



Statement of Qualifications 24-020

Coastal Engineering Consulting Services

RESOLUTION NO. 144205

JULY 16, 2024

Contact:

Dain Gillen, PE
225-955-4599
dain.gillen@neel-schaffer.com



NEEL-SCHAFER

July 16, 2024

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

RE: SOQ 24-020 Coastal Engineering Consulting Services Resolution No. 144205

Neel-Schaffer, Inc. (NSI) is pleased to respond to SOQ 24-020 Coastal Engineering Consulting Services Resolution No. 144205. We are a large, multi-disciplined consulting engineering firm of with over 600 professional, technical, and support staff operating business throughout the southern and southeastern United States with Louisiana offices in New Orleans, Mandeville, Baton Rouge, Lafayette, and Shreveport. We have 47 staff members located in Louisiana offering the services of 24 registered Professional Engineers.

We have been recognized in the *Engineering News Record* "Top 500 Design Firms" listings since 1994 and ranked in the top 250. In addition, Neel-Schaffer has previously been named in the top 25 road and highway design firms in the nation by Roads & Bridges magazine.

Additionally, NSI employs a highly qualified team of professionals skilled in a variety of coastal science and engineering disciplines that are fully capable of conducting the most complex coastal engineering and design for coastal structures and hydrologic and hydraulic analyses.

We routinely provide service on an "On Call" basis for our clients and have been selected for three consecutive CPRA IDIQ Coastal Contracts from 2013 to present. We currently are providing services to CPRA for a three-year multiple task order award contract. In addition, NSI has been selected repeatedly by LADOTD for on-going retainer contracts over the past eighteen years. This is an excellent indication of our firm's performance ability on public contracts and NSI's reputation as a consultant of choice by public agencies.

Our team includes **Coast and Harbor Engineering** and **La Terre Engineering, LLC** providing engineering support as well as **Principal Engineering, Inc.** providing Structural Engineering Support; **Eustis Engineering, LLC** providing Geotechnical; and **BFM Corporation** providing Surveying.

Work under this contract will be performed in our New Orleans, LA office, located at 1340 Poydras Street, Suite 1950 with support provided by other Neel-Schaffer offices as required.

We look forward to the opportunity to be of service to Jefferson Parish.

Sincerely,

Nick Ferlito, Jr., PE, PTOE
Senior Vice President / Louisiana Area Manager

enclosure

engineers | planners | surveyors | environmental scientists | landscape architects

P: 504.875.4662

1340 Poydras Street, Suite 1950
New Orleans, LA 70112

www.neel-schaffer.com



TEC Professional Services Questionnaire

Project Name and Advertisement Resolution Number:

SOQ 24-020 Coastal Engineering Consulting Services *Resolution No. 144205*

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



1340 Poydras Street, Suite 1950
New Orleans, LA 70112

B. 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:

Nick Ferlito, Jr., PE, PTOE *Senior Vice President / Louisiana Area Manager*
225.924.0235

C. 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.

Dain Gillen, PE
601.684.4564
dain.gillen@neel-schaffer.com

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

<u>6</u> Administrative	<u> </u> Estimators	<u> </u> Specification Writers
<u> </u> Architects (Licensed)	<u>1</u> Geologists	<u>1</u> Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u> </u> Graduate Engineers
<u>24</u> Civil Engineers	<u> </u> Interior Designers	<u>1</u> Project Managers
<u>2</u> Construction Inspectors	<u> </u> Landscape Architects	<u> </u> Clerical
<u> </u> Ecologists	<u> </u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u> </u> Electrical Engineers	<u> </u> Mechanical Engineers	<u> </u> Sanitary Engineers
<u>4</u> Engineer Intern	<u> </u> Environmental Engineers	
<u> </u> Professional Land Surveyors	<u>8</u> Other (Planners, Tech Support)	<u>47</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

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

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. Coast and Harbor Engineering PO Box 202737 Austin, TX 78720	Supplemental Coastal Services	YES
2. La Terre Engineering, LLC 343 Third Street, Suite 511B Baton Rouge, LA 70801	Supplemental Coastal Services	YES
3. Gulf South Engineering and Testing, Inc. 15 Veterans Memorial Boulevard Kenner LA 70062	Supplemental Coastal Services	YES
5. Principal Engineering, Inc. 1011 N Causeway Blvd STE 19, Mandeville, LA 70471	Supplemental Coastal Services	YES
6. Eustis Engineering, LLC 3011 28th Street Metairie, LA 70002	Geotechnical	YES
7. BFM Corporation 15 Veterans Memorial Blvd Kenner, LA 70062	Surveying	YES

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

47

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:

Dain Gillen, PE Coastal Discipline Lead

Project Assignment:

Project Manager

Name of Firm with which associated:



Years' experience with this Firm:

1 (21 total)

Education: Degree(s)/Year/Specialization:

BS / 2000 / Biological Engineering
MS / 2002 / Biological and Agricultural Engineering

Active registration: Year first registered/discipline:

2007/ Professional Engineer - Civil, LA 33282

Other experience and qualifications relevant to the proposed Project:

Mr. Gillen joined Neel-Schaffer in 2023 as a Senior Project Manager with 20 years of experience in the field of Water Resources and Coastal Engineering.

Prior to joining Neel-Schaffer, Mr. Gillen served as Engineer Manager for a staff of 10 engineers and technicians for the Louisiana Coastal Protection and Restoration Authority (CPRA). In this role, he was responsible for oversight of project planning, development, design, and construction of large-scale ecosystem restoration and flood risk reduction projects. He also has previous experience with many civil works and flood control projects during design and construction.

Mr. Gillen has worked for state and Federal agencies and private engineering firms, giving him a diverse background and ability to communicate effectively with multiple stakeholders.

RELATED EXPERIENCE

Lillian Park Beach Habitat and Shoreline Protection, Baldwin County, AL: Design Engineer on a project to mitigate excess sand deposition on a County boat ramp. This project consists of the design of riprap groins on Perdido Bay to mitigate excess sand deposition on a County boat ramp. The design of the groins will stabilize the beach shoreline, minimize erosion and habitat loss, and provide a usable public beach. Mr. Gillen is serving as project engineer for the project.

West Hancock County Nearshore Habitat Restoration Project: Project Manager and Design Engineer on a coastal habitat restoration project in Waveland, MS. The project will enhance sub-tidal habitat by placing extensive reef substrate for

TEC Professional Services Questionnaire

shellfish and artificial reefs for productivity of red and black drum, spotted seatrout, crabs, and oysters.

University Lakes Flood Risk Reduction, Baton Rouge, LA: The goal of this project is to increase the sustainability and recreational attributes of the University Lakes on and near the LSU campus. Five of the six lakes will be dredged to increase water quality, and a bird sanctuary and several islands will be constructed to enhance ecological habitat. The project will include drainage improvements at the drainage culvert outfalls. Mr. Gillen is assisting with review of design, quantities, layout, and construction administration for the project.

Slidell Breakwaters Coastal Resilience Project, Slidell, LA: Design engineer of large segmented breakwaters near Slidell, LA. The project consists of the design approximately 8,000 linear feet of foreshore rock dike structures intended to provide coastal resiliency to the Eden Isle community in Slidell, LA. The breakwaters are being designed in phases, as construction funding allows, to provide increasing levels of protection from wave impacts during storm events.

St. Tammany Parish Coastal Master Plan, St. Tammany Parish, LA: Developed a Coastal Master Plan for St. Tammany Parish to reduce flooding risk for residents and protect, restore, and enhance coastal wetlands. Mr. Gillen assisted in development and analysis of conceptual projects to help meet these objectives.

Mandeville Lakefront Wetlands Restoration Project, Mandeville, LA: Situated between two “hard” shorelines, a mature cypress forest is rapidly eroding. The Mandeville Lakefront Wetlands Restoration Project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain. Mr. Gillen completed project review and QA/QC on the project.

Kingwood Regional Drainage/Detention Study & Improvement, Harris County, TX: The project consists of a conceptual Watershed Plan to identify strategies for mitigation of existing flooding problems and to address improved drainage infrastructure required to achieve 100-year channel level-of-service within the Kingwood Area study limits. The limits of study encompass 32.3 miles of stream. Mr. Gillen completed project review and QA/QC on the project.


CS-87: Calcasieu-Sabine Large-Scale Marsh & Hydrologic Restoration, Cameron Parish, LA: Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization planning and initial optimization tasks, and other project planning. Mr. Gillen assisted with program and project management, project alternative evaluations, conceptual designs, and environmental compliance.

Mid-Basin Sediment Diversion Program, Plaquemines Parish, LA: Multi-billion dollar program consisting of the Mid-Barataria (BA-153) and Mid-Breton (BS-030) Sediment Diversion projects. These are large scale civil works projects proposed to divert 75,000 and 50,000 cfs, respectively, from the Mississippi River to deliver sediment to degrading marshes south of New Orleans. Mr. Gillen served as the State’s project engineer, working with design contractors and the Construction Manager at Risk (CMAR) contractors on both projects to optimize project designs for constructability and performance.

Barataria Basin Ridge and Marsh Creation Project - Spanish Pass Increment (BA-203), Venice, LA: Large-scale (1,600 acre) marsh and ridge restoration project in Plaquemines Parish, LA. Mr. Gillen served as the CPRA Engineer for this project, providing extensive input on project design that helped shape the project bid package. Participated in bidding and construction activities. Responded to Contractor RFI’s, attended bi-weekly construction meetings, and approved field orders and change orders.

Cameron-Creole Freshwater Introduction Project (CS-49), Cameron Parish, LA: Project engineer for a freshwater introduction project intended to reduce salinities in an impounded marsh in Cameron Parish, LA. Design of flapgated sheetpile weir structure, rip rap channel protection, and conveyance channel improvements. Input during construction to ensure that project features were being built as shown in the project documents.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Don Lancaster, PE <i>Engineering Manager</i>	
Project Assignment:	
Senior Project Engineer	
Name of Firm with which associated:	
	
Years' experience with this Firm:	
24 years (41 total)	
Education: Degree(s)/Year/Specialization:	
BS / 1982 / Civil Engineering	
Active registration: Year first registered/discipline:	
1987 / Professional Engineer - Civil, LA 22821	
Other experience and qualifications relevant to the proposed Project:	
<p>Don has over 40 years of experience in civil engineering and project management. He manages Neel-Schaffer's offices in Mandeville and New Orleans, LA, as well as overseeing some of the company's largest design, bid and construction administration projects.</p> <p>He has extensive experience in program and project management for large and small municipal and port related projects that include programming, design, bidding and construction administration. His civil background includes ports; roads and bridges; streetscapes; structural; and water and wastewater.</p> <p>Don has extensive experience in preparing contract documents for construction projects. He has coordinated and worked with many local, state and federal agencies, including the Sewerage and Water Board of New Orleans, United States Corps of Engineers, Louisiana Department of Transportation and Development, the New Orleans Levee District, the Port of Gulfport, the Coastal Protection and Restoration Authority and numerous cities, parishes and counties.</p> <p>RELEVANT EXPERIENCE</p> <p>CS-87 Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project: Engineer for Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization planning and initial optimization tasks, and other project planning.</p> <p>PO-184: St. Tammany Storm Surge Risk Reduction Project: Engineer for a CPRA project providing conceptual engineering for a Slidell Ring Levee including levee segments in east Slidell from Lakeshore Estates to Kingspoint and from Kingspoint to US Hwy 190. The project considered the feasibility of alternative alignments and provided conceptual planning and engineering for the required alignment features. It included a data collection report with project feature locations, layouts, environmental considerations, hydrologic and hydraulic considerations, and construction method considerations.</p>	

TEC Professional Services Questionnaire

It also provided a design documentation report with a basis of design, details of the conceptual design stages, example calculations for all relevant disciplines, conceptual level engineer's estimate of probable construction cost, site layouts, conceptual O&M plans, construction considerations, a summary of benefits and impacts and cost comparison for the recommended alternatives.

St. Tammany Parish Coastal Protection Master Plan: Project lead for collaborative effort between St. Tammany Parish Government (STPG) and the St. Tammany Levee, Drainage and Conservation District (STLDCD), with funding from CPRA through an Intergovernmental Agreement. Neel-Schaffer's Team is assisting in this effort. The scope of services is divided into three tasks. Task I consist of collecting and organizing existing flood control assets and associated project data into a GIS data base. Task II is a gap analysis and Task III is a project feasibility analyses and engineering design.

Port of Gulfport Restoration, Gulfport MS: Project Manager for the planning, design, bidding, and construction management of the general engineering for this \$570 million restoration program. Supervise and oversee the engineering and support staff responsible for design of this program to elevate the Port of Gulfport site from its existing elevation of 10 feet above mean sea level (MSL) to 25 feet MSL, which will protect the Port from future storm surges. Work includes an 84-acre expansion of the West Pier by filling the water bottom; relocating tenant facilities; new construction and renovation to create an expandable, modern container terminal; and road and rail upgrades required to support the expanded modernized facility.

Calcasieu Salinity Control - Joe's Cut & West Pass, CPRA, Calcasieu Parish, LA (RSIQ 2016-2019): Mr. Lancaster is NSI's Project manager overseeing and coordinating all aspects of the engineering project. As NSI team leader, develops and coordinates the work plan, civil design, project team meetings, and coordinates with sub-consultants.

Tag Along Creek Drainage Analysis, St. Tammany Parish, LA: Project Manager, Responsible for engineering deliverables for a drainage analysis of Tag Along Creek, a tributary to Bayou Lacombe, for the purpose of determining causes of flooding and developing a solution to afford flood relief for residents of Cloverland Acres Subdivision.

Bayou Mandeville Maintenance Dredging, 3-Year Task Order Contract: Engineering. Officer-in-Charge for this task order contract which has included two task orders to date. One task order provides debris screen improvements at the Teche Vermilion Pump Station. The Bayou Mandeville Maintenance Dredging task includes dredging of a 1-mile-long preexisting access channel from Lake Lery into Bayou Mandeville with the disposal to supplement the Western Bank of Lake Lery.


Mandeville Lakefront Wetlands Restoration, Mandeville, LA: Project Manager for Lakefront Wetlands Restoration Project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain. The project established a best practice for creation of new wetlands, provided engineering concepts in support of multiple storm water routing alternatives and coastal engineering concepts for the design of a storm-resistant shoreline closure with an integral bike path and pedestrian link between Old Mandeville and Sunset Point Park.

Salt Aire Shoreline Restoration, Mobile County, AL: Mr. Lancaster provided Quality Assurance and Quality Control for the preparation of Construction Documents (Plans, Specifications, and Engineer's Opinion of Probable Cost) for the Coastal Engineering Design of the Shoreline Protection and Restoration Project.

High Water Level Flood Protection Bridges, USACE New Orleans, LA: Project Manager, designed flood protection bridges for the Orleans Avenue Canal, which is part of the City of New Orleans Hurricane Flood Protection System. Work included new bridges, floodwalls (I-walls and T-Walls), levees, and roadway approaches. These new bridges tie into the Hurricane Levee Protection System and allow the roads to remain open during flood conditions.

The Groves, Pelican Park, Mandeville, LA: Project Manager for programming, schematic design, final design, bidding and construction phase services for this \$1.8 million green space and multi-generational park project for Pelican Park in Mandeville, Louisiana. The project was funded by St. Tammany Parish, Recreation District. No. 1

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Nick Ferlito, Jr., PE, PTOE <i>Louisiana Area Manager</i>
Project Assignment:
Project Principal
Name of Firm with which associated:
 NEEL-SCHAFFER <i>Solutions you can build upon</i>
Years' experience with this Firm:
28 years (29 total)
Education: Degree(s)/Year/Specialization:
BS / 1993 / Civil Engineering MS / 1996 / Civil Engineering
Active registration: Year first registered/discipline:
1998 / Professional Engineer – Civil, LA #28001
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Ferlito joined Neel-Schaffer in 1996. He is a Senior Vice President and serves as Louisiana Area Manager, overseeing all responsibilities for the state.</p> <p>An ITE-certified Professional Traffic Operations Engineer, he has more than 30 years of experience and manages a wide range of traffic and transportation projects. He has served as a project manager for many intersection/corridor signal timing studies, signal design projects, safety studies and other traffic engineering related projects for public and private projects.</p> <p>Mr. Ferlito is experienced with numerous traffic engineering software packages, including HCS, CORSIM, SYNCHRO, Tru-Traffic (TSPPDraft), and SIDRA. He also completed the Naztec TS1/TS2 Controller 2-Day training course. He has also completed the NEPA and Transportation Decision Making course (2004), the Highway Safety Manual Workshop (2011) as well as LADOTD's Traffic Engineering Process and Report (TEPR) training.</p> <p>RELEVANT EXPERIENCE</p> <p>I-10 & I-12 College Drive Flyover Ramp Design-Build, Baton Rouge, LA: Project Manager for Interchange Modification Report, Transportation Management Plan (TMP) and ITR of MOT Plans for the proposed College Drive Ramp improvements. The IMR was prepared in accordance with DOTD's TEPR and FHWA Policy Points. The IMR analysis was performed using Vissim software. In addition, the TMP was prepared for the various maintenance of traffic phases. Analysis used in the TMP included HCS analysis for detour evaluations and Dynameq (Mesoscopic Modeling) for evaluating various MOT strategies. The project also includes signal modification plans at College Drive and the I-10 WB off ramp. (July 2020 – Present)</p> <p>US 80 Feasibility Study, Haughton, LA: Stage 0/Traffic & Safety Study (S.P. No. 44-10504, T.O. No. H.014044.1) Project</p>

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Manager for the preparation of a Stage 0 Report in support of safety improvements along US 80 corridor, specifically in the vicinity of Bellevue Road and Mid South Loop Road. All analysis performed in HCS for this study. The traffic study was performed in accordance with DOTD's TEPR.

Kansas Lane-Garrett Road Connector and I-20 Improvements, Monroe, LA: (S.P. No. H.004774.5 & H.007300.6) Project Manager/Traffic Lead for the preparation of a Level 4 Transportation Management Plan, review of MOT plans, design of temporary and permanent traffic signals and design of the relocation of DOTD ITS fiber optic trunk line.

I-49 South at Verot School Road, Lafayette, LA: (S.P. No. H.011235.5) Traffic Lead that performed Traffic QA/QC on the preparation of a Transportation Management Plan and design of temporary and permanent traffic signals.

MOVEBR Harding Boulevard at Interstate I-110: Project Manager for traffic engineering for intersection improvements for Harding Boulevard at I-110 to analyze the existing and projected future No Build conditions for operational and safety issues, and developed Tier 1 design solutions that mitigate those issues.

MOVEBR College Drive Enhancements: Project Manager for a traffic study that addressed pedestrian mobility and transit accommodations. The overall project plan incorporated planned LADOTD improvement projects at Interstate 10 which include a Design-Build project to modify the westbound offramp and other ramp terminal improvements implemented by the I-10 widening CMAR project.

MOVEBR N. Sherwood Forest Extension: Project Manager for design report for the extension of the existing North Sherwood Forest Drive from its current northern terminus at Greenwell Springs Road to the intersection of Joor Road at Mickens Road.

College Drive Enhancement Project (Perkins Road to I-10), Baton Rouge, LA (MOVEBR Project 19-EN-HC-0033): Project Manager for the Traffic Study component for the study of the College Drive corridor. The Traffic Study is being prepared in accordance with DOTD' TEPR and includes performing all analysis in Vissim to evaluate various alternatives. In addition to corridor improvements, a tiered analysis will be performed to evaluate various interchange alternatives for I-10 at College Drive. Dynameq will also be used to evaluate off system and connectivity alternatives within the study area.

LA 385 Feasibility Study, Lake Charles, LA: Stage 0/Traffic & Safety Study (S.P. No. 44-4402, T.O. No. H.012685.1) Developed a Stage 0 Report in support of safety improvements along with the LA 385 (Ryan Street) corridor between LA 3186 south of I-10 to Eddy Street north of I-10, including the LA 385 interchange with I-10. Traffic Engineering Manager

LA 6 Feasibility Study, Natchitoches, LA: Stage 0 / Traffic & Safety Study (S.P. 44-4402, T.O. No. H.012307.1) Prepared and coordinated a formal Stage 0, including a comprehensive safety analysis and traffic study for the purpose of analyzing existing and future conditions along the LA 6 corridor between Parish Road 542 west of I-49 to LA 3278 east of I-49, including the LA 6 interchange with I-49 to determine feasible alternatives that will preserve and enhance mobility and safety. Traffic Engineering Manager

District 05 Safety Investment Plan, DOTD District 05 (SPN 4400010504, Task No, H.014295.1). Project Manager for this study. Coordinated the evaluation of crashes on the state and local highway networks using variations in crash statistics to identify possible roadway issues and potential low-cost safety improvements.

IDIQ Contract for Safety Studies (44-10504) District 08 Safety Investment Plan: Developed a District-wide Safety Investment Plan for low cost improvements for HPSI locations, abnormal intersections, roadway departure locations and local roads. Crash history was evaluated at over 70 locations, countermeasures were identified and B/C analysis was performed using CMFs and estimated construction cost for potential low cost improvements at each location.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Steve Hazen, PE <i>Senior Project Manager</i>
Project Assignment:
Structural Engineer
Name of Firm with which associated:

Years' experience with this Firm:
16 years (49 total)
Education: Degree(s)/Year/Specialization:
BS / 1974 / Civil Engineering
Active registration: Year first registered/discipline:
1979 / Professional Engineer - Civil, LA 18087
Other experience and qualifications relevant to the proposed Project:
<p>Steve joined Neel-Schaffer in 2008 and has nearly 50 years of experience. He has worked as a Structural, Hydraulics and Soils Engineer with a primary focus on highway and railway bridges, structural design for buildings, facilities, hydrological analysis, and drainage design for projects. He recently served as the structural designer for several facilities at the Port of Gulfport as well as many bridge and roadway projects in Harris County, TX.</p> <p>RELATED EXPERIENCE</p> <p>Mandeville Lakefront Wetlands Restoration: Senior Structural Engineer. Situated between two “hard” shorelines, a mature cypress forest is rapidly eroding. The project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain.</p> <p>Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project: Senior Structural Engineer. Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization planning and initial optimization tasks, and other project planning.</p> <p>Slidell Ring Levee: Slidell East Segments (PO-184): Senior Structural Engineer. Feasibility evaluation of alternative alignments for flood protection and resiliency for the eastern side of Slidell and conceptual planning and engineering for the required alignment features. Provide Independent Technical Review of conceptual design alternatives and development of capital and construction costs for project features. Review of structural conflicts and land right issues associated with conceptual alignments.</p> <p>Port of Gulfport Restoration: Senior Project Engineer responsible for the structural design of three vehicle maintenance and repair buildings, three gate interchange structures, Customs and Border Patrol building and cross dock inspection facility for the Mississippi State Port Authority.</p>

TEC Professional Services Questionnaire

Calcasieu Salinity Control - Joe's Cut & West Pass, CPRA, Calcasieu Parish, LA (RSIQ 2016-2019): Steve is NSI's primary manager overseeing and coordinating all aspects of the structural engineering components of the project for Joe's Cut. Assists, develops and coordinates the civil design, and coordinates with sub-consultants for the design of West Pass.

Design of hurricane protection levees in Rockefeller Wildlife Refuge in Cameron Parish: Mr. Hazen provided engineering design services for the elevation of hurricane protection levees at the Rockefeller refuge in Southwestern Louisiana. Marsh settlement led to existing levee grades being lower than the required elevation for the desired level of protection.

Inspection of Mississippi river levees during flooding, Belle Chase to Venice, LA: Mr. Hazen performed structural/geotechnical field inspection and evaluation services of various flood risk reduction system components downriver of New Orleans, LA. Specifically he performed an armoring and erosion control study that included erosion monitoring, armoring analysis, and design recommendations that included the use of concrete slope paving and baffle boards.

Design of channel improvement to Bayou Pierre in Shreveport from 70th street to Industrial loop: Mr. Hazen performed hydraulic design of the channel and improvements utilizing the U.S. Army Corps of Engineers, Hydraulic Engineering Center's (HEC) suite of models.

Analysis of Gilbert Bayou channel improvements in Caddo Parish for FEMA LOMR application: Mr. Hazen performed analysis using USACE HEC software for the Caddo Parish Commission to design improvements to the channel of Gilbert Bayou.

Analysis of Bayou Pierre and floodway at Robson for Caddo/Bossier Port for submittal to FEMA: Mr. Hazen performed hydraulic design using USACE HEC software to evaluate hydraulic impacts on the floodway of improvements at the Caddo/Bossier Port.

Hydraulic design of slab span bridges and culverts for timed project Hwy 167. Quitman to Lincoln Parish Line: Mr. Hazen utilized USACE HEC-RAS and LADOTD Hydraulics software for the analysis and design process of bridges and culverts associated with the roadway design.

LA 371 Bridge over Red River at Coushatta, LA: Project Engineer responsible for design of steel cross frames and lateral bracing for non-redundant steel plate girders, concrete approach piers designed to withstand barge impacts, and voided concrete slab approach span design. Pier design included steel H-pile design for barge impact and design of concrete tremie seals. Other work included detailing of miscellaneous steel items, quality control of drawings and review of shop drawings. Two designs were provided for the bridge, one being a concrete segmental bridge and the other a steel plate girder bridge. The steel plate girder bridge was constructed. At the bridge location the Red River is navigable so all main piers and approach column bents in the river were designed to resist the extreme loading from barge impact. The two column approach bents were connected with concrete walls designed in accordance with barge impact criteria provided by LaDOTD.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Amanda Phillips, PE <i>Senior Project Engineer</i>
Project Assignment:
Senior Project Engineer
Name of Firm with which associated:

Years' experience with this Firm:
4 years (22 total)
Education: Degree(s)/Year/Specialization:
BS / 2000 / Biological Engineering
Active registration: Year first registered/discipline:
2005 / Professional Engineer - Civil, LA 31764
Other experience and qualifications relevant to the proposed Project:
<p>Amanda joined Neel-Schaffer in 2020 and serves as a Senior Project Manager in the Coastal Science and Engineering department. Amanda has 20 years of design and construction experience on a wide variety of coastal restoration projects.</p> <p>In addition to design work, she has spent more than 10 years working and learning the world of marine construction. This fast paced, real-world experience has provided her with successes and failures of inland waterway and heavy civil construction critical to furthering her understanding coastal engineering and construction challenges.</p> <p>Her background in biological engineering coupled with her years of construction experience, has provided a unique lens with which to view coastal projects. She is currently pursuing a Master's in Coastal Engineering and Sciences at the University of New Orleans.</p> <p>RELEVANT EXPERIENCE</p> <p>Mandeville Lakefront Wetlands Restoration: Engineer of Record. Update of project design to include changes to existing conditions since original design. Design provides a reduction of water surface elevations for the 50, 100-, and 500-yr storm events through reduction in wave heights and addresses future erosion by significantly reducing the open water fetch from Lake Pontchartrain at the project site. Design reroutes urban stormwaters through the wetlands allowing suspended sediment to settle within the lagoon and marsh areas and will mitigate the effects of saltwater intrusion on the existing wetlands. The newly created wetlands will increase faunal habitats, support fisheries, support bird usage, improve primary productivity at the base of the food chain and improve carbon sequestration and watershed storage.</p> <p>St. Tammany Parish Sustainable Growth Pilot Study: Technical Advisor. Study to detail the hydrology and hydraulics of three drainage basins within the study area to consider future development as related to types, conditions, densities, and regulatory structure associated with the developments. Additionally, the goal is to review regulation of stormwater</p>

TEC Professional Services Questionnaire

management within the study area to avoid additional flood risk and or mitigate flooding within the existing drainage basins associated with the study area as related to existing and future developments.

Slidell Ring Levee: Slidell East Segments (PO-184): Senior Project Engineer. Feasibility evaluation of alternative alignments for flood protection and resiliency for the eastern side of Slidell and conceptual planning and engineering for the required alignment features. Provide Independent Technical Review of conceptual design alternatives and development of capital and construction costs for project features. Review of structural conflicts and land right issues associated with conceptual alignments.

St. Tammany Parish Coastal Master Plan (PO-167), St. Tammany Parish, LA: Senior Project Engineer. Updates to the 2012 Northshore Hurricane and Flood Protection Study with newly completed and current proposed projects as well as coordination with state and federal agencies for the development of independent project feasibility evaluations for the development of a Master Plan within the Coastal Zone of St. Tammany Parish. Development and evaluation of conceptual alignments and estimated capital and construction costs of proposed alignments to determine project priority and viability. Development of conceptual design analysis summary report.


University Lakes Flood Risk Reduction Design: Senior Project Engineer – Dredging and Constructability Coordination with Construction Manager at Risk (CMAR). Improvements to water quality and flood risk reduction potential for the Louisiana State University (LSU) Lakes System. Development and constructability review for dredging of the 6 Lakes. Provide Independent Technical Review of conceptual design alternatives and development of construction costs for project features. Coordination with CMAR Contractor for Constructability concerns and issues during the development of Dredging Plans and Specifications.

Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project: Senior Project Engineer. Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization planning and initial optimization tasks, and other project planning.

Bayou Mandeville Dredging: Project Engineer. Coordinated work of subconsultants for hydrographic surveying of existing channel for this Louisiana Coastal Restoration & Protection Authority (CPRA) project. Provided recommendations to client for project path forward based on survey data and client needs.

Teche-Vermillion Debris Screen: Project Engineer. Coordinated with client to determine project issues and researched options utilizing client input for this CPRA project. Developed scopes of work for geotechnical subcontractor and provided design and oversight of debris screen of a temporary nature as chosen by client.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Warren Huggins, PE <i>Civil Engineer</i>
Project Assignment:
Civil Engineer
Name of Firm with which associated:

Years' experience with this Firm:
11 years (12 total)
Education: Degree(s)/Year/Specialization:
BS / 2012 / Civil Engineering
Active registration: Year first registered/discipline:
2018 / Professional Engineer - Civil, LA 42443
Other experience and qualifications relevant to the proposed Project:
<p>Warren joined Neel-Schaffer in 2013 and works out of the firm's New Orleans and Mandeville, LA, offices. He has assisted in the design of several FEMA-funded Recovery Roads Program projects in New Orleans that include roadway and sidewalk rehabilitation, ADA ramp improvements, water line replacement, and drainage improvements. Warren also has assisted in airport design and planning, developed FAA bid documents, and developed engineer's estimates.</p> <p>RELATED EXPERIENCE</p> <p>Port of Gulfport Restoration Program – West Pier Construction Phases 1, 2, and 3, West Pier Facilities, Gulfport, MS: Construction of over \$160 million in port improvements including demolition, grading, storm drainage and site utilities, paving and roadway construction, electrical and site lighting, striping, railroad construction, transit shed, administration, and maintenance and repair buildings. Responsibilities include developing construction constraints and sequencing plans for all projects, design of some site utilities, and cost estimation duties.</p> <p>Calcasieu Salinity Control - Joe's Cut & West Pass, CPRA, Calcasieu Parish, LA (RSIQ 2016-2019): Designing control structures to limit salinities being introduced through the Calcasieu Ship Channel (CSC) into Calcasieu Lake and surrounding wetlands to reduce the rate of wetland loss within the project area. Duties include cost and quantity estimating, creating drawings such as plan/profiles, cross sections, and details, and coordinating with sub consultants on project features.</p> <p>Salt Aire Shoreline Restoration – Mobile County, AL: Design of a living breakwater and shoreline restoration, using dredged fill and concrete-unit-based wave attenuation structures, to prevent shoreline retreat of the Salt Aire Property and Goat Island in Mobile Bay. Duties included assisting the coastal engineer in the design and preparation of plans, such as existing conditions, proposed layouts, cross sections, typical sections, signage and details.</p>

TEC Professional Services Questionnaire

Concordia Parish Drainage, Concordia Parish, LA: Created hydraulic models of the system of Bayous and canals (approx. 60 mi) that provide for the stormwater drainage of Concordia Parish. Assisted in developing maps that illustrate the parish-wide inundation changes that result from several proposed drainage improvements.

Repurpose Green Field Five, Pelican Park, Mandeville, LA: For Recreation District No. 1, planning and design for repurposing the Green Field Five to an adult focused recreation area with a walking trail adjacent to a created pond, Bocce Ball and Pickleball courts, designed drainage improvements and other amenities. Construction engineering services included response to requests for information, submittal review and biweekly progress meetings. Construction cost is approximately \$1,600,000.

FEMA-funded Recovery Roads Program, Lower Ninth Ward Quad 2, New Orleans: Engineer Intern. Comprehensive recovery strategy to repair Hurricane Katrina related damages on and beneath city managed streets throughout New Orleans. Responsibilities include determination of storm related repairs to streets, sidewalks and ADA ramps through FEMA scoping. Coordination with the Sewerage and Water Board of New Orleans Water Line Replacement Program to incorporate water line and drainage improvements into the project.

Waterline Replacement Program, Mid-City and City Park Neighborhoods, New Orleans, LA: Engineer Intern. Part of a larger Citywide, multi-year infrastructure repair/recovery effort funded by FEMA to restore the city's distribution system. Responsibilities include plan/profile design of new waterlines and drainage improvements on over 60 city blocks.

Lower Ninth Ward Streetscape Phase II, New Orleans, LA: Engineer Intern. The second and final phase of "streetscape" beautification on North Claiborne Avenue. Responsibilities included design of ADA ramps, landscaping, art plazas and previous concrete for pedestrian walkways throughout the neutral ground.

South Jahncke Avenue Water Line Improvements, Covington, LA: Engineer Intern. Water distribution improvements that include replacing 1,600 feet of 4-inch water main with a 10-inch water main. Responsibilities include plan/profile design of new water main and pavement replacement.

Port of Gulfport (MS) Restoration Program, West Pier Construction Phase I and West Pier Facilities: Engineer Intern. Construction of \$110 million in port improvements, including demolition, grading, storm drainage and site utilities, paving and roadway construction, electrical and site lighting, striping, railroad construction, transit shed, administration buildings, and maintenance and repair buildings. Responsibilities included developing construction constraints and sequencing plans for both projects.

Water Line Replacement Program – Mid-City, City Park, and Dixon Neighborhoods, New Orleans, LA: Part of a larger City-wide, multi-year infrastructure repair/recovery effort funded by FEMA to restore the city's water distribution system. Responsibilities include plan/profile design of new waterlines and drainage repairs on over 65 city blocks.

Lower Ninth Ward Streetscape Phase II, New Orleans, LA: The second and final phase of "streetscape" beautification on North Claiborne Ave. in the Lower Ninth Ward neighborhood. Responsibilities included design of ADA ramps, landscaping, art plazas and previous concrete pedestrian walkways throughout the neutral ground and assistance with construction services. Construction cost is approximately \$535,000.

Broad and Lafitte St. Streetscape, New Orleans, LA: "Streetscape" beautification project that ties in with the Lafitte Greenway Bicycle and Pedestrian Path project making the Mid-City neighborhood more accessible for pedestrians. Responsibilities included design of ADA ramps, striping with the addition of bike lines, street lighting additions and improvements, and landscaping and assisting with construction services. Construction cost is approximately \$540,000.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Christopher M. Trebisky, PE, PLS, PP <i>Senior Project Manager</i>
Project Assignment:
Civil Engineer
Name of Firm with which associated:

Years' experience with this Firm:
12 years (25 total)
Education: Degree(s)/Year/Specialization:
BS / 2003 / Environmental Engineering BS / 2010 / Engineering Technology-Surveying
Active registration: Year first registered/discipline:
2013 / Professional Engineer – MS 21207 2014 / Professional Surveyor – MS 25446
Other experience and qualifications relevant to the proposed Project:
<p>Christopher joined Neel-Schaffer in 2012 and serves as a Senior Project Manager on a variety of site/civil and engineering projects. His areas of expertise include site planning, design, transportation design, topographic and title surveying, sanitary and storm drainage systems, and recreation design. Before joining Neel-Schaffer, he worked for 13 years as a project manager for a New Jersey-based consulting firm.</p> <p>In addition, he has experience in writing specifications, bidding and contracting construction work, meeting construction schedules and construction inspection. Christopher is skilled in project budgeting and cost analysis with an excellent background in estimating. Besides engineering and surveying practices, he holds expertise in the field of green construction as a LEED Accredited Professional.</p> <p>RELATED EXPERIENCE</p> <p>Port of Gulfport Restoration, West Pier Site Improvements, Phase I, Gulfport, MS: Project Engineer. Engineering design and construction services for Phase I of a 95-acre Port expansion. Responsible for overall site design, stormwater management and pavement design, with construction costs exceeding \$60 million.</p> <p>Port of Gulfport Restoration, West Pier Site Improvements, Phase 2, Gulfport, MS: Project Engineer. Engineering design and construction services for Phase 2 of a 50-acre Port expansion. Responsible for overall site design, stormwater management and pavement design, with construction costs exceeding \$30 million.</p> <p>City of Vicksburg Port Expansion, Vicksburg, MS: Preliminary Engineering Design and Environmental Permitting for the protection of approximately 1,800 Acres for the development of a multi-modal port in the City of Vicksburg. The project includes the construction approximately 5 miles of levee protection adjacent to the Mississippi River, the development of a slackwater port, and infrastructure to support industrial development vital to the City.</p>

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Amazon Warehouse Civil Site Design, Madison County, MS: Project Manager. Neel-Schaffer was contracted by the Trammell Crow Company to provide complete engineering design and construction management services for a 2.7 million-square foot warehouse near Canton (MS) for Amazon, a one of the top four e-commerce and information technology companies in the United States. The 70-acre site will be the first anchor building for an 850-acre megasite industrial park near Interstate 55 being developed by the Madison County Economic Development Authority. Construction began on the massive ARS Sort Facility on August 1, 2020 and is expected to take 13 months to complete. Neel-Schaffer provided complete civil site design and permitting services on an expedited scheduled and is now providing construction management services. Neel-Schaffer sister firms Maptech and SoilTech Consultants provided survey and geotechnical engineering services, respectively.


Vicksburg Sports Force Parks, Vicksburg, MS: Neel-Schaffer provided a wide variety of services for the construction of Sports Force Parks on the Mississippi, a new \$20 million multi-use complex that opened in February 2019 in Vicksburg near the Mississippi River. Services include civil site design for grading, drainage, and layout for the new complex. Neel-Schaffer also provided construction engineering and inspection during the construction phase, survey through sister firm Maptech, and water and wastewater design through subconsultant SOL Engineering.

Rankin Trails Amphitheater and Baseball Park Project, Brandon MS: Project Manager. Engineering design and construction services for a 75-acre recreational facility, including the provision of 10 baseball fields with state-of-the-art lighting, concession buildings, parking areas and an 8,000-seat amphitheater. Responsible for overall site design, grading and stormwater management and pavement design with construction costs exceeding \$20 million.

Continental Tire, Hinds County, MS: Project Engineer. Preliminary engineering design and planning services for the new \$2.4 billion Continental Tire facility under construction near Clinton. This project included the overall site and drainage layout required to obtain a Section 401 Water Quality permit. The scope also included the design of earthwork models to aid in the development of construction cost estimates for the plant, scheduled to open in late 2019.

Shiloh Park Improvements Project, Brandon, MS: Project Manager. Engineering design and construction services for the reconstruction of a 110-acre recreational facility, including the provision of three new soccer fields, one football field, and miscellaneous parking lots. The project also included converting eight baseball fields to softball fields, and the provision of state-of-the-art lighting systems. Responsible for overall site design, grading, stormwater management and pavement design, with construction costs exceeding \$4 million.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Leah Selcer, PE <i>Civil Engineer</i>
Project Assignment:
Civil/Coastal Engineer
Name of Firm with which associated:

Years' experience with this Firm:
4 (10 total)
Education: Degree(s)/Year/Specialization:
BS / 2014 / Civil Engineering
Active registration: Year first registered/discipline:
2019 / Professional Engineer - Civil, LA 43492
Other experience and qualifications relevant to the proposed Project:
<p>Leah joined Neel-Schaffer's Baton Rouge office in 2020. With an extensive and diverse experience working for consulting firms on a variety of Civil Engineering projects, her focus is providing Coastal Engineering services for NSI clients.</p> <p>She has a broad range of project engineering and management experience, providing design, planning, and budgeting services for multiple projects. She is also experienced in preparing permits, plans and specifications, design calculations, reports, and presentations for a variety of civil engineering projects.</p> <p>She has assisted in the engineering and design of several complex civil, coastal and water resources projects for coastal ports, parish governments, LADOTD, CPRA, as well as private developers.</p> <p>RELEVANT EXPERIENCE</p> <p>Mandeville Lakefront Wetlands Restoration: Situated between two "hard" shorelines, a mature cypress forest is rapidly eroding. The Mandeville Lakefront Wetlands Restoration Project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain.</p> <p>Slidell Ring Levee: Slidell East Segments (PO-184): Project Engineer. Feasibility evaluation of alternative alignments for flood protection for the eastern side of Slidell and conceptual planning and engineering for the required alignment features. The project also included hydrologic and hydraulic considerations and conceptual modeling for two drainage pump stations are required along proposed levee segment to manage the rainfall captured within the flood protection systems during gate closure events to address inland or upstream flooding. Conceptual level of analysis was performed for the sizing of these pump stations.</p>

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Coastal Processes Study for Lillian Park: The Coastal Processes Study for the Lillian Park Beach Habitat and Shoreline Protection Project evaluates the existing conditions and associated coastal processes. By establishing the existing conditions related to wave action, sediment deposition, erosion, and degradation of littoral environments, conceptual alternative solutions can be developed, evaluated, and selected to provide a sustainable shoreline and boat ramp.

St. Tammany Parish Coastal Master Plan (PO-167): Project Engineer. Neel-Schaffer tasks include updating the GEC 2012 Northshore Hurricane and Flood Protection Study with newly completed and current proposed projects, gather information on multiple projects by different agencies and jurisdictions. Perform a gap analysis to identify new projects, and a benefit/cost analysis of proposed projects will be completed to determine project priority and viability. NSI is currently performing a Conceptual project Alternatives and Feasibility Analysis as a part of Task III.

Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project: Project Engineer for Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning. Main project tasks involve evaluation of the flow capacity of the existing drainage system, provide design conditions to drive local hydraulic modeling for culverts, and hydrologic structure design optimization. Hydrologic structure design optimization includes development of hydrologic structure alternatives, analysis and determination of preferred structure type, construction logistics and constructability evaluation, conceptual level estimates of quantities, construction, and operations/maintenance costs, and conceptual pump station evaluation.

University Lakes Flood Risk Reduction Design: Dredging and Constructability Coordination with Construction Manager at Risk (CMAR). Improvements to water quality and flood risk reduction potential for the Louisiana State University (LSU) Lakes System. Development and constructability review for dredging of the 6 Lakes. Provide internal Independent Technical Review of conceptual design alternatives and development of construction costs for project features. Coordination with CMAR Contractor for Constructability concerns and issues during the development of Dredging Plans and Specifications.

Calcasieu Salinity Control - Joe's Cut & West Pass: Project Engineer. Designing control structures to limit salinities being introduced through the Calcasieu Ship Channel (CSC) into Calcasieu Lake and surrounding wetlands to reduce the rate of wetland loss within the project area. Duties include calculations for estimated scour and rip-rap sizing.

Jackson County Board of Supervisors Dredging Program, Group 4: In response to the disaster damages as a result of Hurricane Nate (FEMA EM-3393), Neel-Schaffer was selected by the Jackson County Board of Supervisors to provide professional civil engineering and monitoring services for the dredging, debris and sediment removal of approximately 12,000 linear feet of navigable channels. The project also includes design services necessary to restore navigation aids to acceptable operations.

Upper Terrebonne Basin Watershed Plan/EA, Upper Delta Soil & Water Conservation District: Ms. Selcer was the project engineer responsible for preparing a hydrologic and hydraulic analysis as part of the Watershed Plan and EA for the Upper Terrebonne Basin Watershed using HEC HMS for storm water runoff calculations and HEC RAS for required channel improvements. The total flood protection project area encompasses seven HUC 12 watersheds totaling approximately 225,072 acres.

Petite Caillou Drainage Project, Terrebonne Parish, LA: Project Engineer. This project consisted of the design 450 cfs drainage pump station to reduce flooding due to excessive rainfall. Ms. Selcer performed site design of the pump station and the hydraulic calculations of the conveyance channel. Ms. Selcer prepared preliminary construction plans and estimate of probable cost.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Shane Seeger, EI <i>Civil/Coastal Engineer</i>
Project Assignment:
Civil/Coastal Engineering
Name of Firm with which associated:
 NEEL-SCHAFER <i>Solutions you can build upon</i>
Years' experience with this Firm:
4 (4 total)
Education: Degree(s)/Year/Specialization:
BS / 2022 / Environmental Engineering
Active registration: Year first registered/discipline:
2022 / Engineering Intern - LA 35169
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Shane Seeger has four years of engineering experience as a student intern at Neel-Schaffer's Baton Rouge office. He has experience assisting and with design and document preparation in the Coastal and Water Resources field. Projects he works on include drainage, the design and implementation of habitat restoration, marsh creation, shoreline protection, hydrologic restoration, and flood protection in Coastal Louisiana.</p> <p>RELATED EXPERIENCE</p> <p>Mandeville Lakefront Wetlands Restoration Project, Mandeville, LA: Situated between two "hard" shorelines, a mature cypress forest is rapidly eroding. The Mandeville Lakefront Wetlands Restoration Project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain.</p> <p>PO-184: St. Tammany Storm Surge Risk Reduction Project: Feasibility evaluation of alternative alignments for flood protection for the eastern side of Slidell and conceptual planning and engineering for the required alignment features.</p> <p>PO-167: St. Tammany Parish Coastal Protection Master Plan, St. Tammany Parish, LA: Neel-Schaffer tasks include updating the GEC 2012 Northshore Hurricane and Flood Protection Study with newly completed and current proposed projects, gather information on multiple projects by different agencies and jurisdictions. Perform a gap analysis to identify new projects, and a benefit/cost analysis of proposed projects will be completed to determine project priority and viability. NSI is currently performing a Conceptual project Alternatives and Feasibility Analysis as a part of Task III.</p> <p>CS-87 Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project: Project Engineer for Design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization</p>

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planning and initial optimization tasks, and other project planning tasks.

Coastal Processes Study for the Lillian Park Beach Habitat and Shoreline Protection Project: The Coastal Processes Study for the Lillian Park Beach Habitat and Shoreline Protection Project evaluates the existing conditions and associated coastal processes. By establishing the existing conditions related to wave action, sediment deposition, erosion, and degradation of littoral environments, conceptual alternative solutions can be developed, evaluated, and selected to provide a sustainable shoreline and boat ramp.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sahar Haddadian, PE, PhD, CFM, WEDG <i>Coastal Engineer</i>
Project Assignment:
Coastal Engineer
Name of Firm with which associated:
 NEEL-SCHAFER <i>Solutions you can build upon</i>
Years' experience with this Firm:
2 (11 total)
Education: Degree(s)/Year/Specialization:
BS / 2011 / Civil & Structural Engineering MS / 2013 / Civil & Hydraulic Engineering PhD / 2020 / Civil & Coastal Engineering
Active registration: Year first registered/discipline:
2024 / Professional Engineer - Civil, LA 48648
Other experience and qualifications relevant to the proposed Project:
<p>Ms. Haddadian joined Neel-Schaffer in 2022 and serves as a Coastal Engineer responsible for coastal engineering analyses, numerical modeling, and the design of coastal structures.</p> <p>Sahar has three years of experience, and her expertise ranges from project inception to construction, including: feasibility studies, field investigations, cost estimates, comprehensive coastal engineering analyses, numerical modeling, and structural design.</p>
RELATED EXPERIENCE
<p>MDOT SCOUR Analysis for US-84 and SR-15 Bridges Over Tallahala Creek, MS: Provided quality assessment of two-dimensional numerical modeling of river hydraulics and bridge scour analysis using SMS-SRH2D software</p> <p>SCDOT Scour Analysis for US-301 Bridge Over Savannah River, SC: Sahar was in charge of two-dimensional numerical modeling of river hydraulics and determining the bridge scour depth and extent for the proposed bridge replacement using SMS- SRH2D software.</p> <p>SCDOT Scour Analysis for US-278 EB/WB Bridge Over Okatee River, SC: Sahar was in charge of developing a two-dimensional hydraulic numerical model to estimate the 100- and 500-year river hydraulics for bridge scour calculations using SMS-SRH2D software.</p> <p>St. Tammany Parish Slidell Breakwater Restoration Feasibility Study, Slidell, LA: Sahar was in charge of evaluating the feasibility of constructing shoreline protection and habitat development through the construction of segmented breakwaters along Lake Pontchartrain's southeast shoreline. Sahar analyzed the existing conditions (water levels, subsidence, sea level rise) and coastal processes (wind and wave climate during normal and extreme conditions) on site to determine the real and ongoing negative consequences to the immediate shoreline and littoral habitat found within</p>

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the study area.

St. Tammany Parish Coastal Master Plan, LA: Sahar was in charge of conducting flooding analysis using a two-dimensional HEC-RAS model to evaluate the vulnerable areas during existing conditions and determine the size of proposed pump stations to reduce flooding risk within the project site.

Austal USA South Access Road, Mobile, AL: Sahar was in charge of conducting a two-dimensional HEC-RAS model to evaluate the changes in water surface elevation within the vicinity of the project site due to the widening of the connector road located on Pinto Pass that connects the South end of the Austal Complex to Dunlap Drive.

Marine Industries Association of Palm Beach County Peanut Island Flood Shoal Dredging Project, Riviera Beach, FL: Sahar was in charge of coastal analysis and dredge design for the Peanut Island dredging project. The analysis focused on the potential effects of dredging, such as sand accretion, reduction of sediment, and how long until the project needs to be dredged again.

Miami-Dade County Haulover and Crandon Park Sea Level Rise Mitigation Plan, Miami, FL: Sahar prepared flood inundation and sea level rise analysis for the Haulover Park Sea Level Rise Mitigation Plan. This plan will lead to the development of mitigation solutions and cost estimates to address the effects of sea level rise that impact the public's use of amenities.

Government of the Bahamas/Engineering & Technical Services Glass Window Bridge Coastal Engineering, Eleuthera, The Bahamas: The project included the reconstruction of existing bridge and roadway, which provides sole access between northern and southern regions of the island. Sahar was responsible for modeling of wave propagation and extreme tide events.

Clifton Point LNG Facility, New Province, The Bahamas: The project included Coastal Engineering analysis in determining the hydrodynamic conditions in the Project site. The goal was to determine the sediment transport processes during the construction of the pier and the fate of potential oil spills during the operational phase. Sahar was responsible for hydraulic analysis and the modeling of sediment transport and oil spill.

FDOT District 1 Sea Level Rise, Miami, FL: The project included the sea level rise analysis and determination of the potential future flooding. Sahar was responsible for determining the King tide in the project area and conducting sea level rise analysis to determine possible areas and roads that would experience flooding.

Sunset Harbor Yacht Club wave screen, City of Miami Beach, FL: The project included the construction of a new wave screen on the seaward side of the existing deck. Sahar was responsible for analyzing wave characteristics both within and outside the perimeter of the existing wave attenuator for the Sunset Harbor Yacht Club, and calculating the wave load and wave attenuation to properly design the wave screen.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Levi Roady, EIT Coastal Engineer
Project Assignment:
Coastal Engineer
Name of Firm with which associated:
 NEEL-SCHAFER <small>Solutions you can build upon</small>
Years' experience with this Firm:
2 (4 total)
Education: Degree(s)/Year/Specialization:
BS / 2020 / Ocean Engineering
Active registration: Year first registered/discipline:
2020 / Engineer in Training – TX 74553
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Roady joined Neel-Schaffer in 2022 and serves as an Engineer in Training with the Coastal Engineering Group.</p> <p>Levi has two years of experience with the Army Corps of Engineer Galveston District.</p> <p>Based in Texas, Levi works on drainage and coastal projects along the Gulf of Mexico.</p>
RELATED EXPERIENCE <p>CS-87 Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration, Cameron, LA: Graduate Coastal Engineer. Due to the effects of sea level rise, and several major hurricanes, the Calcasieu-Cameron watershed has suffered from significant land loss since the 1970s. Although several marsh restoration projects have occurred in the region in order to restore lost land, CS-87 is the largest scale marsh-restoration project that has been proposed in the region, with benefits for the entire 65,000 acre watershed. Levi has assisted the Baton Rouge office with the design of marsh creation areas for this project, including research and design of the pipeline corridors used to transport sediment, and the borrow areas where material will be drawn from. Additionally, Levi has created a report to document the corridor creation process, and all preliminary requirements of design.</p> <p>Kingwood (TX) Diversion Ditch Conveyance Improvement Study: Graduate Coastal Engineer. The Kingwood Subdivision experienced severe flooding during both Hurricane Harvey and Tropical Storm Imelda. During these events, the existing Kingwood Diversion Ditch was not able to completely divert flow from the Ben's Branch channel, which resulted in increased flooding in the subdivision. The goal of this project is to improve the capacity of the diversion ditch. Levi assisted by compiling the preliminary engineering report for the project, and coordinating other reports and appendices for delivery to the client.</p> <p>District Comparative Analysis, Galveston, TX: With the initiation of the "Ike Dike" Texas Coastal Study, and a massive</p>

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influx of funding to the district from BBA-18, the comparatively small district of SWG needed to hire new talent that would suit the needs of the Galveston District as they changed their focus from maintenance dredging to new construction. As a student intern with the district's Internal Review group, Levi's report, known as the District Comparative Analysis (DCA), compared the distribution of employees and hiring trends throughout the COE, placing an emphasis on districts that were well-established, specialized in civil works, or conducted operations on the coast. This resulted in a review of 12 of the 36 COE Districts in the Continental United States. Portions of the DCA were used by the SWG commander in a briefing to the Chief of Engineers. The same analysis was used in an analysis by SWD Headquarters Internal Review, where it was presented to 16 Districts from 3 Divisions and was accepted as CPE for professional credit.

Placement Area Classification, Galveston, TX: As an H&H Engineer with the Corps of Engineers, Levi worked with the Operations group, using ArcGIS and topographic imagery to outline every sediment placement area along the GIWW, and determine how much sediment volume each placement area contained. This was used to help create a unified classification system for the GIWW's many sediment placement areas, and determine the total volume for placement remaining along the GIWW. This was in turn used to inform the development of several large dredging projects along the GIWW, and how the placement areas along the GIWW would need to be developed in order to ensure channels could expand to accommodate larger cargo vessels.

PA-118A, Matagorda, TX: Junior H&H Engineer. Levi performed an initial visit to the site, along with other junior geotechnical and structural engineers, to ascertain site conditions of the existing levees and drainage structures. After review was completed, the team worked to design a new outlet structure, in order to accommodate levee raises which would allow dredging operations in the GIWW to continue for the next 10 years.

PA 11, Beaumont, TX: Junior H&H Engineer. On the other end of the GIWW, Levi and a team of other junior engineers visited the site to ascertain site conditions of the existing levees and drainage structures, on behalf of senior coastal engineers. PA 11 was a much larger area than PA-118A, and its outlet structures were in significantly worse condition, making this placement area a much more challenging project. After review was completed, the design team worked to design multiple new outlet structures, in order to accommodate levee raises which would allow dredging operations in the GIWW to continue for the next 10 years.

Texas Coastal Study, Galveston, TX: While not the primary author of the study, Levi worked alongside H&H Engineer Himangshu Das on documentation of the Texas Coastal Study, known as the "Ike Dike," to ensure grammatical accuracy and formatting consistency. Additionally, Levi ensured the accuracy of information in the body between multiple authors, and implemented accurate citations into the text in order to prepare the study for public delivery.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Christina Lenel <i>Civil Engineering Technician</i>
Project Assignment:
Civil Engineering Technician
Name of Firm with which associated:
 NEEL-SCHAFFER <i>Solutions you can build upon</i>
Years' experience with this Firm:
3 (15 total)
Education: Degree(s)/Year/Specialization:
BS / 2010 / Industrial Technology
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Christina Lenel joined Neel-Schaffer and serves as an Engineering Technician in the Mandeville (LA) office. She has more than 10 years of experience as a CAD Tech and Construction Inspector and provides both services for Neel-Schaffer. She joined the firm after working the last seven years for the Louisiana Department of Transportation and Development.</p> <p>Christina's experience includes monitoring construction progress, verifying work performed adhered to plans and specifications, producing daily work reports and estimate quantities, producing As-Built drawings and project closeout submittal packages. She has worked on a variety of projects including new roundabout construction, roadway widening and new roadway construction, installation of embankment and base course, soil cement, asphalt paving, concrete paving, subsurface drainage, and bridge construction.</p> <p>RELATED EXPERIENCE</p> <p>Mandeville Lakefront Wetlands Restoration: Civil Designer for Lakefront Wetlands Restoration Project that will prevent further degradation of the wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain. The project established a best practice for creation of new wetlands, provided engineering concepts in support of multiple storm water routing alternatives and coastal engineering concepts for the design of a storm-resistant shoreline closure with an integral bike path and pedestrian link between Old Mandeville and Sunset Point Park.</p> <p>PO-167: St. Tammany Parish Coastal Master Plan: Civil Designer. NSI tasks include updating the GEC 2012 Northshore Hurricane and Flood Protection Study with newly completed and current proposed projects, gather information on multiple projects by different agencies and jurisdictions. Perform a gap analysis to identify new projects, and a benefit/cost analysis of proposed projects will be completed to determine project priority and viability. NSI is currently performing a</p>

TEC Professional Services Questionnaire

Conceptual project Alternatives and Feasibility Analysis as a part of Task III.

Construction Inspection

US 190: Collins Blvd Right Turn Lane @ Lee Road, Covington, LA: Constructing new turn lane, mill and overlay, embankment and base course, asphalt paving, subsurface drainage.

LA 1085 & LA 1077 Roundabout, Covington, LA: Construct new Roundabout, embankment and base course, asphalt paving and widening, subsurface drainage, Concrete paving.

LA 3228: US 190 to N. Causeway Blvd, Mandeville, LA: Widen to three lanes, embankment and base course, asphalt paving and widening, subsurface drainage, concrete pavement.

LA 59: Roundabout @ Sharp Road, Mandeville, LA: Construct new Roundabout, embankment & base course, asphalt paving and widening, subsurface drainage, concrete paving.



TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Mike Phillips, PE, CFM <i>Senior Project Manager</i>
Project Assignment:
Hydrology & Hydraulics
Name of Firm with which associated:

Years' experience with this Firm:
21 years (21 total)
Education: Degree(s)/Year/Specialization:
BS / 2000 / Civil Engineering
Active registration: Year first registered/discipline:
2009 / Professional Engineer - Civil, LA 34600
Other experience and qualifications relevant to the proposed Project:
<p>Mike joined Neel-Schaffer in 2000 and has 21 years of experience as a Project Engineer/Manager for municipal and DOT on-call contracts involving drainage and flooding problems that require responsiveness, technical expertise, and public relations capability. He manages Neel-Schaffer's hydrology & hydraulics discipline, providing services for clients throughout Neel-Schaffer's nine-state footprint.</p> <p>Mike has extensive experience performing drainage/flood damage inspections after flood events. He routinely performs complex and large-scale hydrologic & hydraulic modeling and flood control infrastructure improvement designs for municipal and private clients. He has managed and performed on-call contracts consisting of complex analyses for DOTs in Alabama, Georgia, and Tennessee, and the US Army Corps of Engineers (Memphis, Little Rock, and Vicksburg Districts).</p> <p>Mike has performed numerous high-profile FEMA Flood Insurance Study Updates and Map Revisions for municipalities and private clients. He is very familiar with FEMA National Flood Insurance Program Regulations; and he is an ASFPM Certified Floodplain Manager.</p> <p>Mike is proficient in the latest hydrologic & hydraulic computer models, including GIS-based applications for hydraulics & hydrology (steady and unsteady flow). He has extensive experience collecting drainage inventory and inspection data using hand-held GPS data collectors with mobile ArcGIS applications. He has extensive experience in plans and details preparation using Microstation and AutoCAD and is very proficient in the use of ArcGIS software.</p>
RELATED EXPERIENCE
<p>Mandeville Lakefront Wetlands Restoration: Lead Hydraulic Engineer responsible for hydrologic and hydraulic (H&H) modeling of alternatives for shoreline closure and marsh creation immediately east of Sunset Point Park. Existing canals south of Galvez Street and east of Massena Street were analyzed and alternatives were developed to route canal flows through the proposed cypress wetlands at various storm levels. Extensive coordination was required with coastal</p>

TEC Professional Services Questionnaire

engineering sub consultant in the exchange of data used for both H&H and wave height numerical modeling. Multiple options for horizontal alignment and cross-sectional geometry of proposed channels through the wetlands were analyzed, as well as options to incorporate a public walking trail through the wetland area.

Brownsitch Road Widening Project, Slidell, LA: Project Engineer responsible for development and calibration of hydrologic and hydraulic models of the upper region of the W-14 Canal watershed that drains to the channel outfall alongside Brownsitch Road. Steady flow models were developed and used to analyze multiple scenarios for design of a subsurface box culvert to capture and convey watershed runoff into the W-14 Canal. Also, localized upstream drainage improvements were analyzed in an effort to reduce the size/cost of the proposed box culvert. The proposed roadway was proposed to be widened to 3-lane capacity and its profile raised to provide access for emergency vehicles during the 100-year storm event. Downstream impacts along the W-14 Canal were analyzed to assess downstream effects and several alternatives were presented to mitigate the increases in discharge.

South Central Drainage Master Plan (LA 1088 and LA 434 Corridor Studies): Project Engineer responsible for performing detailed watershed analyses and hydrologic models for Bayou Lacombe and Bayou Castine drainage basins north of I-12 (60 sq. mi. area). Conceptual engineering design was performed for seven proposed regional detention ponds, and utilization of an existing 60-acre borrow pit lake, to provide regional detention to accommodate future short-term (5-10 year) and long-term (10-20 year) development scenarios, while meeting Parish design requirements for future buildout within areas expected to experience significant growth. Detailed reports and cost estimates were prepared and incorporated into the Plan.

Tag Along Creek Drainage Analysis: Project Engineer responsible for performing an unsteady flow (EPA-SWMM 5) model of Tag Along Creek, a tributary to Bayou Lacombe, for the purpose of determining causes of residential and street flooding along Cloverland Drive and developing multiple alternatives to mitigate the flooding. Alternatives included dredging the existing 2.6-acre Sunrise Lake upstream of the Cloverland Acres Subdivision, constructing regional detention ponds north of N. Pontchartrain Drive, and constructing a bypass canal to divert flood flows to the north of the residential area. The diversion canal was determined to be the most viable option since it was the least expensive and offered 1.5-ft of reduction in the 10-year water levels in the existing creek channel and removed eleven homes from flooding in that event. Construction plans were developed in 2015 and the final model was updated according to the plans.

Cypress Creek and Black Creek Drainage Analyses, Jackson County, Biloxi, Mississippi: Project Hydraulics Engineer responsible for performing drainage analyses of Cypress Creek and Black Creek to determine cause(s) of flooding to homes and streets and provide solutions to alleviate flooding to the maximum extent practicable using the most cost-effective approach. An unsteady flow (EPA-SWMM 5) model of the creeks were developed to analyze existing conditions and multiple flood reduction alternatives. Detailed reports and cost estimates were prepared and presented to County Commissioners.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Colby Curtis, PE <i>Hydrology & Hydraulics</i>
Project Assignment:
<i>Hydrology and Hydraulics Engineer</i>
Name of Firm with which associated:
 NEEL-SCHAFER <i>Solutions you can build upon</i>
Years' experience with this Firm:
1 year (4 total)
Education: Degree(s)/Year/Specialization:
BS / 2020 / Civil Engineering
Active registration: Year first registered/discipline:
2024 / Professional Engineer - Civil, LA 49117
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Curtis joined Neel-Schaffer's New Orleans office in July 2023 and serves as an Engineer Intern in the Water Resources Group.</p> <p>Prior to joining Neel-Schaffer, he worked for three years at the United States Army Corps of Engineers in the Hydraulics Branch for both the Vicksburg and New Orleans District offices.</p> <p>RELATED EXPERIENCE</p> <p>St. Tammany Parish Grande Maison Subdivision Drainage: Addressing subdivision flooding issue in Mandeville, LA. Contributed writing Existing Data Memo, Modeling Report, prepared client presentation, reviewed HEC-RAS and PCSWMM model, and created plan sheets for proposed alternatives.</p> <p>East Baton Rouge Parish Port Hudson-Pride Road Bank Scour: Near the crossing of the Comite River, the Port Hudson-Pride Road was experiencing erosion, weakening bank stabilization along the north side of the road. To mitigate this, developed a HEC-RAS 2D model to analyze velocities in the bend in the existing condition as well as testing multiple river training structures in the model to provide the client with the most stable and cost-effective option. Calculated rip rap Gradations and design parameters for a potential bendway weir.</p> <p>New Orleans Department of Public Works DeSaix Bridge Replacement: Design of a replacement bridge in Bayou St. John, City of New Orleans. Obtained needed permitting to begin construction phase of project. Reviewed submittals and RFIs, checked monthly quantities usage, updated meeting notes, created invoice letters for contractors and subconsultants.</p> <p>St. Tammany Parish Pelican Park Water Well and Tank: The park experienced a pump failure at an existing well during the Aug 2023 drought. Built an InfoWater Pro Water System model to evaluate their current system as well as the benefits</p>

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of adding another well. The model also evaluated installing fire hydrants and increasing the system's pipe size.

Bossier City, LA Jimmie Davis Bridge: Internal technical review of the Drainage Calculations for the proposed ditches, culverts, inlets, and storm drains.

Murphy, TX Maxwell Creek No Rise Study: The city is adding two pedestrian bridges on either side of East FM 44 road at the crossing of Maxwell Creek as well as low crossing a half mile downstream. A hydraulic analysis was performed to document any increase in water surface elevation and mitigate this increase in the stream due to these added obstructions to meet the FEMA required No Rise condition.

Haltom City, TX Huddleston Street No Rise Study: The city is repaving Huddleston Street as well as adding curb and gutter, inlets and storm drains, and sidewalks on either side. The street crosses Stream WB4, which flows through a culvert. A hydrologic and hydraulic analysis was performed to document the changes in runoff and mitigate any increase in water surface elevation in the stream to meet the FEMA required No Rise condition.

New Orleans Sewerage and Water Board Saltwater Intrusion: The saltwater wedge moving up the Mississippi River posed a threat to the City of New Orleans' drinking water as it receives its supply from two intakes on both banks. Helped with preliminary design plans, permitting for the Algiers Intake, and with the initial pipe layout options for the Carrollton Intake in a tight timeframe to meet the Sewerage and Water Board's urgent needs.

City of New Orleans Green Infrastructure Toolkit: Performed an audit and made revisions to the City's standard details, specifications, toolkit calculator, and general guidance document. The details and specifications of focus for NSI's effort were porous concrete pavement, edge restraints, cleanouts, and pavers for sidewalks, alley ways, and parking lanes.

McComb, MS, Donna Heights Drainage: Addressing subdivision flooding issue in McComb, MS. Calculated hydrologic runoff and hydraulic routing. Built HEC-RAS model to reflect existing conditions and to propose alternative solutions to problem.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Greg Taylor, RPG Senior Environmental Geologist
Project Assignment:
Environmental & Permitting
Name of Firm with which associated:

Years' experience with this Firm:
16 years (23 total)
Education: Degree(s)/Year/Specialization:
BS / 1986 / Geology
Active registration: Year first registered/discipline:
1998 / Professional Geologist #861
Other experience and qualifications relevant to the proposed Project:
<p>Greg joined Neel-Schaffer in 2007 after transferring from Neel-Schaffer sister firm SoilTech Consultants. He has more than 30 years of experience and has conducted environmental assessments and remediations throughout Mississippi, Louisiana, Tennessee, Alabama, Arkansas, Florida, and Iowa.</p> <p>Accomplishing these tasks required interfacing with regulatory agencies, preparing work plans/cost estimates, supervising all phases of field work, interpreting laboratory analytical data, preparing/reviewing project reports and making recommendations for future site activities, as needed.</p> <p>Greg has been a key project manager in conducting environmental assessments and remediations at MDOT right-of-way acquisition sites and MDEQ, Federal LUST and state trust funds.</p>
RELATED EXPERIENCE
<p>US 90 Pearl River Bridges Environmental Assessment (NO. H.000284 & NO. H.000286), St. Tammany Parish, LA and Hancock County, MS: Work includes the preparation of an Environmental Assessment, as well as line and grade engineering for fixed and movable span bridge alternatives for the West Pearl and East Pearl Rivers and fixed span concepts for the three middle rivers. Alternatives include placement of new bridges on the existing alignments utilizing temporary bypass structures, as well as alternatives supporting upstream and downstream bridge concepts. For the East Pearl River both concrete and steel span structures were considered. Work also includes navigation studies and supporting environmental studies.</p>
<p>Soil and Groundwater Assessment, Gas Saver, Hattiesburg, MS, MGPTF Facility ID No. 7792: The Gas Saver is an inactive facility and the USTs were removed in the 1990s. In May 2019, soil borings drilled on public right-of-way adjacent to the Gas Saver encountered gasoline odors in soil. Mr. Taylor served as the project manager on behalf of the registered tank owner to conduct a subsurface investigation under the Mississippi Groundwater Protection Trust Fund. Delineation of</p>

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petroleum hydrocarbons should be complete in May 2020 along with recommendations for future site activities. Mr. Taylor's duties as Project Manager included preparing work plans and cost estimates, supervising field crews (soil borings and monitor wells), preparing assessment reports, and preparing project invoices.

Soil and Groundwater Assessment and Remediation, Quick Stop, Vicksburg, MS, MGPTF Facility ID No. 10261: The Quick Stop is an active UST facility that had historical high vapor readings in tank bed leak detection wells. A subsequent Preliminary Subsurface Investigation (May 2018) and a Phase II Contamination Investigation (February 2019) delineated the extent of petroleum hydrocarbon impacts and identified three monitor wells containing free phase gasoline. Remedial measures were implemented as periodic vacuum recovery of free phase gasoline, groundwater, and vapor from the wells containing free product. As of April 2020, only one well contained free product and at a thickness of a sheen. We anticipate the remedial activities will be complete in the Fall of 2020 with confirmatory sampling events conducted the first half of 2021. Mr. Taylor's duties as Project Manager included preparing work plans and cost estimates, supervising field crews (soil borings and monitor wells), preparing assessment reports, and preparing project invoices.

Soil and Groundwater Assessments, Active and Former Service Stations, Highway 11, Picayune, MS: The Pit Stop, Rick's Swimming Pool Service, Ladner Property, US Highway 11, Picayune, MS: Mr. Taylor served as the project manager for soil and groundwater assessments at two former service stations and one active service station along US Highway 11 in Picayune. The work was performed for MDOT under a Master Contract for Environmental Services in connection with MDOT plans to acquire additional right-of-way for improvements to US Highway 11. Mr. Taylor duties as Project Manager included preparing work plans and cost estimates, establishing work schedules, supervising field crews and sampling activities, decommissioning monitor wells in accordance with regulatory requirements, conducting meetings and presentations for MDOT and regulatory personnel and preparing assessment reports and recommendations. Project outcomes included two sites with no contamination and one site having contamination with further assessment and potential remediation conducted under Mississippi's Underground Storage Tank Trust Fund.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Barry Brupbacher <i>Senior Project Manager</i>
Project Assignment:
Environmental & Permitting
Name of Firm with which associated:

Years' experience with this Firm:
17 years (50 total)
Education: Degree(s)/Year/Specialization:
BA / 1972 / Political Science MS / 1990 / Urban Studies from the College of Urban and Public Affairs
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Barry has over 45 years of diversified planning experience performing in both public and private sector consulting. His public sector work includes servicing as Executive Director of South-Central Planning and Development Commission and as Planning Director for the City of Slidell, LA. His broad range of experience includes project development and the preparation of Stage 0 and Stage 1 Environmental Assessments (NEPA documents) for flood protection, roadway, freight rail and transit projects, as well as passenger rail planning, transportation planning, roadway alignment studies, zoning, and land use planning.</p> <p>Barry completed NHI course No. 142005, <i>NEPA and Transportation Decision Making</i> and NTI Course, <i>Managing the Environmental Process</i>. As part of his work on NEPA Environmental Assessments and Environmental Impact Statement, he is responsible for related public Involvement.</p> <p>RELATED EXPERIENCE</p> <p>Mandeville Lakefront Wetlands Restoration Project, Mandeville, LA: Planning manager through permitting. Situated between two "hard" shorelines, a mature cypress forest is rapidly eroding. The Mandeville Lakefront Wetlands Restoration Project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. Storm water from the Galvez and Massena outfalls will be directed through created wetlands, improving water quality within Lake Pontchartrain.</p> <p>St. Tammany Parish Sustainable Growth Pilot Study: Hydrology modeling of a 2,900-acre area bounded by I-12 on the north, LA 59 on the east, Sharp Road on the south and Causeway / US 190 on the west. The work also includes code review and the development of code revisions focused on wetlands preservation. It is anticipated that one alternative hydrology model will incorporate the wetlands preservation code revision. Project Planner.</p>

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US 90 Pearl River Bridges Environmental Assessment (H.000284 & NO. H.000286), St. Tammany Parish, LA and Hancock County, MS: Work includes the preparation of an Environmental Assessment, as well as line and grade engineering for fixed and movable span bridge alternatives for the West Pearl and East Pearl Rivers and fixed span concepts for the three middle rivers. Alternatives include placement of new bridges on the existing alignments utilizing temporary bypass structures, as well as alternatives supporting upstream and downstream bridge concepts. For the East Pearl River both concrete and steel span structures were considered. Work also includes public involvement, navigation studies and supporting environmental studies. Project Manager.

St. Tammany Parish Resiliency Program (Focus Area Master Plans), (Contract No. 13-03), St. Tammany Parish, LA: Deliverables include short, medium, and 20-year demographic forecast, projections of developable area within RPC traffic analysis zones considering potential wetlands, floodplains and other environmental constraints, and recommendations for transportation utility and drainage infrastructure. Project Manager

St. Tammany Parish Coastal Protection Master Plan, St. Tammany Parish, LA: Neel-Schaffer tasks include: updating the GEC 2012 Northshore Hurricane and Flood Protection Study with newly completed and current proposed projects, gather information on multiple projects by different agencies and jurisdictions. Perform a gap analysis to identify new projects, and a benefit/cost analysis of proposed projects will be completed to determine project priority and viability. NSI is currently performing a Conceptual project Alternatives and Feasibility Analysis as a part of Task III.

South Central Area Drainage Master Plan, St. Tammany Parish, Louisiana, LA: Project includes base hydrology model for Bayou Lacombe and Bayou Cain drainage basins north of I-12 (60 sq. mi. area); conceptual engineering for detention ponds to support near term (5-10 year) development scenario. Project also provides analysis of potential environment constraints using GIS based habitat models for wetlands and species of concern. Project Manager

Mandeville Bypass, St. Tammany Parish, LA: The Mandeville Bypass will provide a new 3-mile median section roadway with bike path connecting LA 1088 near its interchange with I-12 and US 190 near Fontainebleau Park. Mr. Brupbacher led the environmental planning for the project which includes analysis of potential wetlands and potential impacts to a Threatened and Endangered species, the Red Cockaded Woodpecker as well as the public involvement, developing traffic forecasts, providing traffic analysis and providing design services for concept routes.

Southcity Parkway Extension: Phase 1 - Robley Drive to Kaliste Saloom Road, Lafayette Parish, LA: Public Involvement and NEPA studies supporting Environmental Assessment developed in conformance with USCG guidance, engineering line and grade and technical environmental studies supporting the design and construction of Southcity Parkway extension from current terminus west of the Vermillion River to Kaliste Saloom Road including a crossing of the Vermillion River. Project Manager.

Route LA 182 (North University Avenue) Widening Environmental Assessment: I-10 to West Pont des Mouton Road (LCG No. 500-10-034, State Project No. H.009335), Lafayette Parish, LA: Project supports the widening of LA 182 to four lane capacity. The Study / EA included Public Involvement, traffic studies, environmental screening and alternative concepts for widening the 2-mile route. Project Manager.

South Central Area Drainage Master Plan, St. Tammany Parish, Louisiana, LA: Project includes base hydrology model for Bayou Lacombe and Bayou Cain drainage basins north of I-12 (60 sq. mi. area); conceptual engineering for detention ponds to support near term (5-10 year) development scenario. Project also provides analysis of potential environment constraints using GIS based habitat models for wetlands and species of concern. Project Manager.

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KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Emily Hudson <i>Administrative Services Manager</i>
Project Assignment:
Deputy Grant Manager
Name of Firm with which associated:
 NEEL-SCHAFER <small>Solutions you can build upon</small>
Years' experience with this Firm:
15 years (18 total)
Education: Degree(s)/Year/Specialization:
BA / 2005 / Photography
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Emily joined Neel-Schaffer in 2009. Her project management responsibilities include preparation of invoices and schedules, document control and other duties. Her position also includes administrative responsibilities, GIS applications, and IT technical support. While at NSI, she has been involved with the public outreach stage in developing Metropolitan Transportation Plans and has created land-use and transportation maps based on information gathered in the public meetings. Her diverse skills make her an asset to our project team.</p> <p>RELEVANT EXPERIENCE</p> <p>Port of Gulfport Expansion, Gulfport, MS: Section 3 Coordinator. Responsible for preparing and submitting Neel-Schaffer's monthly status reports, submitting subconsultants' monthly status reports, ensuring Neel-Schaffer's compliance with Section 3, ensuring subconsultant compliance with Section 3, including conducting subconsultant monitoring, securing Section 3 documentation from new subs (project plan, business certification, and project roster) and explaining Section 3 to ensure future compliance, posting Section 3 covered job openings on WINGS, and advertising as appropriate when subconsultant needs arise.</p> <p>Lower Ninth Ward Streetscape, New Orleans, LA: Responsibilities include document control, Primavera P6 scheduling, maintaining deliverables on a SharePoint site, Section 3 compliance, subconsultant management and monitoring, specification management, and project administration for streetscape design.</p> <p>The Groves at Pelican Park, St. Tammany Parish, LA: Responsibilities include document control, Primavera P6 scheduling, maintaining deliverables on a SharePoint site, Section 3 compliance, subconsultant management and monitoring, specification management, and project administration for conversion of existing ball field to a multi-use facility.</p> <p>Recovery Roads Program, Lower Ninth Ward Northeast Group A & B, New Orleans, LA: Responsibilities include document control, Primavera P6 scheduling, maintaining deliverables on a SharePoint site, Section 3 compliance, subconsultant management and monitoring, specification management, and project administration for design of streets,</p>

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sidewalks, ADA ramps, water / sanitary sewer / drainage systems for the Sewerage and Water Board of New Orleans.

Safe Haven Blue Green Campus Master Plan, St. Tammany Parish, LA: Responsibilities include document control, scheduling, maintaining deliverables on a SharePoint site, Section 3 compliance, subconsultant management and monitoring, specification management, and project administration for assessment of the existing site.

DeSaix Blvd Bridge Replacement, New Orleans, LA: Responsibilities include document control, Primavera P6 scheduling, maintaining deliverables on a SharePoint site, Section 3 compliance, subconsultant management and monitoring, specification management, and project administration for the bridge replacement project.

The Port of Gulfport Restoration Program, Gulfport, MS: Work is issued in task orders in support of the restoration of public infrastructure and publicly owned facilities damaged or destroyed by Hurricane Katrina. Responsibilities include document control, Primavera P6 scheduling, maintaining deliverables on a SharePoint site, Section 3 compliance, subconsultant management and monitoring, specification management, and project administration.

CPRA Calcasieu-Sabine Large-Scale Marsh & Hydrologic Restoration Project, Cameron Parish, LA: Handles billing for design Integration Services that include a combination of initial project management activities, initial data gap analysis preliminary data collection, design integration planning, including project E&D work breakdown structure and cost estimates, optimization planning and initial optimization tasks, and other project planning tasks including supporting CPRA's RESTORE grant amendment requests.



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

PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>St. Tammany Parish Coastal Master Plan (PO-167) <i>St. Tammany Parish, LA</i></p> <p>St. Tammany Parish Laura B. Gatlin, Project Manager lcbeach@stpgov.org 985-898-2552</p>	<p>In 2018, St. Tammany Parish took an important step toward resiliency developing their first comprehensive flood protection plan. Planning was a collaborative effort between St. Tammany Parish Government and the St. Tammany Levee Board, made possible with \$2 million in funding from the Coastal Protection and Restoration Authority through an intergovernmental agreement. To assist with this effort, NSI was selected as the prime consultant to develop the master plan. Contracted Tasks include:</p> <p>Task 1 Collection and Organization of Existing Flood Control Assets and Project Data: Work includes compilation of a GIS data base documenting all major flood control assets, (completed, current, and future projects). The GIS database that was developed also provides documentation of streams, hydraulic units repetitive loss data and other features.</p> <p>Task II Flood Control Assets and Gap Analysis: Work includes performing a gap analysis to identify areas are vulnerable to tidal surge, flooding and wetland loss/reduction; review current models to determine data gaps; Documentation of historical losses from structure flooding, infrastructure damage, and wetland loss in the gap areas. Review and evaluation of current coastal storm surge and wave models (ADCIRC, and WHAFIS) to determine data gaps, including but not limited to geographical area, data, cross-sections, and model runs.</p> <p>Task III Conceptual & Preliminary Engineering on Project Alternatives (projected to be contracted for this phase): This task is part of Phase III efforts and included a desktop assessment of the proposed flood protection segments to identify feasibility level issues within the project vicinity. The Project Alternative Development considered the number of structures protected, the costs of land acquisition and construction, and negative environmental impacts. Additionally, the Project Team considered multiple levels of protection for each area reviewed. These levels include the 25-year, 50-year, and 100-year levels of protection. The levels are associated with the chance of exceedance for the 4 percent, 2 percent, and 1 percent respectively, for coastal storm surge in any given year. Projects that were engineered included levees, pump stations, floodgates, shoreline protection features, marsh and beach restoration and coastal breakwaters.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2023	\$2,000,000	\$2,000,000

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PROJECT NO. 2						
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:					
<p style="text-align: center;">Slidell Ring Levee: Slidell East Segments (PO-184) Slidell, LA</p> <p>Louisiana Coastal Protection and Restoration Authority Jas Singh Jas.singh@la.gov 225.342.4102</p>	<p>The Slidell Ring Levee: East Segments Project, in St. Tammany Parish, Louisiana, includes levee segments that provide flood protection and storm surge risk reduction around for the eastern side of the City of Slidell.</p> <p>The project is part of the CPRA's 2017 <i>Louisiana's Comprehensive Master Plan for a Sustainable Coast</i> and evaluates alternative levee alignments to close gaps in the existing Slidell Ring Levee System and complete this storm surge risk reduction system. The Slidell Hurricane Protection system protects thousands of houses and businesses from a 100-year storm event. Many of these structures have been previously flooded and are considered repetitive losses by FEMA.</p> <p>Conceptual alternative alignments were developed with consideration of cost-effectiveness while achieving project design criteria and goals while utilizing sound engineering principles. The analysis included analytical, empirical and/or limited modeling using the existing data and understanding of the project alternatives developed. Eight conceptual level alternatives were evaluated with respect to landownership, utility conflicts, and right of way requirements for the possible alignments to minimize potential impacts while still meeting the project goals and objectives. A Basis of Design Report was developed to establish comprehensive design criteria for the levees, gate structures, and pumping station complexes as part of this project. A review of compiled data sets and guidance documents was also prepared.</p> <p>As significant component of this study, biologists conducted literature reviews to gain insight on existing conditions and the species known to occur in the Study Area. Data was obtained from various federal and state agency websites such as the US Fish and Wildlife Services, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, US Dept. of Agriculture Natural Resources Conservation Service, LA Dept. of Wildlife and Fisheries, and the Gulf of Mexico Fisheries Management Council.</p> <p>The environmental assessment also included habitat classifications; fish and wildlife resources; threatened and endangered species; and other natural and archeological sites in the area. Wetland areas along with various waters of the US were identified for Section 404 permitting requirements along with potential mitigation requirements associated with wetland alterations. Federally protected wildlife species were identified and recommendations for avoidance or minimization of damage were developed to provide justification for alternative alignments. Multiple site visits were taken to corroborate literature review.</p>					
<p>Completion Date (Actual or estimated):</p>	<p style="text-align: center;">Estimated Cost:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #f2f2f2;"> <th style="width: 50%; padding: 5px;">Entire Project:</th> <th style="width: 50%; padding: 5px;">Work for which Firm was Responsible:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">2022</td> <td style="text-align: center; padding: 5px;">\$287,000</td> </tr> </tbody> </table>		Entire Project:	Work for which Firm was Responsible:	2022	\$287,000
Entire Project:	Work for which Firm was Responsible:					
2022	\$287,000					

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PROJECT NO. 3

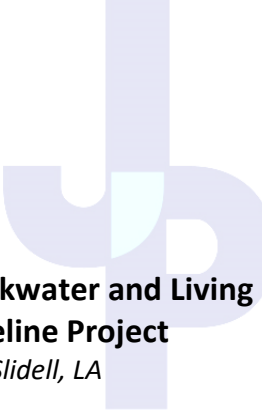
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Mandeville Lakefront Wetlands Restoration Mandeville, LA</p> <p>City of Mandeville Public Works Department Keith LaGrange, Director klagrange@cityofmandeville.com 985-624-3169</p>	<p>Mandeville Lakefront Wetlands project is a whole ecosystem restoration project where multiple habitat types are protected, restored, and created. The project site is situated between two "hard" shorelines, south of a mature cypress forest that is rapidly eroding. This project prevents further degradation of the existing wetlands and restores a functioning ecosystem.</p> <p>A coastal protection berm closure mitigates erosion from wave action from Lake Pontchartrain while also providing functionality by connecting the two "hard" shorelines with a multi-use recreational path. The berm shoreline protection feature provides a reduction of water surface elevations for the 50-, 100-, and 500-yr event through reduction in wave heights and addresses future erosion by significantly reducing the open water fetch from Lake Pontchartrain at the project site.</p> <p>In addition, the project also provides flood protection through the dredging of a diversion channel which will receive the urban runoff from the Galvez and Massena Channel. This diversion channel will direct the waters through the existing intertidal marsh and newly created marsh area. This rerouting of stormwaters through the wetlands allows suspended sediment to settle within the lagoon and marsh areas and will mitigate the effects of saltwater intrusion on the existing wetlands. Mott MacDonald was a subconsultant and provided coastal modeling and support services for coastal engineering.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2022	\$4,000,000	\$350,000

PROJECT NO. 4

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Calcasieu-Sabine Large-Scale Marsh and Hydrologic Restoration Project Cameron Parish, LA</p> <p>Louisiana Coastal and Protection Restoration Authority Jessica Diez Jessica.diez@la.gov 225.342.1477</p>	<p>The State of Louisiana's CPRA selected Neel-Schaffer to provide program management services and develop a project design and design integration services to support the Cameron-Creole Watershed (CCW). The CCW is a marsh system located in southwest Louisiana and is experiencing extensive loss of marsh habitat over the past century. Flood stress from elevated water levels over the marsh is the dominant factor in the marsh loss, although historically saltwater intrusion has played a significant role in marsh degradation.</p> <p>The purpose of the project is to develop an understanding of the hydraulics of the system; evaluate options to improve the ability to manage the water level in the CCW; and reduce marsh and land loss within the CCW. The project features proposed to reduce flood stress include a lake-rim drainage structures that enable the marshes to drain into Calcasieu Lake more frequently and a large-scale marsh creation and nourishment. These features will benefit the entire 65,000-acre Cameron Creole</p>	


TEC Professional Services Questionnaire

	Watershed, which is the subregion of the Calcasieu-Sabine Basin where the original project benefits were predicted to be most concentrated.	
Completion Date <i>(Actual or estimated):</i>	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Estimated 2025	\$261,000,000	\$1,100,000

PROJECT NO. 5	
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
 <p>Slidell Breakwater and Living Shoreline Project <i>Slidell, LA</i></p> <p>St. Tammany Parish Government Randy Pausina 985-898-2529 rbpausina@stpgov.org</p>	<p>The Slidell Breakwaters and Living Shorelines Feasibility Study, for St. Tammany Parish, is a study to determine the feasibility of mitigating the shoreline impacts from the wave environment found along the Lake Pontchartrain shoreline south of the city of Slidell, Louisiana. The project shoreline, spanning roughly six miles, is currently experiencing adverse impacts due to direct, unattenuated, high-energy wave actions. As a result, the shoreline is subject to open wave action, excessive shoreline erosion, roadway overtopping, and degradation of littoral and vegetative environments. Neel Schaffer, Inc. and its team was selected by St. Tammany Parish to provide the engineering services associated with the Slidell Breakwaters and Living Shorelines Feasibility Study.</p> <p>Neel-Schaffer and its team collected and evaluated existing data such as water levels, subsidence and sea level rise, and performed necessary collection of new data such as bathymetric and topographic data. Numerical modeling of coastal processes was then performed to understand the wind and wave climate during normal and extreme conditions at the project site aiding in the development of conceptual alternatives. Neel-Schaffer developed a set of potential solutions to meet the project goals, developed feasible alternatives and associated cost estimates, and provide recommendations on a preferred solution for overall sustainability of the project area.</p> <p>Through the reduction of storm-induced, high-energy waves reaching the project site, the segmented, rubble-mounded breakwaters would address the real and ongoing negative consequences to the immediate shoreline</p> <p>and submerged-aquatic vegetative (SAV) habitat found within the study area. Neel-Schaffer recognized, through a phased construction approach, that the shoreline protection benefits would gain with each phase; however, the environmental benefits would develop immediately following construction of the living shoreline phases. The two living shoreline phases would install stone riprap along the footprint of the final structures but at a submerged elevation in Phase 1 and one foot above normal water level for Phase 2. These two construction phases provide a calmer water environment to restore the natural sediment transport through the area and enhance the conditions needed for subaquatic vegetation to thrive. These SAV benefits are critical foraging and breeding habitat for multiple endangered species found within the project area.</p>

TEC Professional Services Questionnaire

	<p>Neel-Schaffer also recognized the engineering benefits of the phased construction approach. By placing the stone material within the footprint of the final structure, the structural settlement and soil strengths are improved over time allowing the successive phases to have minimal elevation changes. This process also provides the opportunity to maximize construction funding over multiple funding cycles and sources. The overall project recommendations provide coastal resilience to the greater Slidell community by addressing the ongoing erosion along the shoreline while also providing additional critically needed fisheries habitat.</p>	
Completion Date <i>(Actual or estimated):</i>	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2025 (Estimated)	\$9,000,000	\$350,000 (Fee)

PROJECT NO. 6	
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
 <p>Coastal Processes Study for Lillian Park <i>Baldwin County, AL</i></p> <p>Baldwin County Highway Department Seth Peterson, Project Manager 251-970-4055 speterson@baldwincountyal.gov</p>	<p>Neel-Schaffer studied the coastal process occurring at Lillian Park along Perdido Bay in Alabama. Lillian Park Beach and boat launch were constructed to facilitate greater public access to and enjoyment of the natural resources of the Perdido River watershed and the Gulf of Mexico. Erosion of adjacent bay shoreline due to wave energy, loss and reduction of the nearshore habitat and degradation of the littoral habitat are occurring at this location. Additionally, sedimentation is occurring in the boat ramp, hindering water access.</p> <p>The Coastal Processes Study for the Lillian Park Beach Habitat and Shoreline Protection Project evaluated the existing conditions and associated coastal processes found at Lillian Park. The focus of the study and alternatives was to provide a safe and viable park facility, minimize the overall operations and maintenance of the park facility, and provide suitable public access for boats, fisherman, and enthusiasts to the natural resource. The project work tasks included the collection and evaluation of existing data, analysis of coastal processes, and development of conceptual alternatives to meet the project goals.</p> <p>The existing conditions related to wave action, sediment deposition, erosion, and degradation of littoral environments were studied, and the Neel-Schaffer Project Team developed and evaluated Conceptual alternative solutions. The study concluded with conceptual level alternative solutions as well as estimated capital costs comparisons for the various alternatives. The Coastal Process Study analysis provided a basis to develop alternatives that will provide benefits to the functions and maintenance operations at the existing boat launch and improvements to the natural habitat found at Lillian Park.</p> <p>NSI was recently selected by Baldwin County to complete the detailed engineering and design phase of the recommended project alternative.</p>
	Estimated Cost:

TEC Professional Services Questionnaire

Completion Date (Actual or estimated):	Entire Project:	Work for which Firm was Responsible:
2024	\$1,200,000	\$313,000

PROJECT NO. 7

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>West Hancock County Nearshore Habitat Restoration Project Hancock County, MS</p> <p>MDEQ Tina Nations, PhD 601-961-5051 TNations@mdeq.ms.gov</p>	<p>Neel-Schaffer is currently conducting design of the West Hancock County Nearshore Habitat Restoration Project for the Mississippi Department of Environmental Quality (MDEQ). This project, located offshore of Buccaneer State Park near Waveland, MS, is funded by the National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund (GEBF) and was approved in 2013 as one of several projects intended to compensate for natural resources damages that occurred as a result of the 2010 Deepwater Horizon oil spill. The project aims to re-establish coastal habitats to increase productivity of fish and benthic organisms including red and black drum, spotted seatrout, and oysters. This is being accomplished by designing submerged artificial reefs using rock substrates and manufactured reef products to create sub-tidal habitat enhancements for benthic organisms and fish. The overall outcome of this project is to develop plans and acquire permits for the eventual implementation of artificial reefs which would re-establish these important coastal habitats. The NSI team has conducted bathymetric survey, performed a geotechnical investigation, analyzed habitat requirements, and selected cultch materials and manufactured reef products. A preliminary design has been submitted and is currently being refined. Design is scheduled for completion in Fall of 2024 with construction in early 2025.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2025 (Estimated)	\$20,000,000	\$900,000 (Fee)

PROJECT NO. 8

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Jackson County Coastal Dredging Project Jackson County, MS</p> <p>Jackson County Board of Supervisors Matthew Hosey, Project Manager 228-769-3088 matthew_hosey@co.jackson.ms.us</p>	<p>In 2017 Hurricane Nate deposited debris throughout Jackson County Navigable Waterways. Storm surge and runoff caused by Hurricane Nate deposited sediments in five channels including Graveline Bayou Waterway, Vaughndale Bayou Waterway, Sandalwood Bayou Waterway, Cedar Point Bayou Waterway, and Bayou Chicot Waterway.</p> <p>In response to the disaster damages as a result of Hurricane Nate (FEMA EM-3393), NSI was selected by the Jackson County Board of Supervisors to provide professional civil engineering and monitoring services for the dredging, debris</p>	

TEC Professional Services Questionnaire

	and sediment removal of approximately 12,000 linear feet of navigable channels. The project also includes design services necessary to restore navigation aids to acceptable operations.	
Completion Date <i>(Actual or estimated):</i>	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021	\$1,500,000	\$168,500

PROJECT NO. 9

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p style="text-align: center;">Mid-Barataria Sediment Diversion <i>Plaquemines Parish, LA</i></p> <p>Coastal Protection and Restoration Authority Glenn Ledet (225) 400-4012 Glenn.Ledet@la.gov</p>	<p>The Mid-Barataria Sediment Diversion is a large-scale sediment diversion project that aims to deliver up to 75,000 cfs of sediment-laden water from the Mississippi River into the Barataria Basin. The project is one of the largest civil works and environmental restoration projects ever designed and constructed in the U.S. When fully implemented, it is expected to create up to 30,000 acres of new wetlands.</p> <p>The project consists of multiple components including a headworks gate structure at the Mississippi River Levee, new highway and railroad bridges, a conveyance channel, guide levees, and inverted siphon to maintain existing drainage patterns in addition to other ancillary features.</p> <p>NSI is serving as Deputy Project Manager for construction administration (CA) and quality assurance (QA) activities. This role is a critical component to ensure the project's successful execution and adherence to the highest standards of safety and quality. A significant component of NSI's involvement is overseeing the construction of a new railroad bridge; however, we are also involved in oversight of multiple other project components. CA activities include project site safety, quality management, project controls, invoicing and payment, and administration of contract claims and change orders. QA activities include planning, inspections, and testing.</p> <p>Through meticulous construction administration and rigorous quality assurance protocols, we are committed to contributing to the success of the Mid-Barataria Sediment Diversion Project. Our efforts will help restore vital coastal ecosystems, protect local communities, and support sustainable economic growth in the region.</p>	
Completion Date <i>(Actual or estimated):</i>	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2029 (est.)	\$1,800,000,000	\$1,800,000,000

PROJECT NO. 10

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Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p style="text-align: center;">University Lakes Flood Risk Reduction Design Services <i>Baton Rouge, LA</i></p> <p>Brian Lennie, Stantec Project Manager 262 643-9061 Brian.Lennie@stantec.com</p>	<p>The University Lakes connect Louisiana State University with the surrounding neighborhoods, act as a gateway to the State's Flagship University, and have served as an iconic feature for the community for nearly a century. They act as a symbol of the city and state for both those who are local, as well as the tens of thousands of I-10 drivers crossing the lakes each day. Located in the heart of Baton Rouge, the University Lakes are surrounded by local roads, private residences, and university facilities. This urban environment provides construction challenges such as narrow access locations, limited storage locations, and significant pedestrian and vehicle interactions with construction equipment.</p> <p>The University Lakes Restoration project goal is to provide flood risk reduction for the surrounding community and improve water quality within the University Lakes System. Neel-Schaffer is a subconsultant to Stantec with the role of providing hydrology analysis, dredging design, and the lake shoreline restoration.</p> <p>Additionally, the project will utilize an alternative delivery method, Construction Management at Risk to expedite the project's schedule. With years of experience in alternative delivery methods, Neel-Schaffer will bridge between the Owner and the contractor for the Construction Management and Implementation Phase of the project.</p> <p>NSI is also tasked with the design for reuse of the dredged material with consideration for the natural habitats for fisheries and migratory birds that are currently utilizing the University Lakes system. In addition to dredge design, the project will provide an opportunity to improve existing recreational facilities for pedestrians and cyclists around the lakes.</p> <p>With attention to both the ecosystem and human scale, the Lakes can continue to be a point of pride for the University—and when complete will provide a marked improvement to the quality of life for all of Baton Rouge.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2023	\$30,000,000	\$330,000

TEC Professional Services Questionnaire

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

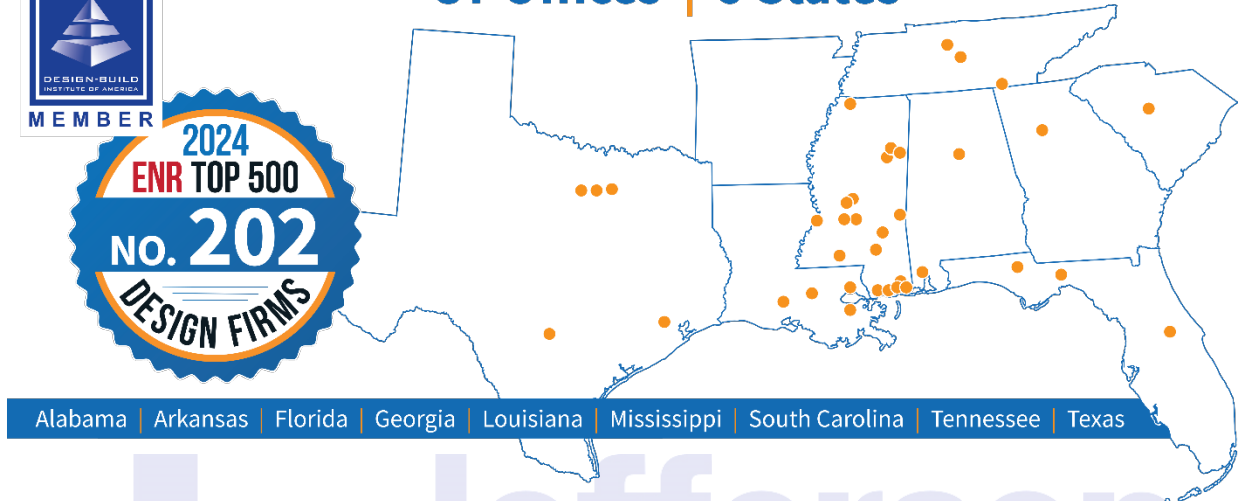
Parties:		Status / Result of Case:
Plaintiff:	Defendant:	
1.		
2.		
3.		
4.		

TEC Professional Services Questionnaire

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



37 Offices | 9 States



Neel-Schaffer is a multi-disciplined engineering and planning firm that was founded in 1983 and today is one of the largest private, employee-owned firms in the South, with nearly 500 employees working out of 37 offices across nine states. A multi-disciplined engineering and planning firm, it encompasses a group of specialized companies with offices in Louisiana, Mississippi, Alabama, Florida, Georgia, Kentucky, Tennessee, and Texas. We provide engineering, emergency management, landscape architecture, environmental, surveying, geotechnical, strategic planning, and community development services to clients throughout the Southeast and Southwest.

Engineering News-Record has listed Neel-Schaffer among the Top 500 Design Firms in the United States annually since 1994, ranking 202 in 2024. Our corporate structure emphasizes local service, with a regional touch. It allows our engineers, geologists, biologists, technicians, and project managers to maintain deeply local connections with clients in the many communities we serve, while having the resources of a much larger regional firm at their disposal. This allows us to provide a full-service approach to program development, design, and construction management for your project.

COASTAL SCIENCE & ENGINEERING

Neel-Schaffer employs a highly qualified team of professionals skilled in a variety of coastal science and engineering disciplines. This multi-disciplinary approach allows for a more holistic blend of experience and services to meet every client's coastal needs.

A local presence ensures our work is informed and coordinated with the issues, governance, and opportunities unique to that region. As a result, we have been able to form effective partnerships with government agencies, non-profits, and other private companies, administering coastal initiatives to meet their needs and those of coastal communities.

We continue to seek opportunities to develop innovative partnerships, and to effectively develop forward-thinking ideas that help create and maintain a resilient Gulf Coast.

COASTAL SERVICES

Coastal Engineering, Science, and Planning:

- Modeling—Hydrodynamic, Wave, Sediment Transport & Morphology
- Coastal Master Plan Development

TEC Professional Services Questionnaire

- Permitting
- Coastal Wetland Science
- Coastal Program Management
- Construction Administration and Inspection

Coastal Engineering Design:

- Shoreline Restoration Design
- Flood Protection Design (Levees, Pump Stations, etc.)
- Diversion and Hydrologic Restoration Design
- Marsh Creation Design
- Dredged Fill Analysis and Placement

PROFESSIONAL TRAINING AND EXPERIENCE

Neel-Schaffer provides coastal and water resources engineers that are fully capable of conducting the most complex coastal engineering and design for coastal structures and hydrologic and hydraulic analyses. Our engineers utilize state-of-the-art modeling and GIS applications in all phases of water resources planning and engineering, including hydrodynamic, hydrologic, hydraulic, wave mechanics, and water quality analysis. Neel-Schaffer software competency includes Delft3D Flow, Delft3D-Wave (SWAN), HEC-RAS, HEC-2, WSPRO, HY-8, RiverCAD, HEC-6T, CulvertMaster, EPA-SWMM, MIKE URBAN, HEC-1, HEC-HMS, StormCAD, PondPack, FlowMaster, HydraFlow, LADOTD HYDRO6020, AutoCAD Storm & Sanitary Analysis, and custom GIS-based applications for hydraulics and hydrology. Typical coastal hydrodynamic and hydraulic projects include:

- Sediment Transport and Morphology Analyses
- Shoreline Stabilization, Protection and Restoration
- Coastal Restoration and Protection Master Planning
- Marsh Creation
- Coastal Hard Structure Engineering (Breakwater, Groins)
- Flood Damage Reduction Structures
- Streambank Erosion Protection
- Marine Structures
- Flood Insurance Studies (FIS)
- Hydrodynamic/Hydraulic Modeling
- Biological and Environmental Assessments of Wetlands
- Dredging

KEY PERSONNEL

Dain Gillen, PE joined Neel-Schaffer in 2023 as a Senior Project Manager with 20 years of experience in the field of Water Resources and Coastal Engineering. Prior to joining Neel-Schaffer, Mr. Gillen served as Engineer Manager for a staff of 10 engineers and technicians for the Louisiana Coastal Protection and Restoration Authority (CPRA). In this role, he was responsible for oversight of project planning, development, design, and construction of large-scale ecosystem restoration and flood risk reduction projects. He also has previous experience with many civil works and flood control projects during design and construction. Mr. Gillen has worked for state and Federal agencies and private engineering firms, giving him a diverse background and ability to communicate effectively with multiple stakeholders.

Nick Ferlito, Jr., PE, PTOE joined Neel-Schaffer in 1996. He is a Senior Vice President and serves as Louisiana Area Manager, overseeing all responsibilities for the state. An ITE-certified Professional Traffic Operations Engineer, he has more than 30 years of experience and manages a wide range of traffic and transportation projects. He has served as a project manager for many intersection/corridor signal timing studies, signal design projects, safety studies and other traffic engineering related projects for public and private projects. Mr. Ferlito is experienced with numerous traffic

TEC Professional Services Questionnaire

engineering software packages, including HCS, CORSIM, SYNCHRO, Tru-Traffic (TSPPDraft), and SIDRA. He also completed the Naztec TS1/TS2 Controller 2-Day training course. He has also completed the NEPA and Transportation Decision Making course (2004), the Highway Safety Manual Workshop (2011) as well as LADOTD's Traffic Engineering Process and Report (TEPR) training.

Don Lancaster, PE manages Neel-Schaffer's Mandeville office and has over 40 years of experience in civil engineering and project management. He is the Civil Design Manager for Neel-Schaffer's Louisiana offices and serves as the manager for Neel-Schaffer's current work as part of the \$570 million Port of Gulfport (MS) Restoration project. The design is completed and construction on new port facilities will be completed in September 2018. Prior to joining Neel-Schaffer in 2003, Mr. Lancaster was Design Manager for a national firm overseeing the Sewerage and Water Board of New Orleans' Sewer System Evaluation and Rehabilitation Program (SSERP) and the Sewerage and Water Board's (S&WB) Sewer System Rehabilitation for Hurricane Katrina Emergency Recovery Efforts. Soon after joining Neel-Schaffer, he managed the design and construction of over \$55 million of roadway, water, sewer and gas system repairs to Bay St. Louis (MS) infrastructure. This effort was funded by FEMA and is intended to restore the City infrastructure that was severely damaged in Hurricane Katrina.

Amanda Phillips, PE is a licensed civil engineer with over 20 years of coastal design and construction experience. She has designed and constructed numerous coastal projects throughout southern Louisiana. These projects include breakwater design, marsh creation projects, island restoration, inland waterways dredging, shoreline protection, levee construction and many other heavy civil construction project types. In addition to design work, Mrs. Phillips has spent more than 10 years working and learning the world of marine construction. This fast paced, real-world experience has provided her with successes and failures of inland waterway and heavy civil construction critical to furthering her understanding coastal engineering and construction challenges. This invaluable knowledge includes equipment usage and techniques, safety and hazard understanding, sediment resource and material management. Her background in biological engineering coupled with her years of construction experience, has provided a unique lens with which to view coastal projects. She is currently pursuing a Master's in Coastal Engineering and Sciences at the University of New Orleans.

Leah Selcer, PE has ten years of engineering experience. She has a broad range of project engineering and management experience, providing design, planning and budgeting, permits, plans and specifications, design calculations, reports and presentations for a variety of projects. Ms. Selcer has assisted in the engineering and design of several complex civil, water resources, and coastal projects for coastal ports, parish governments, the LaDOTD and the CPRA. Her experience includes hydrologic and hydraulic calculations and studies using water modeling software, USACE HEC Software (HEC-RAS and HEC-HMS), LADOTD HYDR 2009 (All programs), CulvertMaster, HydroCAD, HYDROWIN, and Civil3D Hydraulic Analysis Programs.

SIZE OF FIRM

Neel-Schaffer has over 600 professional and technical employees, including planners and engineers with specialization in roadway and bridge design. We have 47 staff members located in Louisiana offering the services of 24 registered Professional Engineers.

CAPACITY FOR TIMELY COMPLETION

Neel-Schaffer has a current monthly billing capacity in excess of \$5 million. As the following chart indicates, we can easily assimilate additional projects into our current workload.

PAST PERFORMANCE

In its performance rating of Neel-Schaffer, the US Army Corps of Engineers, Vicksburg District, concluded that we "consistently produced well organized, well-engineered, professional work." The rating also noted "their engineers and managers were a pleasure to work with. Their spirit of cooperation was a major asset to the contract. They not only met the specifics of their work orders but also were anxious to meet any reasonable desires of the Government

TEC Professional Services Questionnaire

representatives. This was especially noteworthy in maintaining milestone dates when government-furnished data was not available when specified and by beating several of their submission dates. Neel-Schaffer, Inc. is highly recommended for future work..."

In addition, NSI has been selected repeatedly by LADOTD for on-going retainer contracts over the past 12 years. We think this is an excellent indication of our performance ability on public contracts and our reputation as a consultant of choice by public agencies. We are currently working under three active retainer contracts with LADOTD. We also hold a retainer contract with the City of New Orleans Department of Public Works, The Sewerage and Water Board of New Orleans, the CPRA to provide Engineering Services for Coastal Restoration Projects, the Lafayette MPO to provide Roundabout Feasibility Studies, and Ascension Parish in support of their MOVE Ascension transportation program.

To continue improving our services, Neel-Schaffer recently surveyed our clients. We received over 100 responses to our survey involving mostly public clients and were pleased to find that the vast majority are satisfied with our commitment and performance and will more than likely retain our company again. Below is a summary:

- 92% are "likely" or "very likely" to recommend Neel-Schaffer
- 94% rated Neel-Schaffer as "easy" or "very easy" to do business with
- 95% are "satisfied" or "very satisfied" that Neel-Schaffer's deliverables meet your needs
- 96% are "satisfied" or "very satisfied" with Neel-Schaffer's project management capabilities
- 91% rated the overall value you receive from Neel-Schaffer as "good" or "very good"

LOCATION OF PRINCIPLE OFFICE

Our New Orleans LA office, located at 1340 Poydras Street, Suite 1950 will undertake the design for required improvements with support provided by other Neel-Schaffer offices as required.

ANALYSIS OF WORK RESULTING IN LITIGATION

Neel-Schaffer has not previously worked for Jefferson Parish; and we have never entered litigation with Jefferson Parish or other public sector clients.

PRIOR SUCCESSFUL COMPLETION OF PROJECTS

NSI employs a highly qualified team of professionals skilled in a variety of coastal science and coastal engineering disciplines. Our multi-disciplinary approach allows for a more holistic blend of experience and services to meet every client's coastal needs.

Our local presence ensures our work is informed and coordinated with the issues, governance, and opportunities unique to that region. As a result, we have been able to form effective partnerships with government agencies, non-profits, and other private companies, administering coastal initiatives to meet their needs and those of communities.

Neel-Schaffer routinely provides services on an *on-call* basis for our clients. We currently are providing services to CPRA for a three-year multiple task order award contract. We also hold four on-call contracts with LADOTD to provide various services. Our St. Tammany Coastal Master Plan is performed as a Task Order contract and most of our work on Corps of Engineers projects has been performed under task order contracts.

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

Signature: _____

Title: Louisiana Area Manager

Print Name: Nick Ferlito Jr., PE, PTOE

Date: July 16, 2024

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-040 Coastal Engineering Consulting as Needed Parish Wide- Resolution No. 144205

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

**La Terre Engineering, LLC
343 Third Street, Suite 511B
Baton Rouge, LA 70801**



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:

**Seneca Toussant, PE, Principal
343 Third Street, Suite 511B
Baton Rouge, LA 70801
(225) 960-1160
stoussant@laterre-eng.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.

**Seneca Toussant, PE, Principal
343 Third Street, Suite 511B
Baton Rouge, LA 70801
(225) 960-1160
stoussant@laterre-eng.com**

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

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

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

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

TEC Professional Services Questionnaire

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

1.
N/A

2.

H. Has this JOINT-VENTURE previously worked together? Please check: 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. N/A		
2.		
3.		

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

5

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: Seneca Toussant, PE - Principal

Project Assignment: Project Manager/Project Engineer

Name of Firm with which associated: La Terre Engineering, LLC

Years' experience with this Firm: 4

Education: Degree(s)/Year/Specialization: BS, Biological Engineering Louisiana State University - 1999

Active registration: Year first registered/discipline: 2011 - Professional Engineer, LA, Civil Engineering, No. 36080

Other experience and qualifications relevant to the proposed Project:

Mr. Toussant is an accomplished Civil Engineer with over 20 years of consulting experience for an extensive and varied range of projects. His experience ranges from coastal engineering and design, roadway and drainage design, water and wastewater systems design and preparation of planning documents, commercial and residential development and hydrologic and hydraulic studies. Mr. Toussant has been involved in projects from the initial planning stages, through design, to project coordination and construction inspection through final acceptance. His experience includes pipeline conveyance, marsh fill placement, earthen containment dikes, and shoreline protection. He is registered as a professional civil engineer in four states and his relevant project experience includes:

Coastal Protection and Restoration Authority: Bayou Pigeon Boat Launch Improvements | Plaquemine, LA

Mr. Toussant is providing civil engineering design for the Bayou Pigeon Boat Launch Improvements project for CPRA. The project includes expansion of an existing single boat launch and the design and construction of a floating dock, additional parking, ADA accessible parking and access, and a kayak launch.

Slidell Breakwater Restoration Feasibility Study | Slidell, LA

Mr. Toussant is responsible for processing topographic survey data using Autocad Civil 3D to create mapping and surface files as part of the feasibility study for the restoration of existing breakwaters near the City of Slidell.

Coastal Protection and Restoration Authority: Grand Isle State Park Improvement Phase I | Grand Isle, LA

Mr. Toussant was responsible for the preparation of preliminary and final plans, including demolition, geometric drawings, signing plans, and associated drainage improvements for 3 miles of roadway repairs for the project in accordance with LADOTD specifications, standards, and guidelines, including ADA accessible parking and access to address subsidence and sea level rise at the Park facility.

Greater Lafourche Port Commission, 2035 Master Plan | Port Fourchon, LA

Mr. Toussant was responsible for the preparation of the Greater Lafourche Port Commission 2035 Master Plan. He defined the scope of the document and researched, collected and compiled existing data and information to develop and prepare the master plan. He prepared conceptual layouts and cost estimates for infrastructure improvements including dredging and fill placement estimates and the beneficial use of dredge material at the Port facility.

East West Channel Study | Port Fourchon, LA

Mr. Toussant was responsible for the preparation of a study to determine the feasibility of dredging and maintaining access between Port Fourchon and the Port of Terrebonne. The study included determining the costs and benefits of dredging the East-West Channel across Terrebonne Bay to connect Bayou Lafourche to the Houma Navigation Channel to

TEC Professional Services Questionnaire

provide better access between the Port Fourchon and the Port of Terrebonne. His tasks involved research, preparing figures and alignments in AutoCAD, developing conceptual cost estimates and beneficial use of dredge material.

Point Chevreuil Shoreline Protection Project | St Mary Parish, LA

Mr. Toussant prepared construction documents for a shoreline protection project at Point Chevreuil along the southeastern shoreline of East Cote Blanche Bay in St Mary Parish. The project consisted of the design and placement of artificial oyster rings for the protection of eroding shoreline caused by open water fetch and resulting wave energy from East Cote Blanche and Atchafalaya Bays. He prepared plans and specifications to allow for construction of the project.

Deer Island Pass Realignment | St Mary Parish, LA

Mr. Toussant prepared preliminary plans for the Deer Island Restoration project in St Mary Parish. This project consists of dredging the channel across the shallow flat at the mouth of Deer Island Bayou to improve water and sediment flow through Deer Island Pass and provided the creation of 30 acres of marsh through the beneficial use of the dredge material. He was responsible for the sizing and design of the marsh creation cells and preparation of construction documents for the project.

Long Distance Sediment Pipeline Phase I Feasibility Study | Terrebonne Parish, LA

Mr. Toussant assisted in the preparation of a feasibility study for a 40-mile pipeline from the Atchafalaya to deliver sediment to three proposed disposal areas in Terrebonne Parish. His tasks involved pipeline and pipe design, booster station sizing and locations, preparing figures and alignments in AutoCAD, developing conceptual cost estimates for the sediment conveyance portion of the study.

Lafourche Basin Levee District, Hurricane Protection Study Ridge Levee Protection System | Vacherie, LA

Mr. Toussant prepared conceptual alignments for the study and evaluation of an approximately two-hundred-mile ring levee system to provide flood protection to local communities in Lafourche and St Charles Parishes. The conceptual design consisted of ring levee alignments, the hydraulic design and preparation of cost estimates for proposed pump stations and levees.

Chacahoula-Gibson Drainage Resiliency Project | Terrebonne Parish, LA

Mr. Toussant was the project manager and lead design engineer for the preparation of the Chacahoula Pump Station in Terrebonne Parish. He was responsible for all civil and site design for the 1000 CFS pump station including the conveyance channel and all civil site related improvements.

Elliott Jones Canal Drainage Conveyance & Pump Station | Terrebonne Parish, LA

Mr. Toussant was the lead design engineer for the Elliott Jones Pump Station project which consisted of the design of a 1,000 cfs drainage pump station to reduce flooding due to excessive rainfall. Mr. Toussant was responsible for all H&H, pump station design and civil design, including site design of the pump station and the hydraulic calculations of the conveyance channel.

Bayou Plaquemine Boat Launch Improvements | Plaquemine, LA

Mr. Toussant was lead design engineer for the reconstruction of the Bayou Plaquemine Boat Launch that was funded by the Atchafalaya Basin Program and managed by CPRA. The project included demolition of an existing single boat ramp and the design and construction of a double boat ramp, floating dock and shade structure. He coordinated design with CPRA and provided construction administration services and coordinated payment applications and project closeout with CPRA.

Naval Air Station (NAS), Joint Reserve Base (JRB), Basin 1 Drainage Improvements | Belle Chasse, LA

Mr. Toussant was responsible for the preparation of construction documents for required drainage improvements to Basin 1 at the Naval Air Station, Joint Reserve Base in Belle Chasse Louisiana.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title: Lyle Tynes, EI
Project Assignment: Civil Engineer
Name of Firm with which associated: La Terre Engineering, LLC
Years' experience with this Firm: 3
Education: Degree(s)/Year/Specialization: BS, Civil Engineering Louisiana State University - 2020
Active registration: Year first registered/discipline: EI 35128 (Louisiana, Civil)
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Tynes is a graduate of Louisiana State University in Civil Engineering. Mr. Tynes is proficient in using AutoCAD Civil 3D program. He has assisted the Professional Engineering Staff in all aspects of the design process including compiling specification packages for a wide range of projects, preparing site plans, grading plans, utility plans and other construction documents, and coordinating with clients among other activities. At LTE, Mr. Tynes routinely performs hydrology calculations, creates stormwater-related reports like H&H studies and Stormwater Pollution Prevention Plans (SWPPP), as well as coordinating with local and state governing bodies to receive required permits.</p> <p>Coastal Protection and Restoration Authority: Bayou Pigeon Boat Launch Improvements Bayou Pigeon, LA Mr. Tynes is providing civil engineering design for the Bayou Pigeon Boat Launch Improvements project for CPRA. The project includes expansion of an existing single boat launch and the design and construction of a floating dock, additional parking, ADA accessible parking and access and a kayak launch. He is responsible for site construction documents and cost estimates.</p> <p>Steep Bayou Watershed Flood Prevention Plan Rayville, LA Mr. Tynes is responsible for the hydrologic and hydraulic modeling of Steep Bayou using HEC-RAS for the NRCS Watershed flood prevention plan. He is leading alternative analysis efforts and responsible for preparing probable opinions of construction cost and benefit cost analysis for each alternative.</p> <p>Louisiana Watershed Initiative White Castle Canal Drainage Improvements White Castle, LA Mr. Tynes is responsible for the preparation of preliminary and final construction documents for channel improvements for the White Castle Canal.</p> <p>Louisiana Watershed Initiative Town of Maringouin Improvements Maringouin, LA Mr. Tynes is responsible for the preparation of preliminary and final construction documents for drainage improvements for the Town of Maringouin Drainage Improvements project. His responsibilities include preparation of cost estimates and bidding and construction documents.</p> <p>Slidell Breakwater Restoration Feasibility Study Slidell, LA Mr. Tynes is responsible for processing topographic survey data using Autocad Civil 3D to create mapping and surface files as part of the feasibility study for the restoration of existing breakwaters near the City of Slidell.</p> <p>Ward Creek at Siegen Lane Channel Improvements Baton Rouge, LA Mr. Tynes is assisting in the preparation of construction documents for channel improvements for Ward Creek in Baton Rouge Louisiana. His responsibilities also include preparation of permits and permit figures.</p> <p>Louisiana Watershed Initiative LA 22 Gapping Project Ascension, LA Mr. Tynes is part of the grant administration team for the project and his responsibilities include construction administration assistance, site inspections, review of contractor invoices and construction monitoring for the LA 22 gapping project.</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title: Roman Hundley
Project Assignment: Civil Engineer Technician
Name of Firm with which associated: La Terre Engineering, LLC
Years' experience with this Firm: 3
Education: Degree(s)/Year/Specialization: BS, Biological Engineering Louisiana State University - 2020
Active registration: Year first registered/discipline: N/A
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Hundley is a graduate of Louisiana State University in Biological Engineering. Mr. Hundley experience includes drainage design, utility coordination, compiling construction packages, including preparing drawings, specifications and other construction documents. Mr. Hundley's responsibilities also include construction administration for various projects for our clients.</p> <p>Coastal Protection and Restoration Authority: Bayou Pigeon Boat Launch Improvements Bayou Pigeon, LA Mr. Hundley assisting in the civil engineering design for the Bayou Pigeon Boat Launch Improvements project for CPRA. The project includes expansion of an existing single boat launch and the design and construction of a floating dock, additional parking, ADA accessible parking and access and a kayak launch. He is responsible for site construction documents and cost estimates.</p> <p>Jeff Davis Electric CO-OP, Inc. Transmission Line Project - Diamond D Industries Cameron Calcasieu Parish, LA Mr. Hundley providing dewatering calculations and dewatering plans for three required river crossing for proposed utility lines and also prepared a traffic access plan for permitting and approval by LADOTD required as part of the JDEC Transmission Line Project.</p> <p>Bayou Stumpy Drainage Improvements Erwinville, LA Mr. Hundley is construction administration support for the Bayou Stump Drainage Improvements projects for West Baton Rouge Parish. His responsibilities include permitting coordination with LADOTD for right-of-way access and construction administration as needed.</p> <p>Louisiana Watershed Initiative White Castle Canal Drainage Improvements White Castle, LA Mr. Hundley is responsible for the construction administration phase of the project. His responsibilities include biweekly site visits, review and approval of pay applications, engineering during construction and project closeout for the for channel improvements for the White Castle Canal.</p> <p>Louisiana Watershed Initiative Town of Maringouin Improvements Maringouin, LA Mr. Hundley assisted in the preparation of preliminary and final construction documents for drainage improvements for the Town of Maringouin Drainage Improvements project. His responsibilities include preparation of cost estimates, bidding and construction documents.</p>

TEC Professional Services Questionnaire

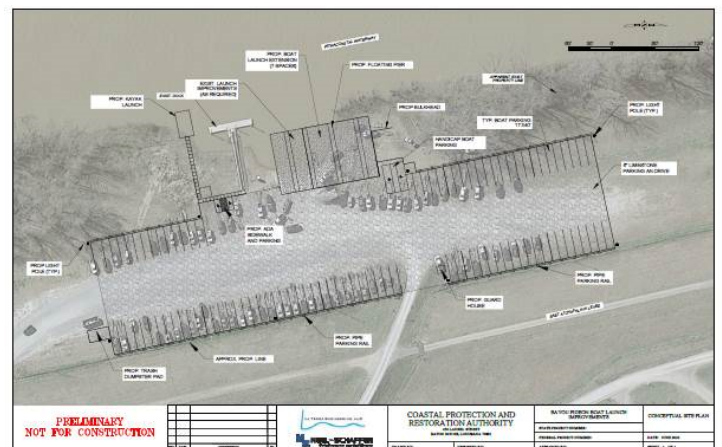
L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Bayou Pigeon Boat Launch Improvements Owner: Coastal Protection and Restoration Authority Contact: Leah Selcer, PE 225-614-2828 leah.selcer@neel-schaffer.com	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2025 E	\$2.5 Mil	80K

Project description:

La Terre Engineering, LLC (LTE) is sub-consultant to Neel-Schaffer Inc. for the Coastal Protection and Restoration Bayou Pigeon Boat Launch Improvements project located in Bayou Pigeon Louisiana. Public and commercial demand for access to Atchafalaya Basin has increased as the existing ramp serves as one of the main access points to the Atchafalaya Basin. Improvements include the expansion of the existing boat launch with the construction of floating piers to accommodate commercial and recreational boaters, ADA parking and access, additional vehicle and boat parking, kayak launches and security lighting.

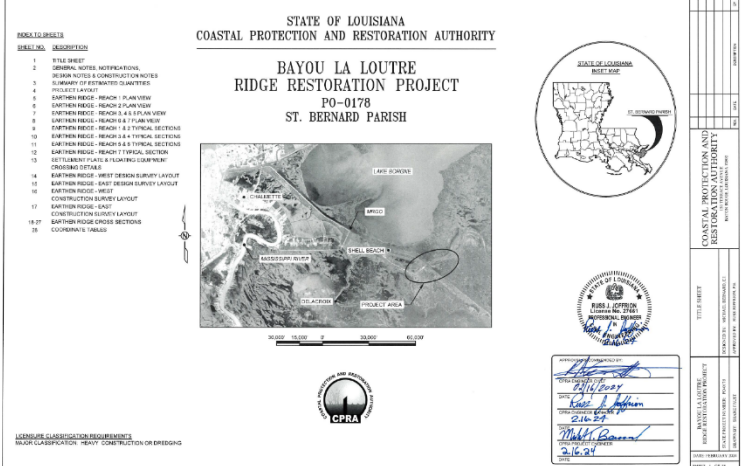


LTE staff are providing general and civil engineering support including site and geometric layout design to assure accessibility, grading and drainage plans technical specifications and cost estimates as part of the construction document development phase of the project.


RELEVANCE TO PROJECT SCOPE

- General Engineering
- Construction Document Preparation
- Cost Estimating

TEC Professional Services Questionnaire


PROJECT NO. 2		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Bayou La Loutre Ridge Restoration (PO-0178) Owner: Coastal Protection and Restoration Authority Contact: Vida Carver, PE 225-342-2799 Vida.Carver@LA.GOV	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
2025 E	Entire Project:	Work for which Firm was Responsible:
2025 E	\$2.7 Mil	277K
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Project description: Project description:</p> <p>La Terre Engineering, LLC (LTE) is providing construction administration and inspection services to CPRA for the Bayou La Loutre Ridge Restoration project located in St. Bernard Parish, Louisiana.</p> <p>The Bayou la Loutre Ridge Restoration (PO-0180) project is part of a larger project to restore marsh and ridge habitat in the Biloxi Marsh area and along Bayou la Loutre. The project consists of two distinct components. The marsh creation portion is located southeast of Lena Lagoon and north of Bayou La Loutre, north of the confluence of Bayou La Loutre and the Mississippi River Gulf Outlet (MRGO). The ridge restoration component extends along Bayou La Loutre southwest of MRGO and again to the northeast of MRGO.</p> </div> <div style="width: 50%; text-align: center;">  </div> </div>		
<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center; margin: 0;">RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> Construction Administration Construction Inspection Davis Bacon Administration Project Closeout </div>		

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Slidell Breakwater Restoration Feasibility Study Owner: St. Tammany Parish Contact: Leah Selcer, PE 225-614-2828 leah.selcer@neel-schaffer.com	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
2022 E	Entire Project: \$6.5 Mil	Work for which Firm was Responsible: 3.5K
<p>Project description:</p> <p>La Terre Engineering, LLC (LTE) is part of the team selected by St Tammany Parish for the Ward Creek at Siegen Lane Channel Improvements Project. The project consists of the widening of Ward Creek to a bottom width of 100' and will include channel stabilization, outfall protection and utility modifications and coordination.</p> <p>The proposed project is an offshore segmented rock breakwater structures along the Lake Pontchartrain shoreline in St. Tammany Parish to the south of the City of Slidell. The goal of the project is to provide coastal resilience to the greater Slidell community by addressing wave energy and wave-induced erosion along the shoreline while also providing additional fisheries habitat, where possible. The total breakwater project would be a maximum of 6-miles long with the first phase of the project to be located near the Eden Isles community between the 1-10 Twin Span Bridge on the east and US Hwy 11 on the west side of the community.</p> <p>The Feasibility Study will provide an analysis of the existing conditions and coastal processes to determine the real and ongoing negative consequences to the immediate shoreline and littoral habitat found within the study area. The Scope of Services for the project includes topographic survey, ROW mapping, Subsurface Utility Engineering, Hydraulic and Hydrologic (H&H) Study and Analysis, Benefit Cost Analysis, permitting and preparation of construction documents.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;">  </div> <div style="width: 35%; border: 1px solid black; padding: 10px; margin-top: 20px;"> <p style="text-align: center; margin: 0;">RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> Civil Engineering Mapping & Cadd Support Preliminary Plans </div> </div>		

TEC Professional Services Questionnaire

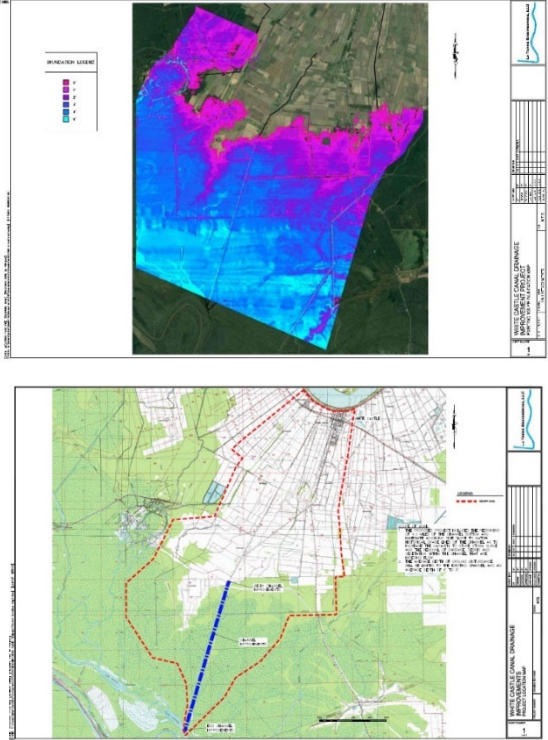
PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Grand Bayou Freshwater Reintroduction Phase II and III- Engineering, Design, and Permitting (Lafourche Parish, LA) Owner: Lafourche Parish Government Point of Contact: Laura Barnes P.E. labarnes@gisy.com 985-219-1048	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2024 E	\$700K	40K
<p>Project description:</p> <p>The Grand Bayou Freshwater Introduction Phase II and III aims to increase the flow of fresh water from the Atchafalaya River down to the Grand Bayou Canal via the Gulf Intracoastal Waterway. The project will increase the flow of freshwater, redirect freshwater from Grand Bayou Canal into the marshes east and west of Grand Bayou Canal; create 112 acres of fresh marsh; and nourish an additional 14 acres of intermediate marsh west of Grand Bayou Canal near Highway 24.</p> <p>La Terre Engineering (LTE) is part of the design team responsible for Phase II and Phase III of the project.</p> <p>Phase II and III includes the following:</p> <ul style="list-style-type: none"> Conduct hydrologic modeling: This will include development of model scenarios needed for delineation of marsh areas of interest, hydraulic boundaries, and proposed dredging and spoil placement and to identify water control structures. Data collection and analysis. Perform bridge scour analysis Prepare 30% design package: This will include estimated construction cost and duration, permit drawings and application submittal, and ongoing agency coordination. Complete 100% engineering and design package: 		




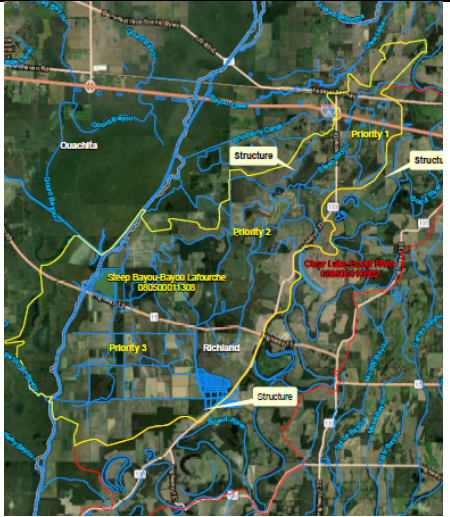
RELEVANCE TO PROJECT SCOPE

- Civil Engineering
- Mapping & Cadd Support
- Hydrology and Hydraulics
- Permitting and Design
- Preliminary and Final Design

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Louisiana Watershed Initiative White Castle Drainage Improvements (White Castle, LA) Owner: Iberville Parish Government Contact: Parish President Chris Daigle 225.687.5190	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
2024 (A)	Entire Project:	Work for which Firm was Responsible:
2024 (A)	\$2.1 Mil	200K
<div style="display: flex;"> <div style="flex: 1;"> <p>Project description:</p> <p>La Terre Engineering LLC (LTE), provided engineering and grant preparation services to Iberville Parish for the White Castle Drainage Improvements project. The White Castle Canal serves as major drainage lateral for the rural portion of Iberville Parish and the Town of White Castle. The 4.5 mile canal conveys storm runoff from local residences, farms and businesses to Lake Natchez.</p> <p>This project consists of the removal of accumulated sediment for approximately 4.5 miles of the channel bottom and immediate adjoining side slope to match historical grade lines. The project includes the removal of siltation above historical channel bottom grade lines and settled eroded materials on the bottom of the channel and the disposal of all excavated soils. LTE's services included the following:</p> <ul style="list-style-type: none"> • LWI Round 1 Application Preparation • Project Location Details <ul style="list-style-type: none"> ○ Project Location Map, Aerial Photo, Map showing Area of Disturbance, Parcel Map, Topo Maps, USGS Ecological Maps, Photographs of the Project Site • Description of Mitigation Need <ul style="list-style-type: none"> ○ Summary of Project Benefits, Map of Benefitting Area, Benefit Cost Analysis, Level of Risk Reduction Narrative, HUD LMI Summary Data • Project Scope of Work <ul style="list-style-type: none"> ○ Project Scope of Work Narratives • Environmental Review & Permitting • Project Schedule & Budget <ul style="list-style-type: none"> ○ Project Milestone Schedule, Project Delivery & Construction Cost Estimate/Budget, O&M Cost Estimate • Preliminary and Final Design • Construction Administration </div> <div style="flex: 1; padding-left: 20px;">  <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p style="text-align: center; margin: 0;">RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> • Civil Engineering • Dredging Design • Mapping & Cadd Support • Hydrology and Hydraulics • Benefit Cost Analysis • Permitting and Design • Preliminary and Final Design </div> </div> </div>		

TEC Professional Services Questionnaire





PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Steep Bayou Watershed Flood Prevention Plan (Rayville, LA) Contact: Jens A. Rummler Owner: Boeuf River Soil and Water Conservation District rummler@coxmclain.com Office: 225.354.6275	Subcontractor- See Below	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021 (A)	\$3.5 Mil.	45K
Project description La Terre Engineering is providing engineering and planning services as part of the Environmental Assessment and Watershed Plan development for the Boeuf River Soil and Water Conservation District for the Steep Bayou Watershed Project as part of the NRCS Small Watershed Program. The project consists of evaluating alternatives to increase drainage capacity to Steep Bayou and will include dredging, snagging and streambed rehabilitation to improve drainage into Boeuf River for the watershed containing 36,400 acres. LTE task include developing hydrologic and hydraulic modeling, development of alternatives, alternative cost estimates and preparation of benefit cost analysis.		
		 <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> Civil Engineering Dredging Design Mapping & Cadd Support Hydrology and Hydraulics Benefit Cost Analysis Permitting and Design Preliminary and Final Design </div>

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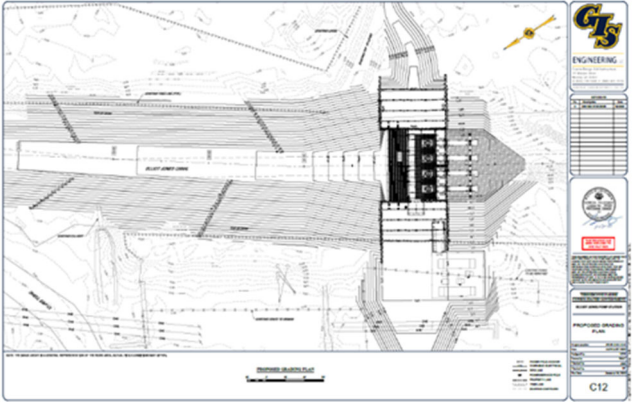

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Ward Creek at Siegen Lane Channel Improvements (Baton Rouge LA) Owner: East Baton Rouge City Parish Contact: Kimberly Koehl, PE 225-644-55232, kimberly.koehl@gsaengineers.com	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
2025 E	Entire Project: \$1.1 Mil	Work for which Firm was Responsible: 30K
<p>Project description:</p> <p>La Terre Engineering, LLC (LTE) is part of the team selected by East Baton Rouge Parish for the Ward Creek at Siegen Lane Channel Improvements Project. The project consists of the widening of Ward Creek to a bottom width of 100' and will include channel stabilization, outfall protection and utility modifications and coordination.</p> <p>The Scope of Services for the project includes topographic survey, ROW mapping, Subsurface Utility Engineering, Hydraulic and Hydrologic (H&H) Study and Analysis, Benefit Cost Analysis, permitting and preparation of construction documents.</p> <p>LTE responsibilities include permitting with LADOTD and preparation of the required Environmental Assessment and submittal to FEMA</p> <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> Civil Engineering Dredging Design Hydrology and Hydraulics Permitting and Design Cost Estimating Preliminary and Final Design </div>		





TEC Professional Services Questionnaire

PROJECT NO. 8						
Project Name, Location and Owner's contact information: Boudreaux to Gilmore Drainage Improvements Project - Pump Station Commissioning (Berwick, LA) Owner: St Mary Parish Government Contact: Henry 'Bo' LaGrange Office: 337-828-4100 Ext. 500	Nature of Firm's Responsibility: Subcontractor- See Below					
Completion Date (Actual or estimated): 5/2021 (A)	Estimated Cost: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px; text-align: center;">Entire Project:</td> <td style="width: 40%; padding: 5px; text-align: center;">Work for which Firm was Responsible:</td> </tr> <tr> <td style="padding: 5px; text-align: center;">\$1.4 Mil.</td> <td style="padding: 5px; text-align: center;">15.6K</td> </tr> </table>		Entire Project:	Work for which Firm was Responsible:	\$1.4 Mil.	15.6K
Entire Project:	Work for which Firm was Responsible:					
\$1.4 Mil.	15.6K					
<p>Project description: La Terre Engineering provided commissioning services for the HMGP-CDBG Boudreaux to Gilmore Drainage Improvements' Pump Station project to Saint Mary Parish Government. La Terre's scope of services included project start up and administration, review of contractor submittals, testing of controls, and preparation of a report of findings which included a punch list and required actions for the acceptance and project closeout by the Parish. The pump station features three 36" axial impeller pumps powered by natural gas engines.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <p style="font-size: small;">Boudreaux to Gilmore Drainage Improvements Pump Station Commissioning HMGP #1786-101-003, FEMA Project 0080 Berwick, Louisiana April 5, 2021</p> </div> <div style="width: 30%; text-align: center;">  </div> <div style="width: 35%;">  </div> </div> <div style="margin-top: 20px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <p style="font-size: x-small;">Prepared By: La Terre Engineering, LLC</p>  <p style="font-size: x-small;">Burk-Kleinpeter, Inc.</p>  </div> <div style="width: 55%; border: 1px solid black; padding: 10px;"> <p style="margin: 0;">RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> Civil Engineering Design Analysis and Reports Construction Administration </div> </div> </div>						

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Elliot Jones Canal Drainage Conveyance & Pump Station (Terrebonne Parish, LA) Owner: Terrebonne Parish Consolidated Government Point of Contact: Jacob M. Loeske, P.E., L.S.I. jloeske@gisy.com 225-408-0700	Subcontractor- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021 (A)	\$14 Mil	20K
Project description: La Terre Engineering is providing design support to GIS Engineering, LLC for the Elliot Jones Canal Drainage Conveyance & Pump Station. The Elliot Jones Canal currently flows directly out of Bayou Black, with a bridge crossing over the entrance to the canal, on Highway 182. The project included a study to evaluate alternatives for providing flood risk reductions in the basin, a hydrologic and hydraulic study of the evaluated alternatives that resulted in the required pump station at the Elliot Jones Canal. The project included improvements to the existing conveyance channel, a pump station consisting of four (4) 60" pumps, discharge piping and a protective trash screen for a design capacity of 1,000cfs. Mr. Toussant was responsible for the preliminary and final design of the pump station and conveyance channel and access roads.		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> RELEVANCE TO PROJECT SCOPE <ul style="list-style-type: none"> Civil Engineering Dredging Design Mapping & Cadd Support Hydrology and Hydraulics Benefit Cost Analysis Permitting and Design Preliminary and Final Design </div> </div> <div style="width: 50%;">   </div> </div>		

TEC Professional Services Questionnaire

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Louisiana Watershed Initiative LA 22 Gapping Project (Ascension Parish, LA) Owner: Pontchartrain Levee District Contact: Monica Salins Gorman, Executive Director 225.869.9721	Prime- See Below	
Completion Date (Actual or estimated)	Estimated Cost:	
2026 (E)	Entire Project: \$42 Mil	Work for which Firm was Responsible: 300K
Project description: La Terre Engineering LLC (LTE) is providing grant management services to the Pontchartrain Levee District (PLD) for the Louisiana Watershed Initiative LA 22 Gapping project in Ascension Parish. LA Hwy 22 functions as a barrier impeding natural hydrology in the Amite River floodplain. The highway prevents the natural flow of water into the adjacent McElroy Swamp, increases surface elevation in the river and exacerbates area flood risk. The LA Hwy 22 Bridge Construction and Drainage Improvements project includes the construction of two bridge structures and the excavation of two drainage basins for the purpose of improving local hydrology, reducing area flood risk and restoring the McElroy Swamp. LTE's scope of work includes the following: <ul style="list-style-type: none"> Establishing project files at PLD's office to demonstrate compliance with all applicable state, local, and federal regulations. The project files will be monitored throughout the program to ensure that they are complete and that all necessary documentation is being retained in PLD's files. Ensuring that the PLD has an acceptable financial management system as it pertains to finances of the CDBG-MIT funds program. Financial management system includes, but is not limited to, cash receipts and disbursements journal and accompanying ledgers that conform to generally accepted principles of municipal accounting. Prepare the Requests for Payment to ensure consistency with the procedures established for the CDBG-MIT funds Program. Assist PLD in meeting the Office of Community Development's financial reporting requirements. Attend and assist PLD during the Office of Community Development's monitoring visit(s). Prepare PLD's response to all monitoring findings. Prepare close-out documents. 		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 10px; margin-right: 20px; flex: 1;"> <p style="text-align: center; margin: 0;">RELEVANCE TO PROJECT SCOPE</p> <ul style="list-style-type: none"> Project Initiation and Planning Grant Management </div> <div style="flex: 1;">   </div> </div>		

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. NONE		
2.		
3.		
4.		

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

THE LA TERRE DIFFERENCE

La Terre Engineering LLC. (LTE) is a full service, minority-owned civil engineering firm founded by Seneca Toussant, PE. Mr. Toussant is a Professional Civil Engineer with over twenty years of experience in a broad range of projects including coastal engineering, marsh creation, shoreline protection, levee, port infrastructure design, and stormwater and drainage design.



LTE's professional services deliver excellent solutions to clients in the following markets: Environmental/Water, Transportation, Development Services and Facilities. These services are designed to provide opportunities for growth and success. Although LTE is a relatively new firm, LTE's founder and principal engineer has an extensive history on a wide range of projects throughout the state for various state agencies, municipalities and parish governments.

LTE is certified as a **Louisiana Unified Certification Program Disadvantaged Business Enterprise (DBE), State & Local Disadvantaged Business Enterprise (SLDBE), 8(a) Certified, HUBZone** and a **Louisiana Hudson Initiative (Small Entrepreneurship) Firm**. LTE can provide experienced professionals and additional staff as LTE grows with the aim to provide timely and well-coordinated work in a professional manner. LTE will provide innovative solutions to the challenges of this project utilizing knowledge of the most current design techniques.

OUR CAPABILITIES

La Terre offers technical expertise in project management, construction management, roadway design, drainage design, water and wastewater design, and land development. La Terre's founder and principal engineer has an extensive history on a wide range of projects throughout the state of Louisiana for various state agencies, municipalities and parish governments. La Terre has the experience and relationships to dedicate the necessary personnel to staff projects immediately, which will ultimately lead to completion within the proposed project schedules.

LTE has the capability to bring in additional qualified and committed professionals to provide the necessary support to ensure timely and successful completion of all tasks and projects we may receive.

TEC Professional Services Questionnaire

- General Civil Engineering
- Dredging - Material Transport, Processing, and Placement
- Construction Inspection
- Construction Management
- Hydraulics and Hydrology
- Technical Document & Report Development
- Construction Cost Estimating
- Preparation of Construction Plans & Specifications
- Project Management
- Pump Station Design
- Roadway/Highway Design
- Stormwater and Flood Control
- Surface Water Management
- Sustainable Design
- Environmental Permitting

QUALIFICATIONS OF KEY PERSONNEL

Mr. Seneca Toussant, PE, is highly regarded professional civil engineer with over twenty years of professional experience and a reputation for assisting his clients achieve success with even their most challenging projects. Mr. Toussant has a multitude of loyal and repeat clients that have been cultivated through his dedication to creative and exceptional service to his clients.

Mr. Toussant has experience on a variety of projects including design and project management experience on coastal projects in south Louisiana. Mr. Toussant has been involved in projects from the initial planning stages, through design, to project coordination and construction inspection through final acceptance. He is currently registered as a professional civil engineer in four states.

Mr. Toussant has performed multiple drainage studies, flood inundation studies and benefit cost analyses that included hydrologic and hydraulic modeling, detention systems, open channel analysis and design, subsurface drainage system and stormwater pump stations for an assortment of public and private projects and grant programs.

EXISTING CUSTOMER SATISFACTION

Below is a short list of references that will attest to customer satisfaction from working LTE.

Louisiana Coastal Protection and Restoration Authority

Glenn Ledet PE, Executive Director
225.400.4012
glenn.ledet@la.gov

Lafourche Parish Government

Archie Chaisson, Parish President
985.446.8427
chaissonap@lafourchegov.org

Pontchartrain Levee District

Monica Gorman, Executive Director
225.869.9721
mgorman@leveedistrict.org

Bayou Lafourche Freshwater District

Dustin Rabalais, Executive Director
985.447.7155
Dustin.Rabalais@blfwd.org

Greater Lafourche Port Commission

Chett Chiasson, Executive Director
985.632.6701
chettc@portfourchon.com

Louisiana Coastal Protection and Restoration Authority

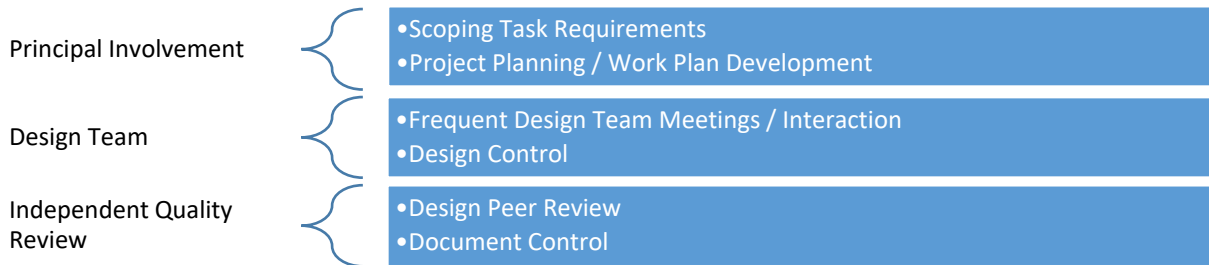
Ignacio Harrouch PE, Former CPRA Operation Chief
225.532.3479
ignacio.harrouch@stantec.com

LTE APPROACH AND METHODOLOGY

LTE's approach to managing design projects is comprehensive and focused on creating the best workflow to accomplish the work. Our goal is reliable delivery of the scope within the agreed budget and within the specified schedule. We anchor our management plan on active, engaging, and productive communication between LTE, the Parish, project staff, and all project stakeholders.

TEC Professional Services Questionnaire

LTE relies upon a proven methodology for managing task order driven and specific projects. The methodology is part of our policy and procedures. To ensure proper implementation and customer satisfaction, the involvement of our firm's principals is a key element. The following bullets highlight our proposed standard process for performing the required services.



QUALITY CONTROL

QC processes work best when they are simple to apply and designed to meet the end goal: an accurate deliverable that fully meets the project objectives. LTE has a quality program that is scalable to meet the needs of a project based on its size, complexity, and the disciplines involved. The process involves development of a Project Execution Plan (PEP), routine peer reviews, and formal quality reviews. The PEP communicates the scope of work (SOW), budget, schedule, applicable standards, and the quality control methods to be rigorously applied throughout the project duration.



At LTE, quality control is built into the schedule, not as an item to occur at the end of the project if there is budget remaining. It follows right behind each work task to catch minor problems before they magnify. Good quality control reduces rework and simplifies budget and schedule control. A quality control check sheet follows every set of plans, calculations, report, or relevant deliverable document to ensure that the required reviews have been successfully performed.

ABILITY AND CAPACITY TO PERFORM SERVICES

LTE has exceeded client expectations on current and previous projects as demonstrated in the examples provided. LTE's founder and principal engineer has a 20-year history of performance with repeat clients which is the foundation upon which LTE was started.


LOCATION OF FIRM

LTE's office is located downtown Baton Rouge and is less than an hour from Jefferson Parish offices and facilities.

CONCLUSION

LTE is pleased to present our qualifications and is prepared to provide the services required under this contract. Our proven experience will provide Jefferson Parish with confidence in the delivery of a high-quality, cost-effective, and timely management and design service to meet your project needs. LTE looks forward to growing and establishing a record of performance to become an integral team member of the Jefferson Parish engineering community.

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

Signature:  Print Name: Seneca Toussant, PE

Title: Principal Date: 7/16/24



ATTACHMENT 1



LOUISIANA UNIFIED CERTIFICATION PROGRAM

Disadvantaged Business Enterprise Program (DBE)

Small Business Element (SBE)

This is to certify that under Title 49, Part 26 of the Code of Federal Regulations
& under the State of Louisiana United Certification Program (LAUCP)

La Terre Engineering, LLC

Is a Certified Disadvantaged Business Enterprise (DBE) & Small Business Element (SBE) in the following specialties:

NC541330, NC541340, NC541620

NOTE: There may be other approved NAICS Codes. The online DBE Directory includes a complete list of approved codes.

Certificate Eligibility: September 2023 to September 2024

This certificate is valid through the above date provided. This firm meets the on-going programmatic standard and fulfills the annual update requirement to remain in good standing as a DBE. This certification is subject to annual verification and suspension or revocation based upon reasonable cause to believe that the firm is ineligible.

Rhonda Wallace

Rhonda Wallace, DBE/SBE Programs Manager

Louisiana Department of Transportation & Development



R. Kyle Ardoin

SECRETARY OF STATE

As Secretary of State of the State of Louisiana, I do hereby Certify that

a copy of the Articles of Organization and Initial Report of

LA TERRE ENGINEERING LLC

Domiciled at MARINGOUIN, LOUISIANA,

Was filed and recorded in this Office on February 24, 2020,

And all fees having been paid as required by law, the limited liability company is authorized to transact business in this State, subject to the restrictions imposed by law, including the provisions of R.S. Title 12, Chapter 22.

In testimony whereof, I have hereunto set my hand and caused the Seal of my Office to be affixed at the City of Baton Rouge on,

February 24, 2020

Secretary of State

WEB 43792422K



Certificate ID: 11172197#ARK73

To validate this certificate, visit the following web site, go to **Business Services**, **Search for Louisiana Business Filings**, **Validate a Certificate**, then follow the instructions displayed.
www.sos.la.gov




Name	Type		City	Status
LA TERRE ENGINEERING LLC	Limited Liability Company		BATON ROUGE	Active
Previous Names				
Business:	LA TERRE ENGINEERING LLC			
Charter Number:	43792422K			
Registration Date:	2/24/2020			
Domicile Address	343 THIRD STREET, SUITE 511B BATON ROUGE, LA 70801			
Mailing Address	343 THIRD STREET, SUITE 511B BATON ROUGE, LA 70801			
Status				
Status:	Active			
Annual Report Status:	In Good Standing			
File Date:	2/24/2020			
Last Report Filed:	3/28/2024			
Type:	Limited Liability Company			
Registered Agent(s)				
Agent:	SENECA TOUSSANT			
Address 1:	343 THIRD STREET, SUITE 511B			
City, State, Zip:	BATON ROUGE, LA 70801			



LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 6/21/2024 the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. Seneca Darnell Toussant
343 Third Street, Suite 511B
Baton Rouge, Louisiana 70801

	LOUISIANA PROFESSIONAL ENGINEERING & LAND SURVEYING BOARD (LPELS)	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com	
Mr. Seneca Darnell Toussant		
License/Certificate Type - Number	Expiration Date	
PE.0036080	09/30/2025	
Status: Active		
<p>Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).</p> <p>LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.</p>		

Fold Here

Cut Here

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

Disclaimer

All information provided by LPELS on this web page, and on its other web pages and internet sites, is made available to provide immediate access for the convenience of interested persons. While LPELS believes the information to be reliable, human or mechanical error remains a possibility, as does delay in the posting or updating of information. Therefore, LPELS makes no guarantee as to the accuracy, completeness, timeliness, currency, or correct sequencing of the information. Neither LPELS, nor any of the sources of the information, shall be responsible for any errors or omissions, or for the use or results obtained from the use of this information. Other specific cautionary notices may be included on other web pages maintained by LPELS.

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name:		Public Address:	
La Terre Engineering, LLC	<div>Mr. Seneca Toussant</div> <div>343 Third Street,</div>		

License/Certificate Information w/ Supervision			
License	Status	First Issuance Date	Expiration Date
EF.0006800	Active	03/19/2020	09/30/2024
			Supervisor(s)
			Mr. Seneca Darnell Toussant # PE.0036080

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

**Coastal Engineering Consulting as-needed Parish Wide
SOQ # 24-020 | Resolution No. 144205**

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



**128 Northpark Boulevard
Covington, Louisiana 70433**

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:

**Henry I. DiFranco, Jr., PE
President
128 Northpark Blvd.
Covington, LA 70433
(985) 624-5001 | henry@pi-aec.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.

**Andre C. Monnot, PE
Vice President
128 Northpark Blvd.
Covington, LA 70433
(985) 624-5001 | andre@pi-aec.com**

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

<u>3</u> Administrative	<u> </u> Estimators	<u> </u> Specification Writers
<u>1</u> Architects (Licensed)	<u> </u> Geologists	<u>1</u> Civil/Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u> </u> Graduate Engineers
<u>3</u> Civil Engineers	<u> </u> Interior Designers	<u>2</u> Project Managers (PH/EI)
<u>5</u> Construction Inspectors	<u> </u> Landscape Architects	<u> </u> Clerical
<u> </u> Ecologists	<u> </u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u>1</u> Electrical Engineers	<u> </u> Mechanical Engineers	<u>1</u> Sanitary Engineers
<u>1</u> Engineer Intern	<u> </u> Environmental Engineers	
<u> </u> Professional Land Surveyors	<u>6</u> Other (Engr Tech & CAD Support)	<u>24</u> TOTAL

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

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. NA – NONE

2.

H. Has this JOINT-VENTURE previously worked together? Please check:
YES _____ NO _____ N/A

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):
Neel-Schaffer, Inc. 1340 Poydras Street, Suite 1950 New Orleans, LA 70112 (504) 875-4662	Coastal & Environmental Engineering	YES
Sub-Consultants for Surveying, Geotechnical or any other specialty to be selected upon issuance of assignments under this contract.		

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

12

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:

Andre C. Monnot, PE, Vice President

Project Assignment:

Professional in Charge/Project Manager – Meets the Minimum Requirement #2-, “The persons or firms under consideration shall have a professional in charge of the Project who is a licensed, registered engineer in the State of Louisiana with a minimum of five (5) years’ experience.”

Name of Firm with which associated:



Years' experience with this Firm:

15 (others, 6)

Education: Degree(s)/Year/Specialization:

BSCE/2002/Civil Engineering

Active registration: Year first registered/discipline:

Professional Engineer – 2007, Civil, Louisiana, License No. 33626

Other experience and qualifications relevant to the proposed Project:

Mr. Monnot has a diverse range of engineering and management experience in both the public sector as a military engineer and as a private consultant. He has demonstrated experience in large-scale H & H drainage modeling and planning, shoreline processes and shoreline protection. Mr. Monnot has gained valuable experience in Water Bottom Reclamation & Riparian Rights due to his project success on numerous coastal protection and restoration projects. Mr. Monnot has been the lead engineer for the CPRA's Mid Barataria Sediment Diversion project and the Lake Pontchartrain Shoreline Protection and Restoration for the City of Mandeville as well as several other coastal related projects.

Prior Related Contract Roles; Program / Contract Management:

- Water Resources Planning, Project and Program Management
- Data Analysis and Management, -Meeting/Reporting Requirements
- Environmental, Biological and Infrastructure Surveys, Environmental Characterization, Compliance &HTRW
- Environmental and Risk Assessment Modeling, -Environmental Studies and Reports



TEC Professional Services Questionnaire

Mr. Monnot continued...

PROJECT RELATED EXPERIENCE:

Bucktown Marsh Overlook | Lake Pontchartrain South Shore Coastal Reclamation and Reengagement Project Jefferson Parish Ecosystem and Coastal Management | Jefferson Parish, La

Mr. Monnot was the lead Project Engineer for design of this project. The 900 sq ft deck platform is supported by five 20" diameter timber poles, projecting 25 ft above the platform, with fabricated metal branches and leaves, invoking forested swamp surroundings. The foundation is pile-supported reinforced concrete slab, designed to resist breaking waves.

Mid-Barataria Sediment Diversion - CPRA, Plaquemines Parish, La

Mr. Monnot is the lead PM for Principal Engineering for this project. The Mid-Barataria Sediment Diversion project is one of the largest sediment capture and transport projects being undertaken under this aggressive program to rebuild the coast of Louisiana. PRINCIPAL developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. PRINCIPAL used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures. Client: LA CPRA

Old Mandeville Shoreline & Tidal Projection, Mandeville, La

A drainage analysis and tidal/wave modeling were performed in an effort to protect areas along the Old Mandeville Lakefront from flooding during tidal/wave and rainfall events. Mr. Monnot was the project coordinator and responsible for overseeing plan preparation and quality control. Client: City of Mandeville

Lakefront Wetlands Restoration Permitting, Mandeville, La

Mr. Monnot completed the **permitting** process for this Lake Pontchartrain shoreline project, including CUP authorization from DNR, section 404 permit from the USACE, Water Quality Certification from LADEQ, Class E Land Lease from LA State Lands Office, and U.S. Coast Guard Authorization. This included mitigation for submerged aquatic vegetation and implementation of construction noise reduction requirements to protect Gulf Sturgeon fingerlings and Manatee as required by NOAA. Mr. Monnot also submitted numerous grant applications to GOHSEP and FEMA including cost/benefit analysis.

Tchefuncte Marsh Shoreline Restoration, Mandeville, La

PRINCIPAL has been contracted to scope the project and design a plan that would further prevent shoreline erosion and trap sediment in the lee of the structure, reversing some effects of past shoreline erosion and creating an environment conducive to submerged aquatic vegetation. Mr. Monnot was the project coordinator and responsible for overseeing plan preparation and quality control. Client: City of Mandeville

Tchefuncte Marsh Assimilation Wetland Pipeline Extension, Mandeville, La

This project uses the ability of existing marsh vegetation to remove nutrients from sewer effluent, while simultaneously increasing the fresh water in the marsh, bolstering plant growth and slowing the loss of freshwater marsh due to saltwater intrusion. Mr. Monnot was the project coordinator and responsible for overseeing plan preparation and quality control. Client: City of Mandeville


Lower Lafitte (Orange Street Basin) Tidal Protection, Town of Jean Lafitte, La

Mr. Monnot is the lead PM for the project. PRINCIPAL is responsible for the design of new required earthen levees, including a description of the process for constructing required improvements to raise existing earthen levees to a top of levee elevation of 8.5 MSL, the design of new required Concrete-Capped Steel Sheet pile Floodwalls to top of cap elevation 7.5 MSL. Also, responsible for the determination of required rights-of-way, access easements, and limits-of-construction for the levees and floodwalls.

Waggaman Area Drainage Master Plan, Jefferson Parish, La

PRINCIPAL conducted an H&H study of the entire Lake Catouache drainage basin to determine which control projects will yield upstream flooding relief for residents, and open vacant property for development. Mr. Monnot was the project coordinator and responsible for overseeing plan preparation and quality control. Client: Jefferson Parish Gov't.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Henry I. DiFranco, PE, MBA, President
Project Assignment:
Project Principal – Meets the Minimum Requirement #1- “The persons or firms under consideration shall have at least one (1) principal who is a licensed professional engineer in the State of Louisiana.”
Name of Firm with which associated:

Years' experience with this Firm:
20 years (others, 12)
Education: Degree(s)/Year/Specialization:
BSCE/1991/Civil Engineering MBA/1998/Business Administration
Active registration: Year first registered/discipline:
Professional Engineer – 1997, Civil, Louisiana License No. 27448
Other experience and qualifications relevant to the proposed Project:
<p>Mr. DiFranco, President of PRINCIPAL, has extensive experience in Public Works engineering serving as the Director of Public Works & Utilities for St. John Parish and holding numerous positions as a public works engineer and consulting engineer throughout his 30+ year career. He has been responsible for numerous water distribution and treatment improvement projects and programs. He planned and managed a parish-wide water system mapping and modeling program in St. John Parish to identify system needs. He was instrumental in analyzing the existing conditions model to develop a list of recommended alternatives to address system needs. As a result of this effort, the Parish Gov. approved a \$10 million dollar capital improvement program to repair and construct new water system infrastructure. The projects included the construction of new elevated and ground water storage tanks to the installation of new water treatment & disinfection equipment. The program also consisted of identifying methods to reduce water loss from distribution system leaks. Various point repairs and water meter replacements were completed which resulted in a decrease of water loss. Other significant projects throughout his career includes the expansion of the Lyons water treatment plant and the analysis and alternate water treatment methods for trihalomethane (THM) and halo acidic (HAA) reduction in the Ruddock water system for St. John Parish. He also performed the design, preparation of construction documents and contract administration of the Terrytown Water System Improvements for JP while working as a design consultant.</p>

TEC Professional Services Questionnaire

Mr. DiFranco Continued...

PROJECT RELATED EXPERIENCE

Old Mandeville Shoreline & Tidal Projection, Mandeville, La

A drainage analysis and tidal/wave modeling were performed in an effort to protect areas along the Old Mandeville Lakefront from flooding during tidal/wave and rainfall events. Mr. DiFranco prepared the scope of work, reviewed all reports and models submitted by the design consultant, attended public meetings and served as a liaison for the owner. Client: City of Mandeville

Tchefuncte Marsh Shoreline Restoration, Mandeville, La

Principal has been contracted to scope the project and design a plan that would further prevent shoreline erosion and trap sediment in the lee of the structure, reversing some effects of past shoreline erosion and creating an environment conducive to submerged aquatic vegetation. Mr. DiFranco oversaw the planning and design. Client: City of Mandeville

Tchefuncte Marsh Wetland Assimilation WWTP Pipeline Extension, Mandeville, La

This project uses the ability of existing marsh vegetation to remove nutrients from sewer effluent, while simultaneously increasing the fresh water in the marsh, bolstering plant growth and slowing the loss of freshwater marsh due to saltwater intrusion. Mr. DiFranco oversaw permitting on the federal and state level, planning and design. Client: City of Mandeville

St. Tammany Parish Coastal Master Plan, St. Tammany Parish, La

As the Chairman of the STLDCD, Mr. DiFranco developed the scope of work and is managing the collection and organizing of existing flood control assets and project data in the St. Tammany coastal zone; perform gap analysis to identify areas that are vulnerable to tidal surge, flooding and wetland loss/reduction; review current models to determine data gaps; develop conceptual coastal project alternatives, including costs; perform benefit/cost analyses; coastal engineering and design, as prioritized by the parish.

Waggaman Area Drainage Master Plan, Jefferson Parish, La

Mr. DiFranco scoped and managed a H&H modeling study of the entire Lake Catouache drainage basin to determine which control projects will yield upstream flooding relief for residents, and open vacant property for development.

Client: Jefferson Parish Gov't.

USACE IDIQ A/E Design and Construction Management - W912P8-09-D-0014, New Orleans, La

Mr. DiFranco provided A/E design and construction management services for USACE flood control projects within the New Orleans district under a \$90M IDIQ Contract.


Client: U.S. Army Corps of Engineers – New Orleans Dist.

Airline Park Blvd. Drainage Pump Station, Jefferson Parish, La

The project includes the construction of a new drainage pump station at Airline Park and West Metairie Canal. Principal analyzed area hydrology and performed hydraulic calculations to establish/verify proposed subsurface pipe sizes and to design a 45 cfs drainage pump station.

Client: Jefferson Parish Government.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Natalya Munger, MSCE, PH, EI, Project Manager
Project Assignment:
Professional Hydrologist H&H Modeling
Name of Firm with which associated:

Years' experience with this Firm:
3 (others, 22)
Education: Degree(s)/Year/Specialization:
Master's Degree/1995/Civil Engineering
Active registration: Year first registered/discipline:
American Institute of Hydrology, Professional Hydrologist (P.H.) Engineer Intern, E.I. Louisiana No. 0030985
Other experience and qualifications relevant to the proposed Project:
<p>Ms. Munger received her degree in civil engineering with minors in surface water hydrology and surveying (Accreditation Board for Engineering and Technology [ABET] accredited). Furthermore, Ms. Munger has professional qualifications as a professional hydrologist (surface water) from the American Institute of Hydrology and has received professional qualifications as a Certified Engineer Intern.</p> <p>Ms. Munger holds computer skills that enhance her credentials even further. Her computer skills include but are not limited to <i>AutoCAD</i>, <i>LA DOTD HYDROWINT</i>, <i>PCSWMM</i>, <i>FHWA WSPRO</i>, <i>HEC-18</i>, and <i>HEC-RA</i>.</p> <p>Natalya Munger will be the key engineer and professional hydrologist for hydrologic and hydraulic (H&H) and specialized modeling and overall environmental compliance.</p>

TEC Professional Services Questionnaire

Ms. Munger continued...

Prior Related Contract Roles:

- H&H Modeling
- Environmental and Risk Assessment Modeling
- Water Resources Planning

PROJECT RELATED EXPERIENCE:

St. Charles Parish East Bank Master Drainage Plan | St. Charles Parish, LA

Ms. Munger assisted in the preparation of Phase I & II of the East Bank Master Drainage Plan for eight drainage basins. The model for this effort was developed through analysis of various datasets provided by the parish using XPSTORM, EPASWMM, and AutoDesk's Storm and Sanitary Analysis, resulting in detailed drainage improvement recommendations. She is currently involved in Phase III of this planning.

Laketown Rock Jetty | Jefferson Parish, LA

Ms. Munger is assisting our project engineer on this project. PRINCIPAL is providing engineering design, bidding, construction phase and project close-out services in addition to an onsite restroom rehab. The project objective is to prevent sediment accretion in the Laketown boat launch channel from Spillway opening and wave action, while maintaining navigability for small boats and the casino boat, by constructing a rock jetty perpendicular to the shore. Work includes a preliminary data investigation, data collection, geotechnical report, survey, and the Coastal Process Study to predict local sediment transport patterns. The total proposed length of the jetty is 1,800 ft and total proposed height of the jetty 14 ft. PRINCIPAL studied sediment models to predict the broad-scale actions induced by Bonnet Carré Spillway opening. Due to underlying soil conditions, a lightweight aggregate core material is required to prevent excessive settlement. Phasing of the jetty was devised to accommodate available funds. 95% Design complete. (Construction Est. Summer 2022).

Subsurface Drainage Design City of New Orleans Department of Public Works, Multiple Locations | New Orleans, LA (ILSI Engineering, Inc.)

Ms. Munger prepared subsurface drainage design and hydraulic analysis using LADOTD HYDR6000 and HYDR6020 for multiple phases of New Orleans Department of Public Works project. Her work also included providing data points showing similar size and complexity. (2018 to 2020).


Southeast Louisiana Drainage Projects in Jefferson Parish | Jefferson Parish Department of Capital Projects | U.S. Army Corps of Engineers, Jefferson, LA (BCG Engineering & Consulting)

Ms. Munger prepared design and construction cost credit reports for Southeast Louisiana Drainage Projects in Jefferson Parish. So far, 59 contracts have been issued under this program for drainage improvements, which included drainage canals, pumping stations, and bridges on both sides of the Mississippi River. The total program cost was \$650 million. (2012 to 2017).

English Turn Drainage, City of New Orleans Sewerage and Water Board | New Orleans, LA (ILSI Engineering, Inc.)

Ms. Munger prepared a hydraulic model using PCSWMM for English Turn Subdivision to improve the capacity of the existing canals in the Algiers Sub-Basin and to increase the capacity of the nearby pump station (2019).

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Tom Schreiner, PE
Project Assignment:
Senior Project Engineer
Name of Firm with which associated:

Years' experience with this Firm:
3 (others, 6)
Education: Degree(s)/Year/Specialization:
Bachelor of Science/1980/Civil Engineering
Active registration: Year first registered/discipline:
Professional Engineer – 1985, Civil & Environmental, Louisiana License No. 21892
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Schreiner has worked successfully as a project manager and program manager on municipal, commercial, institutional, and industrial projects. He has cohesively worked with multiple governmental agencies on a broad spectrum of projects. Mr. Schreiner's experience includes both private and governmental positions. Professional Affiliations: American Society of Civil Engineers (ASCE), American Water-Works Association (AWWA).</p> <p>PROJECT EXPERIENCE:</p> <p>Rachel Street Pump Station, Lafitte Levee District, LA Project consists of designing a new pump station in the Goose Bayou area to accommodate a 10-year storm event in accordance with Jefferson Parish Standards. Drainage shall be designed to be tied into the existing drainage system. Principal is responsible for providing construction documents and a probable construction cost.</p> <p>Grand Isle Drainage Pump Station, Jefferson Parish Government, LA Principal is designing a new stormwater drainage pump station at the north end of Chighizola Lane in Grand Isle. The station is designed on an elevated platform and will discharge stormwater into the marsh. Project includes replacing large diameter CMP culvert adjacent to the station. Principal is also responsible for survey coordination, construction administration and resident inspection.</p>

TEC Professional Services Questionnaire

Mr. Schreiner Continued...

City of Kenner Wastewater Capital Improvement Program, Kenner, LA

As Deputy CAO for the City of Kenner, responsible for the supervision of the Capital Sewer Improvement Program. Upon becoming involved with the program, was able to repurpose over \$15M of LDEQ loan funds to address other needs of the collection and treatment system. Eight additional capital improvement projects were identified with these savings.

Jefferson Parish Emergency/Alternate Water Supply Study, Jefferson Parish, LA

This study evaluated the feasibility of developing an alternate water supply in St. John Parish. Three alternatives were developed which included varying numbers of deep wells, treatment facilities at Ruddock, and a transmission system to convey a maximum of 95 mgd of treated water across a portion of Lake Pontchartrain to Jefferson Parish.

St. Tammany Parish Riverwood, Covington Country Club Drainage Improvements


Project Manager for the preparation of a statewide flood control application to relieve flooding in the Riverwood and Covington Country Club subdivisions in St. Tammany Parish, Louisiana. The application was successful. Design, bidding and construction management followed.

Bogue Chitto State Park, Covington, LA

Designed the site layout, drainage, and auxiliary roads for a new 1800-acre state park. Designed the water supply and distribution system, as well as the wastewater collection and treatment system (approx. 35,000 gpd) Provided construction administration.

Jefferson
Parish
State of Louisiana

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brien Croff, PE
Project Assignment:
Project Engineer Assistant
Name of Firm with which associated:

Years' experience with this Firm:
3 (others, 6)
Education: Degree(s)/Year/Specialization:
Bachelor of Science/2015/Civil Engineering
Active registration: Year first registered/discipline:
Professional Engineer - Civil, 2022, Louisiana License No. 0046408. - Civil, 2020, Ohio, License No. 86190.
Member of: Ohio EPA Certified Wastewater Treatment Operator
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Croff will have responsibility for planning, reports, and reviews. Brien has experience in project management, design drafting, hydraulic modeling and analysis, and technical report writing specifically in the areas of water supply and wastewater infrastructure.</p> <p><i>Experience in Program/Contract Management:</i></p> <ul style="list-style-type: none">-Data Analysis and Management-Environmental, Biological and Infrastructure Surveys-Environmental Studies and Reports-Water Resources Planning-Meeting/Reporting Requirements <p><i>PROJECT EXPERIENCE:</i></p> <p>Mid Barataria Sediment Diversion CPRA, Belle Chasse, LA (PRINCIPAL Engineering, Inc.)</p> <p>Project Engineer assistant for the design and cost estimate for a siphon in the Barataria Basin for the Mid-Barataria Sediment Diversion project for the State of Louisiana. This project consists of the analysis and design of different siphon structures to be integrated into the guide levees as well as the cost feasibility of alternatives.</p>

TEC Professional Services Questionnaire

Mr. Croff Continued...

Mid Barataria Sediment Diversion continued...

Elements of design include reinforced concrete design and construction, using deep soil mixing for founding the structures and large-diameter pipelines, and access roads to and across the primary structures.

Fontainebleau State Park Force Main, City of Mandeville (PRINCIPAL Engineering, Inc.)

Mr. Croff is assisting with the design of this project in addition to completing the Coastal use permit application, permit drawings in progress, & submission of preliminary design draft as of early Jan. 2022. PRINCIPAL is performing Engineering Design and producing plans and specifications suitable for public bid, to replace the sanitary force main between City Lift Station 3, and the east bank of Bayou Castine. Design Submittals include 60%, 95% Pre-Final, and 100% Final. Engineer shall revise documents in accordance with City comments. Technical scope shall be according to the revised Pontchartrain Restoration Program (PRP) Work Plan.

St. Charles Eastbank Master Drainage Plan-Phase I | St. Charles Parish Gov. (PRINCIPAL Engineering, Inc.)

Phase I of the East Bank Master Drainage Plan for St. Charles Parish for the Montz, Norco, New Sarpy, and Ormond drainage basins (~5,000 acres of study area). Modeling platforms employed included XPSTORM, EPA SWMM, and Auto Desk's Storm and Sanitary Analysis. H&H modeling for the 25-yr and 100-yr design storms (NOAA Atlas14) was accomplished, and an integrated program of improvement projects developed for the design criteria. Datasets incorporated were drainage network GIS information validated against field survey; prior flood/drainage studies performed for the Parish in these areas, Lidar topography, public input and anecdotal evidence, present and historical aerial photography, and anticipated future flood control project effects (namely, West Lakeshore). The recommended program of Phase I projects total \$148M in construction cost, consisting of pumping station, conveyance, and detention improvements. (Completed: 2021)

Quentin Road EQ Basin and Pump Station Improvements, Eastlake, Ohio

On this project, Mr. Croff was the design engineer. Responsibilities included developing a basis of design, drafting of construction plans, cost estimate, permit applications, and specifications. The purpose of the project was to construct a 1-million-gallon equalization storage basin on the site of an existing sewage pump station, as well as improvements to the existing pump station. The cost of the project was \$2.2 million.


Troy Oaks Pump Station – Geauga County, Ohio

On this project, Mr. Croff had the role of County project manager during design and construction. The purpose of the project was to decommission an existing wastewater treatment plant and construct a 75,000 gpd pump station in its place, which would discharge to another nearby treatment facility. The cost of the project was \$1.8 million.


List of Most Recent Projects Worked / Working:

- Third Street Drainage – Jefferson Parish
- Stall Ditch Drainage – Jefferson Parish
- Jung & Falcone Lift Station Improvements – Jefferson Parish
- Rachel St. Pump Station – Lafitte Levee Dist.
- Effluent Pipeline Extension – City of Mandeville

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric Glynn, EI
Project Assignment:
Engineer Intern; Project Engineer
Name of Firm with which associated:

Years' experience with this Firm:
3
Education: Degree(s)/Year/Specialization:
Bachelor of Science in Mechanical Engineering/2020/University of New Orleans.
Active registration: Year first registered/discipline:
2021/Engineer Intern (E.I.); Louisiana No. 0035028
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Glynn is currently assisting with modeling, site visits, plan markups, etc. etc. for PRINCIPAL on the following projects:</p> <ul style="list-style-type: none">• St. Charles Parish East Bank Drainage Master Plan – St. Charles Parish• Ozone Woods Drainage - St. Tammany Parish• Lake Vista Group E - Department of Public Works New Orleans• Pointe a la Hache Pump Station Rehabilitation – Plaquemines' Parish Gov.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Michael Melendez, Senior Engineering Technician
Project Assignment:
CAD & Civil Design Technician
Name of Firm with which associated:

Years' experience with this Firm:
18 (others, 7)
Education: Degree(s)/Year/Specialization:
Associate of Science/1999/Computer Aided Design Drafting
Active registration: Year first registered/discipline:
NA
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Melendez has an Associate Degree of Occupational Science in Computer Aided Drafting from Southeast College of Technology. His coursework included drafting classes for architectural, mechanical, civil, piping, and electrical. It also included classes for Microsoft Word and Excel. During his studies, he maintained a 4.0 GPA and graduated with honors. His professional qualities include the ability to analyze a problem and present an accurate resolution. He is also detail oriented, and focuses on quality and accuracy. Mr. Melendez is Proficient with AutoCAD, Civil 3D, GIS and many design software programs to include project scheduling.</p> <p>Mr. Melendez is and/or was the lead Engineering CAD Technician on the following <i>PROJECTS</i>:</p>

TEC Professional Services Questionnaire

Mr. Melendez continued...

Lower Lafitte (Orange Street Basin) Tidal Protection, Town of Jean Lafitte, La. PRINCIPAL was responsible for the design of new required earthen levees, including a description of the process for constructing required improvements to raise existing earthen levees to a top of levee elevation of 8.5 MSL, the design of new required Concrete-Capped Steel Sheet Pile Floodwalls to top of cap elevation 7.5 MSL. Also responsible for the determination of required rights-of-way, access easements, and limits-of-construction for the levees and floodwalls. Constructed expected to begin in January, 2022. Client: Lafitte Levee District

Mid-Barataria Sediment Diversion – LA CPRA, Plaquemines Parish - Belle Chasse, La

The Mid-Barataria Sediment Diversion project is one of the largest sediment capture and transport projects being undertaken under this aggressive program to rebuild the coast of Louisiana. PRINCIPAL developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. Principal used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures. Client: LA CPRA

Tchefuncte Marsh Shoreline Restoration, Mandeville, La

PRINCIPAL has been contracted to scope the project and design a plan that would further prevent shoreline erosion and trap sediment in the lee of the structure, reversing some effects of past shoreline erosion and creating an environment conducive to submerged aquatic vegetation.

Client: City of Mandeville

Waggaman Area Drainage Master Plan, Jefferson Parish, La

PRINCIPAL conducted an H&H study of the entire Lake Catouache drainage basin to determine which control projects will yield upstream flooding relief for residents, and open vacant property for development.

Client: Jefferson Parish Gov't.

Airline Park Blvd. Drainage Pump Station, Jefferson Parish, La


The project includes the construction of a new drainage pump station at Airline Park and West Metairie Canal. PRINCIPAL analyzed area hydrology and performed hydraulic calculations to establish/verify proposed subsurface pipe sizes and to design a 45 cfs drainage pump station.

Client: Jefferson Parish Government.

List of Most Recent Projects Worked / Working:

- Laketown Boat Launch – Jefferson Parish
- Fairfield & Oakland Pump Station - St. Charles Parish
- Kenner Waste Transfer Facility – City of Kenner
- Lake Vista Group C – Department of Public Works New Orleans
- Lake Vista Group E - Department of Public Works New Orleans
- Barriere Rd. Drainage Improvements - Plaquemines Parish
- Jesuit Bend Drainage Rehab – Plaquemines Parish
- Ozone Woods Drainage – St. Tammany Parish
- Bayou Castine Bulkhead Repair – City of Mandeville
- Long Island NC Renovation – WFS

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Emile Barré, EI, Construction Manager
Project Assignment:
Construction Administration
Name of Firm with which associated:

Years' experience with this Firm:
4 (other, 25)
Education: Degree(s)/Year/Specialization:
Bachelor of Science/1994/Mechanical Engineering
Active registration: Year first registered/discipline:
E.I., Louisiana, No. 0015969
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Barré is a dynamic professional with a proven record of building relationships, managing projects, guiding a team, while covering and reporting the details and finishing on time.</p> <p>David Drive Corridor Improvements, Jefferson Parish, LA</p> <p>Mr. Barré is handling the construction administration for construction phase of this project. The project objective is to replace a 6" asbestos cement water main in the Central Ave. right of way between Airline Dr. and Karen Ave., with 12" C-900 PVC and 18" DR 11 HDPE. Existing fire hydrants, fittings, valves, domestic services, and fire services in the project limits will be replaced. PRINCIPAL is providing engineering design, bidding, construction phase and project close-out services for the water main replacement. Currently, PRINCIPAL is in construction phase. Project value \$8M.</p>

TEC Professional Services Questionnaire

Mr. Barré continued...

Abita Springs Gravity Sewer Rehabilitation, St. Tammany Parish, LA

This project includes the rehabilitation of existing sanitary sewer mains, sanitary sewer laterals, sanitary sewer manholes and related appurtenances. Sewer mains predominantly rehabilitated by cured-in-place pipe. Sewer Laterals predominantly rehabilitated by chemical grout sealing. Some sections of sewer laterals dig and replace within roadway and include the rehabilitation of roadway. Project value \$2.5M.

Sewer and Water Maintenance Project, City of Mandeville, LA

This project is to provide maintenance to the City of Mandeville sewer and water system, including repair and replacement of sewer and water mains, service connections, manholes and fire hydrants. Project value \$2M.


Roadway & Drainage Capital Improvement Program, City of Mandeville, LA

This project includes mill and overlay of asphalt streets citywide, concrete panel slab replacement, intersection redesigns, bridge repairs, and drainage improvements. PRINCIPAL created the contract documents, performed engineering design, is administering construction, and providing resident inspection services. The contract has a value of \$5M.

List of Most Recent Projects Worked / Working:

- River Rd. Spillway Repair – St. Charles Parish – Close out
- Westbank Trailhead – St. Charles Parish
- Jesuit Bend Drainage Rehab – Plaquemines Parish – Close out
- Bayou Castine Bulkhead Repair – City of Mandeville – Close out
- WWTP Erosion Control – City of Mandeville
- Sunset Point Restrooms – City of Mandeville

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Luther “Wade” Lucas
Project Assignment:
Resident Inspection
Name of Firm with which associated:

Years’ experience with this Firm:
8 (other, 7)
Education: Degree(s)/Year/Specialization:
N/A
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Lucas has been a valuable part of the Principal Engineering resident inspection team. He has completed the following certifications and training. USACE QC Certification, 2007; OSHA 30HR, 2013; Advanced Blueprint Reading, 2009; Excavation Safety for Competent Person Training, 2008; Standard First Aid/CPR Training, 2008; Introductory to Crew Leadership, 2008; Level One CAT Tractor and Excavator Training, 2008; Construction Core Curriculum, 2007.</p> <p>Central Avenue Rehabilitation, Jefferson Parish, LA The project objective was to replace a 6” asbestos cement water main in the Central Ave. right of way between Airline Dr. and Karen Ave., with 12” C-900 PVC and 18” DR 11 HDPE. Existing fire hydrants, fittings, valves, domestic services, and fire services in the project limits were replaced. Principal provided engineering design, bidding, construction phase and project close-out services for the water main replacement. Mr. Lucas performed resident inspection services for this project. Cost \$3M.</p>

TEC Professional Services Questionnaire

Mr. Lucas continued...

Roadway & Drainage Capital Improvement Program, City of Mandeville, LA

This project included mill and overlay of asphalt streets citywide, concrete panel slab replacement, intersection redesigns, bridge repairs, and drainage improvements. Principal created the contract documents, performed engineering design, administered construction, and provided resident inspection services. Mr. Lucas performed resident inspection services for this project. Contract value \$5M.

Abita Springs Gravity Sewer Rehabilitation, St. Tammany Parish, LA

This project included the rehabilitation of existing sanitary sewer mains, sanitary sewer laterals, sanitary sewer manholes and related appurtenances. Sewer mains were predominantly rehabilitated by cured-in-place pipe. Sewer Laterals were predominantly rehabilitated by chemical grout sealing. Some sections of sewer laterals were dug and replaced within roadway and include the rehabilitation of roadway. Mr. Lucas performed resident inspection services for this project. Project value \$2.5M.

Kenner Pavement Management, Kenner, LA

Mr. Lucas was part of the field crew to evaluate 471 lane-miles of City-owned roadway. Collected data used to recommend optimum preventative maintenance, rehabilitation, and improvement budget level for Louisiana's 5th largest city. Defined specific project programs by year, according to City requirements.

Jefferson
Parish
State of Louisiana

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:	
Bucktown Marsh Overlook Educational Pavilion Jefferson Parish, LA JP Department of Ecosystem and Coastal Management; Director, Michelle Gonzales (504)-736-6719 1221 Elmwood Park Blvd., Suite 310 Jefferson, LA 70123	PRINCIPAL is providing engineering design, bidding, construction phase and project close-out services for an educational overlook platform in the Bucktown Marsh setting, including access to the pavilion (ramps), benches, shade tree planting, and designation of educational signs. The overlook pavilion is a unique elevated timber structure. The 900 sq ft deck platform is supported by five 20" diameter timber poles, projecting 25 ft above the platform, with fabricated metal branches and leaves, invoking forested swamp surroundings. The foundation is pile-supported reinforced concrete slab, designed to resist breaking waves. The project features are designed to engage local residents and tourists in activities that promote coastal and wetland education opportunities as well as enhanced recreational spaces (Funded by the Lake Pontchartrain Restoration Program (PRP)).	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Completed 2024	Engineering \$166K Construction \$1.46M	100%

PROJECT NO. 2		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
A). Laketown Boat Launch B). Laketown Rock Jetty Jefferson Parish, LA JP Department of Ecosystem and Coastal Management; Director, Michelle Gonzales (504)-736-6719 1221 Elmwood Park Blvd., Suite 310 Jefferson, LA 70123	PRINCIPAL is providing engineering design, bidding, construction phase, and project close-out services in addition to an onsite restroom rehab. The project objective is to prevent sediment accretion in the Laketown boat launch channel from Spillway opening and wave action, while maintaining navigability for small boats and the casino boat, by constructing a rock jetty perpendicular to the shore. Work includes a preliminary data investigation, data collection, geotechnical report, survey, and the Coastal Process Study to predict local sediment transport patterns. The total proposed length of the jetty is 1,800 ft and total proposed height of the jetty 14 ft. PRINCIPAL studied sediment models to predict the broad-scale actions induced by Bonnet Carré Spillway opening. Due to underlying soil conditions, a lightweight aggregate core material is required to prevent excessive settlement. Phasing of the jetty was devised to accommodate available funds.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
A). Complete 2023 B.) 100% Design, On-going, 2024 (Est.)	\$17.6M	100%

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Mid-Barataria Sediment Diversion (BA-153) Plaquemines Parish, LA State of Louisiana Coastal Protection and Restoration Authority (CPRA) 150 Terrance Ave. Baton Rouge, LA 70802 Sub-Consultant to AECOM PM- Mr. Bruce LeLong (504)-220-8551	PRINCIPAL developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. Design Criteria was according to USACE EM guidance, experience from past MR diversion projects, and judgement applied to the MBSD project; and provided in written narratives and or/lists. PRINCIPAL used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures. PRINCIPAL also generated a narrative explanation of civil and structural design criteria to be used in development of the inverted siphon to design completion. Provided quantity take-offs for cost estimator use. We provided preliminary design plans and cost estimates for this portion of the project. Currently engaged in engineering during construction.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
On-going, Est 2029	\$1M Engineering Fee \$2.0B Construction	100% scope above ~\$250M Const. (Principal's portion)

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Mandeville Lakefront Wetlands Protection and Restoration – PM and Permitting City of Mandeville, LA City of Mandeville Dept. of Public Works, Keith LaGrange 1100 Mandeville High Blvd Mandeville, La. 70471 Phone: (985) 624-3169	The Mandeville Lakefront Wetlands Restoration project will prevent further degradation of the existing wetlands and restore a functioning wetlands ecosystem within the area. The project established a best practice for creation of new wetlands, provided engineering concepts in support of multiple storm water routing alternatives and coastal engineering concepts for the design of a storm-resistant shoreline closure with an integral bike path and pedestrian link between Old Mandeville and Sunset Point Park. PRINCIPAL was the PM and completed the permitting process for this Lake Pontchartrain shoreline project, including CUP authorization from DNR, section 404 permit from the USACE, Water Quality Certification from LADEQ, Class E and Lease from LA State Lands Office, and U.S. Coast Guard Authorization. This included mitigation for submerged aquatic vegetation and implementation of construction noise reduction requirements to protect Gulf Sturgeon fingerlings and Manatee as required by NOAA. PRINCIPAL also submitted numerous grant applications to the GOHSEP and FEMA including cost/benefit analysis.	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Design Complete & Fully Permitted	\$100,000 (fee)	100%

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Lower Lafitte (Orange Street Basin) Tidal Protection Town of Jean Lafitte, LA Town of Jean Lafitte 2654 Jean Lafitte Boulevard Lafitte, LA 70067 Mayor Tim Kerner Phone: (504) 836-8190	The project area encompasses approximately 192 acres of land with residential and commercial structures, including the southernmost marina facilities in Jefferson Parish. West Jefferson Levee District constructed several sections of earthen levee along the southern and western perimeter of the project area, which, in conjunction with the existing ridge on the west bank of Bayou Barataria, do provide limited protection to these structures. The project area is bounded on the north by the southern bank line of the Pump Canal; west and south by the eastern bank line of Bayou Barataria; and, west by the existing levee system. Principal is responsible for the design of new required earthen levees, including a description of the process for constructing required improvements to raise existing earthen levees to a top of levee elevation of 8.5 MSL, the design of new required Concrete-Capped Steel Sheet pile Floodwalls to top of cap elevation 7.5 MSL. Also responsible for the determination of required rights-of-way, access easements, and limits-of-construction for the levees and floodwalls.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Design 100%, Const On-going, 2024 (Est.)	\$3,500,000	45%

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Tchefuncte Marsh Shoreline Protection and Restoration City of Mandeville, LA City of Mandeville Dept. of Public Works, Keith LaGrange 1100 Mandeville High Blvd Mandeville, La. 70471 Phone: (985) 624-3169	PRINCIPAL is performing a feasibility investigation for the 3.1 mi segment of fresh and mixed marsh shore of Lake Pontchartrain between the Tchefuncte River and the Lake Pontchartrain Causeway Bridge. A shoreline retreat analysis from 1871 to the present was performed to establish the no-build future condition. Localized rapid marsh loss in recent years attributed to breach of a Pleistocene age sand bank at marsh edge has added urgency to purpose and need. Studied factors include existing water quality, vegetation, and fish/wildlife; community baseline and real estate conditions, geologic setting, topography/bathymetry, relative sea level rise; historic and statistical wind/waves; physical, engineering, regulatory, and legal project constraints; project goals—including design life, cost, marsh acreage created, and habitat preserved; and lastly project execution strategy—developing Federal, State, & Local partnerships to best seek funding from available programs.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020	\$400,000 (Engineering Feasibility & Design)	100%

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Lakefront Beach Restoration City of Mandeville, LA City of Mandeville Dept. of Public Works, Keith LaGrange 1100 Mandeville High Blvd Mandeville, LA 70471 Phone: (985) 624-3169	PRINCIPAL designed, permitted and performed construction phase services for the restoration of a recreational beach at the east end of the Mandeville lakefront along the shoreline of Lake Pontchartrain. The project included the dredging of unsuitable material and the placement of granular sand material. PRINCIPAL obtained all permits to include the LA DNR, USACE joint coastal use permit.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2017	\$120,000	100%

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Bayou Rigolette East Jefferson Parish, LA Jefferson Parish Department of Ecosystem and Coastal Management PM – Michelle Gonzales, Director 1221 Elmwood Park Blvd., Suite 310 Jefferson, LA 70123 Phone: (504) 736-6719	The project objective is to restore marsh degraded during Hurricane Ida, located south of the Town of Lafitte, as identified by the U.S. Fish & Wildlife Service. Hurricane damage has opened pathway for water intrusion and flow, which is likely to further degrade the remaining marsh. Principal Engineering is responsible for developing a project data set and project alternatives that would accomplish USFWS identified goals. After coordinating with Jefferson Parish, USFWS, and CPRA to select a project scope Principal will advance the selected project to a conceptual design for funding purposes.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Est. 2024	\$200,000 (fee)	100%

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
U.S Army Corps of Engineers A/E Design & CPS IDIQ Contract #W912P8-09-D-0014 US Army Corps of Engineers New Orleans District (HPO) 7400 Leake Ave. New Orleans, LA 70118 Al Naomi (AECOM) Phone: (504) 799-1322	PRINCIPAL provided design and construction services support for multiple levee and flood protection projects under seven (7) separate Task Orders including LPV 109.02A (South Point to CSX), LPV 111.01 (CSX to Michoud Canal) and LPV 109.02B (I-10 Ramp). PRINCIPAL's duties were primarily to assist in the design process, prepare ROW drawings and misc. design support for the preparation of the construction documents for levee, flood wall and drainage pump station projects. PRINCIPAL was also given two (2) separate Task Orders to provide a Project Engineer and Field Inspector (QAR) for Construction Phase Services to the USACE New Orleans District for floodwall construction and elevation of hurricane protection levees to the 2011 100-yr level. This work was spread over four projects totaling over \$50M in construction cost.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2012	\$500,000 (engineering fee)	100%

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Airline Park Blvd Drainage & New Drainage Pump Station Jefferson Parish, LA Jefferson Parish Department of Drainage PM - Mitchell T. Theriot, P.E, Director 1221 Elmwood Park Blvd., Suite 907 Jefferson, La. 70123 Phone: (504) 736-6751	PRINCIPAL analyzed area hydrology and performed hydraulic calculations to establish/verify proposed subsurface pipe sizes and completed hydrodynamic computer modeling of the system to adequately address limited hydraulic storage available for a new 45 cfs drainage pump station (10-yr water surface elevation at outfall is higher than the street). This project also included reconstruction of 2500 L.F. two-lane, two-way concrete roadway with parking lanes, removal and replacement of mainline subsurface drainage, maintenance of traffic through detour of west-bound W. Metairie Ave (arterial with over 20,000 ADT) to facilitate construction, replacement of concrete side streets at the intersections, replacement of water and sewer house connections, and adjustment/replacement of existing manholes, catch basins, water facilities, and sewer facilities as necessary. PRINCIPAL also analyzed area hydrology, performed hydraulic calculations to establish subsurface pipe sizes and inlet spacing.	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2010	\$3.0M	100%

TEC Professional Services Questionnaire

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

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. N/A - NONE		
2.		
3.		
4.		

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

Profile of PRINCIPAL Engineering Inc.

PRINCIPAL Engineering, Inc. (PRINCIPAL) is a full-service consulting Architecture, Engineering and Construction services (A/E/C) firm specializing in the following disciplines: **Architectural, Civil, Environmental, Structural, Electrical and Mechanical and Construction Engineering Services**. Founded in 2004, we have been successfully providing professional services to federal, state, parish and city government agencies since our inception. Over **90 percent** of our work is from governmental agencies.

PRINCIPAL is pleased to report that we are solvent and in a solid financial condition. We have a healthy cash flow and a favorable cash reserve. In addition to our capital reserves, PRINCIPAL has a significant cash line of credit which gives us the capacity to deploy resources when and where needed to meet the needs of our clients. We have the capacity, capability and experience to deliver successful **Coastal Engineering services** to Jefferson Parish and we have successfully completed numerous public engineering projects for Jefferson Parish. PRINCIPAL's President and Vice President are former active-duty military engineering officers and current reserve forces military engineering officers that have past successful experience working on CONUS and OCONUS US Army and US Air Force DOD Facility and Civil Works Projects.

PRINCIPAL is a verified Service-Disabled Veteran Owned Small Business (SDVOSB) with the Center for Veterans Enterprise (CVE) and PRINCIPAL.

PRINCIPAL Engineering, Inc. is fully licensed and insured to perform architectural and engineering services in the State of Louisiana. The firm is registered as a corporation with the State of Louisiana, Office of the Secretary of State and is licensed as an Engineering Firm with the **Louisiana Professional Engineering and Land Surveying Board; License no. 3168**. In addition, we are currently licensed to practice professional engineering in the states of **Alabama, Arizona, Arkansas, Colorado, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Maryland, Mississippi, Missouri, Nebraska, Nevada, New Mexico, New York, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Utah, Virginia, and West Virginia.**

PRINCIPAL Engineering® is a federally registered service mark.



TEC Professional Services Questionnaire

Section N. continued...

Response to Evaluation/Selection Criteria

1. Professional Training and Experience

Since 2004, PRINCIPAL Engineering has performed A/E services for nearly every municipal government agency in the New Orleans Metropolitan area and all are repeat clients. As a result, PRINCIPAL has a proven history of local public infrastructure engineering and construction success as well as established local relationships that have been built on these accomplishments. PRINCIPAL's president is a past local Public Works and Utilities Director and Public Works Engineer and is a former Chairman of the St. Tammany Levee, Drainage and Conservation District. In addition, PRINCIPAL is very familiar and has intimate knowledge of the Jefferson Parish Coastal Zones. Our team of PRINCIPAL Engineers can easily and precisely navigate and facilitate communication with all the stakeholders involved with any Coastal Improvement Effort. PRINCIPAL has coordinated and worked with the USACE, New Orleans District on federal determination efforts for coastal shoreline protection and restoration efforts for St. Tammany Parish and the City of Mandeville. Furthermore, PRINCIPAL employs two former USACE employees that have deep institutional knowledge regarding federal policies, programs, procedures and design criteria with regard to civil works infrastructure improvement endeavors.

PRINCIPAL employs engineers that are fully capable of conducting complex engineering and design for coastal improvement endeavors. Our engineers utilize state-of-the-art modeling and GIS applications in all phases of water resources planning and engineering, including hydrodynamic, hydrologic, hydraulic, wave mechanics, and water quality analysis. Our Team's software competency includes Delft3D Flow, Delft3D-Wave (SWAN), HEC-RAS, HEC-2, WSPRO, HY-8, RiverCAD, HEC-6T, CulvertMaster, EPA-SWMM, MIKE URBAN, HEC-1, HEC-HMS, StormCAD, PondPack, FlowMaster, HydraFlow, LADOTD, HYDRO6020, AutoCAD Storm & Sanitary Analysis, and custom GIS-based applications for hydraulics and hydrology.

Water Bottom Reclamation & Riparian Rights Expertise

- **Lakefront Wetlands Restoration** - Principal Engineering successfully acquired property rights and permits on behalf of the City of Mandeville to construct and maintain a linear rubble mound shoreline protection project in Lake Pontchartrain. This included abstracting to determine ownership, negotiation with landowners for permission, coordination for consent from adjacent governmental jurisdictions, alteration of an existing LA State land lease, creation of new Class E Land Lease with the Office of State Lands, and definition of servitudes required in favor of the City for construction and maintenance.
- **Shell Beach Fishing Pier** - To construct a new fishing pier into the Mississippi River Gulf Outlet (MRGO) at Shell Beach, Principal Engineering abstracted to determine underlying private property interests and historical rights-of-way within the MRGO easement, from dedication to the Port of New Orleans in 1959, transfer to the United States in 1962, through congressional de-authorization up to the present. Pier alignment was selected to remain within areas that revert to public ownership, therefore available to St. Bernard Parish with permits from the USACE and Coast Guard; including the abandoned LA 46 right of way and the former path of Bayou Yscloskey that were excavated by the MRGO construction and subsequent erosion. For an adjacent park, a legal opinion was prepared for the Parish regarding Riparian landowner rights, determining the amount of land reverting to Parish ownership if reclaimed with public funds, and the portion of a privately owned parcel that must be purchased for use.
- **Tchefuncte Marsh Shoreline Protection** - To construct a 15,000 LF shoreline protection project in Lake Pontchartrain consisting of rubble mound with intermittent breaks, Principal Engineering used abstracted documents, boundary survey, and historical shoreline location to determine State Land Lease requirements, Riparian rights of landowners, and necessary servitudes for acquisition by the City.

TEC Professional Services Questionnaire

Section N. continued...

Key Personnel Training & Experience

- **Henry DiFranco, PE**, is **President** of PRINCIPAL Engineering, Inc. and has over 30+ years of experience in local, state and federal public works engineering and management. Mr. DiFranco, a retired *Lt Col in the Air Force Reserves*, he was deployed to Baghdad, Iraq in support of OPERATION IRAQI FREEDOM. As a civil engineering officer, he was responsible for approximately **\$15 million** dollars of infrastructure improvements in and around the Baghdad area. He completed numerous water distribution projects to provide potable and non-potable water service for new housing development projects for coalition forces under combat conditions. He was assigned to the Air Force Civil Engineering Support Agency where he supported Air Force Civil Engineering worldwide. Furthermore, Mr. DiFranco served as the *Director of Public Works & Utilities* for St. John Parish and held numerous positions as a Parish Public Works Engineer and Consulting Engineer throughout his career. Also, Mr. DiFranco was the Chairman of the *St. Tammany, Levee, Drainage and Conservation District* (Governor Appointed - 2015 to 2020), where he was instrumental in the planning, scope writing and implementation for the development of a Coastal Master Plan for St. Tammany Parish.
- **Andre Monnot, PE**, is **Vice President** of PRINCIPAL Engineering, Inc. As a member of the U.S. Air Force, he held several positions in the Civil Engineering field. He served in a project scoping position, where prior to design, requirements were identified, studied, scoped, and packaged into executable projects; funding source identification and overall prioritization was accomplished. Mr. Monnot deployed in support of OPERATION IRAQI FREEDOM, during which time he was the Chief Maintenance Engineer for the installation. He led construction on several emergency power projects, completed a comprehensive mapping and inventory of the base's water and sanitary sewerage systems, and managed **\$5M** in service contracts for garbage collection, custodial services, and potable water delivery. In the military and as a consultant, he has designed a broad array of projects encompassing water, wastewater, roadway, drainage, structural, and airfield paving. This includes preparation of engineering calculations, drawings, technical specifications, and contract documents; and managing personnel and costs related to the projects.

2. Size of the Firm

PRINCIPAL Engineering has a staff of 24 professional and technical employees. Our experts have specialization in coastal engineering efforts which include a team of 5-licensed Engineers, 1-licensed Hydrologists and 2-Engineer Interns.

3. Capacity

Our current staff has the capacity to add new projects and successfully complete projects for Jefferson Parish. Our team works closely together and utilizes state of the art computer and communications technology to manage the firm's current workload and scheduling of future projects. PRINCIPAL strives to carefully schedule our workload; our experience and resources to complete the project within the client's anticipated schedule is key to fulfilling our Mission.

The size of our firm allows us to provide intimate communication with our clients. We have an established performance record of successfully completing design and/or construction phase services within the client approved performance schedules, including the coordination and scheduling of services from any outside consultants (survey/geotechnical). We have *not* experienced any issues with time delays or cost overruns because of our firm's capacity to deliver a successful product. A snapshot of some of our current workload, current phase and recent project additions include the following:

Current JP Design/Construction Phase Workload:

- ◆ JPG – Live Oak Blvd. Water Line – Design – 95% Complete
- ◆ JPG – Bayou Rigolettes East Marsh – Study – 65% Complete

TEC Professional Services Questionnaire

- ◆ JPG – Lafitte & Pritchard Sewer LS – Close Out 99%

Section N. continued...

- ◆ JPG – Jung Blvd & Falcone St. – Close Out 50%
- ◆ JPG – Jefferson Heights Waterline Improvement – Design – 20% Complete
- ◆ JPG – Cleary & Bright Playground Gym Reno – Record Drawing – 100% Complete – Close Out 50%
- ◆ JPG – Destrehan Sewer Lift Station – Design – Bidding Phase 20%
- ◆ JPG – Grand Isle Pump Station – Design – 95% Complete
- ◆ JPG – Westbank Master Drainage Plan – Study – 70% Complete
- ◆ JPG – Laketown Shoreline Alternatives – Study – 50% Complete
- ◆ JPG – Laketown Rock Jetty – Design – 100% Complete
- ◆ JPG – Woodmere Playground – Design 100% Complete (Sub to Meyer)
- ◆ JPG – Third Street Drainage – Construction – 25% Complete
- ◆ JPG – Stall Ditch Drainage – Construction – 100% Complete
- ◆ JPG – Bucktown Marsh Overlook Structure – 100% Complete
- ◆ JPG – Woodmere Youth Center Renovations – Design – 95% Complete

Furthermore, with an average of twenty-two (24) full-time employees PRINCIPAL has an approximate current capacity of \$5.5M annually. Our current monthly billing average is approximately \$350K for an average yearly gross billing of \$4.2M. Therefore, our current existing capacity to initiate backlog and take on new projects is over \$1.0M annually.

4. Past Performance

Principal Engineering has an excellent professional reputation with all of our governmental agency clients. Principal has provided services to nearly every public agency in the New Orleans metropolitan area as well as various State and Federal agencies. Every Governmental client is and has been a repeat customer. A partial list of our New Orleans regional area clients includes the following:

- ◆ City of New Orleans, Department of Public Works
- ◆ City of Kenner, Department of Public Works
- ◆ City of Covington, Department of Engineering
- ◆ City of Mandeville, Department of Public Works
- ◆ Jefferson Parish, Department of Public Works
- ◆ Jefferson Parish School Board
- ◆ St. Tammany Parish, Department of Engineering
- ◆ St. Tammany Parish, Department of Environmental Services
- ◆ Town of Abita Springs
- ◆ City of Slidell, Department of Engineering
- ◆ Plaquemines Parish Government, Department of Public Works
- ◆ St. Bernard Parish Government, Department of Public Works
- ◆ Sewerage and Water Board of New Orleans
- ◆ Housing Authority of Jefferson Parish
- ◆ St. Charles Parish, Department of Public Works
- ◆ St. John the Baptist Parish Department of Utilities & Public Works

5. Location of Office Performing Work

Our St. Tammany Parish, LA office, located at **128 Northpark Boulevard, Covington, LA 70433** is the office where the work will be performed.

TEC Professional Services Questionnaire

6. Analysis of Work Resulting in Litigation

Principal Engineering, Inc. has no past or current litigation with Jefferson Parish Government, and we have no history of litigation with any governmental/municipal client.

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

Please see attached related projects Principal Engineering Inc., has included in this SOQ with verifiable references.

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

Signature: _____



Print Name: Henry I. DiFranco, Jr.

Title: President

Date: July 16, 2024



TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

As-Needed Parish-Wide

Coastal Engineering Consulting Services

SOQ **24-020** | Resolution No. **144205**

B. Firm Name & Address:



BFM Corporation, LLC

15 Veterans Memorial Boulevard | Kenner LA 70062

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:

Ralph P. Fontcuberta, Jr., PLS, Executive Vice President

504-468-8800 | 504-468-8800 cell | ralph@bfmcorporation.com

Registered Professional Land Surveyor (**Louisiana No. 4329; since 1974**)

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:

Ralph P. Fontcuberta, Jr., PLS, Executive Vice President

504-468-8800 | 504-468-8800 cell | ralph@bfmcorporation.com

Registered Professional Land Surveyor (**Louisiana No. 4329; since 1974**)

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

<u>4</u>	Administrative		Estimators		Specification Writers
	Architects (Licensed)		Geologists		Structural Engineers
	Chemical Engineers	<u>1</u>	Geotechnical Engineers		Graduate Engineers
	Civil Engineers		Interior Designers	<u>2</u>	Project Managers
	Construction Inspectors		Landscape Architects		Clerical (<i>see Administrative</i>)
	Ecologists	<u>1</u>	Land Surveyor (<i>Apprentice</i>)		Grant/Funding Specialist
	Electrical Engineers		Mechanical Engineers		Sanitary Engineers
	Engineer Intern		Environmental Engineers	<u>1</u>	<i>Researcher/Archivist</i>
<u>2</u>	Professional Land Surveyors			<u>3</u>	<i>CADD Technicians</i>
				<u>6</u>	<i>Survey Crew Chief</i>
				<u>6</u>	<i>Survey Crew Instrumentman</i>
				<u>26</u>	TOTAL

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

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

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.		
1. N/A		
2.		
H. Has this JOINT-VENTURE previously worked together? Please check: YES_____ NO_____ N/A		
I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.		
Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. N/A		
2.		
3.		
J. Please specify the total number of support personnel that may assist in the completion of the Project: <div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; width: 100px; margin-right: 10px;">26</div> <div>(all personnel will be available for assignment to the project)</div> </div>		

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., résumé) 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:

Ralph P. Fontcuberta, Jr., PLS

Executive Vice President / Registered Professional Land Surveyor

Project Assignment:

Registered Professional Land Surveyor

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

42 years (Founding Principal of BFM in 1982); Gulf South Engineering and Testing, Inc. | 2017 to present
57 years total (1967) BFM Corporation, LLC | 1982 to present
Surveys, Inc. | 1967 to 1982
The Boeing Company | 1964 to 1967

Education: Degree(s)/Year/Specialization:

2 yr, Building Trade Curriculum, Delgado, New Orleans
2 yr, Mathematics Curriculum, University of New Orleans

Active Registration: Year first registered/discipline:

1974 / Professional Land Surveyor (Louisiana No. 4329)
1974 / Professional Land Surveyor (Mississippi No. 1633)

Other experience and qualifications relevant to the proposed Project:

Ralph P. Fontcuberta, Jr., PLS has provided services on an almost incalculable number of surveying projects throughout southeastern Louisiana in the past half century and has been a registered Professional Land Surveyor (PLS) since 1974. He is thoroughly knowledgeable in all aspects of surveying: topographic, hydrographic, boundary, right-of-way surveying, and all facets thereof. He has provided surveying services for residential, plant, and industrial layout projects, ranging from small private lots & buildings to multi-million-dollar programs, including the New Orleans FEMA Streets/Recovery Roads Program. Since the beginning of his career, his work has entailed computations, drafting, and field work for various industrial, commercial, municipal, and private clients.

Project work has included topographic surveying needed for a wide variety of engineering, architectural, construction, and other related endeavors. This has included projects for numerous branches of virtually every regional city/parish/town government, multiple State agencies (LA Dept. of Natural Resources (LADNR), Coastal Protection & Restoration Administration (CPRA), LA

TEC Professional Services Questionnaire

Other experience and qualifications: **Ralph P. Fontcuberta, Jr., PLS (continued)**

Dept. of Transportation & Development (LADOTD), MS Dept. of Transportation (MDOT), and others), Federal agencies (U.S. Army Corps of Engineers (USACE), Dept. of the Navy, etc.), private/public companies (Entergy, BellSouth, Cox Cable, etc.), and numerous other public/private entities.

Mr. Fontcuberta's surveying experience with Jefferson Parish can be traced back to BFM's inception in 1982, and to 1967 then while working as a surveyor with another firm. He has over half a century of experience with surveying throughout the region and specifically with Jefferson Parish. He has served as the PLS for projects throughout every corner of Jefferson Parish. Relevant project history includes, but is certainly not limited to, the following:

- Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, LA
- Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA
- The Westshore Enhancements Storm Surge Protection Project (Phase 1 & 2), Ascension Parish, LA
- Abita River Regional Detention Pond Expansion, St. Tammany Parish, LA
- Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, LA
- Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, LA
- Fisher Basin Alignment Extension (Fisher/Lafitte Tidal Protection Alignment), Jefferson Parish, LA
- Marsh Island (Lafreniere Park), Metairie, Jefferson Parish, LA
- Alexis Bay Marsh Creation Project, Venice, Plaquemines Parish, LA
- Bayou Segnette Topographic Survey, Westwego, Jefferson Parish, LA
- Trapp Canal Improvements, Bayou Fatma to Bayou Barataria, Jefferson Parish, LA
- Grand Isle State Park Breakwater Survey for Erosion, Jefferson Parish, LA
- Lower Lafitte Shoreline Stabilization at Bayou Rigolets, Segments AU1 and AU5, Jefferson Parish, LA
- Elmer's Island Surveying Services, Grand Isle, Jefferson Parish, LA
- Grand Isle Jetty Project, Grand Isle, Jefferson Parish, LA
- Fifi Island Restoration Extension, Jefferson Parish, LA
- Hydrographic Survey of the Mississippi River Range Line 1-9, Westwego, Jefferson Parish, LA
- Bayou Segnette Fronting Protection/New Pump Station, Westwego, Jefferson Parish, LA
- Lake Pontchartrain LPV149 - Caernarvon Canal Floodwall Construction Layout Survey, St. Bernard/Plaquemines Parish, LA
- Tchefuncte River Area Surveys, Tchefuncte River, LA
- Multibeam Hydrographic Survey, Pelican Island, Plaquemines Parish, LA
- SLFPA-E Levee Certification Phase 2 Survey - 40 Arpent & Maxent Levees, Orleans & St. Bernard Levee Systems, Orleans Parish, LA
- Forested Ridge Reach B-2, Fort Jackson to Venice, Plaquemines Parish, LA
- Bayou Sale Shoreline Protection Project (TV-20), Terrebonne Parish, LA
- Bayou Henderson, Ascension Parish, LA

TEC Professional Services Questionnaire

Other experience and qualifications: **Ralph P. Fontcuberta, Jr., PLS (continued)**

- LPV 107 Lincoln Beach Levee & Gate, Orleans Parish, LA
- Lac Des Allemands Shoreline Protection & Restorations, St. John the Baptist Parish, LA
- Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA
- Hydrographic/Reclamation Monitoring at Multiple Sites, Terrebonne Parish, LA
- Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 4, St. Charles Parish, LA
- Lake Pontchartrain Shoreline Projection and Enhancement Design Survey, St. Charles Parish, LA
- Louisiana DNR 2503-00-40; Bathymetric Surveying for Lake Borgne at Shell Beach (PO-30), LA
- Lincoln Beach Restoration, Orleans Parish, LA
- Goose Bayou Ridge Creation and Shoreline Protection Project, Goose Bayou at Cypress Bayou, LA
- Barataria Bridge, Jonathan Davis Wetland Restoration, LA
- USCG Belmont Ranges, St. James Parish, Gramercy, LA
- Barataria Basin Landbridge Shoreline Protection, LA
- Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 1, St. Charles Parish, LA
- Walnut Street, Orleans Street, and Oak Park Pond, St. Tammany Parish, LA
- Central Wetlands Unit and 40 Arpent Canal Access & Enhancement Project, St. Bernard Parish, LA
- WBV-MRL 4.1, English Turn Bend to Belle Chasse, Plaquemines Parish, LA
- Plaquemines Parish Coastal Restoration, Plaquemines Parish, LA
- Louisiana DNR 2503-00-40; Violet Canal - South of Chalmette on LA 46, St. Bernard Parish, LA
- Naomi Siphon Outfall Management (BA-03C) and Barataria Bay Waterway East Bank Protection (BA-26), LA
- WBV-MRL 6.1, Parish Line to English Turn Bend, Orleans & Plaquemines Parishes, LA
- USA Right-of-Way Line, Intracoastal Waterway in Belle Chasse, Plaquemines Parish, LA
- Shrimp Factory Alternative Site, SE Louisiana Flood Protection Authority - East, St. Bernard Parish, LA
- Rigolets Shoreline Protection Development, Third District, Orleans Parish, LA
- Deer Island Pass, St. Mary Parish, LA
- Fort Pike (State Historic Site), Slidell, St. Tammany Parish, LA
- Cat Island Restoration Project, Plaquemines Parish, LA
- Bayou Dupre Flood Gate, St. Bernard Parish, LA
- Black Bayou Surveying Services, Lake Charles, Calcasieu Parish, LA
- Bayou St. John Hydrographic Survey, New Orleans, LA
- Port of Manchac Soundings, Lake Pontchartrain, Manchac, Tangipahoa Parish, LA
- Tiger Pass Hydrographic Survey, Venice Boat Harbor Road, Belle Chasse, LA
- Intracoastal Waterway Cross Sections (including Engineers Road), Belle Chasse, Plaquemines Parish, LA
- Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 2, Lafourche Parish, LA

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Chad M. Poché, P.E.

Executive Vice President / Registered Professional Geotechnical Engineer

Project Assignment:

Engineering Liaison

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

7 years (became partial owner of BFM in 2017);
31 years total (1993)

BFM Corporation, LLC | 2017 to present
Gulf South Engineering and Testing, Inc. | 2011 to present
Ardaman and Associates, Inc. | 2007 to 2011
Soil Testing Engineers, Inc. | 2001 to 2007
Eustis Engineering | 1996 to 2001
Soil Testing Engineers, Inc. | 1993 to 1996

Education: Degree(s)/Year/Specialization:

M.S., 1998, Civil Engineering, University of New Orleans
B.S., 1993, Civil Engineering, Louisiana State University

Active Registration: Year first registered/discipline:

1998, Civil Engineer (Louisiana No. 27667)
2002, Civil Engineer (Mississippi No. 15405)

Other experience and qualifications relevant to the proposed Project:

Chad M. Poché, P.E. is an Executive Vice President with (and partial owner of) BFM Corporation, LLC, and a co-founder of BFM's sister company, Gulf South Engineering and Testing, Inc. He has been a consulting geotechnical engineer for nearly 30 years in South Louisiana, working on traditional and unique geotechnical engineering projects (shallow and deep foundation design, slope stability, pavement design, etc.). Mr. Poché has also provided construction oversight for waste facilities and virtually every type of earthwork related project. He has been the geotechnical engineer of record for thousands of projects throughout his career.

Mr. Poché's experience includes the development of appropriate scopes of work and proposals for a broad range of projects; planning and coordinating analyses; preparing technical reports; foundation and geotechnical engineering design; construction recommendations; Miss. River facility permitting; managing personnel and office operations, and; serving as an Expert Witness. Mr. Poché has logged soil borings; overseen the installation of ground water monitoring wells, piezometers, and inclinometers; overseen and evaluated pile load tests; overseen, performed, and evaluated dynamic pile testing (PDA and PIT); performed CMT field testing and inspection; and performed laboratory testing.

TEC Professional Services Questionnaire

Other experience and qualifications: **Chad M. Poché, P.E. (continued)**

Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. Scope included establishing three static GPS observation points at major turns on the levee to ensure baseline is constrained to State Plane Coordinates; BFM also established a baseline along the centerline of the existing earthen levee (referenced to NAD 1983 2011). BFM set vertical control Temporary Benchmarks (TBM) which were referenced to horizontal control points (NAVD 1988 Geoid 12B). Plotted a cross section depicting the ground, edge of water, top and toe of earthen levee, and levee centerline at typical widths of 100 feet. Located visible above-ground utilities as well as underground utilities with visible surface evidence (where available, BFM obtained record drawings from relevant agencies to further plot utilities), as well as existing wall, center of pumps, and discharge pipes at the existing pump station. Trees and large shrubbery & etc. were located and described. Existing improvements (such as sheds, piers, and buildings) and trees were included in general location surveying. Deliverables included hardcopy, PDF, and AutoCAD DWG files. (\$150,000 (fee); 2018)

The Westshore Enhancements Storm Surge Protection Project (Phase 1 & 2), Ascension Parish, LA. BFM provided Boundary and Route Topographic & Hydrographic Surveying for the project in Ascension Parish, LA; as established, the project was executed in two phases. BFM executed a Route Topographic Survey; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$477,340 (fee); 2023)

Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, LA. BFM provided Magnetometer & Hydrographic surveying services for the Tchefuncte Marsh Shoreline Protection Project. Prior to field work, BFM reviewed the Prime's design work plan (September 2021), reviewing existing and previous CPRA projects to identify previously permitted and approved marsh fill borrow areas in Lake Pontchartrain within 6 miles of the project's area. The scope of services included conducting a Magnetometer Survey throughout the site to identify any potential pipelines or other metallic obstructions. Services included surveying along four transects, parallel to the shoreline. A Hydrographic Survey of two 50-acre borrow pit locations was conducted. Cross Sections were taken at 250 ft. intervals within the borrow pits. (\$68,300 (fee); 2022)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also considered. (\$118,873 (fee); 2019)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 1, St. Charles Parish, LA. BFM provided topographic and hydrographic surveying services for Segment 1 of the Upper Barataria Basin Risk Reduction (UBRR) Project; this involved the Davis Pond West Guide Levee in St. Charles Parish. (\$19,147 (fee); 2019)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Gary J. Lambert, Jr., PLS

Vice President / Registered Professional Land Surveyor

Project Assignment:

Project Manager/Drafting Supervisor

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

6 years (joined BFM in 2018);
13 years total (2011)

BFM Corporation, LLC | 2018 to present
Riverlands Surveying | 2016 to 2018
Bertucci Contracting | 2011 to 2016

Education: Degree(s)/Year/Specialization:

B.S., 2018, Geomatics, Nicholls State University

B.S., 2014, Construction Management, Louisiana State University

Active Registration: Year first registered/discipline:

2021, Professional Land Surveyor (Louisiana No. 5929)

Other experience and qualifications relevant to the proposed Project:

Gary J. Lambert, Jr., is a registered Professional Land Surveyor in Louisiana and provides Project Management and Drafting Oversight for BFM Corporation. He is the first point of contact for clients on technical matters, scheduling, and deliverables for project work, and conducts meetings with engineering, architectural, and government officials to discuss various project needs. His project work has encompassed all manner of surveying services, from basic home lots to 100+ acre tract boundary surveys.

In the field, Mr. Lambert has provided services as a Survey Crew Chief, using both traditional and robotic surveying methods, since the start of his professional career, and has experience with Leica, Hypack, AutoCAD, AutoCAD 3D, Trimble, and RTK surveying technologies. He further trains employees in the use of an aerial drone, laser scanner, and remote-controlled hydrographic survey boat. This survey experience includes topographic, boundary, ALTA/NSPS, FEMA, and various construction surveying. Mr. Lambert has also conducted hydrographic surveys in the Mississippi River and various other bodies of water throughout the Gulf Coast area.

Mr. Lambert has completed Basic OSHA Training and holds license with the Gulf Coast Safety Council (08SSV, ID429523).

TEC Professional Services Questionnaire

Other experience and qualifications: **Gary J. Lambert, Jr., PLS (continued)**

Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. Scope included establishing three static GPS observation points at major turns on the levee to ensure baseline is constrained to State Plane Coordinates; BFM also established a baseline along the centerline of the existing earthen levee (referenced to NAD 1983 2011). BFM set vertical control Temporary Benchmarks (TBM) which were referenced to horizontal control points (NAVD 1988 Geoid 12B). Plotted a cross section depicting the ground, edge of water, top and toe of earthen levee, and levee centerline at typical widths of 100 feet. Located visible above-ground utilities as well as underground utilities with visible surface evidence (where available, BFM obtained record drawings from relevant agencies to further plot utilities), as well as existing wall, center of pumps, and discharge pipes at the existing pump station. Trees and large shrubbery & etc. were located and described. Existing improvements (such as sheds, piers, and buildings) and trees were included in general location surveying. Deliverables included hardcopy, PDF, and AutoCAD DWG files. (\$150,000 (fee); 2018)

Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, LA. BFM provided Magnetometer & Hydrographic surveying services for the Tchefuncte Marsh Shoreline Protection Project. Prior to field work, BFM reviewed the Prime's design work plan (September 2021), reviewing existing and previous CPRA projects to identify previously permitted and approved marsh fill borrow areas in Lake Pontchartrain within 6 miles of the project's area. The scope of services included conducting a Magnetometer Survey throughout the site to identify any potential pipelines or other metallic obstructions. Services included surveying along four transects, parallel to the shoreline. A Hydrographic Survey of two 50-acre borrow pit locations was conducted. Cross Sections were taken at 250 ft. intervals within the borrow pits. (\$68,300 (fee); 2022)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also considered. (\$118,873 (fee); 2019)

Abita River Regional Detention Pond Expansion, St. Tammany Parish, LA. BFM provided topographic and hydrographic surveying services for the project, whose Limits of Survey consisted of Parcel A3-A, a portion of Lambert Investments Minor Subdivision, in St. Tammany Parish. BFM established two temporary benchmarks (TBMs) along Harrison Avenue near the project site, with the vertical datum referenced to NAVD 1988. Surveying services included location of the existing pond, adjoining swales and culverts, and two ditches which exist within the remainder of Parcel A3-A. Spot elevations were taken at 200 ft. intervals on land and 50 ft. within the limits of the pond. Deliverables included detailed indelible prints showing plan & profile views with cross-sections along with digital files. (\$68,400 (fee); 2019)

The Westshore Enhancements Storm Surge Protection Project (Phase 1 & 2), Ascension Parish, LA. BFM provided Boundary and Route Topographic & Hydrographic Surveying for the project in Ascension Parish, LA; as established, the project was executed in two phases. BFM executed a Route Topographic Survey; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$477,340 (fee); 2023)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Christopher Lemley
Field Operations Manager/Survey Crew Chief

Project Assignment:

Field Operations Manager/Survey Crew Chief

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

10 years (joined BFM in 2014); BFM Corporation, LLC | 2014 to present
18 years total (2006) G.E.C., Inc. | 2010 to 2014
Krebs, LaSalle, LeMieux Consultants, Inc. | 2006 to 2010

Education: Degree(s)/Year/Specialization:

High School Diploma

Active Registration: Year first registered/discipline:

American Traffic Safety Service Assn. – Traffic Flagger
Louisiana Boater Education - Boating Safety Certificate
Norfolk Southern Roadway Worker Protection Contractor Safety Certificate

Other experience and qualifications relevant to the proposed Project:

Chris Lemley's services as BFM's Field Operations Manager includes overseeing all field work and activity by company personnel. His surveying experience includes over 8 years as a Survey Crew Chief. His survey software experience includes projects involving Trimble, Topcon, Leica, and Hypack, and has maintained and operated GPS, Auto-Level, and Total Station. Notable past project work has included the New Orleans Museum of Art, Jackson Barracks Restoration, US Highway 11, NASA Michoud Cells 3 & 4, the St. Bernard Lot Next Door Program, and multiple Orleans Parish School Recovery projects (including L.B. Landry, George Washington Carver, and Alice M. Harte schools).

Lafitte Area Levee Repair (BA-82) (CPRA 4400007082, Task 8), Jefferson Parish, LA. BFM provided all topographic and hydrographic surveying services as required by the project. This included establishing a baseline parallel to the shoreline, establishing temporary benchmarks, plotting location of improvements, determining pipeline aspects (size, depth, etc.), and taking cross sections, as well as all elements of the hydrographic survey of the waterway. (\$8,924 (fee); 2017)

Lower Lafitte Waterline, Jefferson Parish, LA. BFM provided surveying services associated with the location of a 16 inch plastic waterline in the Barataria Waterway as part of the Lower Lafitte Shoreline Stabilization project. BFM provided stakeout surveying for the project, staking the water

TEC Professional Services Questionnaire

Other experience and qualifications: **Christopher Lemley (continued)**

line every 50 feet (with 4 ft. wooden stakes). Certain areas were very deep and the line was not accurately located in this area. BFM set markers where approximate locations were based on the areas where the line was found. (\$38,205 (fee); 2017)

Fisher Basin Alignment Extension (Fisher/Lafitte Tidal Protection Alignment), Jefferson Parish, LA. BFM provided topographic, bathymetric, and boundary surveying services for the project. The scope of services included extension of the project baseline along the shoreline of Bayou Barataria and towards LA45. The topographic survey was executed with sufficient intermittent shots to establish grade, and located all topographic features that could interfere with the proposed floodwalls and levee. Cross sections were also taken, with hydrographic surveys continuing out into the water and terminating at the thalweg. Overall, the surveying and mapping included sufficient topographic surveys and cross sections necessary to design, layout, access, construct, and perform the work. (\$12,197 (fee); 2015)

Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, LA. BFM provided Magnetometer & Hydrographic surveying services for the Tchefuncte Marsh Shoreline Protection Project. Prior to field work, BFM reviewed the Prime's design work plan (September 2021), reviewing existing and previous CPRA projects to identify previously permitted and approved marsh fill borrow areas in Lake Pontchartrain within 6 miles of the project's area. The scope of services included conducting a Magnetometer Survey throughout the site to identify any potential pipelines or other metallic obstructions. Services included surveying along four transects, parallel to the shoreline. A Hydrographic Survey of two 50-acre borrow pit locations was conducted. Cross Sections were taken at 250 ft. intervals within the borrow pits. (\$68,300 (fee); 2022)

Alexis Bay Marsh Creation Project, Venice, Plaquemines Parish, LA. BFM provided multiple survey services for this marsh creation project, including elevations, locations, establishing control points, and plat preparation. The project, which specifically involved the creation of a terrace field in Alexis Bay near Venice, Louisiana, also included general topographic surveying services of the project's island location. Hydrographic surveying via airboat was a project element. (\$8,625 (fee); 2015)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 1, St. Charles Parish, LA. BFM provided topographic and hydrographic surveying services for Segment 1 of the Upper Barataria Basin Risk Reduction (UBRR) Project; this involved the Davis Pond West Guide Levee in St. Charles Parish. (\$19,147 (fee); 2019)

Hydrographic/Reclamation Monitoring at Multiple Sites, Vermilion Parish, LA. BFM provided topographic and hydrographic surveying services for ongoing reclamation monitoring at multiple sites, including Blue Hammock, Bay Goreau, Bay Goreau (West), and Hellhole Bay. GPS surveying services included elevations based on NAVD 1988 vertical (Geoid 12A epoch 2006.85), which utilized land-based laser scanning. Spot elevations were also provided. For the hydrographic surveying elements, BFM's dual frequency Z-boat took soundings in the same area (to show depth of silt and hard pan with a minimum water depth of 18 inches to show dual frequency); as the soundings got closer to the water's edge the surface of the silt was utilized to tie into the bank. Further, BFM plotted location of improvements within the designated limits of the survey. Deliverables included hardcopy, PDF, and AutoCAD DWG files. (\$35,500 (fee); 2016)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

John Philip Thayer

Procurement Director (Proposals & Project Management Support)

Project Assignment:

Project Management Support

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

16 years (joined BFM in 2008);
17 years total (2007)

BFM Corporation, LLC | 2008 to present
Delle Land Surveying | 2007 to 2008

Education: Degree(s)/Year/Specialization:

Certificate, 2015, Land Surveying Services

B.S., 2007, Physical Education, Trevecca Nazarene University

Active Registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Phil Thayer serves as BFM's Procurement Director, providing proposal preparation and Project Management Support, having considerable experience in field surveying services, including ALTA/as-built surveying, construction layout, boundary, topographic, cross-sections, GPS use, and numerous other surveying types.

Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, LA. BFM's surveying services on the project included establishing horizontal & vertical control (referenced to established benchmark and LA State Plane Coordinate System, NAD 1983 2011), coordination of proposed bulkhead/I-wall centerline, and collection of spot elevation every 25 feet along the centerline. BFM also plotted collected data with centerline overlaid for reference purposes. Deliverables include hardcopy, PDF, and AutoCAD DWG files. (\$23,220 (fee); 2017)

Lac Des Allemands Shoreline Restorations, St. John the Baptist Parish, LA. BFM provided surveying services for the project, which extended from Vacherie Canal southeast along the shoreline of Lac Des Allemands to Pointe Aux Herbes, a distance of approximately 11,000 feet. Surveying services included the research & review of any existing survey data and establishing a project baseline along the existing shoreline. Cross-sections extended from the baseline, 100 ft. in shore to 500 ft. off shore, every 300 ft. and perpendicular along the baseline. Hydrographic surveying included the mouth of the Vacherie Canal and mouth of Oil Well Canal, noting any significant features. Geotechnical borings were located (for plan identification). BFM further

TEC Professional Services Questionnaire

Other experience and qualifications: **John Philip Thayer (continued)**

established control (for use by contractor during construction), and prepared drawings of the survey results to include a plan view of the survey and a profile view of each transect. (\$38,399 (fee); 2010)

Lake Pontchartrain Shoreline Projection and Enhancement Design Survey, St. Charles Parish, LA. For the project, BFM provided topographic and hydrographic survey in the Labranche Wetlands area on the south shore of Lake Pontchartrain. The project begins at the easterly end of the previously constructed shoreline protection project east to the St. Charles-Jefferson Parish line. BFM also surveyed canals, sloughs and bayous that emptied into Lake Pontchartrain a minimum of 100 feet from the point of entry into the lake. Controls were established following the shoreline of Lake Pontchartrain for the entire project length. All sections taken were stationed along this baseline, which was based on the Louisiana State Plane Coordinate System, Lambert Grid, NAD 1983 (2007) as established by GPS observations. Elevations were established on each control point (based on NAVD 1988) and transects along the survey baseline taken at 300 ft. intervals (shorter intervals where necessary to define the shoreline). Transects extended 100 ft. inland to 500 ft. off the shoreline, with additional shots taken in-between to define it accurately. BFM further located existing weirs, dams or levees constructed across canals, sloughs or bayous, as well as any soil boring sites in the project area. (\$32,295 (fee); 2010)

Lower Lafitte Shoreline Stabilization at Bayou Rigolets, Segments AU1 and AU5, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. (\$33,370 (fee); 2010)

Fifi Island Restoration Extension, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. The scope of services involved mapping of property lines and existing servitudes for the railroad, cemetery, private residences, and a commercial establishment (Dive Shop) north of Airline Boulevard. The project also included preparation of a servitude document across the railroad property. (\$10,210 (fee); 2011)

Port of Manchac Soundings, Lake Pontchartrain, Manchac, Tangipahoa Parish, LA. BFM provided surveying services for the project involving a centerline of channel soundings from Lake Pontchartrain to the Port of Manchac Harbor on North Pass. (\$3,300 (fee); 2010)

Alexis Bay Marsh Creation Project, Venice, Plaquemines Parish, LA. BFM provided multiple survey services for this marsh creation project, including elevations, locations, establishing control points, and plat preparation. The project, which specifically involved the creation of a terrace field in Alexis Bay near Venice, Louisiana, also included general topographic surveying services of the project's island location. Hydrographic surveying via airboat was a project element. (\$8,625 (fee); 2015)

Goose Bayou Ridge Creation and Shoreline Protection Project, Goose Bayou at Cypress Bayou, LA. BFM located the western shoreline of Goose Bayou from the Pen in Lafitte to its intersection with Cypress Bayou. Surveying services included cross sections every 300 feet extending 100 feet into the marsh and sounding out the centerline of Goose Bayou. (\$25,325 (fee); 2009)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Dawn Hoffman Researcher/Archivist
Project Assignment:
Researcher/Archivist
Name of Firm with which associated:
 BFM CORPORATION, LLC Professional Land & Hydrographic Surveying
Years' experience with this Firm:
<div style="display: flex; justify-content: space-between;"> <div> 15 years (joined BFM in 2009); 27 years total (1997) </div> <div style="text-align: right;"> <i>BFM Corporation, LLC 2009 to present</i> <i>Fluor Corporation 2007 to 2009</i> <i>Geographic Computer Technologies, LLC 2000 to 2007</i> </div> </div>
Education: Degree(s)/Year/Specialization:
A.D., 1999, Computer-Aided Drafting, Southeast College of Technology Certificate, 2003, Introduction to ArcGIS, Louisiana State University
Active Registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project:
<p>Dawn Hoffman serves as BFM's primary researcher and has more than 25 years of experience in this field. She is extremely knowledgeable with researching in various parishes and cities.</p> <p>Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. Scope included establishing three static GPS observation points at major turns on the levee to ensure baseline is constrained to State Plane Coordinates; BFM also established a baseline along the centerline of the existing earthen levee (referenced to NAD 1983 2011). BFM set vertical control Temporary Benchmarks (TBM) which were referenced to horizontal control points (NAVD 1988 Geoid 12B). Plotted a cross section depicting the ground, edge of water, top and toe of earthen levee, and levee centerline at typical widths of 100 feet. Located visible above-ground utilities as well as underground utilities with visible surface evidence (where available, BFM obtained record drawings from relevant agencies to further plot utilities), as well as existing wall, center of pumps, and discharge pipes at the existing pump station. Trees and large shrubbery & etc. were located and described. Existing improvements (such as sheds, piers, and buildings) and trees were included in general location surveying. Deliverables included hardcopy, PDF, and AutoCAD DWG files. (\$150,000 (fee); 2018)</p> <p>Fisher Basin Alignment Extension (Fisher/Lafitte Tidal Protection Alignment), Jefferson Parish, LA. BFM provided topographic, bathymetric, and boundary surveying services for the project. The scope of services included extension of the project baseline along the shoreline of Bayou Barataria and towards LA45. The topographic survey was executed with sufficient intermittent shots to</p>

TEC Professional Services Questionnaire

Other experience and qualifications: **Dawn Hoffman (continued)**

establish grade, and located all topographic features that could interfere with the proposed floodwalls and levee. Cross sections were also taken, with hydrographic surveys continuing out into the water and terminating at the thalweg. Overall, the surveying and mapping included sufficient topographic surveys and cross sections necessary to design, layout, access, construct, and perform the work. (\$12,197 (fee); 2015)

Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, LA. BFM's surveying services on the project included establishing horizontal & vertical control (referenced to established benchmark and LA State Plane Coordinate System, NAD 1983 2011), coordination of proposed bulkhead/I-wall centerline, and collection of spot elevation every 25 feet along the centerline. BFM also plotted collected data with centerline overlaid for reference purposes. Deliverables include hardcopy, PDF, and AutoCAD DWG files. (\$23,220 (fee); 2017)

Marsh Island (Lafreniere Park), Metairie, Jefferson Parish, LA. BFM Corporation provided bathymetric and topographic surveying services for the Marsh Island project at Lafreniere Park in Jefferson Parish, Louisiana. The survey encompassed the island and surrounding waters up to and including the sidewalk. Cross sections of the island and surrounding waters were cut after the topographic and hydrographic surveying was completed. (\$9,568 (fee); 2016)

SLFPA-E Levee Certification Phase 2 Survey - 40 Arpent & Maxent Levees, Orleans & St. Bernard Levee Systems, Orleans Parish, LA. BFM surveyed the centerline of the 40 Arpent "Back" Levee (in excess of 124,000 lf on a 100 ft grid). Control points were established utilizing RTK GPS. In addition, each pump station was surveyed and all grade breaks/roads were obtained along the centerline of the levee. The old shrimp building at Violet Canal was also located as part of the survey. Surveys included utility locations (based on field evidence, investigation, and available utility records) as well as foundation of above-ground utility poles, wet wells, and pipeline crossings. Bathymetry information was incorporated into cross-section point file and combined with ground survey; this information was further converted to the same elevations as the levee profile work. Additional cross sections were surveyed to support detailed geotechnical analysis; locations were coordinated with the geotechnical engineer of record for the project. These cross sections extended 100 ft from the toe of the levee in both directions and included bathymetry of the lake, wetland, or canal, depending on location, and extended until depth of the body was determined. (\$166,500 (fee); 2013)

Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, LA. BFM provided Magnetometer & Hydrographic surveying services for the Tchefuncte Marsh Shoreline Protection Project. Prior to field work, BFM reviewed the Prime's design work plan (September 2021), reviewing existing and previous CPRA projects to identify previously permitted and approved marsh fill borrow areas in Lake Pontchartrain within 6 miles of the project's area. The scope of services included conducting a Magnetometer Survey throughout the site to identify any potential pipelines or other metallic obstructions. Services included surveying along four transects, parallel to the shoreline. A Hydrographic Survey of two 50-acre borrow pit locations was conducted. Cross Sections were taken at 250 ft. intervals within the borrow pits. (\$68,300 (fee); 2022)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Anthony Watson

CADD Technician (AutoCADD Drafting Services)

Project Assignment:

CADD Technician (AutoCADD Drafting Services)

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

13 years (joined BFM in 2011);
33 years total (1991)

BFM Corporation, LLC | 2011 to present
Krebs LaSalle Lemieux / GEC | 2008 to 2011
Doug Connally and Associates Land Surveying (Dallas, TX) | 1995-2008
Electrician | 1991 to 1995
City of Plano TX (Part-Time Drafting Services) | 1991

Education: Degree(s)/Year/Specialization:

Coursework - CAD, Avatech Solutions, Los Colinas, TX

Active Registration: Year first registered/discipline:

N/A

Other experience and qualifications relevant to the proposed Project:

Anthony Watson has experience as a draftsman/survey technician, having started his career as an intern with the Surveying Department of the City of Plano, Texas. His experience through the years includes manual and computer-aided drafting for a wide range of projects, ranging from small lot surveys to subdivisions to municipal treatment and private industrial plants. He has experience in all facets of surveying (boundary, topographic, ALTA/ACSM, plan & profile, etc.) in both drafting and field environments.

Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, LA. BFM's surveying services on the project included establishing horizontal & vertical control (referenced to established benchmark and LA State Plane Coordinate System, NAD 1983 2011), coordination of proposed bulkhead/I-wall centerline, and collection of spot elevation every 25 feet along the centerline. BFM also plotted collected data with centerline overlaid for reference purposes. Deliverables include hardcopy, PDF, and AutoCAD DWG files. (\$23,220 (fee); 2017)

Fisher Basin Alignment Extension (Fisher/Lafitte Tidal Protection Alignment), Jefferson Parish, LA. BFM provided topographic, bathymetric, and boundary surveying services for the project. The scope of services included extension of the project baseline along the shoreline of Bayou Barataria and towards LA45. The topographic survey was executed with sufficient intermittent shots to establish grade, and located all topographic features that could interfere with the proposed

TEC Professional Services Questionnaire

Other experience and qualifications: **Anthony Watson (continued)**

floodwalls and levee. Cross sections were also taken, with hydrographic surveys continuing out into the water and terminating at the thalweg. Overall, the surveying and mapping included sufficient topographic surveys and cross sections necessary to design, layout, access, construct, and perform the work. (\$12,197 (fee); 2015)

Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, LA. BFM provided Magnetometer & Hydrographic surveying services for the Tchefuncte Marsh Shoreline Protection Project. Prior to field work, BFM reviewed the Prime's design work plan (September 2021), reviewing existing and previous CPRA projects to identify previously permitted and approved marsh fill borrow areas in Lake Pontchartrain within 6 miles of the project's area. The scope of services included conducting a Magnetometer Survey throughout the site to identify any potential pipelines or other metallic obstructions. Services included surveying along four transects, parallel to the shoreline. A Hydrographic Survey of two 50-acre borrow pit locations was conducted. Cross Sections were taken at 250 ft. intervals within the borrow pits. (\$68,300 (fee); 2022)

The Westshore Enhancements Storm Surge Protection Project (Phase 1 & 2), Ascension Parish, LA. BFM provided Boundary and Route Topographic & Hydrographic Surveying for the project in Ascension Parish, LA; as established, the project was executed in two phases. BFM executed a Route Topographic Survey; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$477,340 (fee); 2023)

Bayou Segnette Fronting Protection/New Pump Station, Westwego, Jefferson Parish, LA. BFM's surveying services included establishment of vertical control for a new pump station. Total Station services were utilized for the project. (\$3,435 (fee); 2012)

Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. Scope included establishing three static GPS observation points at major turns on the levee to ensure baseline is constrained to State Plane Coordinates; BFM also established a baseline along the centerline of the existing earthen levee (referenced to NAD 1983 2011). BFM set vertical control Temporary Benchmarks (TBM) which were referenced to horizontal control points (NAVD 1988 Geoid 12B). Plotted a cross section depicting the ground, edge of water, top and toe of earthen levee, and levee centerline at typical widths of 100 feet. Located visible above-ground utilities as well as underground utilities with visible surface evidence (where available, BFM obtained record drawings from relevant agencies to further plot utilities), as well as existing wall, center of pumps, and discharge pipes at the existing pump station. Trees and large shrubbery & etc. were located and described. Existing improvements (such as sheds, piers, and buildings) and trees were included in general location surveying. Deliverables included hardcopy, PDF, and AutoCAD DWG files. (\$150,000 (fee); 2018)

Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, LA. BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also considered. (\$118,873 (fee); 2019)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Curtis "Jay" Barrios
Survey Crew Chief

Project Assignment:

Survey Crew Chief

Name of Firm with which associated:

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

Years' experience with this Firm:

34 years (joined BFM in 1990);
39 years total (1985)

BFM Corporation, LLC | 1990 to present
Benson Mercedes Benz | 1989 to 1990
SECO Electric | 1987
Frishhertz Electric | 1986 to 1987
Plain Construction | 1985 to 1986

Education: Degree(s)/Year/Specialization:

High School Diploma

Active Registration: Year first registered/discipline:

American Traffic Safety Service Assn. – Traffic Flagger
Basic OSHA Training Class Completion
Transportation Work Identification Card (TWIC)

Other experience and qualifications relevant to the proposed Project:

Jay Barrios' surveying experience includes boundary, hydrographic, and topographic. He has been the Survey Crew Chief for thousands of projects and is one of the more experienced surveyors in the area. Further, Mr. Barrios has been involved on major transmission projects for Entergy and South Central Bell (AT&T).

Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, LA. BFM's surveying services on the project included establishing horizontal & vertical control (referenced to established benchmark and LA State Plane Coordinate System, NAD 1983 2011), coordination of proposed bulkhead/I-wall centerline, and collection of spot elevation every 25 feet along the centerline. BFM also plotted collected data with centerline overlaid for reference purposes. Deliverables include hardcopy, PDF, and AutoCAD DWG files. (\$23,220 (fee); 2017)

Lake Pontchartrain Shoreline Projection and Enhancement Design Survey, St. Charles Parish, LA. For the project, BFM provided topographic and hydrographic survey in the Labranche Wetlands area on the south shore of Lake Pontchartrain. The project begins at the easterly end of the previously constructed shoreline protection project east to the St. Charles-Jefferson Parish line. BFM also surveyed canals, sloughs and bayous that emptied into Lake Pontchartrain a minimum of

TEC Professional Services Questionnaire

Other experience and qualifications: **Curtis "Jay" Barrios (continued)**

100 feet from the point of entry into the lake. Controls were established following the shoreline of Lake Pontchartrain for the entire project length. All sections taken were stationed along this baseline, which was based on the Louisiana State Plane Coordinate System, Lambert Grid, NAD 1983 (2007) as established by GPS observations. Elevations were established on each control point (based on NAVD 1988) and transects along the survey baseline taken at 300 ft. intervals (shorter intervals where necessary to define the shoreline). Transects extended 100 ft. inland to 500 ft. off the shoreline, with additional shots taken in-between to define it accurately. BFM further located existing weirs, dams or levees constructed across canals, sloughs or bayous, as well as any soil boring sites in the project area. (\$32,295 (fee); 2010)

Fisher Basin Alignment Extension (Fisher/Lafitte Tidal Protection Alignment), Jefferson Parish, LA. BFM provided topographic, bathymetric, and boundary surveying services for the project. The scope of services included extension of the project baseline along the shoreline of Bayou Barataria and towards LA45. The topographic survey was executed with sufficient intermittent shots to establish grade, and located all topographic features that could interfere with the proposed floodwalls and levee. Cross sections were also taken, with hydrographic surveys continuing out into the water and terminating at the thalweg. Overall, the surveying and mapping included sufficient topographic surveys and cross sections necessary to design, layout, access, construct, and perform the work. (\$12,197 (fee); 2015)

Fifi Island Restoration Extension, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. The scope of services involved mapping of property lines and existing servitudes for the railroad, cemetery, private residences, and a commercial establishment (Dive Shop) north of Airline Boulevard. The project also included preparation of a servitude document across the railroad property. (\$10,210 (fee); 2011)

Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, LA. BFM provided topographic and hydrographic surveying services for the project. Scope included establishing three static GPS observation points at major turns on the levee to ensure baseline is constrained to State Plane Coordinates; BFM also established a baseline along the centerline of the existing earthen levee (referenced to NAD 1983 2011). BFM set vertical control Temporary Benchmarks (TBM) which were referenced to horizontal control points (NAVD 1988 Geoid 12B). Plotted a cross section depicting the ground, edge of water, top and toe of earthen levee, and levee centerline at typical widths of 100 feet. Located visible above-ground utilities as well as underground utilities with visible surface evidence (where available, BFM obtained record drawings from relevant agencies to further plot utilities), as well as existing wall, center of pumps, and discharge pipes at the existing pump station. Trees and large shrubbery & etc. were located and described. Existing improvements (such as sheds, piers, and buildings) and trees were included in general location surveying. Deliverables included hardcopy, PDF, and AutoCAD DWG files. (\$150,000 (fee); 2018)

The Westshore Enhancements Storm Surge Protection Project (Phase 1 & 2), Ascension Parish, LA. BFM provided Boundary and Route Topographic & Hydrographic Surveying for the project in Ascension Parish, LA; as established, the project was executed in two phases. BFM executed a Route Topographic Survey; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work. (\$477,340 (fee); 2023)

TEC Professional Services Questionnaire

- L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this project. Please include 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:
Paillet Basin Tidal Protection Levee, Town of Jean Lafitte, Jefferson Parish, Louisiana APTIM 2424 Edenborn Avenue Suite 450 Metairie LA 70001 Gene S. Gillen, P.E., 504-832-4881 info@aptim.com	BFM provided topographic and hydrographic surveying; scope included establishing three static GPS observation points at major turns on the levee to ensure baseline is constrained to State Plane Coordinates; also established a baseline along the centerline of the existing earthen levee. Set vertical control TBMs and plotted a cross section depicting the ground, edge of water, top and toe of earthen levee, and levee centerline at typical widths of 100 feet. Located utilities, existing wall, center of pumps, and discharge pipes at the existing pump station. Existing improvements (sheds, piers, buildings) and trees were included in general location surveying.
Completion Date (Actual or estimated:)	Estimated Cost:
	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">Entire Project:</div> <div style="width: 45%; text-align: center;">Work for which Firm was Responsible:</div> </div>
June 2018	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">N/A</div> <div style="width: 45%; text-align: center;">\$150,000 (fee)</div> </div>

PROJECT NO. 2

Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:
Upper Barataria Basin Risk Reduction (UBRR) Project, Segment 3, Lafourche Parish, Louisiana Greenup Industries, LLC 2200 Veterans Memorial Blvd Ste 114 Kenner LA 70062 Rodney Greenup, Jr., 225-283-4843 rodney@greenupind.com	BFM's scope of services included all topographic & hydrographic surveying as directed; magnetometer surveying was utilized to determine the presence of pipelines within the subject survey area. BFM established as client-supplied baseline and Temporary Benchmarks (TBM). Provided cross sections along Bayou Des Allemands and located elements & existing improvements within the designated limits of survey, as well as above- & below-ground utilities. As-built data was also considered.
Completion Date (Actual or estimated:)	Estimated Cost:
	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">Entire Project:</div> <div style="width: 45%; text-align: center;">Work for which Firm was Responsible:</div> </div>
July 2019	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">N/A</div> <div style="width: 45%; text-align: center;">\$118,873 (fee)</div> </div>

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
The Westshore Enhancements Storm Surge Protection Project (Phase 1 & 2), Ascension Parish, Louisiana Burk-Kleinpeter, Inc. 4176 Canal Street New Orleans LA 70119 David Boyd, P.E., 504-483-6271 dboyd@bkusa.com	BFM provided Boundary and Route Topographic & Hydrographic Surveying for the project in Ascension Parish, LA; as established, the project was executed in two phases. BFM executed a Route Topographic Survey; the full scope plan & profile included all services, utilities, properties, elevations and items necessary to perform any and all engineering and construction work.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
October 2023	N/A	\$477,340 (fee)

PROJECT NO. 4		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Abita River Regional Detention Pond Expansion, St. Tammany Parish, Louisiana CSRS Inc. 6767 Perkins Road, Suite 200 Baton Rouge LA 70808 Scott Hoffeld, 225-769-0546 scott.hoffeld@csrsinc.com	BFM provided topographic and hydrographic surveying for the project, whose Limits of Survey consisted of Parcel A3-A, a portion of Lambert Investments Minor Subdivision, in St. Tammany Parish. BFM established two temporary benchmarks (TBMs) along Harrison Avenue near the project site, with the vertical datum referenced to NAVD 1988. Surveying services included location of the existing pond, adjoining swales and culverts, and two ditches which exist within the remainder of Parcel A3-A. Spot elevations were taken at 200 ft. intervals on land and 50 ft. within the limits of the pond. Deliverables included detailed indelible prints showing plan & profile views with cross-sections along with digital files.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
July 2019	N/A	\$68,400 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Tchefuncte Marsh Shoreline Protection Project (Magnetometer & Hydrographic Survey), St. Tammany Parish, Louisiana Volkert, Inc. 7967 Office Park Blvd 2nd Floor Baton Rouge LA 70809 Matt Salmon, P.E., 214-478-4754 matt.salmon@volkert.com	BFM provided Magnetometer & Hydrographic surveying services for the Tchefuncte Marsh Shoreline Protection Project. Prior to field work, BFM reviewed the Prime's design work plan (September 2021), reviewing existing and previous CPRA projects to identify previously permitted and approved marsh fill borrow areas in Lake Pontchartrain within 6 miles of the project's area. The scope of services included conducting a Magnetometer Survey throughout the site to identify any potential pipelines or other metallic obstructions. Services included surveying along four transects, parallel to the shoreline. A Hydrographic Survey of two 50-acre borrow pit locations was conducted. Cross Sections were taken at 250 ft. intervals within the borrow pits.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
June 2022	N/A	\$63,800 (fee)

PROJECT NO. 6		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Lafitte Tidal Protection, Phase II, Lafitte Area Independent Levee District, Jefferson Parish, Louisiana BCG Engineering & Consulting, Inc. 9619 Interline Avenue, Suite A Baton Rouge LA 70809 David T. Dodgen, 225-924-3116	BFM's surveying services on the project included establishing horizontal & vertical control (referenced to established benchmark and LA State Plane Coordinate System, NAD 1983 2011), coordination of proposed bulkhead/I-wall centerline, and collection of spot elevation every 25 feet along the centerline. BFM also plotted collected data with centerline overlaid for reference purposes. Deliverables include hardcopy, PDF, and AutoCAD DWG files.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
June 2017	N/A	\$23,220 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Fisher Basin Alignment Extension (Fisher/Lafitte Tidal Protection Alignment), Jefferson Parish, Louisiana Brown Cunningham Gannuch 3012 26th Street Metairie LA 70002 Ann L. Springston, P.E., 504-454-3866 aspringston@ardurragroup.com	BFM provided topographic, bathymetric, and boundary surveying services for the project. The scope of services included extension of the project baseline along the shoreline of Bayou Barataria and towards LA45. The topographic survey was executed with sufficient intermittent shots to establish grade, and located all topographic features that could interfere with the proposed floodwalls and levee. Cross sections were also taken, with hydrographic surveys continuing out into the water and terminating at the thalweg. Overall, the surveying and mapping included sufficient topographic surveys and cross sections necessary to design, layout, access, construct, and perform the work.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
April 2015	N/A	\$12,197 (fee)

PROJECT NO. 8		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Marsh Island (Lafreniere Park), Metairie, Jefferson Parish, Louisiana Mathes Brierre Architects 201 St. Charles Avenue, Suite 4100 New Orleans LA 70170-4100 Scott Evans, AIA, 504-586-9303 talfortish@mathesbrierre.com	BFM Corporation provided bathymetric and topographic surveying services for the Marsh Island project at Lafreniere Park in Jefferson Parish, Louisiana. The survey encompassed the island and surrounding waters up to and including the sidewalk. Cross sections of the island and surrounding waters were cut after the topographic and hydrographic surveying was completed.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
February 2016	N/A	\$9,568 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 9		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Alexis Bay Marsh Creation Project, Venice, Plaquemines Parish, Louisiana Manchac Consulting Group, Inc. 2137-A Quail Run Drive, Suite A Baton Rouge LA 70808 Daniel Duhon, 225-448-3972	BFM provided multiple survey services for this marsh creation project, including elevations, locations, establishing control points, and plat preparation. The project, which specifically involved the creation of a terrace field in Alexis Bay near Venice, Louisiana, also included general topographic surveying services of the project's island location. Hydrographic surveying via airboat was a project element.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
February 2015	N/A	\$8,625 (fee)

PROJECT NO. 10		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Lower Lafitte Waterline Stakeout, Jefferson Parish, Louisiana CB&I 2424 Edenborn Avenue Suite 450 Metairie LA 70001 Gene S. Gillen, P.E., 504-832-4881 gene.gillen@cbi.com	BFM provided surveying services associated with the location of a 16 inch plastic waterline in the Barataria Waterway as part of the Lower Lafitte Shoreline Stabilization project. BFM provided stakeout surveying for the project, staking the water line every 50 feet (with 4 ft. wooden stakes). Certain areas were very deep and the line was not accurately located in this area. BFM set markers where approximate locations were based on the areas where the line was found.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
January 2017	N/A	\$38,205 (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.	<div>BFM Corporation is not currently, nor has it previously been involved, in litigation with Jefferson Parish.</div>	
2.		
3.		
4.		

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

BFM CORPORATION, LLC
Professional Land & Hydrographic Surveying

CRITERIA 1 | PROFESSIONAL TRAINING AND EXPERIENCE

Established in 1982, **BFM Corporation, LLC, Professional Land & Hydrographic Surveying**, provides services to public & private concerns throughout Louisiana and the Gulf South. For over 40 years, BFM has provided surveying services covering all facets of engineering, construction, and forensics; topographic, and hydrographic, as well as drone-based surveying and high-definition laser scanning.

BFM Corporation is a majority Woman-Owned Business Enterprise (WBE) as well as a Hudson Initiative certified Small & Emerging Business and Small Entrepreneurship in Louisiana.

Our capabilities include the following and more:

- Topographic Surveying
- Drone Surveying
- Photogrammic & LiDAR and 3D Laser Scanning
- Bathymetric / Hydrographic Surveys
- Property, Boundary, and Right-of-Way Surveys
- Maps, Cross-Sections, & Data Sets; Benchmarks

TEC Professional Services Questionnaire

N. continued.

- Construction-Related Surveying and Builder's Package Surveys
- American Land Title Association (ALTA) Surveys

BFM's project work routinely involves **extensive records and related research** as an element of successful completion, as well as coordination with the client, agency or department. BFM has the personnel to make sure this is done correctly and expeditiously.

Our **Survey Field Crews** are equipped with Leica Viva and Leica Captivate Data Collectors, as well as Leica GPS Smart Antennas. Each GPS unit is linked to the Leica SmartNet Network, giving each crew the ability for Real Time Kinematic Positioning (RTK), derived from the Global Navigation Satellite System (GNSS). Furthermore, each crew is outfitted with Leica TS series robotic total stations, simplifying and expediting projects. BFM can also use in-house drones and 3D scanners to further analyze sites and projects. BFM's crews are trained to use this equipment to its full potential to maximize accuracy and efficiency in the field.

BFM offers **Drone Surveying Services**, featuring a DJI Matrice 600 Pro drone outfitted with a Sony A7R3 42-megapixel camera, Pixhawk Triggering System, VMAP PPK system, and an A3 Pro Flight Controller. It can capture 50 acres of land allowing BFM to quickly & accurately capture data and facilitates quicker field work to produce highly accurate and precise surveying information. Deliverables feature Clean Point Cloud, 3D Mesh, Orthomosaic, and AutoCAD DWG Topographic.

BFM's **3D modeling capabilities** allow us to process & model for any design purpose. High-definition scanner data is processed using software from Leica and Autodesk. BFM is working on non-traditional survey deliverables, including virtual tours, live walkthroughs, detailed pipe rack modeling, and modeling for use with Autodesk Revit Architecture.

When needed, BFM provides **bathymetric surveying** to handle **any hydrographic surveying tasks**. For large rivers and bodies of water, we are equipped with Teledyne Odom Hydro Solutions' Hydro Trac Single Beam Echo Sounder. For smaller bodies of water, BFM uses an SL20 Remote Controlled Boat equipped with CEE Scope Dual Channel Echo Sounder. We use Hypack Software to process collected data. Further, BFM can execute multi-beam scans, side scans and magnetometer surveys upon request.

Please refer to our projects included in Item L and in our personnel listings in Item K for specific type project examples and an overview of our surveying experience with this project type.

CRITERIA 2 | SIZE OF FIRM

As noted, BFM has the manpower and equipment to execute any surveying task within the reasonable time set forth by the contract or project engineer. BFM has no issue with meeting the project deadlines set forth by our clients, both municipal and private. It is our continual goal to keep this reputation solid. Further, we establish base costs and fees for our services, and work with our clients to meet all project budgets.

TEC Professional Services Questionnaire

N. continued.

As noted in **item E** of this form, BFM currently has a **full-time staff of two dozen people**, including **two Registered Professional Land Surveyors, Survey Field Crew Personnel, and AutoCAD drafting personnel**, as well as **complete administrative and support staff**.

CRITERIA 3 | CAPACITY FOR TIMELY COMPLETION

BFM has the manpower and equipment to execute any surveying task within the reasonable time set forth by a contract or project engineer. It is our goal to keep this reputation solid. We establish base costs and fees for our services, and work with our clients to meet all project budgets. Our workload and scheduling, and proximity to the project site, will allow for quick assignment of personnel to any directed project.

BFM Corporation's **Ralph P. Fontcuberta, Jr., PLS**, Executive Vice President, is a **Louisiana-Registered Professional Land Surveyor (since 1974)** and meets or exceeds any minimum requirements for any surveying project. He has been **providing surveying services in Louisiana for over 50 years** and brings an almost incalculable wealth of experience in the region to any project, especially in Southeast Louisiana.

Chad M. Poché, P.E., Executive Vice President, brings **more than 25 years of experience** to assist in completing projects on time and within budget. He has been a consulting geotechnical engineer for more than 20 years in South Louisiana and has been the geotechnical engineer of record for thousands of projects.

Gary J. Lambert, Jr., PLS, Vice President is a **registered Professional Land Surveyor** and provides Project Management & Drafting Oversight and is the first point of contact for clients on technical matters. He meets with engineering, architectural, and government officials to discuss various project needs.

Our personnel included **multiple survey crews** and a **fully-staffed drafting department** to handle any project needs; they are thoroughly trained and extensively familiar with the region and needs of various types of surveying projects.

CRITERIA 4 | PAST PERFORMANCE ON PARISH CONTRACTS

BFM Corporation has provided **surveying services in Jefferson Parish since 1982**, both **directly to Parish agencies and as a consultant to firms serving the Parish**. The firm has executed many hundreds of projects in the Parish, including both direct Parish projects and State agency projects (CPRA, Louisiana DOTD, etc.), not to mention the scores of surveying projects for private individuals and industry.

As noted, Mr. Fontcuberta has **over half a century of professional land surveying experience**, including over 40 years with BFM. **He has provided professional surveying services for thousands of projects for and throughout Jefferson Parish.**

TEC Professional Services Questionnaire

N. continued.

CRITERIA 5 | LOCATION OF THE PRINCIPAL OFFICE

BFM has called Jefferson Parish home office location since the firm's inception in 1982; our principal office is located in Jefferson Parish at 15 Veterans Memorial Boulevard in Kenner.

CRITERIA 6 | LEGAL STATEMENT

BFM Corporation is **not involved in litigation with Jefferson Parish** nor with any of our clients, as is noted in Item M of this form.

CRITERIA 7 | PRIOR SUCCESSFUL COMPLETION OF PROJECTS

For over 40 years, BFM Corporation has completed thousands of projects throughout Jefferson Parish and Southeast Louisiana, both to municipal and various private clients, similar to the project at hand, not to mention other drainage projects in a wide range of sizes, from small lot to Parish-wide endeavors. **Multiple examples of this work are included throughout this form in both the Personnel Résumés section (Item K) and Representative Project Work (Item L).** Further, BFM has worked with virtually every municipality in the region. We enjoy a high repeat-business rate with all our clients. We offer the following specific references for contact:

Mark R. Drewes, P.E., Director, Jefferson Parish Public Works Department
(504-736-6783 | JPPW@jeffparish.net)

Neil Schneider, CCM, P.E., Director, Capital Projects, Jefferson Parish Public Works Dept.
(504-736-6783 | JPPW@jeffparish.net)

José A. Gonzales, CAO, City of Kenner
(504-468-4090 | jgonzalez@kenner.la.us)

Angela DeSoto, P.E., Director of Engineering, Jefferson Parish
(504-736-6511 | ADeSoto@jeffparish.net)

Sid Trouard, P.E., Program Manager, Jefferson Parish Sewerage Capital Improvement Program
(504-736-6386 | STrouard@jeffparish.net)

Ben Lapine, Acting Director, Department of Drainage, Jefferson Parish
(504-736-6661 | JPSewerage@jeffparish.net)

Our professional work history is exemplary. We strive to provide on-time and technically thorough project deliverables at the budget set by our clients.

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

Signature: 

Print Name: Chad M. Poché, P.E.

Title: Executive Vice President

Date: June 25, 2024

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ 24-020, Resolution No. 144205
Coastal Engineering Consulting Services As-Needed Parish Wide

B. Firm Name & Address:

Eustis Engineering L.L.C.
3011 28th Street, Metairie, Louisiana 70002

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

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.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.

Gwendolyn P. Sanders, P.E. / President / 504-834-0157 / gsanders@eustiseng.com

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

<u>7</u> Administrative	<u> </u> Estimators	<u> </u> Specification Writers
<u> </u> Architects (Licensed)	<u>2</u> Geologists	<u> </u> Structural Engineers
<u> </u> Chemical Engineers	<u>17</u> Geotechnical Engineers	<u>3</u> Graduate Engineers
<u> </u> Civil Engineers	<u> </u> Interior Designers	<u> </u> Project Managers
<u> </u> Construction Inspectors	<u> </u> Landscape Architects	<u>11</u> Clerical
<u> </u> Ecologists	<u> </u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u> </u> Electrical Engineers	<u> </u> Mechanical Engineers	<u> </u> Sanitary Engineers
<u>5</u> Engineer Intern	<u> </u> Environmental Engineers	<u>47</u> Other
<u> </u> Professional Land Surveyors		<u>92</u> TOTAL

F. Is this submittal is 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. Not applicable.

2.

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

YES ☐ NO ☐

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

Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. Not Applicable.		
2.		
3.		

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

We estimate **16** individuals will be needed to complete the geotechnical services associated with projects under this advertisement. This includes a three-member drill crew as well as laboratory, clerical, and engineering staff. More employees can be added, as necessary, to complete any project.

TEC Professional Services Questionnaire

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

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Gwendolyn P. Sanders, P.E. / President and Project Principal

Project Assignment:

Project Principal / Limited Liability Corporation Member

Name of Firm with which Associated:

Eustis Engineering L.L.C.

Years' Experience with This Firm:

31

Education: Degree(s)/Year/Specialization:

Master of Science / 1992 / Civil Engineering

Bachelor of Science / 1990 / Civil Engineering

Active Registration: Year First Registered/Discipline:

Louisiana: 1997 / Civil Engineering

Mississippi: 2003 / Engineering

Texas: 2020 / Civil Engineering

Other Experience and Qualifications Relevant to the Proposed Project:

Mrs. Sanders began her professional career with Eustis Engineering in 1993. Over the past 31 years, she has worked her way up through the ranks of the engineering department including Associate Engineer, Project Engineer, Project Manager, and Engineering Manager. She has been on Eustis Engineering's Board of Directors since 1997. In 2020, Mrs. Sanders became Eustis Engineering's first woman president after previously serving as a Vice President and Executive Vice President. As President, she is responsible for day-to-day business operations including quality, safety, marketing, and long-term strategic growth. She also actively participates in the engineering design and review processes.

Considering her experience with Eustis Engineering, a leading Gulf Coast geotechnical firm, Mrs. Sanders has extensive experience in soft soils and working on projects in coastal Louisiana. She has been directly and indirectly involved in numerous projects throughout the Gulf Coast area, particularly in the Greater New Orleans area. Mrs. Sanders has been involved in and managed every aspect of a geotechnical engineering project, namely developing appropriate scopes of work for projects, planning and coordinating field investigations, assigning laboratory testing, performing geotechnical engineering analyses, preparing detailed reports with engineering analyses and recommendations, reviewing reports prepared by other professionals, and consulting with clients. Much of her work experience has dealt with identifying soil properties, developing criteria for design of foundations, and determining an appropriate foundation to support the structure under consideration.

In 2017, Mrs. Sanders served as program advisor for the Deep Foundations Institute's 42nd annual conference. She has twice been named one of the 50 Women of the Year by New Orleans CityBusiness, first in 2017 and again in 2021. She is currently serving as an associate member of the ASCE Standards Committee for the Design of Foundations. She has a keen eye for detail and is a stickler for quality. Her work ethic, combined with her communication skills, translates to Mrs. Sanders' ability to deliver successful geotechnical engineering projects to her clients.

Over the years, Mrs. Sanders has been involved with more than 2,800 projects in some capacity, including the following contained within this submittal:

- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Louisiana (23325.00-.11)

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:

Gwendolyn P. Sanders, P.E. / President and Project Principal

- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grande Cheniere Ridge Marsh Creation Area (BA-0240), Plaquemines Parish, Louisiana (24364)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grande Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana (24384.-.02)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Marsh Creation Projects in the Breton Sound, St. Bernard Parish, Louisiana (24431.00-.01 & 24762)
- State of Louisiana - Grand Isle State Park, Phase I and II Improvements, Jefferson Parish, Louisiana (24093.00-.01 and 25239)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
James J. Hance, P.E. / Senior Project Manager and Vice President (Finance)	
Project Assignment:	
Senior Project Manager / Limited Liability Corporation Member	
Name of Firm with which Associated:	
Eustis Engineering L.L.C.	
Years' Experience with This Firm:	
20	
Education: Degree(s)/Year/Specialization:	
Master of Business Administration / 2011 / Business Administration Master of Science / 2003 / Civil Engineering (Geotechnical) Bachelor of Science / 1998 / Civil Engineering	
Active Registration: Year First Registered/Discipline:	
Louisiana: 2004 / Civil Engineering Mississippi: 2012 / Engineering Texas: 2010 / Civil Engineering	
Other Experience and Qualifications Relevant to the Proposed Project:	
<p>For 3 years, Mr. Hance was a Staff Engineer and Assistant Project Manager on numerous design and construction phase projects in the Washington D.C. metropolitan area. His duties included management of field technicians who performed concrete, asphalt, and soils testing as well as foundation construction observations of spread footings, mats, drilled shafts, augercast piles, driven steel H-piles, tiebacks, and underpinning piers.</p> <p>After relocating to Austin, Texas, to eventually pursue graduate studies in engineering, Mr. Hance acted as an assistant project engineer for several design phase projects. These projects involved retention and stream bank stabilization applications. The types of systems designed included mechanically stabilized earth (MSE), single and multi-tiered walls and slopes utilizing geogrid reinforcement, and the use of geosynthetic materials in engineering applications such as erosion control solutions for open channel flow conditions.</p> <p>Mr. Hance was a graduate research assistant at the University of Texas at Austin where he published his Master's thesis in association with a Master of Science in Civil Engineering degree: <i>Assessment of Seafloor Slope Stability Based on a Database of Published Submarine Slope Failures</i>.</p> <p>Mr. Hance has spent the past 20 years with Eustis Engineering and has worked on many projects for Jefferson Parish. During his tenure at Eustis Engineering, he has earned four promotions: Project Engineer (July 2004), Project Manager (November 2007), Vice President (August 2011), and Chief Financial Officer (August 2012). Mr. Hance manages geotechnical services associated with commercial, industrial, environmental, and civil works projects. His responsibilities include managing a wide variety of design and construction phase projects (public and private sectors), management of staff engineers and development of their skill assets, developing scopes of work and appropriate fees for new projects with clients, participating in business development and marketing ventures, and negotiating contracts.</p> <p>Some of his experience relative to this submittal includes the following:</p> <ul style="list-style-type: none">• State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Bayou Dularge Ridge, Marsh, and Hydrologic Restoration Project, Terrebonne Parish, Louisiana (23970.00, .01)	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
James J. Hance, P.E. / Senior Project Manager and Vice President (Finance)
<ul style="list-style-type: none">State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Plaquemines and Jefferson Parishes, Louisiana (23325.00-.11)Jefferson Parish - Upper Barataria Terracing Project, Jefferson Parish, Louisiana (25108)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grande Cheniere Ridge Marsh Creation Area, Plaquemines Parish, Louisiana (24364)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grand Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana (24384.00 -.02)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Marsh Creation Projects in the Breton Sound, St. Bernard Parish, Louisiana (24431.00-.01 & 24762)State of Louisiana - Grand Isle State Park, Phase I and II Improvements, Jefferson Parish, Louisiana (24093.00-.01 and 25239)State of Louisiana – Department of Wildlife and Fisheries, Marsh Island Refuge Water Control Structure Replacements, Belly Dam, Joe Aucoin, and Northeast Bird Island, Iberia Parish, Louisiana (24170.00- .01)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Sean G. Walsh, P.E. / Engineering Manager and Vice President (Engineering)
Project Assignment:
Project Manager
Name of Firm with which Associated:
Eustis Engineering L.L.C.
Years' Experience with This Firm:
11
Education: Degree(s)/Year/Specialization:
Master of Science / 2010 / Civil Engineering Bachelor of Science / 2007 / Civil Engineering
Active Registration: Year First Registered/Discipline:
Louisiana: 2013 / Civil Engineering
Other Experience and Qualifications Relevant to the Proposed Project:
<p>For his first 5 years after graduation, Mr. Sean G. Walsh, P.E., was a Project Engineer on numerous projects in New York and the New Orleans metropolitan area where he gained experience in civil, geotechnical, and geo-environmental engineering projects for a variety of public and private clients.</p> <p>Since joining Eustis Engineering in 2012 as a Project Engineer, Mr. Walsh has been responsible for developing and managing engineering package preparations (e.g., engineering design and analysis, reporting, developing construction and permit drawings, contract specifications, cost estimates, and design reporting) for a diverse range of design and analysis projects, including deep foundations, excavation support systems, utility foundations, slope stabilization, solid waste closure systems, levee inspection/safety, and seepage modeling.</p> <p>Mr. Walsh was promoted to Project Manager in 2017, Engineering Manager in 2019, and Vice President in 2020. Mr. Walsh is also a graduate of the 2017 New Orleans Regional Leadership Institute (NORLI), a 1-year training program designed to help shape community leaders.</p> <p>During his employment with Eustis Engineering, Mr. Walsh has provided engineering services on more than 650 projects. Mr. Walsh has risen to the level of Vice President and Engineering Manager, in which he is responsible for personnel resource allocation, the overall engineering schedule, and execution of engineering services. Mr. Walsh also functions as a mentor to the engineering staff.</p> <p>A large portion of Mr. Walsh's experience, before and after joining Eustis Engineering, involved development of design and construction recommendations associated with flood protection systems in southeastern Louisiana. Mr. Walsh has served as the project engineer and project manager responsible for the development and implementation of geotechnical exploration programs; development of soil testing laboratory programs; and interpretation of the results to evaluate strength, compressibility, and general soil characterization. Mr. Walsh used these data for geotechnical designs comprising pile capacity curves; bearing capacity analyses; cantilever retaining analyses; anchored retaining wall analyses; temporary retaining structure design; time-settlement projections for earthen levees with lift schedules; soil pressure profiles; structural and earthen levee under seepage analyses; levee and bank stability by Spencer's Method of Slices and Method of Planes; reinforced embankment design; stability analyses of flood protection walls (e.g., T-walls, I-walls, L-walls, and braced 'A-Frame' walls); downdrag and settlement analyses; settlement induced bending moments (SIBM) in foundation piles; piping analyses; uplift analyses; heave analyses; three-dimensional modeling of fill and structural load placements for predictions of time-rate settlements of foundation systems; and</p>

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

Name & Title:

Sean G. Walsh, P.E. / Engineering Manager and Vice President (Engineering)

numerical modeling of soil-structure interaction (SSI) of flood protection structures by the finite element method (FEM).

Mr. Walsh has also worked on many local government projects in towns and cities including New Orleans, Golden Meadow, and Kentwood; numerous projects in Jefferson, Orleans, St. Bernard, St. Charles, and Plaquemines Parishes; several Port Commissions (e.g., Baton Rouge, New Orleans, South Louisiana); the Sewerage & Water Board of New Orleans; etc.

Regardless of the types of projects engineered for these agencies, his responsibilities have remained the same, namely defining the project philosophy; developing and maintaining the schedule; providing status reports to clients; controlling expenditures; overseeing project personnel; and reviewing the project design for compliance with engineering principles, company standards, and client requirements. He is hands-on in coordinating activities concerned with technical developments and in resolving engineering design/test problems.

Mr. Walsh's skills over the past 16 years in the industry have developed exponentially with the variety of projects that have crossed his desk. Regarding this submittal, Mr. Walsh has been directly involved with the following projects:

- State of Louisiana – Coastal Protection and Restoration Authority, Bayou Dularge Ridge, Marsh, and Hydrologic Restoration Project, Terrebonne Parish, Louisiana (23970.00, .01)
- State of Louisiana – Coastal Protection and Restoration Authority, Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte (Plaquemines and Jefferson Parishes), Louisiana (23325.00 - .11)
- Jefferson Parish – Upper Barataria Terracing Project, Jefferson Parish, Louisiana (25108)
- State of Louisiana – Coastal Protection and Restoration Authority (CPRA), Grand Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana (24384.00, .01)
- State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Marsh Creation Projects in the Breton Sound, St. Bernard Parish, Louisiana (24431.00-.01 & 24762)
- State of Louisiana - Grand Isle State Park, Phase I and II Improvements, Jefferson Parish, Louisiana (24093.00 - .01, 25239)
- State of Louisiana, Department of Wildlife and Fisheries - Marsh Island Refuge Water Control Structure Replacements, Belly Dam, Joe Aucoin, and Northeast Bird Island, Iberia Parish, Louisiana (24170.00 - .01)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
James M. Williams, P.E. / Geotechnical Project Engineer	
Project Assignment:	
Project Engineer	
Name of Firm with which Associated:	
Eustis Engineering L.L.C.	
Years' Experience with This Firm:	
6	
Education: Degree(s)/Year/Specialization:	
Master of Science / 2018 / Civil Engineering Bachelor of Science / 2016 / Civil Engineering	
Active Registration: Year First Registered/Discipline:	
Louisiana: 2021 / Civil Engineering	
Other Experience and Qualifications Relevant to the Proposed Project:	
<p>While an undergraduate at Mississippi State University, Mr. Williams worked as both an Undergraduate Research Assistant and a Soils Laboratory Assistant. As an Undergraduate Research Assistant, Mr. Williams created a database of historic test results related to off-road vehicular mobility. He completed a statistical analysis of the database results and developed empirical relations. As a Soils Laboratory Assistant, Mr. Williams organized and instructed undergraduate student teaching exercises. He also prepared test specimens for research and teaching practices.</p> <p>As a Graduate Research Assistant, Mr. Williams continued to work with a database of historic test results. He conducted laboratory exploration of soil and soil-biochar mixture properties through standard procedures including particle size, triaxial shear testing, consolidation testing, and permeability testing. He also employed microscopy and chemical techniques to determine qualitative information related to the mineralogy and microstructure of earthen material.</p> <p>As a Project Engineer for Eustis Engineering L.L.C., Mr. Williams coordinates site access, assigns laboratory tests, and performs geotechnical engineering analyses and evaluations. Engineering analyses may include estimates of allowable bearing values; estimates of allowable pile load capacity for various types and sizes of piles; pile response to vertical and lateral loading; slope stability analyses of riverbanks, levees, and earthen structures; sheetpile wall design; wick drainage design; and settlement estimates. Mr. Williams has developed a proficiency with engineering programs such as LPILE® and GROUP® by Ensoft, Inc.; SLOPE/W by GeoStudio; Settle3 by Rocscience Inc.; and PSDDF by Timothy Stark, PhD and Hangseok Choi, PhD. He also provides technical assistance to our laboratory manager for planning, processing, and review of advanced laboratory testing. Currently, Mr. Williams is also working with the Vice President of Testing on Eustis Engineering's OpenGround® and KeyLAB® implementation.</p> <p>Mr. Williams' skills and understanding of the soft soil behavior of coastal Louisiana have developed exponentially with the variety of projects that have crossed his desk. Regarding this submittal, Mr. Williams has been directly involved with the following projects:</p> <ul style="list-style-type: none">• State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Bayou Dularge Ridge, Marsh, and Hydrologic Restoration Project, Terrebonne Parish, Louisiana (23970.00, .01)• Grand Isle Independent Levee District - Preliminary Study, Fifi Island Rock and Restoration Project, Jefferson Parish, Louisiana (25128)	

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
James M. Williams, P.E. / Geotechnical Project Engineer
<ul style="list-style-type: none">State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Plaquemines and Jefferson Parishes, Louisiana (23325.00-.11)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grand Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana (24384.00 -.02)State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Marsh Creation Projects in the Breton Sound, St. Bernard Parish, Louisiana (24431.00 - .01 & 24762)State of Louisiana - Grand Isle State Park, Phase I and II Improvements, Jefferson Parish, Louisiana (24093.00-.01 & 25239)State of Louisiana – Department of Wildlife and Fisheries, Marsh Island Refuge Water Control Structure Replacements, Belly Dam, Joe Aucoin, and Northeast Bird Island, Iberia Parish, Louisiana (24170.00 - .01)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Henry C. Worley, P.E. / Geotechnical Project Engineer	
Project Assignment:	
Project Engineer	
Name of Firm with which Associated:	
Eustis Engineering L.L.C.	
Years' Experience with This Firm:	
6	
Education: Degree(s)/Year/Specialization:	
Master of Science / 2022 / Engineering Bachelor of Science / 2016 / Civil Engineering 2019 / Coastal Engineering Certificate	
Active Registration: Year First Registered/Discipline:	
Louisiana: 2021 / Civil Engineering	
Other Experience and Qualifications Relevant to the Proposed Project:	
<p>Mr. Worley received his Master of Science degree in Engineering with a focus in geotechnical and coastal engineering in 2022. For this degree, he researched consolidation testing parameters and correlations typically implemented in local practice. Mr. Worley worked at Eustis Engineering in the summer of 2015 as a student intern and returned as an assistant engineer after working for the State of Louisiana, Coastal Protection and Restoration Authority (CPRA) and others after receiving his undergraduate degree. Over the past 7 years, he has worked on a number of coastal restoration and flood protection projects for CPRA, the U.S. Department of Agriculture's Natural Resources Conservation Service (USDA NRCS), and Ducks Unlimited.</p> <p>Engineering analyses associated with these coastal engineering projects include evaluation of global and local slope stability, estimating allowable soil bearing values, estimating the total and time-rate of settlement due to fill placement and structural loads, and shallow and deep foundation evaluations. He continues to hone his knowledge with computation software such as LPILE®, GROUP®, Settle3, SLOPE/W, PSDDF, and the U.S. Army Corps of Engineers' CWALSHT.</p> <p>Mr. Worley has direct involvement with the following projects relevant to this submittal:</p> <ul style="list-style-type: none">• State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Bayou Dularge Ridge, Marsh, and Hydrologic Restoration Project, Terrebonne Parish, Louisiana (23970.00, .01)• State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Plaquemines and Jefferson Parishes, Louisiana (23325.00-.11)• Jefferson Parish - Upper Barataria Terracing Project, Jefferson Parish, Louisiana (25108)• State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grande Cheniere Ridge Marsh Creation Area, Plaquemines Parish, Louisiana (24364)• State of Louisiana - Coastal Protection and Restoration Authority (CPRA), Grand Bayou Ridge and Marsh Restoration, Plaquemines Parish, Louisiana (24365)	

PROJECT NO. 01	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>State of Louisiana Coastal Protection and Restoration Authority (CPRA) Bayou DuLarge Ridge, Marsh, and Hydrologic Restoration Project Terrebonne Parish, Louisiana Eustis Engineering Project Nos. 23970.00 - .01</p> <p>Contact Information: USDA – NRCS Through Sigma Consulting Group, Inc. 10305 Airline Highway Baton Rouge, Louisiana 70816 Robert Lear, P.E. @ 225-298-0800 rlear@sigmacg.com</p>	<p>This restoration project in Terrebonne Parish is located on the lower end of Bayou DuLarge between Lake Merchant and Caillou Lake. The project will use borrow material from Lake Merchant to create and nourish marsh on the southern side of Bayou DuLarge, restore the ridge along the southern bank line of Bayou DuLarge, and reestablish historic hydrologic and salinity conditions by installing a structure that reduces the cross-section of Grand Pass and the intrusion of Gulf marine waters into the project area.</p> <p>Eustis Engineering's role in this project included obtaining 45 undisturbed soil borings and cone penetration tests (CPTs) using airboat-mounted equipment and truck-mounted equipment positioned on a jack-up barge. The borings and CPTs extended to depths of 40 to 50 feet below the mudline for the marsh and ridge locations and 120 to 150 feet below the mudline for the Grand Pass structure. The airboat was used whenever possible to minimize detrimental impacts to the marsh environment.</p> <p>Samples obtained from the soil borings were subjected to soil mechanics laboratory tests in accordance with ASTM standards. Testing consisted primarily of classification tests. Beyond these tests, bulk samples of soil dredged from the borrow source were used to conduct settling column tests and self-weight consolidation tests.</p> <p>Eustis Engineering published a geotechnical data report (GDR) on 17 March 2020. Based on the GDR, Eustis Engineering performed engineering design and analyses, published two geotechnical engineering reports, and contributed to the 30% and final designs considering the following project features.</p> <p>Grand Pass Closure: Eustis Engineering performed slope stability and settlement analyses to evaluate rock embankment closure concepts and evaluate alternatives using sheetpiles and driven piles for the closure.</p> <p>Earthen Containment Dikes: Eustis Engineering's team performed stability analyses for three marsh fill elevations to evaluate the geometry required for a stable dike configuration. Analyses included estimates of dike fill consolidation during and after construction, recommendations for setup time required for the newly placed material before dredged fill slurry was placed, sequencing recommendations, and bearing capacity recommendations.</p> <p>Marsh Creation Fill Area Design: Settlement analyses were performed for five marsh fill elevations projecting settlement over the 25-year project life. Eustis Engineering's analyses considered settlement during and after construction for scenarios of single-stage, two-stage, and three-stage dredging.</p>

PROJECT NO. 01		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	Earthen Ridge Design: Eustis Engineering performed slope stability and settlement analyses for the ridge configuration. Engineering analyses included consolidation estimates during construction. Analyses also included two configurations for a gap closure along the ridge alignments.	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
06/2023 (A)	Unknown	\$760,000

PROJECT NO. 02		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Grand Isle Independent Levee District Preliminary Study Fifi Island Rock and Restoration Project Jefferson Parish, Louisiana CPRA Project No. TE-0171 Eustis Engineering Project No. 25128</p> <p>Contact Information: Grand Isle Independent Levee District Through GIS Engineering, L.L.C. Suite 600 935 Gravier Street New Orleans, Louisiana 70112 Kyle Galloway, P.E. @ 504-265-3504 kgalloway@gisy.com</p>	<p>In a preliminary effort, Eustis Engineering provided geotechnical services for the Fifi Island Rock and Restoration Project. The objective of this project is to create, maintain, and nourish existing, deteriorating wetlands by placing hydraulically dredged material from an undetermined borrow source. Specifically, 281 acres of confined marsh will be placed in designated marsh creation areas (MCAs) formed by constructing earthen containment dikes (ECDs), rock dikes (RDs), and breakwaters around Fifi Island located northwest of Grand Isle.</p> <p>Eustis Engineering's geotechnical exploration included the performance of eight cone penetration tests (CPTs) to evaluate subsurface conditions and stratification. The CPTs were performed with an airboat-mounted rig using an electronic piezocone penetrometer with a 5-ton capacity.</p> <p>Utilizing the results of the geotechnical exploration, we performed engineering evaluations in general accordance with our proposal, furnished plans, and additional information from GIS.</p> <p>Our engineering analyses of the marsh creation cells included preliminary settlement estimates projecting settlement over the 20-year project life considering the effect of settlement of the subsurface soils. The settlement over time was estimated for 20 years after construction.</p> <p>Our scope for the ECDs, RDs, and breakwaters included slope stability analyses with and without marsh fill (as applicable) to evaluate the geometry required for stable dike/breakwater configuration, development of settlement estimates, and general construction recommendations.</p> <p>Design recommendations for the proposed project features were provided based on our findings from the CPT soundings and available historical data in the Grand Isle vicinity. Construction recommendations were also provided.</p> <p>Eustis Engineering plans to provide a new proposal comprising additional geotechnical field exploration and subsequent analyses to support final design of the project.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
05/2024 (A)	Unknown	\$85,000 (to date)

PROJECT NO. 03	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p> State of Louisiana Coastal Protection and Restoration Authority (CPRA) Mid-Barataria Sediment Diversion Project Mississippi River Mile 60.7 AHP Vicinity of Ironton and Lafitte (Plaquemines and Jefferson Parishes), Louisiana CPRA Project No. BA-53 CPRA Contract No. 4400013603 Eustis Engineering Project No. 23325.00-.11 </p> <p> Contact Information: State of Louisiana – CPRA Through AECOM 1515 Poydras Street, Suite 2700 New Orleans, Louisiana 70112 Mark Gonski @ 504-799-1332 Mark.gonski@aecom.com </p>	<p> The Mid-Barataria Sediment Diversion (MBSD) project is being designed to strategically reintroduce sediment and nutrients from the Mississippi River into the Barataria Basin. MBSD is an estimated \$1.3 billion project and the Coastal Protection and Restoration Authority's (CPRA) signature project of the 2017 and 2023 Coastal Master Plans. It is a Construction-Manager-At-Risk (CMAR) project delivery method where the engineering and design (E&D) team is co-located with the CMAR and CPRA throughout the E&D process. Eustis Engineering L.L.C. is the lead geotechnical engineer for the E&D team. The MBSD project will sustainably create approximately 15,000 acres of land in the Barataria Basin over the long term. The CPRA proposes to construct the diversion intake and control structure through the Mississippi River levee on the western side of the Mississippi River at approximate River Mile 60.7 AHP in Plaquemines Parish, Louisiana. The diversion outfall will be constructed through the future New Orleans to Venice (NOV) levee into the Barataria Basin, allowing sediment-laden water from the Mississippi River to flow into the Barataria Basin. Key project features include a river inlet and diversion control structure, a conveyance channel, an outfall transition feature, site forced drainage including siphon and sluice gate structures, LA Highway 23 bridge and approaches, and the New Orleans and Gulf Coast Railroad bridge and approaches. </p> <p> The 15% Basis of Design phase was completed in October 2018. The 30% Design phase was completed in November 2019 which included issuing a Design Documentation Report and a Geotechnical Engineering Report. After the 30% submittal, the CPRA initiated a Value Engineering phase that began in January 2020. The 60% and 90% designs were submitted in July 2021 and July 2022, respectively. The 100% design and Section 408 application was submitted in May 2023. Eustis Engineering's activities throughout these phases have included: serving as the permitting agent for the CPRA and obtaining a Coastal Use Permit and Section 10/404 Permits from the U.S. Army Corps of Engineers (USACE) for performing soil borings and cone penetration tests (CPTs); developing a detailed project design criteria document; participating in a semi-quantitative risk assessments (SQRA) and workshop with the design team, CMAR, the CPRA, and the USACE; writing a SQRA Risk Report; helping develop and update the project risk register; obtaining CPTs and borings; soil laboratory testing including advanced shear strength testing (direct simple shear); and engineering analyses/design of the various project features. Eustis Engineering obtained 162 borings (3-in. and 5-in. diameter) and 98 CPTs for the three exploration phases (15%, 30% and 60%) in the river, land, and Barataria Bay environments. The field program was performed safely over several years and with hundreds of thousands of man-hours, one of the most impressive field exploration programs completed in the firm's 78-year history. </p>

PROJECT NO. 03		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<p>Eustis Engineering took a lead role in developing geotechnical testing, instrumentation plans, and specifications for two, full-scale levee wick drain test sections. These test sections were necessary to improve the understanding of levee settlement, gain-in-foundation shear strength, and levee staged-construction schedule. These test levees and the associated instrumentation and monitoring began in 2019 and were completed in 2021. With 100% design complete, the construction phase was originally scheduled to begin in fall 2023 but was delayed. Some construction operations are anticipated to begin later this year. Eustis Engineering will remain involved performing engineering during construction tasks that include data gathering and evaluation for the extensive pile load test program and geotechnical instrumentation program for the conveyance channel levees.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
Project is On Hold	Unknown	\$5,526,630

PROJECT NO. 04		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>Jefferson Parish Upper Barataria Terracing Project Jefferson Parish, Louisiana FNI Project JPL22495 Eustis Engineering Project No. 25108</p> <p>Contact Information: Jefferson Parish Government Through Freese and Nichols, Inc. 900 Camp Street New Orleans, Louisiana 70130 Nina Reins @ 225-245-7202</p>	<p>The Upper Barataria Terracing project comprises construction of earthen terraces, using materials from adjacent borrow canals in open water to encourage the creation of emergent marsh in Barataria Bay near Bayou Dupre Cut and Bayou Dupont.</p> <p>Eustis Engineering L.L.C.'s scope of service for the geotechnical exploration comprised obtaining a Coastal Use Permit (CUP), executing a geotechnical exploration, and performing subsequent laboratory testing. Borings were performed at nine locations to depths of 50 feet below the mudline to evaluate subsurface conditions and stratification and to obtain samples of the various substrata. The soil test borings were drilled using a drill rig mounted onto a marsh buggy. Soil mechanics laboratory tests, performed on samples obtained from the soil borings, were used to evaluate the physical properties of the subsoils. The results from the soil borings and laboratory tests were transmitted through a geotechnical data report and later used to establish the recommendations we prepared in our geotechnical engineering report.</p> <p>Engineering analyses performed by Eustis Engineering for the proposed terraces included slope stability evaluation of the earthen terraces considering adjacent borrow canals; settlement analyses for immediate and long-term settlement due to the compression of subsurface soil consolidation; and general construction recommendations. We transmitted the findings and recommendations into a final geotechnical engineering report. Eustis Engineering provided additional consulting efforts with Freese and Nichols to establish constructability recommendations for use in the project plans and specifications. Our constructability recommendations are based on recent coastal engineering projects specific to earthen terraces and borrow canals.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
04/2024 (A)	Unknown	\$131,000 (to date)

PROJECT NO. 05	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>State of Louisiana - Coastal Protection and Restoration Authority (CPRA) Grande Cheniere Ridge Marsh Creation Area Plaquemines Parish, Louisiana CPRA Contract No. 4400015385 CPRA Project No. BA-0240 CPRA Task No. 2 Eustis Engineering Project No. 24364</p> <p>Contact Information: State of Louisiana – CPRA The Water Campus 150 Terrace Avenue Baton Rouge, Louisiana 70802 Tye Fitzgerald, P.E. @ 225-342-7308 Tye.fitzgerald@la.gov</p>	<p>The purpose of the Grande Cheniere Ridge Marsh Creation Project (BA-0240) is to create 600 acres of marsh and 10,820 linear feet of coastal ridge habitat by hydraulically dredging material from the Mississippi River borrow source. Significant marsh loss has occurred in this area due to construction of numerous oil and gas canals, subsidence, and sediment deprivation. The hope is marsh creation areas will be formed with the construction of earthen containment dikes around the boundaries of each proposed area using material excavated from adjacent borrow canals.</p> <p>Five undisturbed soil borings and twelve cone penetration tests were performed within the marsh creation area (MCA). The soil borings extended to depths of 20 and 40 feet below the mudline. The CPTs were performed to depths of 36 to 40 feet below the mudline. Before our field operations, Eustis Engineering subcontracted T. Baker Smith, LLC, to perform a magnetometer survey at each boring and CPT location to ensure no pipelines or obstructions existed at the exploration points. Access for the MCA was via marsh buggy and air boat. Eustis Engineering also completed marine borings from a jack-up-barge within the Mississippi River (under a separate task order) to evaluate the proposed borrow source to be hydraulically dredged and pumped to the MCA. Once the field operations were completed, soil mechanics laboratory tests were performed on select, representative samples from the MCA. Testing included natural water content, unit weight, one-point unconsolidated undrained triaxial compression shear, Atterberg limits determinations, organic content tests, specific gravity, grain size analysis, percent passing the U.S. Standard No. 200 sieve, and consolidation tests. These results were transmitted as a Geotechnical Data Report.</p> <p>Our engineering scope of work included evaluation of the marsh creation fill cells, earthen containment dikes design, ridge design, estimates of settlement, and slope stability analyses. Engineering analyses were performed using soil boring and laboratory test data from the current and previous explorations [October 2007 (BA-0042) and December 2015 (BA-0173)]. We also provided recommendations regarding site preparation and general construction recommendations relevant to our geotechnical design assumptions.</p> <p>More specifically, our engineering analyses of the MCA have included settlement estimates and settlement curves for furnished marsh fill elevations which project settlement over a 20-year project life. Engineering analyses for the earthen containment dikes and the earthen ridge included slope stability analysis with and without marsh fill to evaluate the geometry required for stable configurations (construction elevation, acceptable side slopes, and acceptable crown width), geotextile requirements, estimates of dike fill consolidation during construction, construction sequencing recommendations, and</p>

PROJECT NO. 05		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	bearing capacity assessments. These recommendations were issued in a draft Geotechnical Engineering Report (GER). Comments from CPRA were incorporated in the final GER.	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
06/2021 (A)	Unknown	\$110,650

PROJECT NO. 06	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>State of Louisiana – Coastal Protection and Restoration Authority (CPRA) Grande Bayou Ridge and Marsh Restoration Plaquemines Parish, Louisiana CPRA Contract No. 4400015385 CPRA Project No. BA-0217 Eustis Engineering Project No. 24365</p> <p>Contact Information: State of Louisiana – CPRA 150 Terrace Avenue Baton Rouge, Louisiana 70802 Tye Fitzgerald, P.E. at 225-342-7308 tye.fitzgerald@la.gov</p>	<p>The Grand Bayou Ridge and Marsh Restoration Project (BA-0217) will create approximately 344 acres of marsh; 25,000 linear feet of terraces; and 10,657 linear feet of coastal ridge habitat by hydraulically dredging material from a Mississippi River borrow source and utilizing in-situ materials from Grand Bayou. The marsh creation areas will be formed by constructing earthen containment dikes around the boundaries of each proposed area using material excavated from adjacent borrow canals. The project will adhere to CPRA's Geotechnical Standards, Marsh Creation and Coastal Restoration Projects (Version 1.0) engineering and design standards.</p> <p>Thirty-one locations were identified for drilling and testing in the project area. Six of the locations were designated as co-located soil borings and cone penetration tests (CPTs). These locations also correspond to those identified in a Coastal Use Permit obtained by CPRA. The borings and CPTs varied between 20 and 40 feet in depths. The borings were made using drilling equipment mounted onto a marsh buggy and the CPTs were made using an airboat. Mobilization for this task order was combined with the nearby BA-0240 project to provide economy. As part of our field investigation, Eustis Engineering's personnel coordinated with landowners, the U.S. Army Corps of Engineers, and appropriate levee boards. Eustis Engineering teamed with T. Baker Smith, LLC, to complete a hazard survey and provide locations and elevations for each boring/CPT. In the laboratory, samples were classified using the Unified Soil Classification System. Testing included moisture content, unit weight, one-point unconsolidated undrained triaxial compression shear, Atterberg limits determinations, organic content, sieve and hydrometer analyses, and consolidation tests. Field and laboratory test results were summarized in a Geotechnical Data Report (GDR). Note, samples of the Mississippi River borrow source were obtained and tested under a separate task order to provide soil characteristics for design.</p> <p>Our staff performed engineering analyses for the earthen containment dikes, earthen ridge feature, earthen terrace design, and marsh creation fill area. These analyses include stability analyses to evaluate the geometry required for stable configurations of the dike, ridge, and terrace designs; estimates of fill consolidation settlement during construction of these same features; settlement curves (including immediate and consolidation settlement) of the subsurface soils; and construction sequencing recommendations. Marsh creation fill area designs require engineering analyses associated with evaluation of both primary and secondary consolidation settlement of the subsurface soils due to placement of sand as well as the projected settlement during construction and up to 20 years after construction. All data were presented in accordance with the Louisiana Sand Resource Database's Standard Operating Procedures for Geo-Scientific</p>

PROJECT NO. 06		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	Data Management. Draft and final Geotechnical Engineering Reports (GER) were published to present the findings of the project.	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
07/2021 (A)	Unknown	\$165,350

PROJECT NO. 07	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>State of Louisiana - Coastal Protection and Restoration Authority (CPRA) Maurepas Diversion and West Shore of Lake Pontchartrain St. John the Baptist Parish, Louisiana Eustis Engineering Project Nos. 24384.00-.02</p> <p>Contact Information: State of Louisiana – CPRA Through AECOM Technical Services, Inc. 59100 Industrial Boulevard Building 3502 Plaquemine, Louisiana 70764 Clay Loyless, P.E. @ 504-799-1324</p>	<p>Eustis Engineering L.L.C.'s scope of service for the 15% design included review of existing geotechnical data, development of a geotechnical data collection plan, collection of new geotechnical data, laboratory analyses, development of geotechnical soil design reaches, and preparation of geotechnical design recommendations for the future flood protection and freshwater diversion. Our services focused on the freshwater diversion and the flood protection features associated with the U.S. Army Corps of Engineers' (USACE's) West Shore of Lake Pontchartrain (WSLP) alignment. The WSLP geotechnical exploration and analyses need to meet requirements for a 1% storm. Thus, all designs will be performed in accordance with the interim <u>Hurricane and Storm Damage Risk Reduction System Design Guidelines</u> (HSDRRSDG) as modified by WSLP project specific post-summit memoranda developed by the USACE, New Orleans District. The geotechnical exploration work to date was completed to define soil and foundation conditions along the future WSLP levee alignment as well as information for the diversion beyond the area of the WSLP.</p> <p>AECOM Technical Services, Inc. furnished available historical data, analyses, and reports to Eustis Engineering for review. In addition to the furnished data, Eustis Engineering performed additional field exploration to provide current soil conditions at the site to meet HSDRRSDG for the future levee and structural foundations. The field exploration comprised twelve, 5-in. diameter soil borings and eight cone penetration tests (CPTs). The 4-ft undisturbed sample tubes were extruded in the laboratory, divided, and tested in general accordance with standards followed by the USACE for the other portions of the WSLP alignments. Our soil mechanics laboratory tests comprised unconfined compression shear, one and three-point unconsolidated undrained triaxial compression shear, direct simple shear, consolidation, Atterberg limits determinations, organic content determinations, and sieve and hydrometer analyses.</p> <p>Using these data, the Maurepas Diversion was separated into three soil design reaches by our engineering staff. Subsurface conditions and design parameters were included in the initial draft report. Ongoing efforts will comprise deep-seated global stability analyses; unbalanced force determinations for T-walls; piping cutoff designs; uplift analyses; allowable pile load capacity estimates per the HSDRRSDG for T-wall structures; allowable pile load capacity estimates per the State of Louisiana, Department of Transportation and Development (LaDOTD) for Airline Highway; development of lateral load soil design parameters for foundation piles (e.g., subgrade moduli, LPILE® parameters, etc.) subject to unbalanced loading; preparation of Geotechnical Design Reports and supporting information for the Design Documentation Report; levee stability analyses with estimates of strength gain during and after construction; reinforcing geotextile strength and width based on the 2070 design elevations; settlement curves to year 2070;</p>

PROJECT NO. 07		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<p>estimates of settlement induced bending moments at multiple future tie-in locations along with recommendations for mitigating such effects; ground improvement programs by use of wick drain fields and preload/surcharge embankments at multiple sites; conceptual temporary retaining structure designs at each future structure location; utility relocation design recommendations pertaining to geotechnical requirements; Maurepas Diversion channel stability designs; LaDOTD standard pavement designs; and development and coordination of submittals for 35%, 95%, and 100% design stages including comment review and resolution. The Geotechnical Engineering Report to support the 35% level design was issued in December 2022. Some advancement of a 65% design alternative was made in 2023.</p> <p>We have recently completed a Geotechnical Data Report for a borrow area study. We conducted a supplemental geotechnical exploration that included the performance of ten soil borings to assess the diversion site as a potential borrow source for the proposed levees.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
Ongoing	Unknown	\$581,000 (to date)

PROJECT NO. 08		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
<p>State of Louisiana - Coastal Protection and Restoration Authority (CPRA) Marsh Creation Projects in the Breton Sound (BS-0037 and BS-0041) St. Bernard Parish, Louisiana Eustis Engineering Project Nos. 24431.00, .01, and 24762</p> <p>Contact Information: State of Louisiana – Coastal Protection and Restoration Authority (CPRA) 150 Terrace Avenue Baton Rouge, Louisiana 70802 Jessica Diez @ 225-342-1477</p>	<p>Eustis Engineering L.L.C. has provided geotechnical services for adjacent projects in the Breton Sound as part of the Coastal Protection and Restoration Authority (CPRA) Coastal Master Plan. These projects are BS-0037 and BS-0041 and involve the creation of more than 1,200 acres of confined marsh areas in the Breton Sound.</p> <p>Project No. BS-0037 will occur at the East Delacroix Marsh. The scope calls for 406 acres of confined marsh created by hydraulically dredging material from a borrow source in nearby Lake Lery. The marsh creation areas will be formed by constructing earthen containment dikes (ECDs) around the open perimeter. The existing tidal levee will be utilized to provide approximately 12,950 feet of terraces. Eustis Engineering drilled soil borings to depths of 15 feet in the Lake Lery borrow area, one boring and six cone penetration tests (CPTs) to 40 feet at the Delacroix Tidal Levee, and six soil borings and twelve CPTs to depths of 30 feet in the marsh creation area and terrace field. The borrow borings were made using a drill rig mounted onto pontoons. The marsh creation and terrace field borings and CPTs were made using airboat-mounted equipment.</p> <p>Project No. BS-0041 is planned in the North Delacroix area. The goal is to create and nourish approximately 389 acres of marsh while consulting approximately 8,550 linear feet of earthen terraces. The 389 acres of marsh will comprise 322 acres of marsh creation and 67 acres of marsh nourishment by hydraulically dredging material from a borrow source in nearby Lake Amedee. Two creation cells allowing channel drainage, tidal levees, and earthen containment dikes (ECDs) will be created, and the cells will be dewatered to attain necessary sediment. The ECDs will be formed by constructing temporary earthen terraces around the open perimeter.</p> <p>For both of these projects, Eustis Engineering performed engineering analyses and reporting services once our review of the existing and obtained geotechnical data was completed. These design analyses include ECD design, marsh creation area design, and canal closure features. Final geotechnical engineering reports have been published for both projects.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
06/2023 (A)	Unknown	\$398,270

PROJECT NO. 09	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p>State of Louisiana Grand Isle State Park Phase I and II Improvements Jefferson Parish, Louisiana Eustis Engineering Project Nos. 24093.00-.01 & 25239</p> <p>Contact Information: State of Louisiana – CPRA Through GIS Engineering, L.L.C. Post Office Box 820 Galliano, Louisiana 70354 Laura L. Barnes, P.E. @ 985-219-1048</p>	<p>This project consists of repairs and upgrades to existing roads and parking lots damaged by repeated flooding. For the existing three-mile park roadway system, the repairs would include milling, overlaying, and full depth patching of pavement areas where sections had failed. In the three parking areas, repairs would include pulverizing the existing asphalt parking areas, and adding base course and an asphalt overlay to raise the parking area grades to above normal tide elevations.</p> <p>Eustis Engineering L.L.C.'s field investigation for Phase I included the performance of seven direct-push type borings and two pavement cores using one of our Geoprobe® rigs to identify the subsurface soils, stratifications, and pavement conditions at the site, and to obtain samples of the various strata encountered. The borings were performed to depths varying between 8.5 and 9.0 feet below the asphalt surface, and the pavement cores were performed to depths of 2.5 and 3.3 feet. Laboratory testing services included the performance of visual classification and natural water content determinations to aid in the classification of the soil samples.</p> <p>Engineering analyses were performed and recommendations developed for groundwater management including temporary and permanent drainage; site preparation including demolition and removal of existing slabs or pavements; subgrade preparation; structural fill and its compaction; and flexible pavement components and thicknesses meeting Section 502 of the <u>Louisiana Standard Specifications for Roads and Bridges</u>.</p> <p>Phase II of the project focused on the proposed reconstruction of a rock jetty and deep foundation design for the planned extension of a fishing pier at the Grand Isle Park. Eustis Engineering's field exploration for this phase comprised two marine-based soil borings to obtain samples of the various strata encountered at the rock jetty and fishing pier. The borings extended to depths of 50 and 100 feet below the mudline.</p> <p>Soil mechanics laboratory tests included natural water content, unit weight, unconfined compression shear, unconsolidated undrained triaxial compression shear, Atterberg limits determinations, and grain size distributions.</p> <p>Proposed fishing pier upgrades comprise an extension of the existing pier into the Gulf of Mexico by approximately 400 feet. Eustis Engineering developed estimates of allowable axial and lateral pile load capacity to support the new pier foundations. We also provided estimates of allowable soil bearing capacity, deep-seated stability assessments, and general construction recommendations for the reconstruction of a rock jetty at the site.</p> <p>In November 2023, further improvements to Grand Isle State Park's fishing pier were proposed, featuring a new structure of approximately 1,300 feet in the Gulf of Mexico. Eustis Engineering was asked to perform geotechnical services for this effort. We are utilizing data from Boring B-1 of the geotechnical exploration conducted during Phase II at the fishing pier under</p>

PROJECT NO. 09		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	Eustis Engineering Project No. 24093.01 to supplement our engineering analyses. We have also recently completed drilling one undisturbed soil boring to a depth of 120 feet using a track-mounted drill rig to supplement the available data. Our team applied for and acquired a Coastal Use Permit through the Louisiana Department of Energy and Natural Resources, Office of Coastal Management, to allow for these exploration operations. The existing data, new soil boring, and laboratory tests are being utilized to prepare an updated design report of our findings and recommendations for the revised project scope. With the supplemental field exploration completed, the design analyses are underway and the report will be published in July 2024.	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
07/2024 (E)	Unknown	\$44,000 (to date)

PROJECT NO. 10	
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:
<p> State of Louisiana Department of Wildlife and Fisheries Marsh Island Refuge Water Control Structure Replacements Belly Dam, Joe Aucoin, and Northeast Bird Island Iberia Parish, Louisiana Ducks Unlimited Project No. DU-LA-198-1 Eustis Engineering Project Nos. 24170.00, .01 </p> <p> Contact Information: State of Louisiana Through Ducks Unlimited, Inc. 915 Front Street Richmond, Texas 77469 John Hetherwick @ 832-595-0063 jhetherwick@ducks.org </p>	<p>The project consists of the construction of three new flood control structures within the existing Marsh Island Refuge in Iberia Parish, Louisiana. The exact site was positioned on the northern side of Marsh Island, just south of the New Iberia, Louisiana coast. The Joe Aucoin West Weir and Belly Dam Weir flood control structures will replace existing structures with reported scour areas, and the Northeast (NE) Unit Structure on the Northeast Bird Island Unit will comprise new construction. Eustis Engineering L.L.C. was contracted to perform a geotechnical exploration and subsequent analyses, based on specific hydraulic design criteria, for the proposed design features.</p> <p>Three borings were drilled to depths of 50 feet below the existing mudline in open water channels and bayous. These borings were completed with the use of a drill rig mounted onto a pontoon boat owned and operated by Specialized Environmental Resources, Inc. as subcontracted through Eustis Engineering. We provided the soil technician to log the boreholes and retain the samples. Once the field/marine operations were completed, we selected samples to be subjected to soil mechanics laboratory tests in our in-house facilities. Testing performed included natural water content, total unit weight, and unconsolidated undrained triaxial compression shear. Additionally, Atterberg limits determinations were performed on selected samples.</p> <p>Engineering analyses performed and evaluations made, based on the soil borings and laboratory tests, consisted of:</p> <ul style="list-style-type: none"> • site preparation recommendations regarding the demolition of the existing structures; • sheetpile wall (PVC, vinyl, or steel) foundation recommendations for the Joe Aucoin West Weir, NE Unit Structure, and Belly Dam Weir; • results of local and global slope stability analyses and respective factors of safety; • flood control structure analyses and recommendations; • deep foundation recommendations including allowable load capacity for treated ASTM D25 timber piles and pile group capacity and spacing considerations; • settlement estimates due to structural loads of deep foundations; and • deep foundation installation and testing recommendations for driven piles.

PROJECT NO. 10		
Project Name, Location, and Owner's Contact Information:	Nature of Firm's Responsibility:	
	<p>After issuing our report, Eustis Engineering was requested to perform supplemental engineering analyses for the project. Specifically, additional local stability analyses were requested to be performed for each of the proposed water control structures. The purpose of these additional analyses was to verify the amount of sheetpile length saved if an anchored sheetpile wall was designed at each of the project locations in lieu of a cantilevered sheetpile wall.</p>	
Completion Date (Actual or Estimated)	Estimated Cost:	
	Entire Project:	Work for Which Firm Was Responsible:
12/2021 (A)	Unknown	\$38,000

TEC Professional Services Questionnaire

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

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. None at this time.		
2.		
3.		
4.		

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

EVALUATION CRITERIA

Professional Training and Experience. Our staff includes eight project managers and senior project managers with a supporting staff of project engineers, engineering interns, engineering technicians, and geologists. This staff has worked on field investigations for Jefferson Parish projects as well as the geotechnical design of marsh and ridge restoration, shoreline stabilization, and living shorelines across the Gulf Coast during their tenure with Eustis Engineering. Eustis Engineering currently has 17 professional engineers registered in the State of Louisiana.

Capacity for Timely Completion. Our geotechnical engineering staff has extensive experience in a wide range of projects to meet the needs of the team to support projects for Jefferson Parish. Our staff size allows diversification and appointment of teams to meet our commitments on projects in a timely and professional manner. We believe Eustis Engineering has demonstrated that we have sufficient capability and capacity to provide geotechnical services under this SOQ.

Location of the Principal Office Where Work will be Performed. Work under this advertisement will be performed out of Eustis Engineering's headquarters in Metairie, Louisiana. This office is conveniently located just off the I-10 Service Road and Causeway Boulevard in the heart of Jefferson Parish.

Adversarial Legal Proceedings with the Parish. Currently, Jefferson Parish and Eustis Engineering have no ongoing adversarial legal proceeding between our entities.

Prior Successful Completion of Projects Requiring Soils Investigation Services for Which Firm has Provided Verifiable References. Eustis Engineering has provided geotechnical services for more than 4,000 projects in Jefferson Parish during our nearly 80 years in business. Some of these projects include:

- Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Plaquemines and Jefferson Parishes, Louisiana;
- Lafitte Area Independent Levee District, Lafitte Tidal Protection, Rosethorn Basin – Phase I Frontal Levee Along Bayou Barataria;
- Lafitte Area Independent Levee District, Fisher School Basin – Tidal Protection Along Bayou Barataria;
- National Park Service, Jean Lafitte National Historical Park and Preserve, Barataria Preserve Unit;

- Coalition to Restore Coastal Louisiana and Pontchartrain Levee District – Salinity Barrier, Interstate 10 at Interstate 310, Jefferson Parish – St. Charles Parish line;
- Veterans Boulevard Drainage Pump Stations;
- Hoey’s Canal Drainage Improvements;
- 17th Street Canal Drainage Improvements, Airline Highway to Hoey’s Canal;
- Instrumentation Installation and Monitoring, Lapalco Boulevard Overpass at Bayou Segnette; and
- Grand Isle State Park, Phase I and II Improvements.

References:

Kevin DeZarn, P.E. GIS Engineering, L.L.C. 197 Elysian Drive Houma, Louisiana PN 985-219-1048	Randy M. Perrin, E.I. U.S. Army Corps of Engineers Post Office Box 60267 New Orleans, Louisiana 70160 PN 504-862-1121
Anthony Goodgion, P.E. Linfield, Hunter & Junius, Inc. 3608 18 th Street Metairie, Louisiana 70002 PN 504-833-5300	Mark Gonski, P.E. AECOM 1515 Poydras Street Suite 2700 New Orleans, Louisiana 70112 PN 504-799-1332
Joe Fifer, P.E. Ducks Unlimited, Inc. 806 Bayou Black Houma, Louisiana 70360 PN 985-853-3005	Bruce Adams, P.E. Volkert Inc. 3801 Canal Street Suite 210 New Orleans, Louisiana 701189 PN 504-865-0456

When Eustis Engineering L.L.C. opened its first office in Vicksburg, Mississippi, in 1946, it housed its entire operation in less than 500 square feet of space. **Seventy-eight years later**, our personnel and equipment occupy 40,000+ square feet of space in five locations.

Eustis Engineering is the third oldest, continually operating geotechnical firm in the United States. From a single two-man office to approximately 115 individuals in five offices, the firm has grown to house accounting, administrative, quality control, safety, drilling, engineering, laboratory, and construction materials testing departments. These departments work together to provide our clients with the quality work desired in a cost efficient and timely manner.

Eustis Engineering is headquartered in Metairie, Louisiana, in the heart of Jefferson Parish. We also operate branch offices in Baton Rouge and Lafayette, Louisiana, Gulfport, Mississippi, and Houston, Texas. Our offices and staff collaborate seamlessly using Microsoft Teams and other virtual platforms.

Eustis Engineering's services encompass many disciplines including the performance of:

- subsurface exploration (drilling of soil borings, cone penetration testing, downhole vane, and Geoprobe®);
- soil mechanics laboratory tests;
- field instrumentation and monitoring;
- non-destructive testing of piles and shafts including dynamic pile testing, crosshole sonic logging, single-hole sonic logging, low strain pile integrity testing, and thermal integrity profiling;
- geotechnical engineering design;
- special inspections; and
- construction quality control and materials testing services.

Eustis Engineering L.L.C. Important Numbers	
Item	Number
Unique Entity Identifier (UEI)	R83MG9NLTMS4
CAGE Code	4MOP2
Firm License - Louisiana	EF.0003558
Firm License - Mississippi	2078
Firm Registration – Texas	13895

Eustis Engineering has worked on over 850 geotechnical and construction materials testing projects for Jefferson Parish Government entities. We have also worked on over 4,000 projects of all types throughout the east and west banks of Jefferson Parish alone, not considering similar projects in the surrounding parishes. This work history gives our engineering staff unparalleled familiarity with the foundation conditions in the Gulf Coast and the challenges that may arise for projects associated with this contract.

ENGINEERING SERVICES

Eustis Engineering has geotechnical engineering capabilities to fulfill the requirements of nearly any project. As evidenced by the included write-ups in this package, our experience with various marsh creation, ridge restoration, and other coastal engineering projects is varied and extensive. We evaluate local and deep-seated global stability of earthen containment dikes, ridges, and terraces; levee embankments and shoreline; and waterway slopes. We provide assessments of seepage and erosion control measures.

We have developed pile capacity and bearing capacity analyses for projects throughout the coastal areas of the United States. Eustis Engineering's evaluation of piles includes estimates of vertical capacity for groups. We also perform lateral analyses of individual piles and pile groups using LPILE® and GROUP® software. We evaluate floodwalls, including I-walls, L-walls, T-walls and gates.

We perform settlement studies including estimates of settlement and time-rate of settlement with and without wick drains to enhance consolidation. These settlement studies include estimates and recommendations for lift construction affecting a gain-in-strength of foundation soils associated with subsoil consolidation. Preload/surcharge operations are also a component of our settlement evaluations.

In our practice, Eustis Engineering has developed methodologies associated with the estimates of negative skin friction on pile foundations. The methods are the current state of practice. The extension of these methods is an evaluation of settlement induced bending moments. Eustis Engineering is also utilizing a numerical model program, SIGMA/W, in association with the rigorous settlement program Settle3.

Engineering Staffing

Our engineering staff has 16 master's degrees in Civil Engineering, Engineering, Engineering Management, Geology, and Business Administration. Participation in post-Bachelor of Science curricula, as well as continuing education and professional registration that emphasizes engineering management and technical issues, is very important to Eustis Engineering. Our engineers also regularly present at technical conferences. We encourage and fund our staff for these activities and programs.

Employee	Education	Experience	
		Years with Eustis Engineering	Total Years
Professional Engineers (P.E.)			
Benjamin M. Cody	M.S. / Civil Engineering	22	26
Brian A. Deschamp	B.A. / Business Administration	12	12
	M.S. / Civil Engineering – Geotechnical		
P. Tennant Duckworth	M.S. / Civil Engineering	3	3
James J. Hance	M.S. / Civil Engineering	20	24
	M.B.A. / Business Administration		
Chad L. Held	M.S. / Civil Engineering	33	33
Matthew K. Morales	B.S. / Civil Engineering	15	15
Tomas K. Morales	B.S. / Civil Engineering	10	10
Travis R. Richards	M.S. / Engineering	17	24
	M.S. / Engineering Management		
	Coastal Engineering Certificate		
Chad D. Roe	M.S. / Civil Engineering	1	11
Gwendolyn P. Sanders	M.S. / Engineering	31	31
Sanjay S. Shahji	M.S. / Civil Engineering	1	18
Shaun R. Simon	M.S. / Civil Engineering	24	24
Alice E. Stark	B.S. / Civil and Environmental Engineering	<1	8
Patrick A. Thurmond	M.S. Engineering Management	9	9
	M.S. / Civil Engineering		
	Coastal Engineering Certificate		
Sean G. Walsh	M.S. / Civil Engineering	11	16
James M. Williams	M.S. / Civil Engineering	6	6
Henry C. Worley	M.S. / Engineering	6	7
	Coastal Engineering Certificate		
Engineering Interns (E.I.)			
Adam K. Abdulbagi	B.S. / Civil Engineering	1	1
Naba Almofraji	B.S. / Civil Engineering	<1	6
Alvaro E. Carvajal	B.S. / Civil Engineering	1	1
Joseph P. DiGiovanni	B.S. / Civil Engineering	1	1

Steven B. Tidwell	B.S. / Geological Engineering	<1	13
Engineering Graduates			
Alexander Soriano Doninelli	B.S. / Civil Engineering	<1	4
Lesley L. Reitmeyer	B.S. / Civil Engineering	15	15
Xia (Bruce) Xialong	PhD / Geotechnical Engineering	<1	10
	M.S. / Geotechnical Engineering		
Geologists			
Matthew J. Blasini, G.I.T.	B.S. / Geology	5	6
Nathan A. Quick, P.G.	M.S. / Geology	2	7
Total Years of Experience		246	322

Reviewing our table, the majority of Eustis Engineering's professional engineers have at least ten years of experience in geotechnical engineering.

Cone Penetration Testing Capabilities

Eustis Engineering owns two dedicated track-mounted cone penetration test (CPT) rigs and operates four other multi-purpose rigs capable of performing CPTs. Operators are either specifically trained engineering technicians or engineers who perform field operations utilizing the CPT equipment. Engineers with specialized knowledge and experience operating the rigs evaluate the sounds and produce the CPT logs. Five of our rigs can be placed on a cargo buggy, shallow draft barge, or airboat to access coastal marsh or open water. We have sounded to depths of 180 feet and have the ability to perform dissipation and seismic testing. Field testing is performed according to ASTM D5778 and common industry practices. Eustis Engineering has been performing CPTs and using CPT technology since the early 2000s.

A CPT can be accomplished rapidly with four or five being performed in the same time frame as a standard geotechnical boring; therefore, CPTs are typically cost-effective in providing enhanced subsurface exploration and better delineation of subsurface conditions at a project site.

Dynamic Pile Testing Capabilities

Eustis Engineering was the first private consulting firm to own and operate dynamic pile testing equipment in the States of Louisiana and Mississippi. The pile types tested include timber piles; small size pipe piles; square, precast concrete piles and large (60 to 72-in. diameter) spun-cast, prestressed concrete piles; open-end and closed-end steel pipe piles; and steel H-piles.

We often upgrade our data collectors and operate four Pile Driving Analyzers® (PDAs): one PAX unit and three PDA-8G units. These units can be battery operated and use wireless gauge transmitters to eliminate the need for a main cable to connect directly to the units. We also stock and use underwater gauges to monitor pile driving in marine environments when the pile head descends below the water surface. To support our four PDA units, Eustis Engineering maintains an extensive inventory of calibrated gauges and accessories. To provide quality assurance and rapid responses to issues in the field, all PDAs have wireless communication, enabling our engineers direct oversight of the dynamic pile testing process in real time.

We also use this PDA equipment to maintain the calibrations of our automatic Standard Penetration Test (SPT) hammers on our drill rigs.

Other Non-Destructive Testing Capabilities

Our engineering staff at Eustis Engineering performs other non-destructive testing services to verify the structural integrity of drilled shafts, augercast piles, and precast concrete piles. Some of these processes include crosshole/single-hole sonic logging (CSL or SSL), low strain pile integrity testing (PIT), and thermal integrity profiling (TIP™). We also perform parallel seismic testing to evaluate existing foundation depths.

INSTRUMENTATION

Eustis Engineering has installed geotechnical instrumentation for decades. Our instrumentation programs have resulted in substantial cost savings to our clients by reducing preload durations, providing refinement of geotechnical design parameters through full-scale testing, and verifying the performance of cutting-edge designs. Our services go beyond the construction phase, as long-term monitoring programs enable owners to maximize utilization of their facilities throughout the design life by verifying if soil behavior is within acceptable limits.

Eustis Engineering provides the following instrumentation services:

- Vibrating wire devices including piezometers, extensometers, settlement gauges, and strain gauges
- Data loggers to enable periodic collection of data for vibrating wire devices
- Data links for remote web access to data loggers in near real time
- Settlement plates
- Conventional slope inclinometers or MEM sensor array inclinometers
- Monitoring services of all instrumentation devices with geotechnical interpretation

Instrumentation is a natural complement to our design services, providing data to verify or modify recommendations based on the observational method. Ongoing monitoring enables us to provide continuing services from project inception to the end of a project's design life.

DRILLING/FIELD EXPLORATION

Eustis Engineering possesses licenses and credentials to perform geotechnical drilling in Louisiana and Mississippi (no license is needed in Texas). With our licenses and credentials, Eustis Engineering drills soil borings and performs sampling operations for our clients' projects in all types of environments including land, marsh, swamp, and marine. Our personnel have the capability and experience to provide these services from trucks, barges, pontoons, and swamp or marsh buggies. We also have portable units that can be used inside structures planned for retrofit/renovations.

Field Exploration Personnel

We can provide up to nine drillers and drill rigs capable of obtaining standard 3-in. diameter Shelby tube samples and 5-in. diameter fixed piston samples, sounding CPT, advancing Geoprobe samplers, and installing

geotechnical instrumentation on land, in water, and in marsh environments as indicated in the following table.

Capabilities of Eustis Engineering's Field Exploration Staff	Blair Armant	Scott Bombard	James Cordes	Tevin Crawford	Rene Davidson	Eric Held	James Lubben	George Reitmeyer	Lawrence Rome
Hand Auger Borings	X	X	X	X	X	X	X	X	X
General Type (3-in. Diameter Borings)	X	X	X	X	X	X	X		X
General Type (3-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings)	X	X	X	X	X	X	X		X
Undisturbed Type (5-in. Diameter Borings) in Hard Access Locations (Marsh, Swamp, Heavily Forested)	X	X	X	X	X	X	X		X
Location Information (Latitude, Longitude)	X	X	X	X	X	X	X		X
Set Permanent Benchmarks	X	X	X	X	X	X	X		X
Install Instrumentation	X	X	X	X	X	X	X		X
Cone Penetration Tests		X				X		X	X
Geoprobe Sampling		X	X		X	X	X		X

Field Exploration Equipment

Eustis Engineering owns and operates seven wet rotary drill rigs. These include truck, track, and skid-mounted rigs. This equipment includes one Diedrich truck-mounted D-50 turbo drill rig (with an automatic SPT hammer); one truck-mounted CME-55 rig; one track-mounted CME-850X rig with an automatic hammer; one track-mounted CME-850XR rig with an automatic hammer; one truck-mounted CME-55 rig with a detachable CME-55 skid unit and automatic hammer; and two track mounted Geoprobe 3230 DT. We also own two track-mounted cone penetrometer systems capable of providing up to 15 tons of reaction. Our CME track rigs provide low ground pressure and are designed to traverse soft ground surfaces, steep slopes, and lightly wooded areas. Eustis Engineering also owns two direct push Geoprobe units: the 6620DT, and the 540M. Eustis Engineering's 6620DT Geoprobe with its 12-in. tracks allow this equipment to be used on pavement as well as off road and in rugged terrain. The 6620DT and 3230DT rigs also can be placed on specialized equipment. This includes a jack-up barge and a cargo buggy for operations over marsh/water. These units can install shallow monitoring wells and other instrumentation. We also have the capability to perform CPTs and downhole vanes using the 3230DT rigs. Our 540M Geoprobe can fit into confined spaces as narrow as 32 inches. The 540M can also be utilized on an airboat for coastal terrains.

Other Specialized Soil Sampling Equipment

In addition to our drill rigs, Eustis Engineering owns and operates an Acker Vane Shear to perform down hole in-situ testing. We also have hand augers to obtain samples at various depths for use in classification and stratification of soil deposits. This equipment can be used in association with handheld piston samplers to obtain small diameter samples. Finally, we operate dynamic cone penetration tests (DCPTs) to assess the in-situ strength of undisturbed soils and compacted materials in accordance with ASTM D6951.

Drone Capabilities

Eustis Engineering utilizes small Unmanned Aerial Systems (sUAS), more commonly known as “drones,” to enhance our services. We use drones to perform site inspections, field reconnaissance, pre/post-construction condition surveys, construction inspections, and other forms of visual monitoring. We currently operate a DJI Mavic Air 2S Drone piloted by a Part 107 Certified Remote Pilot.

LABORATORY SERVICES

Eustis Engineering’s laboratories are constantly evolving with the purchase of new equipment on a yearly basis. Our gINT® data management software from Bentley allows for maximum efficiency in the production of boring logs and data entry.

Eustis Engineering has also acquired OpenGround®, Bentley’s Cloud platform, which interfaces with a collection of geotechnical applications. OpenGround provides a comprehensive solution for collecting, reporting, managing, visualizing, analyzing, and accessing data. Its advanced digital workflows combine both subsurface and surface data into one cohesive design. This software provides Eustis Engineering’s team members access to a data source via connected applications or a web portal, increasing both collaboration and efficiency. Improved access and reliability will save time and money in the planning, design, analysis, construction, and operation of infrastructure projects.

Eustis Engineering has also acquired KeyLAB® from Bentley. KeyLAB is the leading laboratory management system built specifically for geotechnical and construction materials testing laboratories. It improves our laboratory efficiency at every stage of the geotechnical and construction testing process, including sample and storeroom management, as well as electronic scheduling, testing, and reporting. It integrates with Microsoft Excel®, allowing for the efficient development of customized worksheets and reports.

Technical testing common to our laboratories includes ASTM; American Concrete Institute (ACI); State of Louisiana, Department of Transportation and Development (LaDOTD); AASHTO; FAA; and the U.S. Army Corps of Engineers (USACE). Our laboratories hold accreditations from AASHTO, LaDOTD, and the USACE.

Laboratory Staffing

Eustis Engineering currently has qualified technicians to sample construction materials and perform soil mechanics laboratory testing. These technicians are versed in the latest standards from ASTM, LaDOTD, MDOT, AASHTO, FAA, and the USACE. Many of our technicians have earned certifications with the National Institute for Certification in Engineering Technologies (NICET) in the area of geotechnical engineering technology and in the subfields of construction, exploration, generalist, and laboratory.

Laboratory Quality Control

In our effort to ensure the quality of our laboratory and materials testing, our programs are regularly inspected by outside agencies such as the USACE, the AMRL Group of the American Association of State Highway and Transportation Officials, and the CCRL Group of AASHTO. Eustis Engineering is also accredited by the Mississippi Department of Transportation.

Eustis Engineering has three soil mechanics laboratories where our laboratory practices and quality management system meet the requirements of AASHTO R 18 and ASTM E329. These offices are located in Metairie, Baton Rouge, and Gulfport. Individual offices may comply with ASTM quality system specifications including ASTM C1077, ASTM D366, and ASTM D3740. Accreditations in the various areas are shown below.

Metairie	Baton Rouge	Gulfport
Aggregate	Aggregate	Aggregate
Concrete	Soil	Asphalt
Masonry	Concrete	Concrete
Soil	Spray Fire-Resistive Material	Soil
		Spray Fire-Resistive Material

To further show quality is paramount to Eustis Engineering, we have two individuals in charge of maintaining quality in our testing. Travis R. Richards, P.E., is the Engineer-In-Charge. Timmy Holleman, dedicated Quality Control Manager, oversees the calibration of our equipment and maintenance of our quality system. The biggest reward of our quality system is knowing our clients are confident our testing laboratories produce the highest quality results and conform to state and national standards.

CONSTRUCTION MATERIALS TESTING

Eustis Engineering has been involved in construction materials testing (CMT) and inspection on a regular basis since the mid-1980s. Over the past 30+ years, Eustis Engineering has accumulated a wealth of experienced technicians in these areas. Whether 20 feet down in an excavation or 20 stories up in a high rise, our CMT technicians are there providing the inspection services needed on individual projects.

Staffing

Eustis Engineering currently has nearly 30 technicians on staff to provide construction inspection services on a daily basis. These services encompass the areas of soils, piling, asphalt, concrete, steel, and others.

Services

Soils testing in the field is performed by means of density tests, fill placement inspection, and depth checks. These services are performed by technicians who have attended courses by Troxler or Humboldt in the use of nuclear density devices.


Piling services include the inspection of various types of piles, logging these piles, and performance of pile load tests with calibrated equipment. Load test results are, in turn, interpreted and reported by a registered engineer on our staff.

Our realm of concrete inspection includes the formulation and review of mix designs, quality control at the plant and in the field, materials testing and sampling, precast piling inspection, post tension inspection, floor flatness, and mortar and grout inspection. These services are performed by our ACI and NICET certified technicians.

Steel inspection may include the visual inspection of structural steel at the site or in the shop, steel and pipe coating sampling, post tension and welder certification witnessing, and the performance of ultrasonic and x-ray testing. These services are performed by members of our staff currently certified with AWS, ASNT, and/or ASME.

Other CMT services provided by Eustis Engineering personnel include fireproofing inspection, vibration and acoustical monitoring, paint inspection, and more.

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

Signature: 
Title: President

Print Name: Gwendolyn P. Sanders, P.E.
Date: 21 June 2024

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

As-Needed Parish-Wide

Coastal Engineering Consulting Services

SOQ 24-020 | Resolution No. 144205

B. Firm Name & Address:



Gulf South Engineering and Testing, Inc.

15 Veterans Memorial Boulevard | Kenner LA 70062

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:

Chad M. Poché, P.E., Executive Vice President

504-305-4401 | 504-460-5239 cell | cpoche@gulfsoutheng.com

Registered Professional Civil Engineer (Louisiana No. 27667; since 1998)

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:

Chad M. Poché, P.E., Executive Vice President

504-305-4401 | 504-460-5239 cell | cpoche@gulfsoutheng.com

Registered Professional Civil Engineer (Louisiana No. 27667; since 1998)

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

<u>7</u>	Administrative	<u> </u>	Estimators	<u> </u>	Specification Writers
<u> </u>	Architects (Licensed)	<u> </u>	Geologists	<u> </u>	Structural Engineers
<u> </u>	Chemical Engineers	<u>2</u>	Geotechnical Engineers	<u> </u>	Graduate Engineers
<u> </u>	Civil Engineers	<u> </u>	Interior Designers	<u>1</u>	Project Managers
<u>10</u>	Construction Inspectors	<u> </u>	Landscape Architects	<u> </u>	Clerical (<i>see Administrative</i>)
<u> </u>	Ecologists	<u> </u>	Land Surveyor (<i>Apprentice</i>)	<u> </u>	Grant/Funding Specialist
<u> </u>	Electrical Engineers	<u> </u>	Mechanical Engineers	<u> </u>	Sanitary Engineers
<u> </u>	Engineer Intern	<u> </u>	Environmental Engineers	<u>1</u>	CMT Supervisor
<u>1</u>	Professional Land Surveyors	<u> </u>		<u>1</u>	Construction Svcs Manager
				<u>4</u>	Laboratory Personnel
				<u>3</u>	Soil Boring Personnel
				<u>30</u>	TOTAL

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

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

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.		
1. N/A		
2.		
H. Has this JOINT-VENTURE previously worked together? Please check: YES_____ NO_____ N/A		
I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.		
Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. N/A		
2.		
3.		
J. Please specify the total number of support personnel that may assist in the completion of the Project: 30 (all personnel will be available for assignment to the project)		

TEC Professional Services Questionnaire

- K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e., résumé) 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:

Chad M. Poché, P.E.

Executive Vice President / Registered Professional Geotechnical Engineer

Project Assignment:

Geotechnical Engineer / Principal In Charge

Name of Firm with which associated:



ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants

Years' experience with this Firm:

13 years (founded Gulf South in 2011);
31 years total (1993)

BFM Corporation, LLC | 2017 to present
Gulf South Engineering and Testing, Inc. | 2011 to present
Ardaman and Associates, Inc. | 2007 to 2011
Soil Testing Engineers, Inc. | 2001 to 2007
Eustis Engineering | 1996 to 2001
Soil Testing Engineers, Inc. | 1993 to 1996

Education: Degree(s)/Year/Specialization:

M.S., 1998, Civil Engineering, University of New Orleans
B.S., 1993, Civil Engineering, Louisiana State University

Active Registration: Year first registered/discipline:

1998, Civil Engineer (Louisiana No. 27667)
2002, Civil Engineer (Mississippi No. 15405)

Other experience and qualifications relevant to the proposed Project:

Chad M. Poché, P.E., is Executive Vice President, co-founder, and a Principal in Gulf South. He has been a consulting geotechnical engineer for nearly 30 years in South Louisiana, working on traditional and unique geotechnical engineering projects (shallow and deep foundation design, slope stability, pavement design, etc.). Mr. Poché has also provided construction oversight for virtually every type of earthwork related project. He has been the geotechnical engineer of record for thousands of projects throughout his career.

Mr. Poché's experience includes the development of appropriate scopes of work and proposals for a broad range of projects; planning and coordinating analyses; preparing technical reports; foundation and geotechnical engineering design; construction recommendations; Miss. River facility permitting; managing personnel and office operations and serving as an Expert Witness.

TEC Professional Services Questionnaire

Other experience and qualifications: **Chad M. Poché, P.E. (continued)**

Mr. Poché has logged soil borings; overseen the installation of ground water monitoring wells, piezometers, and inclinometers; overseen and evaluated pile load tests; overseen, performed, and evaluated dynamic pile testing (PDA and PIT); performed CMT field testing and inspection; and performed laboratory testing.

Marsh Island Restoration Project, Lafreniere Park, Metairie, Jefferson Parish, LA. Geotechnical investigation for construction of a new bulkhead wall around Marsh Island. Gulf South's scope includes drilling two soil borings each to a depth of 30 feet on the island, lab testing, and geotechnical engineering analyses including sheetpile and/or retaining wall design parameters, earth pressures, and general construction procedures and recommendations. (\$5,000 (fee); 2017)

Tchefuncte Marsh Shoreline Protection Project: New Borrow Fill Area, Lake Pontchartrain, St. Tammany Parish, LA. Geotechnical engineering services for shoreline protection along the Lake Pontchartrain coastline by construction of a rock dike (approx. 15,000 lf) and marsh fill area located east of the mouth of the Tchefuncte River in St. Tammany Parish, LA. Scope includes drilling 14 borings within the lake, each to a depth of 40 feet below the water surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates. (\$90,000 (fee); 2021)


Northshore Living Shoreline Protection, Lake Pontchartrain, St. Tammany Parish, LA. Geotechnical engineering services for shore protection along the northshore of Lake Pontchartrain coastline in two areas by constructing rock dikes in St. Tammany Parish, LA. Gulf South's scope includes drilling 16 borings each to a depth of 30 feet below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates. (\$65,000 (fee); 2023)

Tchefuncte Marsh Shoreline Protection - New Rock Dikes, Lake Pontchartrain, St. Tammany Parish, LA. Geotechnical engineering services for the shore protection along Lake Pontchartrain coastline by constructing a rock dike at Tchefuncte Marsh in St. Tammany Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (18 at 30 ft) in Lake Pontchartrain, laboratory testing (including consolidation tests), engineering analyses (bearing values, settlement, slope stability, construction procedures & recommendations). The project utilized shallow-draft barge equipment. (\$65,000 (fee); 2020)

Proposed Estuary Mitigation Bank (EMB) GIWW - Deadend Canal, Vendome Canal, Hockey Stick Canal, Crown Point, Jefferson Parish, LA. Geotechnical investigation for construction of a new wetland restoration project near Crown Point, LA. Gulf South's scope includes drilling nine soil borings to depths of 15 and 40 feet in water and marsh, lab testing (including settlement column test), and geotechnical engineering analysis including estimates of settlement, time rate of settlement, borrow/fill ratios, and general construction recommendations. (\$26,500 (fee); 2016)

Engineering Analysis Review (EAR) - Lafitte Tidal Protection Project (Phase I), Lafitte, Jefferson Parish, LA. Engineering analysis review of alternative pile type/size recommendations (provided by Client) for drainage structure site in Jefferson Parish, near Lafitte, LA. Gulf South's scope includes engineering analysis consisting of LPILE analysis and general construction recommendations. (\$5,000 (fee); 2016)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Bryson S. Beard, P.E., ACI Associate Geotechnical Engineer/Field Engineer	
Project Assignment:	
Associate Geotechnical Engineer/Field Engineer	
Name of Firm with which associated:	
<div style="display: flex; align-items: center;">  <div> ENGINEERING AND TESTING, INC. Geotechnical & Materials Consultants </div> </div>	
Years' experience with this Firm:	
2 years (joined Gulf South in 2022); 3 years total (2021)	<i>Gulf South Engineering and Testing, Inc. 2022 to present</i> <i>TetraTech, Inc. 2021 to 2022</i>
Education: Degree(s)/Year/Specialization:	
B.S., Geological Engineering (2021; University of Mississippi)	
Active Registration: Year first registered/discipline:	
Louisiana P.E. License Passed October 2023 Georgia, Engineering Intern (No. EIT029180, 2022)	
Other experience and qualifications relevant to the proposed Project:	
<p>Bryson S. Beard, P.E., is an Associate Geotechnical Engineer/Field Engineer who serves as a Project Manager. He has performed geotechnical engineering analyses consisting of shallow and deep foundations, slope stability, TRS and sheetpile wall design, settlement, pavement design, etc., and has prepared engineering reports. Mr. Beard's experience in the field includes surface and subsurface soil sampling, water sampling, and soil classification. His work experience further includes core logging and oversight of groundwater monitoring well installations, piezometers, and inclinometers. He has been responsible for the preparation of reports and Facility Response Plans. He is experienced with laboratory sample preparation and testing as well as air sampling and soil gas sampling.</p> <p>Mr. Bryson recently passed his Louisiana Professional Engineering test and will be a noted P.E. for the State of Louisiana once he fulfills the apprenticeship requirements set forth by LAPELS.</p> <p>Northshore Living Shoreline Protection, Lake Pontchartrain, St. Tammany Parish, LA. Geotechnical engineering services for shore protection along the northshore of Lake Pontchartrain coastline in two areas by constructing rock dikes in St. Tammany Parish, LA. Gulf South's scope includes drilling 16 borings each to a depth of 30 feet below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates. (\$65,000 (fee); 2023)</p>	

TEC Professional Services Questionnaire

Other experience and qualifications: **Bryson S. Beard, P.E., ACI (continued)**

LaPlace Water Source Project: New Intake, Pump Stations & Pretreatment Facility, LaPlace, St. John the Baptist Parish, LA. Geotechnical engineering services for the construction of a new water source infrastructure project between the Mississippi River (MSR; east bank) and railway just north of 5th street in LaPlace, LA. Proposed structures will consist of water intake structure, pump stations, pipeline crossing levee, below grade pipelines, and a pretreatment plant. Gulf South's scope includes permitting, clearing, drilling ten undisturbed soil borings (3 at 80 ft, 3 at 30 ft, 3 at 100 ft, and 1 at 150 ft) below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. (\$100,000 (fee); ongoing)

Barber Road Bank Stabilization, Paradis, St. Charles Parish, LA. Geotechnical engineering services for portions of the road that have failed or are failing into the ditch along Barber Road in Paradis, LA. Gulf South's scope includes drilling five borings (depth of 40 feet below ground surface), laboratory testing, engineering analyses (slope stability analyses, pavement design) and general construction procedures and recommendations. (\$12,000 (fee); 2022)


Bucktown Paddlers Launch, Metairie, Jefferson Parish, LA. Gulf South provided construction materials testing and inspection during construction of the project. Gulf South's scope of work includes building earthwork, paving & concrete, concrete testing, soil density tests, pile inspection and modeling, and vibration monitoring. (\$15,000; 2023)

Geotechnical Exploration Proposal (LED Site Certification), Port of Terrebonne, Houma, LA. Geotechnical services regarding LED Certification for a 35-acre site along Rome Woodard Drive for the Port of Terrebonne in Houma, LA. Drilled undisturbed soil borings. Geotechnical laboratory testing performed in accordance with ASTM standards, and includes strength tests (unconfined and/or triaxial), classification tests (Atterberg Limits and/or particle size), and other testing as appropriate. Geotechnical evaluation includes subsoil conditions, allowable soil bearing values, allowable pile load capacities, settlement estimates, and general construction procedures & recommendations. (\$5,900 (fee); 2024)

City of New Orleans Municipal Yacht Harbor Fishing Pier and Restroom, City of New Orleans, LA. Gulf South performed the Geotechnical Investigation for the project, which consists of a new fishing pier and restroom building at the Municipal Yacht Harbor along the south shore of Lake Pontchartrain in New Orleans, LA. The restroom will be an elevated structure, approximately 700 square feet, and constructed on land. The pier will be approximately 300 to 400 feet in length and extend from shore into Lake Pontchartrain. The project involves field investigation, laboratory testing, and geotechnical engineering services. (\$42,070 (fee); 2023)

Bucktown Harbor New Dock and Loading Area, Metairie, Jefferson Parish, LA. Geotechnical engineering services for construction of a new dock and bulkhead at Jefferson Parish's Bucktown Harbor in Metairie, LA. Gulf South's scope includes drilling one boring to a depth of 50 feet below the ground surface and one boring in Lake Pontchartrain to a depth of 50 feet below mudline, laboratory testing, engineering analyses (allowable pile load capacities, slope stability, sheetpile wall analyses), and general construction procedures and recommendations. (\$10,500 (fee); 2022)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Joseph H. “Trey” Binder, III, ACI Laboratory Manager	
Project Assignment:	
Laboratory Manager; Laboratory Technician	
Name of Firm with which associated:	
 ENGINEERING AND TESTING, INC. Geotechnical & Materials Consultants	
Years’ experience with this Firm:	
13 years (joined Gulf South in 2011); 13 years total (2011)	<i>Gulf South Engineering and Testing, Inc. 2011 to present</i> <i>Ardaman and Associates, Inc. 2007 to 2011</i> <i>Soil Testing Engineers, Inc. 2006 to 2007</i>
Education: Degree(s)/Year/Specialization:	
A.D., General Studies (2006; Nunez Community College)	
Active Registration: Year first registered/discipline:	
HAZMAT Awareness HAZMAT Operations Training ACI Aggregate Base Testing Technician ACI Concrete Strength Testing Technician	
Other experience and qualifications relevant to the proposed Project:	
<p>Trey Binder has direct experience with field and laboratory testing services. Mr. Binder’s field work includes soil inspection and testing consisting of nuclear density testing and soil boring logging, vibration monitoring, pile inspection, concrete testing and inspection, asphalt testing and inspection, and pavement coring. In the laboratory, Mr. Binder has performed soil laboratory testing consisting of unconfined compression strength tests, triaxial strength tests, Atterberg limits, organic content tests, moisture and density tests, Proctor compaction tests, sieve analyses, and sample extrusion.</p> <p>Tchefuncte Marsh Shoreline Protection Project: New Borrow Fill Area, Lake Pontchartrain, St. Tammany Parish, LA. Geotechnical engineering services for shoreline protection along the Lake Pontchartrain coastline by construction of a rock dike (approximately 15,000 linear feet) and marsh fill area located east of the mouth of the Tchefuncte River in St. Tammany Parish, LA. Gulf South's scope includes drilling 14 borings within the lake, each to a depth of 40 feet below the water surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates. (\$90,000 (fee); 2021)</p>	

TEC Professional Services Questionnaire

Other experience and qualifications: **Joseph H. "Trey" Binder, III, ACI (continued)**

Northshore Living Shoreline Protection, Lake Pontchartrain, St. Tammany Parish, LA. Geotechnical engineering services for shore protection along the northshore of Lake Pontchartrain coastline in two areas by constructing rock dikes in St. Tammany Parish, LA. Gulf South's scope includes drilling 16 borings each to a depth of 30 feet below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates. (\$65,000 (fee); 2023)


Bayou Des Allemands Gate, Upper Barataria Risk Reduction Program Segment 3, St. Charles Parish, LA. Geotechnical investigation for construction of a new swinging barge gate structure within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 2 at 120 ft., 1 at 100 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. One boring was performed over water; the remaining borings were performed over land. (\$145,885 (fee); 2021)

Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA. Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Scope includes drilling undisturbed soil borings, CPT probes, lab testing, and engineering analyses (site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship), estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)

Bayou Gauche/Sunset Levee - New Roller Gate, Upper Barataria Risk Reduction Program Segment 2, St. Charles Parish, LA. Geotechnical investigation for construction of a new roller gate and T-wall structures. Gulf South's scope includes drilling undisturbed soil borings (2 at 200 ft.), CPT probes (2 at 200 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, design levee lift stability, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. The borings and CPT were performed over water using barge-mounted equipment. (\$110,880 (fee); 2020)

Airline Highway Backwater Protection Project, St. John the Baptist Parish, LA. Geotechnical engineering services for the construction of a new water source infrastructure project between the Mississippi River (MSR; east bank) and railway just north of 5th street in LaPlace, LA. Proposed structures will consist of water intake structure, pump stations, pipeline crossing levee, below grade pipelines, and a pretreatment plant. Gulf South's scope includes permitting, clearing, drilling ten undisturbed soil borings below the ground surface, execution of laboratory testing, provision of engineering analyses (bearing values, bedding & backfills settlement, pile capacities, earth pressures, slope stability, cofferdam analyses, levee analyses) and establishing general construction procedures and recommendations. (\$55,000 (fee); 2020)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Eric A. Paille, C.E.T., ACI Construction Services Manager	
Project Assignment:	
Construction Services Manager	
Name of Firm with which associated:	
<div style="display: flex; align-items: center;">  <div> ENGINEERING AND TESTING, INC. Geotechnical & Materials Consultants </div> </div>	
Years' experience with this Firm:	
13 years (joined Gulf South in 2011); 35 years total (1989)	<i>Gulf South Engineering and Testing, Inc. 2011 to present</i> <i>Ardaman and Associates, Inc. 2007 to 2011</i> <i>Soil Testing Engineers, Inc. 1988 to 2007</i>
Education: Degree(s)/Year/Specialization:	
High School Diploma	
Active Registration: Year first registered/discipline:	
<i>ACI-I Field Technician (since 1991; No. 929012)</i> <i>Certified Engineering Technician (since 1992)</i> <i>Nuclear Gauge Safety Training (since 1994; No. 061321)</i> <i>Pile Driving Analyzer/CAPWAP, OSHA 40 HAZWOPER</i>	
Other experience and qualifications relevant to the proposed Project:	
<p>Eric A. Paille, C.E.T., ACI, serves as Gulf South's Construction Services Manager as well as the manager of our Gonzales office. He has experience as a technician, inspector, and testing manager, and is knowledgeable in all aspects of construction materials testing and construction inspection. Mr. Paille has performed all applicable field and soil tests over the past 30+ years. In addition, he is certified in the safe use and handling of the nuclear density gauge. He received PDA training in 2003 and has knowledge of PDA testing along with significant experience with pile driving analyzers. Mr. Paille is one of the most knowledgeable people in our industry.</p> <p>Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program Segment 4, St. Charles Parish, LA. Geotechnical investigation for construction of a new earthen levee within the flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing, and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. (\$174,720 (fee); 2021)</p>	

TEC Professional Services Questionnaire

Other experience and qualifications: **Eric A. Paille, C.E.T., ACI (continued)**

Marsh Island Wildlife Refuge Levee/Bulkhead Repairs (Louisiana DNR), Vermillion Bay, New Iberia, Iberia Parish, LA. Geotechnical investigation for various repairs to a dam, levee, and bulkhead at Marsh Island Wildlife Refuge in Iberia Parish, LA. Gulf South's scope of work includes drilling five soil borings each to a depth of 60 feet using marsh drilling equipment, laboratory testing, and geotechnical engineering services consisting of providing allowable soil bearing values, allowable pile capacities, bulkhead design parameters, slope stability analyses, estimates of settlement, and general construction recommendations. (\$51,250 (fee); 2014)


Proposed Estuary Mitigation Bank (EMB) GIWW - Deadend Canal, Vendome Canal, Hockey Stick Canal, Crown Point, Jefferson Parish, LA. Geotechnical investigation for construction of a new wetland restoration project near Crown Point, LA. Gulf South's scope includes drilling nine soil borings to depths of 15 and 40 feet in water and marsh, lab testing (including settlement column test), and geotechnical engineering analysis including estimates of settlement, time rate of settlement, borrow/fill ratios, and general construction recommendations. (\$26,500 (fee); 2016)

Marsh Island Restoration Project, Lafreniere Park, Metairie, Jefferson Parish, LA. Geotechnical investigation for construction of a new bulkhead wall around Marsh Island within Lafreniere Park in Metairie, LA. Gulf South's scope includes drilling two soil borings each to a depth of 30 feet on the island, lab testing, and geotechnical engineering analyses including sheetpile and/or retaining wall design parameters, earth pressures, and general construction procedures and recommendations. (\$5,000 (fee); 2017)

South Lafourche Levee District - Morganza to the Gulf (Reach K Mitigation Area), Lafourche Parish, LA. Geotechnical investigation for a wetlands mitigation project in Lafourche Parish, LA. Project consists of dredging various canals (totaling approx. 2.6 miles or 13,750 lf) and creating wetlands (approx. 40 acres). Gulf South's scope includes drilling 18 undisturbed soil borings to depths of 10 feet (12 borings in canals) and 30 feet (6 borings in fill area) below apparent mud line, lab testing (including consolidation tests & Settlement Column tests), and engineering analyses (inclusive of estimates of settlement, borrow/fill ratios, time rate settlement, slope stability analyses), and general construction recommendations. All borings were performed over water using barge and marsh buggy equipment. Analyses submitted, reviewed, and approved by the Louisiana Department of Natural Resources and the U.S. Army Corps of Engineers. (\$42,000 (fee); 2017)

Bayou Des Allemands Gate, Upper Barataria Risk Reduction Program Segment 3, St. Charles Parish, LA. Geotechnical investigation for construction of a new swinging barge gate structure within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 2 at 120 ft., 1 at 100 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. One boring was performed over water; the remaining borings were performed over land. (\$145,885 (fee); 2021)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Ian Kerner Poché, ACI Assistant Laboratory Supervisor	
Project Assignment:	
Assistant Laboratory Supervisor	
Name of Firm with which associated:	
<div style="display: flex; align-items: center;">  <div> ENGINEERING AND TESTING, INC. Geotechnical & Materials Consultants </div> </div>	
Years' experience with this Firm:	
7 years (joined Gulf South in 2017); Gulf South Engineering and Testing, Inc. 2017 to present 7 years total (2017)	
Education: Degree(s)/Year/Specialization:	
High School Diploma	
Active Registration: Year first registered/discipline:	
ACI Concrete Field Testing Technician - Grade 1 (exp 2028 03) ACI Aggregate Testing Technician - Level 1 (exp 2029 02 27)	
Other experience and qualifications relevant to the proposed Project:	
<p>Ian Poché has worked in Gulf South's laboratory for several years and has experience with virtually every type of soil test. He has also helped when needed in the CMT department and has concrete testing experience, and is an ACI-certified Concrete Field Testing Technician.</p> <p>Bayou Des Allemands Gate, Upper Barataria Risk Reduction Program Segment 3, St. Charles Parish, LA. Geotechnical investigation for construction of a new swinging barge gate structure within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 2 at 120 ft., 1 at 100 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations. One boring was performed over water; the remaining borings were performed over land. (\$145,885 (fee); 2021)</p> <p>City of New Orleans Municipal Yacht Harbor Fishing Pier and Restroom, City of New Orleans, LA. Gulf South performed the Geotechnical Investigation for the project, which consists of a new fishing pier and restroom building at the Municipal Yacht Harbor along the south shore of Lake Pontchartrain in New Orleans, LA. The restroom will be an elevated structure, approximately 700 square feet, and constructed on land. The pier will be approximately 300 to 400 feet in length and extend from shore into Lake Pontchartrain. The project involves field investigation, laboratory testing, and geotechnical engineering services. (\$42,070 (fee); 2023)</p>	

TEC Professional Services Questionnaire

Other experience and qualifications: **Ian Kerner Poché, ACI (continued)**

Geotechnical Exploration Proposal (LED Site Certification), Port of Terrebonne, Houma, LA. Geotechnical services regarding LED Certification for a 35-acre site along Rome Woodard Drive for the Port of Terrebonne in Houma, Drilled undisturbed soil borings. Geotechnical laboratory testing performed in accordance with ASTM standards, and includes strength tests (unconfined and/or triaxial), classification tests (Atterberg Limits and/or particle size), and other testing as appropriate. Geotechnical evaluation includes subsoil conditions, allowable soil bearing values, allowable pile load capacities, settlement estimates, and general construction procedures & recommendations. (\$5,900 (fee); 2024)

Improvements to Sewer Lift Station M-11-3 (13th & Farrington) and Force Main, Marrero, Jefferson Parish, LA. Gulf South provided the materials testing and inspection during construction. Gulf South's scope of services included vibration monitoring, bedding and backfill testing, compaction/density tests, and concrete testing and inspection. (\$15,000 (fee); 2019)


Lake Cataouatche Drainage Pump Station Replacement (Chighizola Lane), Grand Isle, Jefferson Parish, LA. Geotechnical engineering services for the construction of a replacement Lake Cataouatche drainage pump station at the end of Chighizola Lane in Grand Isle. Gulf South's scope includes drilling one undisturbed soil borings to a depth of 80 feet below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Pump station is close to a USACE floodwall so coordination and geotechnical engineering analyses were required to show the new pump station would not adversely affect the integrity of the floodwall. (\$7,500 (fee); 2020)

Lift Station F-8-3 Replacement, Metairie, Jefferson Parish, LA. Geotechnical engineering services for the construction of a new lift station to replace the existing Jefferson Parish lift station (LS F-8-3) station off West Esplanade Avenue (between Houma Boulevard and Hudson Street) in Metairie, LA. Gulf South's scope includes drilling a single undisturbed soil boring to a depth of 100 feet below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. (\$8,500 (fee); 2020)

Ole Miss Sewer Force Main, City of Kenner, LA. Geotechnical engineering services for the construction of a new sewer force main along Ole Miss Drive from the John Hopkins Lift Station to 35th Street within Kenner, LA. The force main will be 10-inches in diameter, approximately 2,100 linear feet, and installed 10 to 15 feet deep via directional drilling. Gulf South's scope includes drilling four undisturbed soil borings to depths of 20 feet below the ground surface, laboratory testing, engineering analyses (including soil bearing values, bedding & backfill, and settlement) and general construction procedures and recommendations. (\$8,000 (fee); 2021)

Lift Station Upgrade (24th St. and Delaware Ave.), City of Kenner, LA. Geotechnical engineering services for construction of a new generator pad and wet well located at 24th Street and Delaware Avenue in Kenner, LA. Gulf South's scope of services includes drilling two borings to a depths of 70 feet (1 boring for wet well) and 50 feet (1 boring for generator pad) below the ground surface, laboratory testing, engineering analyses (soil bearing values, pile capacities, bedding & backfill, and estimates of settlement) and general construction procedures and recommendations. (\$7,500 (fee); 2022)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:	
Name & Title:	
Brandon A. Paille, ACI Construction Materials Testing (CMT) Supervisor/Project Manager	
Project Assignment:	
Construction Materials Testing (CMT) Supervisor/Project Manager	
Name of Firm with which associated:	
<div style="display: flex; align-items: center;">  <div> ENGINEERING AND TESTING, INC. Geotechnical & Materials Consultants </div> </div>	
Years' experience with this Firm:	
5 years (2012-2016; 2023 to present); 14 years total (2010)	<i>Gulf South Engineering and Testing, Inc. 2023 to present</i> <i>Ascension Parish Sheriff's Office 2016 to 2023</i> <i>Gulf South Engineering and Testing, Inc. 2012 to 2016</i> <i>Ardaman and Associates, Inc. 2010 to 2012</i>
Education: Degree(s)/Year/Specialization:	
<i>High School Diploma</i>	
Active Registration: Year first registered/discipline:	
APNGA Nuclear Gauge Safety ACI Field Technician Level 1 OSHA Safety Training – 8 hr.	
Other experience and qualifications relevant to the proposed Project:	
<p>Brandon A. Paille, ACI has performed soil laboratory testing consisting of unconfined compression strength tests, triaxial strength tests, hydrometers, Atterberg limits, organic contents, moisture contents, proctor compaction tests, sieve analyses, as well as extrusion of samples. Mr. Paille's field experience includes soil inspection and testing consisting of nuclear density testing, soil boring logging, concrete testing and inspections, timber and precast pile logging and vibration monitoring. In Mr. Paille's years in the construction materials testing industry, he has obtained a vast amount of knowledge and experience which makes him an integral part of our Gulf South Team.</p> <p>Bayou Sauvage Water Control Pipe Replacement, U.S. Wildlife & Fisheries, New Orleans, LA. Geotechnical investigation for drainage pipe replacement at 2 sites for the U. S. Fish and Wildlife in New Orleans, LA. New drainage pipes will be 6 feet in diameter. Drill 1 boring to 20 feet in depth at each site and perform laboratory testing and geotechnical engineering analyses consisting of allowable soil bearing values, bedding and backfill recommendations, estimates of settlement, and general construction recommendations. (\$3,500 (fee); 2012)</p> <p>Bucktown Paddlers Launch, Metairie, Jefferson Parish, LA. Gulf South provided construction materials testing and inspection during construction of the project. Gulf South's scope of work includes building earthwork, paving & concrete, concrete testing, soil density tests, pile inspection and modeling, and vibration monitoring. (\$15,000; 2023)</p>	

TEC Professional Services Questionnaire

Other experience and qualifications: **Brandon A. Paille, ACI (continued)**

Bonanza Pump Station Flood Protection, Houma, Terrebonne Parish, LA. Geotechnical investigation for replacement of an existing bulkhead at Terrebonne Parish's Bonanza Pump Station in Houma, LA. Gulf South's scope of work included performing a soil boring to a depth of 80 feet, laboratory testing, and geotechnical engineering analyses consisting of bulkhead design parameters (tip depth, bending moment, anchor force, etc.), and general construction recommendations. (\$4,500 (fee); 2013)

Casing Installation - 40 Arpent Canal Floodwall, Chalmette, St. Bernard Parish, LA. Geotechnical investigation for casing installations at 40 Arpent Canal floodwall in Chalmette, LA. Casings installed to perform sonic tests to determine sheet pile lengths. Casings installed to depths of 40 to 60 feet below the ground surface and within 15 feet of the existing sheet pile. (\$18,900 (fee); 2014)

Bonnabel Boat Launch Ramp Replacement, Jefferson Parish, LA. Geotechnical investigation for improvement/replacement of the existing boat ramps at the Bonnabel Boat Launch in Metairie, LA. The expansion consists of 3 (50'x60') pile supported concrete ramps. Scope of work included drilling two (2) soil borings to a depth of 60 feet each and providing laboratory testing, and geotechnical engineering analysis consisting of pile load capacities, estimates of settlement, and general construction recommendations. (\$4,000 (fee), 2014)

Drainage System Engineering Analysis – CCTV Drain Line Inspections, City of New Orleans, LA. Project management and oversight of cleaning/flushing and inspection of sewer drainage pipelines in New Orleans, LA. Gulf South oversaw field operations and coordinated project phases with subcontractors. Subcontractor's inspection methods will utilize CCTV camera equipment to record drain line data. During post processing phase, all data was compiled and consolidated to create a digital database of the drain line information. (\$20,000 (fee); 2014)

New Pump/Lift Station, Airline Park Boulevard at West Metairie Avenue, Jefferson Parish, LA. Geotechnical investigation for a new pump/lift station for Jefferson Parish near the intersection of Airline Park Blvd. and W. Metairie Avenue. Scope of work consisted of performing one soil boring to 50 feet, laboratory testing, and geotechnical engineering analyses consisting of allowable soil bearing values, bedding and backfill recommendations, estimates of settlement, and general construction recommendations. (\$5,000 (fee); 2013)

Taft Park Drainage Improvements, Jefferson Parish, LA. Perform inspection and testing during construction of various drainage improvements at Taft Park. Scope of services provided by Gulf South included asphalt and/or concrete testing and inspection, field density tests, on-site inspection and documentation, and laboratory testing. (\$25,000 (fee); 2015)

Water Sampling in Mobile Bay, U.S. Coast Guard – Aviation Training Center, Mobile, AL. Surface water sampling in Mobile Bay at 3 locations, 2 times per month for period of 1 year. Samples were tested for Enterococci, Organic Carbon, and TSS. Gulf South reported every event as well as summarized every 3 months of sampling, and further compared results to EPA thresholds. Report rainfall levels were noted 3 days prior and after sampling. (\$33,000 (fee); 2012)

TEC Professional Services Questionnaire

- L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this project. Please include 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:
Tchefuncte Marsh Shoreline Protection Project: New Borrow Fill Area, Lake Pontchartrain, St. Tammany Parish, Louisiana Volkert, Inc. 9448 Brookline Ave Baton Rouge LA 70809 Matt Salmon, 225-218-9440 matt.salmon@volkert.com	Geotechnical engineering services for shoreline protection along the Lake Pontchartrain coastline by construction of a rock dike (approximately 15,000 linear feet) and marsh fill area located east of the mouth of the Tchefuncte River in St. Tammany Parish, LA. Gulf South's scope includes drilling 14 borings within the lake, each to a depth of 40 feet below the water surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates.
Completion Date (Actual or estimated:)	Estimated Cost:
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Entire Project: N/A </div> <div style="text-align: center;"> Work for which Firm was Responsible: \$90,000 (fee) </div> </div>
December 2021	

PROJECT NO. 2

Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:
Proposed Estuary Mitigation Bank (EMB) GIWW - Deadend Canal, Vendome Canal, Hockey Stick Canal, Crown Point, Jefferson Parish, Louisiana The Natural Resources Investment Group, LLC 3801 Woodland Heights Rd Ste 110 Little Rock AR 72217 Robert Stainton III, PE, 501-716-2884 robert@tnrig.com	Geotechnical investigation for construction of a new wetland restoration project near Crown Point, LA. Gulf South's scope includes drilling nine soil borings to depths of 15 and 40 feet in water and marsh, lab testing (including settlement column test), and geotechnical engineering analysis including estimates of settlement, time rate of settlement, borrow/fill ratios, and general construction recommendations.
Completion Date (Actual or estimated:)	Estimated Cost:
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Entire Project: N/A </div> <div style="text-align: center;"> Work for which Firm was Responsible: \$26,500 (fee) </div> </div>
October 2016	

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Northshore Living Shoreline Protection, Lake Pontchartrain, St. Tammany Parish, Louisiana Barowka & Bonura Engineers 209 Canal Street Metairie LA 70005 Jeff Bonura, P.E., 504-828-0030 jbonura@bbecllc.com	Geotechnical engineering services for shore protection along the northshore of Lake Pontchartrain coastline in two areas by constructing rock dikes in St. Tammany Parish, LA. Gulf South's scope includes drilling 16 borings each to a depth of 30 feet below the ground surface, laboratory testing, engineering analyses and general construction procedures and recommendations. Gulf South provided recommendations for allowable soil bearing values, estimates of settlement, slope stability analyses, time rate of settlement, and strength gain estimates.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
February 2023	N/A	\$65,000 (fee)

PROJECT NO. 4		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Marsh Island Wildlife Refuge Levee/ Bulkhead Repairs (Louisiana DNR), Vermillion Bay, New Iberia, Iberia Parish, Louisiana Royal Engineers & Consultants, LLC 3909 Ambassador Caffery Pkwy. Lafayette LA 70503 Beau Tate, 337-456-5351 btate@royalengineering.net	Geotechnical investigation for various repairs to a dam, levee, and bulkhead at Marsh Island Wildlife Refuge in Iberia Parish, LA. Gulf South's scope of work includes drilling five (5) soil borings each to a depth of 60 feet using marsh drilling equipment, laboratory testing, and geotechnical engineering services consisting of providing allowable soil bearing values, allowable pile capacities, bulkhead design parameters, slope stability analyses, estimates of settlement, and general construction recommendations.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
May 2015	N/A	\$51,250 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Tchefuncte Marsh Shoreline Protection - New Rock Dikes, Lake Pontchartrain, St. Tammany Parish, Louisiana</p> <p>Principal Engineering, Inc. 1011 North Causeway Blvd, Suite 19 Mandeville LA 70471</p> <p>Andre Monnot, P.E., 985-624-5001 andre@pi-aec.com</p>	<p>Geotechnical engineering services for the shore protection along Lake Pontchartrain coastline by constructing a rock dike at Tchefuncte Marsh in St. Tammany Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (18 at 30 ft) in Lake Pontchartrain, laboratory testing (including consolidation tests), engineering analyses (bearing values, settlement, slope stability, construction procedures & recommendations). The project utilized shallow-draft barge equipment.</p>	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
June 2020	N/A	\$65,000 (fee)

PROJECT NO. 6		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Highway 90 Tie-In Levee, Upper Barataria Risk Reduction Program (UBRR) Segment 4, St. Charles Parish, Louisiana</p> <p>Lafourche Basin Levee District 21380 Highway 20 Vacherie LA 70090</p> <p>Donald Ray Henry, 225-265-7545 drhenry@lbld.us.com</p>	<p>Geotechnical investigation for construction of a new earthen levee within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations.</p>	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
January 2021	N/A	\$174,720 (fee)

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Marsh Island Restoration Project, Lafreniere Park , Metairie, Jefferson Parish, Louisiana Mathes Brierre Architect 201 St. Charles Street, Suite 4100 New Orleans LA 70170-4100 Scott Evans, AIA , 504-586-9303 sevans@mathiesbrierre.com	Geotechnical investigation for construction of a new bulkhead wall around Marsh Island within Lafreniere Park in Metairie, LA. Gulf South's scope includes drilling two soil borings each to a depth of 30 feet on the island, lab testing, and geotechnical engineering analyses including sheetpile and/or retaining wall design parameters, earth pressures, and general construction procedures and recommendations.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
May 2017	N/A	\$5,000 (fee)

PROJECT NO. 8		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Bayou Des Allemands Gate, Upper Barataria Risk Reduction (UBRR) Program Segment 3 , St. Charles Parish, Louisiana Lafourche Basin Levee District 21380 Highway 20 Vacherie LA 70090 Donald Ray Henry , 225-265-7545 drhenry@lbld.us.com	Geotechnical investigation for construction of a new earthen levee within the UBRR flood protection/risk reduction system in St. Charles Parish, LA. Gulf South's scope includes drilling undisturbed soil borings (1 at 200 ft., 3 at 75 ft.), CPT probes (6 at 75 ft.), lab testing (including consolidation tests), and engineering analyses including site/soil characterization, global/local SSA for floodwalls, levee tie-ins, and floodgates, seepage analyses for sheetpile walls, settlement/downdrag analyses, unbalanced forces for structures, pile load capacities, pile foundation load-deflection relationship, estimates of settlement, ground improvement recommendations, and general construction procedures and recommendations.	
Completion Date (Actual or estimated:)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
February 2021	N/A	\$145,885 (fee)

TEC Professional Services Questionnaire


PROJECT NO. 9		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Engineering Analysis Review (EAR) - Lafitte Tidal Protection Project (Phase I), Lafitte, Jefferson Parish, Louisiana G&S Engineering, LLC Post Office Box 71 Mandeville LA 70470 Scott Gros, 504-744-0630 scottgros@gmail.com	Engineering analysis review of alternative pile type/size recommendations (provided by Client) for drainage structure site in Jefferson Parish, near Lafitte, LA. Gulf South's scope includes engineering analysis consisting of LPILE analysis and general construction recommendations.	
Completion Date (Actual or estimated:)	Estimated Cost:	
June 2016	Entire Project:	Work for which Firm was Responsible:
June 2016	N/A	\$5,000 (fee)

PROJECT NO. 10		
Project Name, Location, and Owner's contact information:	Nature of Firm's Responsibility:	
Laketown Boat Launch Improvements - New Rock Jetty, South Shore Lake Pontchartrain, City of Kenner, Jefferson Parish, Louisiana Jefferson Parish 1221 Elmwood Park Blvd Ste 310 Jefferson LA 70123 Michelle M. Gonzales, CFM, 504-736-6653 mgonzales@jeffparish.net	Geotechnical engineering services for the construction of a rock jetty dike and boat launch protection along the Lake Pontchartrain shoreline at the Laketown Boat Launch in Kenner. Gulf South's scope includes drilling undisturbed soil borings (two at 50 ft bgs), laboratory testing, engineering analyses and general construction procedures and recommendations. One boring was drilled within Lake Pontchartrain (using barge-mounted drilling equipment) and one boring was drilled on land.	
Completion Date (Actual or estimated:)	Estimated Cost:	
January 2021	Entire Project:	Work for which Firm was Responsible:
January 2021	N/A	\$21,500 (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.	<i>Gulf South Engineering and Testing, Inc. is not currently, nor has it previously been involved, in litigation with Jefferson Parish.</i>	
2.		
3.		
4.		

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



ENGINEERING AND TESTING, INC.
 Geotechnical & Materials Consultants

CRITERIA 1 | PROFESSIONAL TRAINING AND EXPERIENCE

Gulf South Engineering and Testing, Inc. (Gulf South) is a geotechnical engineering and construction materials testing and inspection company which began operations in 2011. Since that time, we have grown to two offices and nearly three dozen employees.

Gulf South provides a broad range of geotechnical related services, completing more than 100 geotechnical engineering projects and 300 construction materials testing and inspection projects each year. These projects typically include soil borings (shallow and deep borings), laboratory testing (AASHTO, ASTM methods, etc.), soil classification (USCS), geotechnical engineering, and construction material testing and field inspection.

Gulf South is a woman-owned, Hudson Initiative-certified small entrepreneurship in Louisiana. Our laboratory is AASHTO and CCRL certified and USACE validated.

Geotechnical Engineering Services

Gulf South's ownership and senior management have decades of combined experience in the profession and have completed thousands of projects. One of Gulf South's Principals, Chad M. Poché, P.E., a founding principal and Professional Engineer registered in Civil Engineering in Louisiana and Mississippi, has specific and extensive training & experience in geotechnical engineering. He has three decades of experience in planning, administering, and conducting geotechnical investigations.

TEC Professional Services Questionnaire

N. continued.

The firm has specific engineering experience and training in **Geotechnical Engineering, Foundation Design, and Geology & Geohydrology**; our staff has extensive experience in all aspects of soil mechanics and geotechnical engineering with specific knowledge in the following areas:

- Shallow and deep foundations (piles, shafts, augercast, screw/anchor piles)
- Deep excavations, cofferdams, retaining walls
- Levees and soft ground construction; slope stability & seepage
- Earthwork; settlement analyses
- Shoreline protection
- Scour analyses
- LRFD Design
- Mechanically Stabilized Earth (MSE) Walls
- Development of load test programs
- Geotechnical instrumentation and construction monitoring
- Canals and pump station foundations
- Pipe bedding and backfill
- Roadways, bridges, pavements

Field Investigation Services

Gulf South owns truck mounted (ARDCO C-1000) and track mounted (ARDCO SD 350) drilling rigs with associated and appurtenant support equipment (water trucks and buggy). Our equipment and crews are capable of drilling soil borings to depths of up to 300 feet and installing monitor wells, piezometers, and inclinometers. We can also perform CPT soundings, geoprobe borings, and field testing at any site. Our staff has extensive experience in planning, oversight, and direction of field investigations.

Laboratory Testing Services

Gulf South's laboratory is equipped to serve the specific needs of our clients and managed by trained and experienced personnel. All testing is performed in accordance with ASTM, AASHTO, and/or other approved procedures. Gulf South routinely performs soil and concrete strength testing (unconfined and triaxial), soil classification tests (Atterberg limits, moisture content, density, particle size), soil and aggregate sieves, organic content, pH, soil resistivity, and moisture/density relationships (Proctor tests). Gulf South's laboratories are managed by full time, experienced, managers and staff. Further, Gulf South's Kenner laboratory is AASHTO and CCRL certified and USACE validated.

Construction Materials Testing & Inspection

Gulf South provides a full range of construction materials testing & inspection services for structures, earthwork, foundations, pipelines, and pavements. The range of services provided includes:

- Fill and base compaction and density testing
- Vibration monitoring
- Pre- and post-construction inspection

TEC Professional Services Questionnaire

N. continued.

- Concrete testing and inspection
- Soil testing (field and laboratory)
- Asphalt testing
- Pile (driven & augercast) and shaft installation monitoring
- Load tests
- Earthwork/proof roll inspection
- Welding inspection
- Steel inspection
- Noise monitoring
- Prepare daily field reports and/or field books
- Maintain records per the client's directive

We have provided construction testing & oversight for projects as small as a house pad to as large as the **\$1.2 billion Louis Armstrong New Orleans International Airport North Terminal** project.

Please refer to our projects included in Item L and in our personnel listings in Item K for specific type project examples and an overview of our professional experience with this project type.

CRITERIA 2 | SIZE OF FIRM

At over 30 employees, Gulf South has the appropriate number of employees and personnel for this project. We will complete our scope of services on time and within budget. Further said, Gulf South can readily meet the time and budget constraints for projects assigned to this contract. Our current workload is such that we can expeditiously complete projects for this contract.

CRITERIA 3 | CAPACITY FOR TIMELY COMPLETION

Activity is dependent on the scope of work as well as site access and conditions, however; typically soil borings can be started within one week of receiving notice to proceed with a final product delivered within 3 to 4 weeks of completing the borings. Gulf South's workload & scheduling, coupled with our headquarters being nearby, will allow for assignment of key personnel shortly after any project is assigned.

CRITERIA 4 | PAST PERFORMANCE ON PARISH CONTRACTS

Gulf South has worked both directly and indirectly for various Jefferson Parish Departments (Public Works, Engineering Department, Drainage Department, Jefferson Parish School Board, etc.) throughout our history. Beyond the projects included within this form, additional project information (including listings, background, & client contacts) are available upon request. We have also completed similar services for Public and Private concerns throughout the region.

CRITERIA 5 | LOCATION OF THE PRINCIPAL OFFICE

Gulf South Engineering and Testing has been headquartered in Jefferson Parish since beginning operations in 2011; our principal office is located in Jefferson Parish at 15 Veterans Memorial Boulevard in Kenner. We also maintain an office in Gonzales, LA.

TEC Professional Services Questionnaire

N. continued.

CRITERIA 6 | LEGAL STATEMENT

As stated in Item M, Gulf South has had no litigation, past or present, with Jefferson Parish, nor any of our clients.

CRITERIA 7 | PRIOR SUCCESSFUL COMPLETION OF PROJECTS

The Principals and key employees of Gulf South have many years of applicable experience in working for and with Government Agencies and private industry. Founding principal and Executive Vice President of Gulf South, Chad M. Poché, P.E., has been a practicing registered geotechnical engineer in South Louisiana since 1998. He has specialized training and experience in geotechnical engineering throughout Louisiana.

As evidenced in the provided projects and personnel résumés, key personnel experience includes the completion of thousands of projects in the region throughout their careers for a broad range of clients, including both the government and private sectors. We can submit data in formats acceptable and customized to our clients' needs.

Gulf South invites you to contact any of our clients for a candid discussion of our service and professionalism, and offer these direct references:

Neil Schneider, CCM, P.E., Director, Capital Projects, Jefferson Parish
(504-736-6783 | JPPW@jeffparish.net)

Ben Lepine, Acting Director, Drainage Department, Jefferson Parish
(504-736-6751 | JPDrainage@jeffparish.net)

Angela DeSoto, P.E., Director, Engineering Department, Jefferson Parish
(504-736-6511 | ADeSoto@jeffparish.net)

Mark R. Drewes, P.E., Director, Public Works Department, Jefferson Parish
(504-736-6783 | JPPW@jeffparish.net)

Michael B. Cooper, Parish President, St. Tammany Parish
(985-898-2362 | president@stpgov.org)

Joey Tureau, Director of Transportation, Ascension Parish
(225-450-1013 | jtureau@apgov.us)

José A. Gonzales, CAO, City of Kenner
(504-468-4090 | jgonzalez@kenner.la.us)

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

Signature: _____

Print Name: Chad M. Poché, P.E.

Title: Executive Vice President

Date: June 25, 2024

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

SOQ #24-020 Coastal Engineering Consulting Services as needed parish wide. Resolution No. 144205

B. Firm Name & Address:

Coast & Harbor Engineering, Inc.
PO Box 202737
Austin, TX 78720



**COAST & HARBOR
ENGINEERING**

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:

Josh Carter, PE, BC.CE
PO Box 202737
Austin, TX 78720

office: (512) 615-0816
email: josh.carter@coastharboreng.com
LA PE: 33391

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.

Josh Carter, PE, BC.CE
PO Box 202737
Austin, TX 78720

office: (512) 615-0816
email: josh.carter@coastharboreng.com
LA PE: 33391

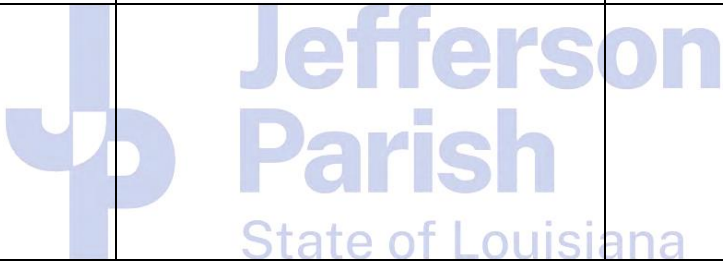
E. Please provide the number of employees whose primary function corresponds with each category:

<input type="checkbox"/> Administrative	<input type="checkbox"/> Estimators	<input type="checkbox"/> Specification Writers
<input type="checkbox"/> Architects (Licensed)	<input type="checkbox"/> Geologists	<input type="checkbox"/> Structural Engineers
<input type="checkbox"/> Chemical Engineers	<input type="checkbox"/> Geotechnical Engineers	<input type="checkbox"/> Graduate Engineers
<input type="checkbox"/> Civil Engineers	<input type="checkbox"/> Interior Designers	<input type="checkbox"/> Project Managers
<input type="checkbox"/> Construction Inspectors	<input type="checkbox"/> Landscape Architects	<input type="checkbox"/> Clerical
<input type="checkbox"/> Ecologists	<input type="checkbox"/> Land Surveyor	<input type="checkbox"/> Grant/Funding Specialist
<input type="checkbox"/> Electrical Engineers	<input type="checkbox"/> Mechanical Engineers	<input type="checkbox"/> Sanitary Engineers
<input type="checkbox"/> Engineer Intern	<input type="checkbox"/> Environmental Engineers	<input type="checkbox"/> Other (Coastal Engineers)
<input type="checkbox"/> Professional Land Surveyors		<u>12</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 <u>all subcontractors must submit a fully completed copy of this questionnaire</u>, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.		
Name & Address:	Specialty:	Worked with Firm Before (Yes or No):
1. N/A		
2. N/A		
3. N/A		
J. Please specify the total number of support personnel that may assist in the completion of this Project: <div style="text-align: center; font-size: 1.2em;">12</div>		

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:

Josh Carter, PE, BC.CE - Principal

Project Assignment:

Principal-in-Charge

Name of Firm with which associated:

Coast & Harbor Engineering, Inc.

Years' experience with this Firm:

5 months

Education: Degree(s)/Year/Specialization:

MS, Civil and Environmental Engineering, Massachusetts Institute of Technology / 2002 / Coastal Engineering
BS, Ocean Engineering, Texas A&M University / 1999 / Coastal Engineering

Active registration: Year first registered/discipline:

Professional Engineer: LA, #33391, 2007; TX, #97258, 2006; FL, #80996, 2016; MS, #18618, 2008;
AL, #34115-E, 2013; VA, 57398, 2017

Other experience and qualifications relevant to the proposed Project:

Josh is a Principal Coastal Engineer. He has participated in 100s of coastal projects along the Gulf and as Engineer of Record for more than 20. He designs coastal structures such as breakwaters, groins, revetments, living shorelines; beach/dune nourishment and marsh creation; and navigation channels. Josh has worked in nearly all parts of coastal Jefferson Parish and has working models of Lake Pontchartrain, Barataria Bay, and areas north, as well as all of Grand Isle. Josh has delivered projects up to \$500M in construction.

Selected experience

Bucktown Harbor Marina Entrance Improvement Project, Jefferson Parish, LA: Principal-in-Charge for evaluation, design, and construction of improvements to the entrance of the Bucktown Harbor Marina to reduce wave energy penetration into the marina. Oversaw data collection, wave modeling, and feasibility study. Directed the design and permitting of the project. Managed construction administration and inspection.

Grand Isle Barrier Shoreline Stabilization Study, Jefferson Parish, LA: Coastal Engineer for a study which developed a long-term solution to reduce storm damage and create a recreational beach. He conducted coastal engineering analysis and evaluated alternatives through numerical modeling. His coastal engineering analysis led to an understanding of the processes controlling the shoreline change at Grand Isle which allowed for solutions developed to address the processes responsible for shoreline change.

Grand Isle Levee/Dune Hot Spot Emergency Stabilization and Repair, Grand Isle, Jefferson Parish, LA: Project Director for emergency project to stabilize an erosional hotspot has formed on the western end of the Island where chronic erosion has continued to threaten the USACE levee/dune system, adjacent infrastructure, and recreational beach. The project consisted of constructing a 2,800-foot-long stone revetment for immediate protection, and design of beach and breakwaters for long-term stabilization. Designed 5 rock breakwaters and a 750,000 CY beach nourishment along the westernmost 2 miles of Grand Isle including design of a borrow site at the Caminada Pass ebb shoal.

Jefferson Floodwall – Hurricane Forces on I-10 Bridge, Jefferson Parish, LA: Coastal Engineer responsible for analyzing hurricane wave-induced forces and moments on bridge span locations at the I-10 bridge.

TEC Professional Services Questionnaire

Josh Carter continued

East/West Grand Terre Island Shoreline Stabilization, Jefferson and Plaquemines, LA:

Coastal Engineer responsible for evaluating the shoreline erosion rate and predicting the rate of shoreline retreat for each of the proposed beach nourishment alternatives. A sophisticated methodology was pioneered to evaluate the morphology and lifetime of the beach nourishment by combining cross-shore profile modeling, 2-dimensional wave and wave-induced current modeling, and the measured coastal erosion at the site. This methodology led to a better understanding of the capacity of each proposed nourishment alternatives to withstand the erosive forces acting on the islands' shorelines.

Bayou Bonfouca Marsh Creation – Numerical Modeling, St. Tammany Parish, LA: Project Manager for numerical modeling conducted to support a marsh creation project. He directed the evaluation of impacts of dredging the proposed borrow source on changes to the local wave climate and resulting changes in shoreline morphology. He also directed 3-dimensional circulation and water quality modeling to investigate the potential for the borrow source to act as a trap for low dissolved oxygen water and developed variations to the borrow cut design to maximize flushing of the borrow cut to eliminate water quality impacts.

Elmer's Island Breach Repair, Jefferson Parish, LA: Coastal Engineer who computed statistics for waves, winds, water levels, and storm occurrence. He also directed and conducted numerical modeling in support of the analysis and design calculations. Modeling work included circulation modeling, wave penetration modeling, and shoreline morphologic modeling. Results from these analyses were used to develop alternative breach fill solutions. Mr. Carter also managed field data collection tasks including topographic/bathymetric surveys, geotechnical field investigation, sediment borrow source investigation and preliminary and final design assistance.

Living Shoreline Demonstration Project, St. Bernard Parish, LA: Project Manager for a demonstration project which evaluated living shoreline products to reduce wave energy that reached the shore and stimulate oyster growth to increase the biodiversity in the immediate area. He was responsible for the overall project delivery, Mr. Carter directed the morphologic analysis, evaluation nine

living shoreline products, and design. The evaluation investigated the product's ability to reduce wave energy past the structure utilizing 3D computational fluid dynamics modeling tools. He also managed final design, bidding phase services and managed construction administration.

Mandeville Wetlands Protection, Mandeville, LA: Project Manager for a protection project needed to reduce erosion to the cypress wetland, maintain the hydraulic connection with stormwater outfalls that feed into the wetlands and into Lake Pontchartrain, and serve as a walkway between two adjacent parks. He was responsible for data collection efforts and analysis of existing conditions including wind and wave climate, tide elevations, and sediment transport patterns. He also directed an alternatives analysis for three alternatives: a rock revetment, a living shoreline, and a hybrid structure which combined the advantages of the revetment and living shoreline concepts.

Cameron Parish Shoreline Restoration, Cameron Parish, LA: Project Manager for a \$42M beach nourishment project along the Gulf Coast Beach which consisted of importing dredged sand from 20 miles offshore. He was responsible for existing and new field data collection, coastal engineering analysis, project alternatives development, alternatives analysis, and borrow source investigation, and managed acquisition of required regulatory approval for its mining. He also participated in the analysis of analytical, empirical, and numerical modeling of waves, tides, sediment transport and shoreline morphology. The design team utilized the results of the coastal engineering analysis to develop alternative shoreline nourishment methods and configuration. He also managed the construction oversight services.

Bio-Engineered Oyster Reef Demonstration, Cameron Parish, LA: Project Manager for a demonstration project which evaluated a new concrete oyster reef technology, the Oysterbreak™ and compared the performance of the Oysterbreak™ structures to traditional rock structures in their ability to provide shoreline stabilization to a marsh shoreline in the open Gulf of Mexico in very weak soil conditions. He was responsible for the analytical and numerical modeling, including 2D and 3D VOF numerical modeling of the structure's stability and ability to reduce wave impacts on the shoreline. He also coordinated and developed the final design, technical specifications, construction contracting documents, and coordinating with agencies and client for project review.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL
Name & Title:
Scott Fenical, PE, BC.CE, D.PE - Principal Coastal Engineer
Project Assignment:
Senior Coastal Engineer
Name of Firm with which associated:
Coast & Harbor Engineering, Inc.
Years' experience with this Firm:
5 months
Education: Degree(s)/Year/Specialization:
MS, Ocean Engineering, Texas A&M University / 1996 / Coastal Engineering BS, Mechanical Engineering, University of California, Santa Barbara / 1994
Active registration: Year first registered/discipline:
Professional Engineer: CA, 59466, 1999; TX, 116337, 2014
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Fenical's 29 years of experience also includes planning, engineering, and design of a wide range of shoreline protection projects such as beach nourishment, coastal armoring, inlet and waterway maintenance, and dune restoration. He prepares and reviews engineering plans and designs for coastal/ shoreline structures including maintenance dredging, habitat restoration, artificial reef development, breakwaters, groins, revetments, beach nourishment, and dune restoration. His numerical modeling and analysis experience includes wave transformation, wave-generated nearshore circulation, tide and wind-generated circulation, sediment transport under waves and currents, and water quality.</p> <p>Selected experience</p> <p>Caminada Bridge Design Criteria Development, Caminada Pass, Jefferson Parish, LA: Coastal engineer responsible for storm surge analysis and modeling, wave transformation modeling and wave loading analysis for the re-development of Caminada Pass Bridge. Mr. Fenical also performed evaluation of historical hurricane data which included measuring storm surge, wave heights, and hurricane parameters. Based on evaluation of these hurricane parameters, design hurricane events were estimated for the 100-year event for the project design. Storm surge was evaluated based existing studies, as well as those predicted by numerical modeling tools. He also developed a bathymetry/topography database relevant to the project site and a detailed numerical modeling domain covering the entire Gulf of Mexico and lower half of Louisiana.</p> <p>Grand Isle Shoreline Stabilization Study, Jefferson Parish, LA: Coastal Engineer who worked on the coastal processes analysis team developing and implementing numerical modeling for existing conditions and for proposed alternatives. Mr. Fenical developed the wave transformation modeling as well as the combined tide, wave, and wind-induced currents, which were used to drive sediment transport and sediment transport pathway models. Results of the evaluation were used in the design to achieve the optimal performance of various alternative components.</p> <p>East/West Grand Terre Islands Shoreline Stabilization Project, Jefferson/Plaquemines Parish, LA: Coastal Engineer responsible for overseeing the coastal modeling. The modeling included regional and nearshore spectral wind wave transformation, nearshore wave-induced currents, regional tidal current circulation verified with field data, coupled wave-induced and tidal-induced currents, and sediment transport under combined waves and currents. The sediment transport modeling was coupled with a shoreline response model to predict beach fill longevity. Also, the fate and longevity of the beach fill was modeled with particle tracking models. Mr. Fenical performed marsh fill volume calculations and cohesive sediment transport modeling of the marsh material under waves to determine scour of the marsh material over the project lifetime.</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL
Name & Title:
Arpit Agarwal, PE – Principal
Project Assignment:
Senior Coastal Engineer
Name of Firm with which associated:
Coast & Harbor Engineering, Inc.
Years' experience with this Firm:
5 months
Education: Degree(s)/Year/Specialization:
MS, Civil Engineering, University of Delaware / 2005 / Coastal Engineering Bachelor of Technology, Naval Architecture & Ocean Engineering, Indian Institute of Technology, 2003
Active registration: Year first registered/discipline:
Professional Engineer: LA 46339, 2021; TX 104878, 2009
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Agarwal has served as a Project Manager and Coastal Engineer in planning and data collection efforts, alternatives analyses, and design for a variety of coastal work such as shoreline stabilization, coastal protection, and marine terminal projects. He is proficient in performing sophisticated analytical and numerical analysis on a variety of meteorologic and oceanographic data types. His experience has ranged from developing his own computer codes and using available numerical models to performing modeling and analysis of wave transformation, tide and wind induced currents, propeller wash, sediment transport, shoreline change, and morphology.</p> <p>Selected experience</p> <p>Grand Isle Levee/Dune Emergency Stabilization, Grand Isle, LA: Coastal Engineer responsible for managing the coastal engineering analysis which included statistical analysis of coastal processes, wave and circulation modeling, morphology analysis including shoreline change and bed bottom morphology, shoreline morphology modeling and development of sediment budget along the Grand Isle shoreline. He also helped in the development and analysis of different alternatives for mitigating shoreline erosion.</p> <p>Cameron Parish Shoreline Stabilization, LA: Coastal Engineer for beach nourishment project that placed 2 million cubic yards of sand along the shoreline protecting State Highway 82/27. He was responsible for conducting coastal modeling to determine the fate of beach nourishment material. He developed and analyzed configurations of beach nourishment and identified the most feasible. He utilized wave modeling to transform waves to nearshore to design the project. His work also helped in determining if the dredging of borrow source sites had any adverse impact on the current shoreline. Additionally, he developed a dynamic sediment budget to predict the future shoreline positions.</p> <p>Bayou Bonfouca Marsh Creation - Numerical Modeling, St. Tammany Parish, LA: Arpit developed wave models for evaluating changes to the wave climate leeward of the proposed borrow sites for the Bayou Bonfouca Marsh Creation Project. Mr. Agarwal conducted the borrow area impact analysis using the numerical model SWAN to assess the impact of the borrow area on local wave energies impacting the shoreline.</p> <p>Bird's Foot Delta Hydrologic Restoration, Plaquemines Parish, LA: The 521,000-acre delta has degraded and restoration is proposed through increasing the hydraulic connection between the Mississippi River, main passes, and crevassing for land building. Mr. Agarwal conducted hydraulic and morphologic numerical modeling incorporating riverine and coastal hydrodynamics and 3D effects to capture salinity over a large range of scales to capture river processes down to detailed crevasse splay land building, and evaluated a dredge template that balances long-term land building and habitat benefits without impacts to navigation.</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL
Name & Title:
Craig Harter – Coastal Engineer
Project Assignment:
Coastal Engineer
Name of Firm with which associated:
Coast & Harbor Engineering, Inc.
Years' experience with this Firm:
5 months
Education: Degree(s)/Year/Specialization:
MS, Ocean Engineering, Texas A&M / 2015 / Coastal Engineering
BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, 2010
Active registration: Year first registered/discipline:
Professional Engineer: TX, 134941, 2020
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Harter is a professional engineer with of experience in coastal modeling. He is skilled in a variety of numerical modeling software for coastal processes such as wave transformation (SWAN), general circulation and storm surge (ADCIRC), and detailed hydrodynamics (Flow 3D). Mr. Harter has effectively created, calibrated, and validated modeling tools to understand the coastal setting and analyze project performance.</p> <p>Selected experience</p> <p>Grand Isle Levee Dune and Beach Nourishment, Coastal Protection and Restoration Authority of Louisiana, Grand Isle, LA. Coastal engineer responsible for developing and calibrating a dynamically coupled 2D depth averaged hydro – morphological model in Delft 3D to simulate inlet dynamics and sediment bypassing across the inlet on the west end of Grand Isle. Utilized the model to identify changes to the inlet dynamics under the influence of two breakwater scenarios and three proposed dredge pit scenarios. Used the changes to bypassing from the coupled model to force a 1D shoreline response model (Gencade) to identify potential changes to the shoreline position as a result of the proposed project alternatives. (2016 - 2017).</p> <p>Cameron Creole Marsh Hydraulic Analysis, Coastal Protection and Restoration Authority of Louisiana, Cameron Parish, LA: Coastal engineer. Developed an innovative approach to simulating tidal currents by using machine learning technology by creating a neural network that was trained to act as an accurate and efficient surrogate hydrodynamic model that predicted tidal currents and water levels 300,000 times faster than the numerical model and with remarkable accuracy. His work accelerated the computational timeline of more than 200 storm surge scenarios. Developed the methodology to evaluate the complete hurricane-induced risks including water elevation, wave conditions, and probabilistic hydrodynamic loads on project features.</p> <p>Little Bay Drainage Improvements, Rockport, TX: Coastal engineer for hydrological, hydraulic, and hydrodynamic circulation modeling of Little Bay. Developed joint annual exceedance probability curves for storm surge and precipitation using statistical modeling from historical data. Simulated the joint influence of extreme surge and precipitation using HEC-RAS 5 in terms of flood extent and peak velocity. Further analyzed the sensitivity of the hydraulic system to the latency between surge and precipitation peaks as well as the shape of the storm surge hydrograph. The results of the analysis will be used by our team to explore potential mitigation measures to increase the overall circulation between Little Bay and Aransas Bay and alleviate prolonged flooding.</p>

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL
Name & Title:
Thomas Everett, PE – Coastal Engineer
Project Assignment:
Coastal Engineer
Name of Firm with which associated:
Coast & Harbor Engineering, Inc.
Years' experience with this Firm:
5 months
Education: Degree(s)/Year/Specialization:
MS, Coastal and Ecological Engineering, Louisiana State University / 2016 / Coastal Engineering BS, Civil Engineering, Louisiana State University 2014
Active registration: Year first registered/discipline:
Professional Engineer: TX, #137249, 2020
Other experience and qualifications relevant to the proposed Project:
<p>Thomas Everett, PE is a Professional Engineer with nearly a decade of experience in coastal analyses, design, and restoration projects, working as a technical lead, project manager and staff manager. Work history includes complex modeling efforts in nearshore hydrodynamics, circulation, riverine sediment transport and morphology, and field data collection and processing with a focus in the Gulf of Mexico, and extensive experience in Louisiana and Texas.</p> <p>Selected experience</p> <p>Bird's Foot Delta Hydrologic Restoration Project (MR-173): Lead project engineer for a project that proposes to restore the hydrology, freshwater, and sediment delivery to the Eastern Bird Foot Delta. Project engineer responsible for developing understand the dynamics of the Bird's Foot Delta developing modeling approach. Responsible for 3D hydraulic and morphologic coastal modeling of the Lowermost Mississippi River and Bird's Foot Delta complex.</p> <p>Pontchartrain Pond Hydrodynamic Assessment: Project manager and coastal engineer for a project that includes the analysis and design of a channel to restore circulation to Pontchartrain Pond along the south shore of Lake Pontchartrain in Jefferson Parish, LA. A fully coupled surface wave and circulation model of Pontchartrain Pond and alternative channel designs were developed. The model calculated flow velocities and water quality within the designed channels to determine channel stability.</p> <p>Slidell Breakwater Restoration: Project manager and coastal engineer for a project that developed a design concept and detailed cost estimate for a breakwater system in Slidell, LA on the shore of Lake Pontchartrain. A coastal engineering analysis was conducted to develop a project site understanding, to aid in numerical modeling, alternatives analysis, and development of a preliminary shoreline protection system. The goal of the shoreline protection system was to reduce storm induced wind-waves along the project shoreline. Numerical modeling was used to develop, evaluate, and recommend alternatives at the project site.</p> <p>Biloxi Marsh Living Shoreline Project, Coastal Protection and Restoration Authority of Louisiana (CPRA), St. Bernard Parish, LA: Coastal Engineer for a living shoreline project that will build approximately 11 miles of shoreline protection to reduce shoreline erosion and enhance ecological habitat. Constructed a nearshore wave model to transform offshore wave energy to the breakwater structure. Validated the model against wave gauge measurements. Additionally, he assisted in a comprehensive shoreline change analysis to determine short- and long-term retreat rates across the project site. From the shoreline change analysis and wave modeling, a relationship between incident wave energy and shoreline retreat rate was determined for each breakwater type.</p>

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:

Bucktown Harbor Marina Entrance Improvement Project

Jefferson Parish Ecosystem and Coastal Management, Michelle Gonzales: (504)736-6653

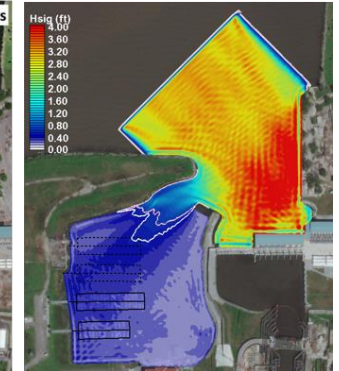
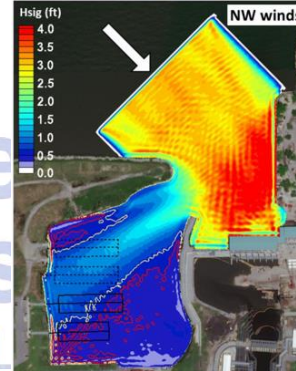
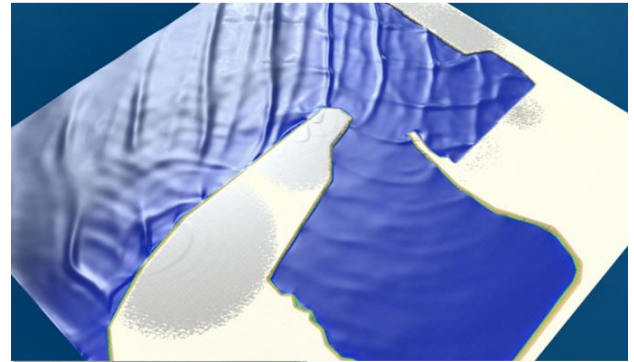
Nature of Firm's Responsibility:

See below

Ships were experiencing large motions during regular winter storm events. Coast & Harbor Engineering (CHE), as part of Mott MacDonald*, developed alternative solutions including a variety of structural modifications to the entrance and reconfiguration of the entrance channel. The improved entrance provides calm mooring conditions and improved navigation safety.

We evaluated wave energy penetration into the Marina Entrance which caused unacceptable motion of vessels moored in the marina. Waves were shown to diffract around the entrance as well as reflect off of the eastern wall of the 17th Street Canal outfall. A number of entrance configurations were developed and tested using wave modeling to provide an entrance that reduced waves to an acceptable level while still providing for safe navigation through the entrance. The recommended solution was coordinated with the Marina Tenants, US Coast Guard, the USACE, SLFPA-E, CPRA and the Parish.

The new entrance was designed and all permits were obtained for the project construction, including a USACE Section 10/404 permit, a USACE Section 408 approval in coordination with SLFPA-E and CPRA, and a SLFPA-E permit.



Top: modeling of waves entering marina; middle: wave modeling of (left) existing conditions and (right) with recommended solution, and bottom: completed entrance jetty.

CHE, working as Mott MacDonald, provided engineering services during construction as well as construction inspection. Construction was completed in December 2022, with final acceptance obtained in April 2023.

**CHE staff provided services as part of Mott MacDonald for Jefferson Parish from 2018-2023, and former CHE staff re-formed CHE in February 2024.*

Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
April 2023	Construction: \$1.09M	Engineering and Construction Admin: \$219K

TEC Professional Services Questionnaire

PROJECT NO. 2

Project Name, Location and Owner's contact information:

Grand Isle Levee/Dune Emergency Stabilization, Jefferson Parish, LA

CPRA, Rudy Simoneaux (225) 342 0981

Nature of Firm's Responsibility:

See below

In 2008, CHE engineers* conducted a study to evaluate historical construction activities along the Grand Isle Gulf shoreline. We determined coastal processes and forces that controlled shoreline stability and developed long-term engineering solutions and recommendations that would provide storm damage reduction, preserve structural integrity for the Grand Isle gulf shoreline.

Since 2008, a series of projects have been undertaken by the USACE based on CHE's recommendations. The USACE projects have stabilized much of the Grand Isle shoreline however, an erosional hotspot has formed on the western end of the Island where chronic erosion has continued to threaten the USACE levee/dune system, adjacent infrastructure, and recreational beach. The CPRA employed CHE* to develop a solution to stabilize this hot-spot.

Our engineers conducted an analysis to understand the coastal processes and morphology at the hot spot. We evaluated regional morphology through a 2d morphologic model and developed a sediment budget. We then used these findings to develop and evaluate alternatives to reduce storm damage and stabilize the western shoreline. The four alternatives included replacing the GI-01C project template, larger scale beach nourishment, beach nourishment and breakwaters, and beach nourishment and headland breakwaters. These alternatives were evaluated by their performance, cost, and recreational value.

A 2,800-foot-long stone revetment was constructed as a temporary solution, and later 5 breakwaters and a 750,000 CY beach nourishment was design and constructed. CHE provided engineering design and construction administration for each of these projects.

**CHE staff provided services as part of Mott MacDonald for CPRA from 2014-2024, and former CHE staff re-formed CHE in February 2024 and continue to provide services to CPRA as CHE.*



Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
March 2021	Construction: \$15M	Engineering and Construction Admin: \$500k

TEC Professional Services Questionnaire

PROJECT NO. 3

Project Name, Location and Owner's contact information:

Hurricane Forces on Jefferson Lakefront Floodwall, Jefferson Parish, LA

LADOTD, Rahman & Associates, Inc. Rahman Bhatti (504) 469-0022

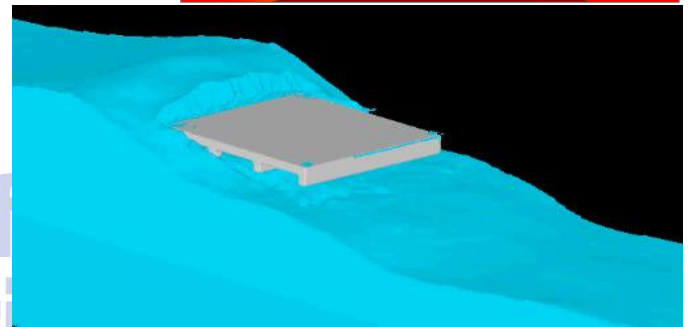
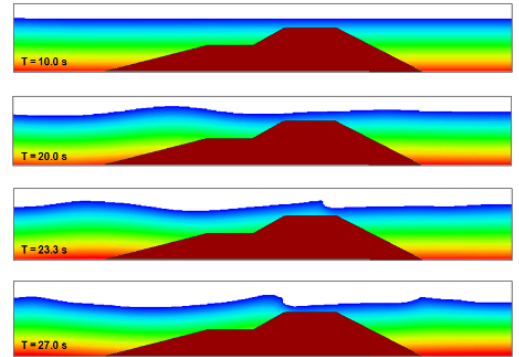
Nature of Firm's Responsibility:

See below

CHE engineers* analyzed three proposed floodwall alternatives for the Jefferson Lakefront floodwall at the intersection with the I-10 Bridge by conducting numerical modeling and computing hurricane wave-induced forces and moments on selected bridge span locations.

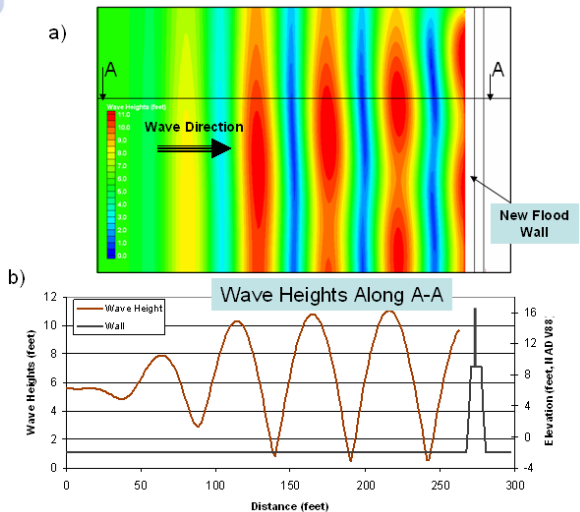
We conducted an analysis to determine the effects of the existing floodwall on waves during the design hurricane event. Hurricane wave forces and moments about the trailing edge were evaluated using AASHTO Guide Specifications. We used 2-D and 3-D computational fluid dynamics (CFD) models to evaluate the effects of the submerged existing floodwall on transformation of incident wave parameters to the selected bridge span locations. Then, our engineers determined input wave parameters to be used for wave force calculations from the numerical modeling results. We evaluated two combinations of applied forces and moments on the selected bridge spans (maximum vertical force and maximum horizontal force) following AASHTO guidelines. Results were used in the design of the floodwall.

** CHE staff provided professional engineering services from 2003 to 2014, and as part of Mott MacDonald from 2014-2024. Former CHE staff reformed CHE in February 2024.*



Existing conditions water surface elevation from CFD modeling results

Example wave transformation modeling results, interaction with vertical wall



Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2009	Unknown	\$27k

TEC Professional Services Questionnaire

PROJECT NO. 4

Project Name, Location and Owner's contact information:
Caminada Bridge Design, Caminada Pass, Jefferson Parish, LA
 LADOTD, Rahman & Associates, Inc. Rahman Bhatti (504) 469-0022

Nature of Firm's Responsibility:
 See below

Louisiana Department of Transportation and Development (LADOTD) required technical information on wave forces for the Caminada Bridge design. Caminada Bridge is located in Caminada Pass. Caminada Pass separates the Caminada-Moreau Headlands (CMH) from Grand Isle. Caminada Pass connects the Gulf of Mexico on the south side to Barataria Bay to the North. Louisiana Highway 1 runs from the CMH to Grand Isle and is connected by the bridge over Caminada Pass.

The project vicinity is subject to high winds, storm surge, and wave impacts due to tropical storm and hurricane events that dominate the design conditions by becoming completely inundated by storm surge during major storm events.



CHE engineers* developed statistical information on extreme wave storm events and hurricanes and coordinated with LADOTD on the design events for the analysis. The design storm event was selected based on statistical analysis of historical events (included Hurricane Katrina) at the project site in coordination with LADOTD. The maximum water surface elevation was determined based on the results of numerical modeling, using a 2-Dimensional circulation numerical model (ADCIRC) and a spectral wave generation/propagation model (SWAN).

Wave forces on the bridge were determined using the most advanced engineering methods and numerical models. Wave forces calculations included vertical forces on the bridge deck and on pile caps, and horizontal forces on piles, girders, railings and pile caps.

We reviewed a series of draft and final reports from AASHTO and became familiar with the AASHTO methodology for computing wave forces. We also computed vertical forces on Caminada Bridge using the AASHTO methodology.

The results of the computations derived from the AASHTO methodology were compared to the results of the computations derived from our methods and an evaluation of the differences was reported to LADOTD.

**CHE staff provided professional engineering services from 2003 to 2014, and as part of Mott MacDonald from 2014-2024. Former CHE staff re-formed CHE in February 2024.*

Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2008	Unknown	\$70k

TEC Professional Services Questionnaire

PROJECT NO. 5

Project Name, Location and Owner's contact information:

Biloxi Marsh Living Shoreline Project (PO-0174), St. Bernard Parish, LA
CPRA, Rudy Simoneaux (225) 342 0981

Nature of Firm's Responsibility:

See below

The Biloxi Marshes consist of approximately 121,000 acres of brackish and salt marshes, which provide an important storm buffer for New Orleans as well as key habitat and ecosystem services. The marshes have been greatly impacted by shoreline erosion from wind-driven waves.

The project created 11 miles of bioengineered oyster reef breakwater fringing the marshes to reduce shoreline erosion, prevent further marsh degradation, promote community resilience, and enhance local fisheries and oyster production. The artificial oyster reef coastal structures were created using precast concrete units in a variety of configurations provide coastal protection and ecosystem restoration benefits by using artificial reefs to reduce wave energy impacting the shoreline thereby reducing erosion and increasing coastal habitat. CHE Engineers* provided planning, data collection, coastal engineering, engineering design, created detailed plans and specifications and provided engineering services during construction.

CHE Engineers evaluated project feasibility assessment. We conducted detailed coastal modeling and analysis to develop an understanding of the coastal processes acting at the site. We conducted wave modeling to determine the wave energy impacting the shoreline and evaluated historical shoreline change rates. This information was used to develop a model of shoreline erosion as a function of wave energy. We then developed detailed 3D computational fluid dynamic (CFD) model simulations of 12 artificial reef units (ARU) in multiple configurations to determine the wave interactions and wave transmission through the reef structures for the local wave climate. Multiple alternative project layouts were evaluated across the 11 mile project shoreline; the best performing layout was computed to save between 133 and 145 acres of wetlands over the next 20 years and provide 129 acres of reef habitat while minimizing impacts to the local habitat during construction.

CHE Engineers developed final design plans, specifications, and construction contract documents, which allowed for procurement of ARUs in a competitive process which are all protected by patent.

CHE Engineers, along with its subconsultants, provided construction administration, engineering support, and inspection throughout construction.

We evaluated construction progress and schedule compliance, meeting environmental regulatory requirements, provided daily inspection in a remote site with multiple working plants, provided regular reporting of progress, change order review, baseline and monthly schedule review. Construction was completed 9 months ahead of schedule (55% of allotted time) and \$8M (15%) under budget.

**CHE staff provided services as part of Mott MacDonald for CPRA from 2014-2024, and former CHE staff re-formed CHE in February 2024 and continue to provide services to CPRA as CHE.*



Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2023	\$51M	\$3.2M

TEC Professional Services Questionnaire

PROJECT NO. 6

Project Name, Location and Owner's contact information:

Cameron-Creole Hydraulic Restoration Project (CS-87) Cameron Parish, LA
CPRA, Katie Freer (225) 342-4635

Nature of Firm's Responsibility:

See below

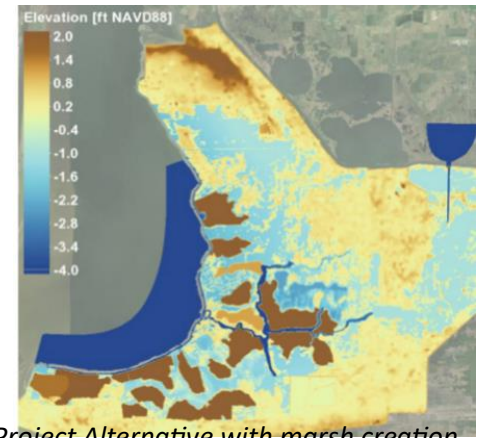
The Cameron-Creole watershed in southwest Louisiana has experienced wetland loss due to saltwater intrusion and flood stress. In the 1950s, the construction of the levee system was carried out to mitigate the effects of saltwater intrusion. While the flow control structures have acted to limit saltwater intrusion from the lake to the marsh, they have also exacerbated flood stress during and after heavy rainfall events by decreasing the hydraulic connectivity with Calcasieu Lake.

CHE Engineers* evaluated alternatives to improve the ability to manage the water level using machine learning technology. These options consisted of increasing the area of the gate structures, converting the gate structures to flap-gates or gates that only allow water to flow out of the marsh, and increasing the drainage area by adding additional flap-gates. The Machine Learning data driven model allowed us to simulate over 8,000 variations of the additional flap gates within minutes and assisted the team in developing an optimal solution. This analysis revealed that the addition of one-way water control structures could help improve the drainage of the area and improve marsh health.

Our engineers further explored the various characteristics of the water control structures and their potential impact on the health of the Cameron-Creole watershed using a high-resolution numerical model. The project alternatives included different configurations of added one-way water control structures as well as conveyance improvements and large-scale marsh creation features. We included the marsh creation cells within the model; results showed improving conveyance around the new marsh cells are important to overall watershed marsh health.

The construction of one-way water control structures will reduce the average water level in the marsh and increase the overall area of healthy marsh. We identified seven locations along the lake rim that are suitable for the construction of these structures. The addition of 4,000 acres of new marsh could help improve the drainage of this area. Other improvements determined as part of our analysis include the dredging of the Grand Bayou and extending the connection of the East Prong to the eastern portion of the watershed.

**CHE staff provided services as part of Mott MacDonald for CPRA from 2014-2024, and former CHE staff re-formed CHE in February 2024 and continue to provide services to CPRA as CHE.*



Project Alternative with marsh creation



Flow paths of hydraulic conveyance in the Cameron-Creole Watershed for preferred

Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2022	Est. \$160M	\$250k

TEC Professional Services Questionnaire

PROJECT NO. 7

Project Name, Location and Owner's contact information:

Bayou Bonfouca Marsh Creation - Modeling St. Tammany Parish, LA

CPRA, Shannon Haynes (225) 342-9424

Nature of Firm's Responsibility:

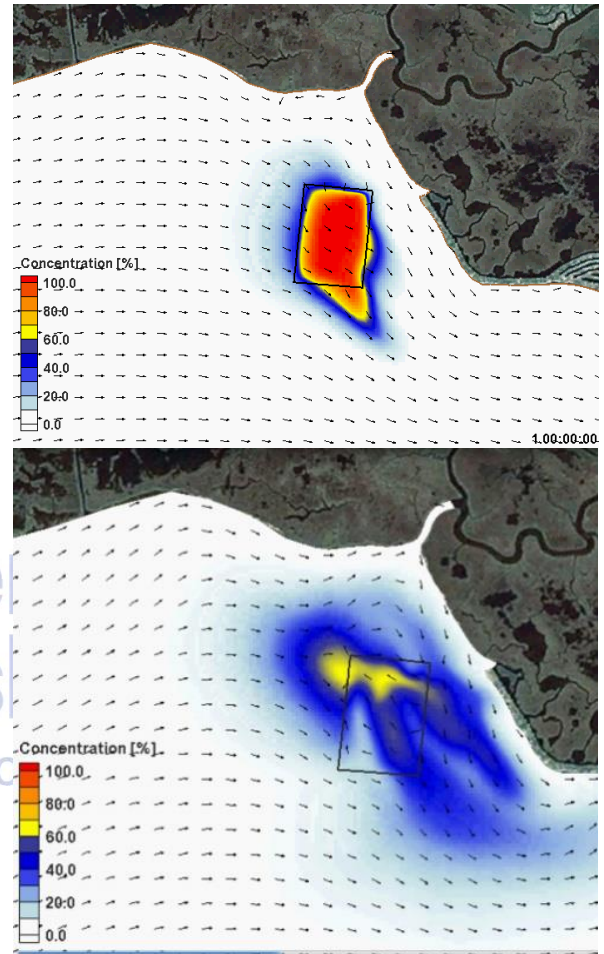
See below

The Bayou Bonfouca Marsh Creation Project (PO-104) created marsh in open water areas adjacent to Bayou Bonfouca with sediment pumped from Lake Pontchartrain. The proposed marsh creation sediment borrow area was located in Lake Pontchartrain approximately 3,000 feet offshore.

CHE Engineers* provided numerical modeling services for design and permitting. Our engineers evaluated changes to the wave climate as a result of dredging the borrow site and analyzed the water quality and mixing characteristics in the proposed borrow pit for various cut configurations to determine if variation in the cut design can improve mixing in the pit to improve pit water quality.

We evaluated changes to the wave climate as a result of dredging the borrow site and developed a wave modeling domain of Lake Pontchartrain and of the proposed borrow pit site and conducted two-dimensional wave generation and transformation modeling using the SWAN model.

We also developed a 3D circulation model of Lake Pontchartrain to simulate tide and wind-induced currents and mixing. We developed a variety of borrow site cut configurations and compared the residence time of each to minimize the residence time and maximize mixing and flushing, thereby improving the water quality in and near the borrow site.



Concentration from borrow pit as simulated by 3D circulation modeling

**CHE staff provided professional engineering services from 2003 to 2014, and as part of Mott MacDonald for CPRA from 2014-2024. Former CHE staff re-formed CHE in February 2024 and continue to provide services to CPRA as CHE.*

Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2013	Est. \$28.2M	\$42k

TEC Professional Services Questionnaire

PROJECT NO. 8

Project Name, Location and Owner's contact information:

Mandeville Wetlands Protection, Mandeville, LA

Neel-Schaffer, Inc., Barry Brupbaker (985) 674-9820

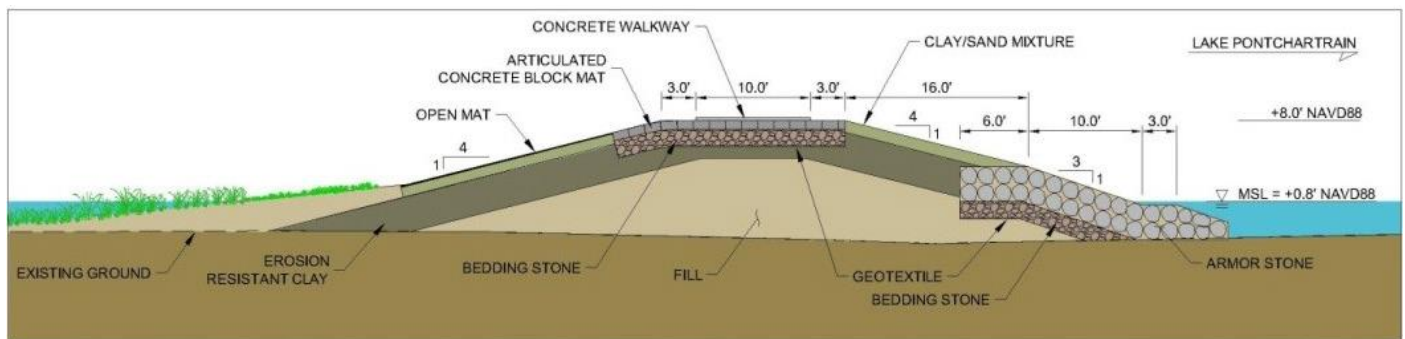
Nature of Firm's Responsibility:

See below

A cypress wetland located between two public parks on the north shore of Lake Pontchartrain in Mandeville, Louisiana is rapidly eroding. The City of Mandeville wanted a solution that would reduce erosion to the cypress wetland, maintain the hydraulic connection with stormwater outfalls that feed into the wetlands and into Lake Pontchartrain, and serve as a walkway between two adjacent parks.

Mott MacDonald developed conceptual designs for three concepts: a rock revetment, a living shoreline, and a hybrid structure which combined the advantages of the revetment and living shoreline while meeting the project goals and minimizing construction and maintenance costs.

The hybrid structure, which encompasses the advantages of both the stone revetment and living shoreline, provides the green space in the upper portion of the embankment while maintaining stability during the storm events.



**CHE staff provided professional engineering services from 2003 to 2014, and as part of Mott MacDonald for from 2014-2024. Former CHE staff re-formed CHE in February 2024.*

Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2012	unknown	\$50k

TEC Professional Services Questionnaire

PROJECT NO. 9

Project Name, Location and Owner's contact information:

La Quinta Terminal Aquatic Habitat Creation, Corpus Christi, TX

Port of Corpus Christi Authority, Sarah Garza (361) 885-6163

Nature of Firm's Responsibility:

See below

As part of the mitigation requirements for the La Quinta Terminal Expansion Project, aquatic habitat within the La Quinta channel needed to be created to support the transplanting of seagrass and smooth cordgrass.

CHE Engineers* developed and evaluated several habitat berm alternatives by analyzing the amount of habitat each would produce, constructability requirements, and their overall performance to determine the most cost-effective solution. The project features a protection berm designed to protect the marsh habitat from excess wave energy, aquatic habitat mitigation berms, and smooth cordgrass and seagrass plantings. Our engineers designed the berms to the ideal elevation for planting smooth cordgrass and strategically placed channels to provide sufficient circulation within the project site.

The project created over 30 acres of wetlands, provides enough sacrificial upland material to accommodate sea level rise and erosion over the next 20 years, and protects the mitigation site to maintain healthy smooth cordgrass growth.



**CHE staff provided professional engineering services from 2003 to 2014, and as part of Mott MacDonald from 2014-2024. Former CHE staff re-formed CHE in February 2024.*

Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2015	Est. \$42M	\$220k

TEC Professional Services Questionnaire

PROJECT NO. 10

Project Name, Location and Owner's contact information:

Carancahua Boat Ramp Access Channel Dredging, Jackson County, TX

Jackson County, TX, Kathy Smartt, (512) 800-4740

Nature of Firm's Responsibility:

See below

The boat ramp basin was subject to rapid silting and depths were insufficient for recreational vessels and rapid deployment of rescue and emergency vessels. During low tide, the ramp is completely inaccessible due to sediment buildup in the basin and access channel. The ramp area and navigation channel have been dredged numerous times, but rapidly re-silts. CHE Engineers* conducted an engineering analysis and design services to improve the boat ramp, adjacent bulkhead, and dredge the entrance channel and boat basin.

We conducted a coastal analysis to determine the processes controlling sedimentation along the project shoreline including analysis of wind, water levels, river inflow, and shoreline change. We also determined site morphology through a shoreline change analysis and performed circulation modeling to determine the effects of extending the breakwaters and wave modeling to determine any additional sheltering effects due to the proposed breakwater extensions as well as to determine the incident wave height and period for use in the design of the structures.

Based on our analysis, we developed several alternatives and evaluated them using several criteria such as permitting difficulty, cost, constructability, and performance to recommend the best alternative within the available project funding. We then developed technical specifications, construction level drawings, and cost estimates for project features including the breakwater modifications, channel and boat basin configuration, boat ramp improvements, bulkhead improvements, and dredge material placement areas.

A key to the success of the project was the creation of wetlands adjacent to the jetties using the dredge spoils protected by a small breakwater. This allowed for beneficial use of the dredged material and turned what is typically an environmental burden into a benefit. Regulatory agencies praised the creation of wetlands which more than mitigated for the dredging of wetlands on the site, making the project self-mitigating which dramatically reduced regulatory review time and construction costs.

**CHE staff provided professional engineering services from 2003 to 2014, and as part of Mott MacDonald from 2014-2024. Former CHE staff re-formed CHE in February 2024.*



Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible
2014	Est. \$960k	\$163k

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	N/A
2. N/A	N/A	N/A
3. N/A	N/A	N/A
4. N/A	N/A	N/A
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; justify-content: space-between;"> <div style="width: 60%;"> <p>About us</p> <p>Coast & Harbor Engineering (CHE) is a specialty coastal engineering consulting firm with worldwide experience and strong technical specializations in coastal and hydraulic engineering. Our coastal engineers are experts in the analysis and design related to various coastal protection and coastal habitat restoration projects. These projects include coastal resilience measures such as shoreline protection and stabilization, evaluation of sea level rise and storm impacts; ecosystem enhancement; and design of harbors, waterways, marine terminals, and beneficial use of dredged material.</p> <p>CHE was originally formed in 2003 and provided specialty hydraulic and coastal engineering services across the US and worldwide. In 2014, CHE was acquired by Mott MacDonald, where CHE staff led the coastal discipline and hydraulic and coastal design aspects of small to multi-billion dollar projects. In February 2024, former owners and leaders of CHE worked with Mott MacDonald to re-form CHE into an independent, small business providing specialized hydraulic and coastal engineering services.</p> <p>We have executed unique coastal projects in Louisiana since 2003. Behind these successful projects has been a team of dedicated engineers, project managers, and technicians – who understand that in addition to technical excellence, success depends on sustained coordination and synergy between client, engineers, regulatory agencies, and stakeholders. Our team's strong local knowledge of Louisiana's coast, infrastructure, programs, goals, and governmental agencies, combined with our experience in planning, evaluating, designing, permitting, and overseeing coastal projects throughout the Gulf of Mexico makes us especially qualified to provide all-inclusive engineering services for Jefferson Parish.</p> </div> <div style="width: 35%;"> <p>Our expertise</p> <ul style="list-style-type: none"> Coastal planning Feasibility studies Marsh and ridge restoration Shoreline stabilization & protection Dredging Beneficial use of dredge material Living shoreline design Coastal & hydraulic modeling Coastal structure design Coastal restoration design Permitting Cost estimates Field investigations </div> </div>		

TEC Professional Services Questionnaire

Evaluation Criteria

1. Professional training and experience in relation to coastal engineering

CHE's specialized coastal and hydraulic engineering services has helped state agencies and local municipalities across the gulf coast by utilizing advanced modeling capabilities to restore coastal habitats, implement living shoreline solutions, and protect shorelines.

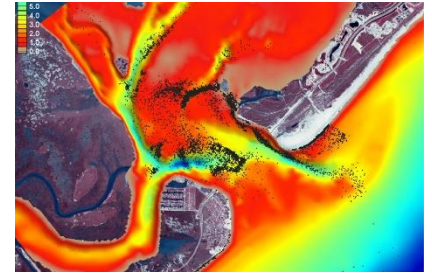
CHE is recognized as a leader in the field of coastal engineering through advanced certification, participation in professional organizations, and numerous papers and lectures presented by our staff. Two of our principals are Board Certified in Coastal Engineering by the Academy of Coastal Ocean Ports and Navigations Engineers (ACOPNE). Board Certification is a voluntary, post-license credential that provides recognition of advanced expertise in the coastal engineering field, superior experience, and a commitment to lifelong learning in coastal engineering. Certification is designated by abbreviations BC.CE.

Utilizing advanced modeling capabilities

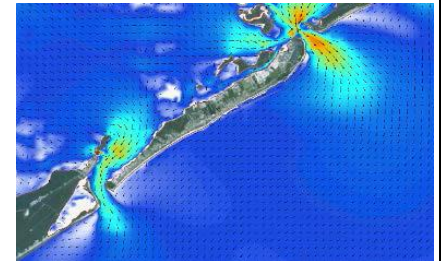
CHE's coastal engineers are experts in wave mechanics and wave induced sediment transport, storm flood propagation, storm prediction and statistical analysis, beach morphology and nearshore processes, bay and estuary hydrodynamics, and hydrodynamics of navigation channels, including vessel wakes.

Our engineering analyses focus on both the short-term and long-term impacts of these processes as well as the long-term impacts of eustatic sea level rise, subsidence, and hurricanes. Our understanding of physical processes goes beyond natural forces; we also have expertise in the analysis of impact caused by manmade structures and construction such as breakwaters and dredging.

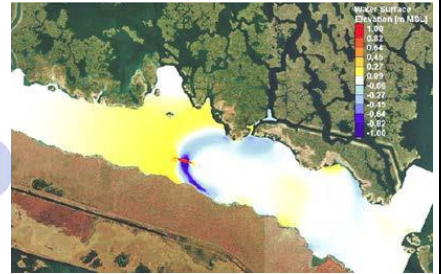
We have performed advanced analysis on a variety of coastal processes by conducting numerical modeling, feasibility studies, and evaluating alternatives. Our engineers are highly skilled in developing, verifying, and applying data processing software, statistical analysis programs, numerical modeling tools, and data visualization techniques to effectively simulate waves, currents, and sediment transport. We have successfully used these tools to properly simulate extremely diverse coastal environments and design sustainable solutions.



Coastal sediment transport modeling



Coastal circulation modeling



Vessel hydrodynamics modeling

Wave growth and transformation

- SWAN
- HWAVER
- BOUSS-2D
- CMS-WAVE
- MIKE21
- CELERIS

Wave-Structure Interaction

- FLOW3D
- Open Foam

Tide, wind and wave-induced circulation

- ADCIRC
- SELFE
- Delft 3D
- DFLOW-FM
- MIKE 21/3
- CMS-FLOW
- ADH
- FESWMS
- HEC-RAS

Sediment Transport and Morphology

- MIKE 21/3
- Delft 3D
- MORPHO
- COHSED
- GENCADE/GENESIS
- SBEACH
- XBEACH
- LAGRESED
- SED2D
- FLOW3D

Vessel Hydrodynamics (CHE's Proprietary Models)

- VH-LS (steady longwave)
- VH-LU (unsteady longwave)

Propwash

(CHE's Proprietary Models)

- VH-OS (steady propwash)
- VH-PS (unsteady propwash)

Water Quality

- MIKE
- Delft3D-Qual
- SELFE

TEC Professional Services Questionnaire



Implementing living shoreline technology

As a leader in the coastal engineering industry, CHE has been on the forefront of designing living shoreline solutions to prevent shoreline erosion and create nearshore habitat. In Louisiana, we designed the first project to use artificial reef products and have advanced to creating over 13 miles of artificial reefs, now one of the largest living shoreline projects of its kind in the Gulf of Mexico.

Cameron Parish Shoreline Protection, Cameron Parish, LA



Dredge Engineering

CHE has demonstrated long-term success on a variety of complex dredging challenges. Our dredging experts have developed designs for every kind of dredging effort, from small scale specialty dredging for environmental restoration to large scale marsh creation and beach nourishment and production-based navigation dredging. We continuously work with the dredging industry to approach dredging design with an understanding from the construction industry.



Protection shorelines and coastal infrastructure

We have created lasting improvements to coastal communities by protecting coastal roads and stabilizing shorelines threatened by erosion, flooding, and hurricanes. We have designed resilient coastal structures such as revetments, breakwaters, seawalls, and groins. We have also nourished dune and beaches all along the gulf coast



Beneficial use of dredged material

Dredged material disposal is the most challenging aspect of dredging engineering. Creative beneficial use (BU) helps expand options for both disposal of dredged material and create opportunities for ecosystem restoration and coastal protection. CHE frequently uses BU techniques. For example, BU on the Carancahua Boat Ramp dredging project not only allowed for very inexpensive dredging by placing material nearby the dredge site, BU turned what would have been an environmental impact into a benefit, expediting permitting and creating habitat



Restoring Coastal Habitats

CHE designs solutions that promote healthy ecosystems by restoring coastal habitat. Our engineers enhance ecosystems that rely on coastal, wetland, and riverine environments. Using advanced modeling tools, we simulate the natural processes impacting the habitat to gain an understanding of the issues to restore natural dunes and vegetation, improved water quality, created marshes, create living shorelines.



Coastal Engineering Design

CHE Engineers have extensive experience in all aspects of coastal engineering design, including performing a variety of analyses and technical evaluations such as wave loading, geotechnical stability, wave transformation, and scour as well as developing cost estimates for coastal protection and restoration projects. We also plan and manage field investigations such as geotechnical, cultural resources, bathy surveys, and similar. CHE Engineers have developed designs for 100s of projects along the Gulf coast and managed construction and inspect of these designs.

TEC Professional Services Questionnaire

2. Size of Firm

Coast & Harbor Engineering employs twelve experienced coastal engineers. Two of our principals are Board Certified in Coastal Engineering by the Academy of Coastal Ocean Ports and Navigations Engineers. Board Certification is a voluntary, post-license credential that provides recognition of advanced expertise in the coastal engineering field. Nine of our staff are licensed Professional Engineers.

CHE engineers provide a full range of experience and expertise in delivering professional engineering services. We regularly evaluate project feasibility, develop project designs including engineering plans and technical specifications, and provide engineering support during construction including construction administration and inspection.



3. Capacity for timely completion

Coast & Harbor Engineering is presently prepared and available to begin working with the Parish immediately if awarded the contract. Based on the currently contracted work, CHE has prepared man-hour forecasts extending to the anticipated length of this contract. Based upon those projections and estimates of anticipated future work for that same period, CHE believes at this time that the proposed staff are more than adequate to handle the current contracted and projected work.

4. Past Performance

See Section L.

5. Principal Office Location

CHE operates as a fully remote work force, with no central office. The Principal Office address for CHE is PO Box 202737, Austin, TX 78720.

6. Adversarial legal proceedings between the Parish and CHE

CHE does not currently have and has never had any adversarial legal proceedings involving Jefferson Parish

7. Project References

In addition to the reference indicated in Section L, below are two more clients who can attest to our coastal engineering capabilities and timely execution of projects.

Rudy Simoneaux

Coastal Protection and Restoration Authority

Chief, Engineering Division
150 Terrace Ave
Baton Rouge, LA, 70802
225.342.0981
rudy.simoneaux@la.gov

Thomas Durnin

Texas General Land Office

Project Manager, Coastal Resource Division
1700 N. Congress Ave, Ste 300
Austin, TX 78701
512.463.1192
thomas.durnin@glo.texas.gov

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

Signature: _____


Principal

Print Name: Josh Carter, PE, BC.CE

Title: _____

Date: 7/8/2024