quarterly reports and close-out reports, and provide analytical reviews.
- Submit project invoices for both consultants and contractors into LouisianaPA.com and secure

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reimbursements for Town of Jean Lafitte.

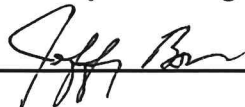
- Review all invoices for accuracy and verify that invoices adhere to state approved guidelines and verify accuracy of payments generated by GOHSEP.
- Track expenses from origination to project worksheet assignments and payment.
- Work with Town of Jean Lafitte employees to compile the necessary documents to justify work performed and funds obligated according to FEMA guidelines.
- Assist the Parish in resolving issues during reconciliation of grant close-out.
- Communicate effectively with state auditors on behalf of the parish.
- Review contracts and invoices to reconcile total project costs for completed projects and write version requests to obtain funding for FEMA approved work.
- Formulate projections for future anticipated costs.
- Provide documentation to the Louisiana Legislative Auditors in an effort to speed up the closeout process and generate final versions for projects.
- Work with GOHSEP to obtain required documents for grant close-out, provide assistance to GOHSEP Document Review Specialist and Team Leads on a daily basis, and attend meetings on behalf of Town of Jean Lafitte.
- Utilize electronic document management system to store project records.



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

Signature:  Print Name: Jeffrey Bonura, P.E.

Title: Sole Member Date: July 16, 2024